60 LEADERS ON INNOVATION

22 CHALLENGING INNOVATION QUESTIONS ANSWERED BY 60 WORLD-CLASS THOUGHT LEADERS

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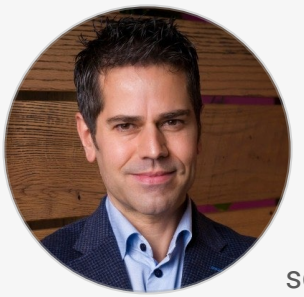
PREFACE



GEORGE KRASADAKIS

Corporate innovation is not easy. While most of companies out there claim to be innovative, it is only a minority of them that are able to systematically create value through their novel products, services, or business models. There are companies that only scratch the surface of innovation – they focus on 'appearing innovative' - while others try hard to foster innovation but with no success. In practice, even the most expensive, well-thought innovation programs and sophisticated innovation labs often fail to produce real innovation outcomes. Considering that there are plenty of 'tested' and 'proven' methods and recipes for innovation, this leads to an interesting quest for the missing element that prevents companies from becoming truly innovative.

Reflecting on my experience across various multinationals, technology startups, and big tech companies, I would argue that the single most important success factor of corporate innovation is a vivid environment characterized by 'diversity of thought' and a special 'discovery mode'. In such an environment there is both *plurality of ideas* - coming from all directions and across the hierarchy - and the *readiness to exploit them* - the ability to consider novel ideas as drivers of business success. The former requires inspired, capable people who believe in the organizational purpose and engage 'naturally' with innovation activities. The latter requires the right innovation capabilities along with a special leadership style that supports a continual 'opportunity discovery' function. Such a business setup inspires creative minds across the hierarchy of the organization – it brings together scientists, domain experts, technologists, and business leaders as a single force, a cross-disciplinary team that works and innovates 'naturally' towards big, meaningful organizational objectives.

This principle of 'diversity of thought' was precisely the source of inspiration for producing this very special book. I envisioned '60 Leaders on Innovation' as a synthesis of expert views against a fixed set of 'tough' innovation questions -- answered not by a single 'innovation authority', but by active leaders across disciplines, industries, and geographies. Interestingly, these perspectives are not always in perfect agreement or alignment - and this is the beauty of this initiative.

The book is organized into 22 chapters. Each chapter presents one question and multiple answers reflecting a variety of backgrounds and standpoints. Some of the questions focus on the characteristics of

innovative companies - for example, we asked our leaders ‘What makes a company innovative?’ or ‘How is innovation different in the startup world?’. Other questions target the essential innovation methods and digital tools, the skills that aspiring innovators need to have, the role of business experimentation, and the interlink of agile product development and innovation. We also asked questions about the role of the C-Suite in empowering innovation, the importance of a strong innovation culture, and how a community of innovators could play a role in a corporate environment. We challenged the need for a Chief Innovation Officer, and we unpacked one of the most popular business buzzwords of our time: ‘Digital Transformation’. Finally, we looked at the future and asked how innovation can help humanity solve the big problems of our time.

This book brings together unique insights and ‘practical wisdom’ on corporate innovation. I am extremely grateful to the 60 leaders – the amazing group of academics, business leaders, technologists, investors and start-up founders who made this ‘crazy idea’ a reality. I am also grateful to Robin Nessensohn, my partner in this project, who believed in this idea and committed to making it happen; and to Coy Chen for creating the cover of the book and assisting in setting up some visual aspects. A project made of pure passion for innovation from 63 people across the globe.

This book is ‘connected’: you are welcome to join the discussion and participate in the ongoing exchange of thoughts through our innovation group on LinkedIn - where you may share your thoughts and ask any question regarding innovation.

July 2021
Dublin, Ireland

George Krasadakis
Author of ‘The Innovation Mode’

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1 WHAT MAKES A COMPANY INNOVATIVE?

What are the defining characteristics and the ‘inner drivers’ of truly innovative companies? Could we identify the factors that boost a company’s ability to innovate? There are no easy answers to these questions – as any attempt to measure and explain the level of innovation of a company gets easily complicated.

We asked our thought leaders about the criteria they would use to classify a company as ‘innovative’ and how they would design or architect a new organization with innovation at its core. We also captured their insights on how to transform a ‘conventional’, established company into an innovative agile organization.

Read the great responses and insights provided by an amazing group of leaders - featuring Enrique Dans, Jesse Nieminen, Brian Kennedy, Dr. Marily Nika, Steven O'Kennedy, Andrea Kates, Sofia Fernandes.

ENRIQUE DANS

Professor of Innovation
IE Business School

As a corporate attribute, innovation could be defined as *the ability to avoid isomorphism* (the tendency of organizations to progressively resemble their normative environment), to be able to come up with new ideas that result in the introduction of new goods or services, or improvement in offering such goods or services. Innovation allows companies to tackle the current needs of current customers (incremental innovation) or to drastically affect the variables that the market takes into consideration when approaching that need, product, or service (disruptive innovation) - in some occasions even creating a new market.

Innovative companies are not necessarily companies that invent things, since innovation usually reflects more the use or application of an idea or method rather than the creation of the idea or method itself. But innovative companies should be able to do something beyond just improvement - since improvement typically refers to doing the same thing better instead of doing something different or following a different approach. Innovative companies are able to understand that innovation may come from anywhere, from any contextual variable, to an idea that emerges anywhere in the organization, and have differential expertise on the technologies or methodologies that allows them to focus on their users.

The learning function differentiates companies with a sustainable innovation culture.

– Enrique Dans

In newly created companies, this expertise is usually related to the foundation of the company: the company finds a new approach to cover a need in the market, assembles the required expertise to design it and launch it, and delivers it. Once established, the challenge becomes how

to react when a new technology or approach is able to render their product or service as obsolete: in many cases, the company entrenches in its methodologies and tries to improve them following incremental innovation principles, whilst ridiculing or ignoring other alternative approaches - in some cases, even resourcing to the law to try to make any other approaches difficult and to preclude other companies from competing.

Conventional companies require a constant scouting of the market and the relevant technologies that could eventually be applied to their industry, to avoid missing any relevant approaches that could allow them to pursue different ways to offer their products or services in an advantageous way. The first important approach is to establish *a learning culture*: the learning function differentiates companies with a sustainable innovation culture from those that just hit the magic spot once in a while. *Agility implies constant scouting and exploration*, done in a collective way so that anyone in the organization that finds a competing approach by any means - from reading publications to pure serendipity or random inspiration - feels that he or she is able to propose it to the whole organization, and gets explored as a potential source of innovation.

Agility implies constant scouting and exploration.

– Enrique Dans

The most innovative company out there right now (2021) would probably be Tesla, a company that placed its bets on technologies such as batteries and solar panels, capitalized on the long term and on the strong economies of scale generated by such technologies, and has been able to completely transform an old industry by establishing a long term leadership on it. Interestingly enough, this is a characteristic that Tesla's CEO, Elon Musk, has been consistently applying to every single company that he created, which proves that innovation strategies can be consistently replicated across different industries. As Elon Musk knows very well, *companies lose when they invest more resources in protecting their innovation than in generating it. The value of innovation lies not in avoiding others from copying you, but in getting them to want to copy you*.

Enrique Dans is a professor of innovation at IE Business School since 1990, and Senior Advisor on Innovation and Digital Transformation at IE University.

JESSE NIEMINEN

Co-founder & Chairman
VIIMA

When we look at what makes a company 'innovative', we must first take a step back and define what 'innovation' means, since there are so many different ways people use the term. My favorite definition is "the introduction of something new"[1] - it's simple enough for people to understand and covers every kind of innovation. So, with that background, an innovative company is simply one that keeps introducing new things – such as changes to internal processes, minor improvements to existing products, or perhaps even entirely new products and services. Thus, a truly innovative company is one that's never satisfied with the status quo and that keeps working hard to improve every facet of the organization.

If you have the luxury of having a fresh start, your organization will naturally evolve and change quickly, so all you need to do is to sustain that effort and cultivate a culture that's always trying to be a little better and offer a little more value to your customers. However, if you're an incumbent that's a bit set in their ways, transforming the organization towards an agile, innovative organization is much more difficult. It will take years, tons of hard work, and countless changes to culture, people, and processes within the organization, and clear top-management support to enable all of that.

Creating an innovative company from scratch is much simpler than changing an existing one.

– Jesse Nieminen

However, if I had to name just one thing to focus on to kickstart this movement, I'd seek to create a very tangible, concrete change in the way the company operates towards more agile and innovative direction. One example of such a change that we've used together with many of our clients is a new company-wide idea management process that anyone can be a part of, and where the best ideas will be highlighted, and innovators rewarded in front of the entire company. This kind of tangible change is

[1] Innovation | Definition of Innovation by Merriam-Webster

always a much clearer statement than anything the CEO might say in an all-hands meeting.

As to which company I'd consider to be the most innovative in the world, I'd have to say Tesla. There are obviously many innovative companies out there, but what makes Tesla so special is that they operate in a few different, extremely challenging, and competitive industries, and despite these limitations they have been able to introduce dozens if not hundreds of records and big firsts – and more importantly, have been able to successfully scale most of them. What's more, their pace of innovation is an entire order of magnitude faster than their competitors. In my experience, the pace of innovation is the single most important factor in determining an organization's ability to succeed in the long term, and that's where Tesla really shines.

Jesse Nieminen is the Co-founder, Chief Growth Officer & Chairman of Viima, and an entrepreneurial leader with a passion for building businesses and growing organizations to scale in the digital age.

BRIAN KENNEDY

Head of Digital and Innovation
EXPLEO

For a company to be considered truly "innovative" it must place a premium on *collaboration*, especially internally. The company must also live and breathe *change*, challenging everything by not accepting the status quo or "that's the way we have always done things". Another key criteria for an innovative business is their *obsession with the customer:* learning from each customer interaction and continually improving the customer experiences across all channels is foundational.

Customer insights from data are also necessary, to not only deliver the best possible frictionless customer experiences but also to understand what new products and services your customers need and how the company's offerings will address these requirements.

One of the goals of an innovative company is to disrupt its existing business model. Innovative organizations are risk-takers, consistently exploring new business models and leveraging their assets to identify and realize new revenue streams. Demonstration of this approach to risk should also be illustrated by *aspirational company objectives*: *if stretch goals are not making most people nervous, you are not aiming high enough*.

Truly innovative companies are continually trying new things, ideas, ways of working, adopting new technologies, etc. They *fail often* with

some of these activities, but they *fail fast* and learn from them. If organizations are not failing when innovating, they may be playing it safe and not making the most of the business opportunities out there. Lastly, to be innovative, companies must foster a *data-driven* and *innovative culture*.

Evolve from 'command and control' towards cross-functional, collaborative behaviours.

– Brian Kennedy

Innovation must become part of the company's DNA – and this can happen by emphasizing *design-thinking*[2], *customer-first,* and *human-centric* approaches to all products and services, and by leveraging the latest technologies to drive operational efficiencies and all the while *cultivating your talent*. When nurturing employees, leaders must pay more *attention to competencies and potential* over experience; they must *encourage* the right mindset and *empower* their people, enable them to *evolve from a command and control structure towards more cross-functional collaborative behaviours*. Being Innovative is all about your people and how they work together, and with external partners.

When designing a new company with innovation at its core, taking a Lean Startup[3] approach is a suitable first step in building a business model. It is essential to focus on creating a learning organization - one that recognizes experimentation and validation as key activities and uses them to quickly learn what works and what does not, and then applies these learnings for customer engagement fulfilment and development of new products and services.

To transform a traditional bricks-and-mortar organization into an innovative agile company, numerous factors are involved and various approaches are needed. The established approach to this Digital Transformation demands a clear and close alignment between the Company's Strategy and any Digital Roadmap. At the same time, it is important to ensure organizational support for the programs being implemented and clarity regarding the benefits expected from them.

[2] Design thinking - Wikipedia
[3] Lean startup - Wikipedia

What makes a company innovative?

While this top-down strategic method to Digital Transformation is necessary and indeed paramount to successfully transform from a Traditional into a Digital Business, it should not be the only approach: companies must also consider a bottom-up approach to Digital Transformation – programs, tools, and methods to *harness your people and their creativity.* For instance, you may use methods, such as Micro-Innovation to tap into your people as a source of innovation and as a low-cost, low-risk, bottom-up approach to Digital Transformation. In fact, there must be both top-down and bottom-up activities when innovating on your Digital Transformation Journey.

If organizations are not failing when innovating, they may be playing it safe.

– Brian Kennedy

A key initial step for these bottom-up activities is building an operating model and organizational capability which empowers and engages all employees. This creates a safe environment for innovation, where there is no such thing as a bad idea, where good ideas are recognized and rewarded and, most importantly, employees are supported to deliver innovations. An environment where success is “showing results quickly”, not “doing the right planning”.

Brian is a Senior Leader within ‘Expleo’ and is currently the Head of Digital and Innovation Services. Since joining in 2017, he has primarily concentrated on building & developing Expleo’ s Digital & Innovation Services. He has 30 years of progressive experience spanning the full range of global IT services, previously working in internal CIO roles.

DR. MARILY NIKA

AI Product Leader
TECH COMPANIES IN THE BAY AREA

"Adapt or face extinction". I use this phrase a lot in my courses when I want to showcase the importance of rewiring your brain and your company's culture to embrace innovation. If a business doesn't plug the latest advancements of technology into their strategy, it may face extinction. A great example of that is Blockbuster - an American-based provider that would provide rental services for movies and video games. It was extremely popular and was once valued as a $3 billion company. However, Blockbuster *did not pivot quickly enough* to online rentals and on-demand offerings and it ended up filing for bankruptcy after Netflix's popularity continued to grow.

Don't fall for the 'shiny object' trap. Focus on what matters.

- Marily Nika

So how can you adapt? How can you guard against disruption and fast-moving, tech-enabled startups? Here is my advice. If you are working in an established company, then: *invest in talent*. Diverse, driven, ambitious & fresh minds that are not afraid to challenge the status quo and to come up with completely new ideas and verticals. If they will never be able to pass your hiring bar, it's time to change that bar. Talent will modernize legacy-powered companies' technology stack and this is how leadership will make sure that the organization is set for success when competition arises. In order to innovate, a company also needs to *innovate strategically*. That is, be careful not to fall for the 'shiny object' trap. *Focus on what really matters*. Ask yourself 'what user problem am I solving'? And 'is it the right time for me to launch this'? These are key questions that are far more important to answer than getting any fancy technology patented. Baby steps are important - before flying, make sure there is product-market fit.

Marily Nika is an AI Product Leader based in San Francisco that has worked for Google and Facebook. She holds a Ph.D. in Computing Science from Imperial College London and is currently a teaching fellow at Harvard Business School. Outside of her day role, Marily acts as advisor to early stage startups and also empowers the women in tech community in various ways.

STEVEN O'KENNEDY

Associate Director of Engineering
GLOBAL CENTRE FOR INNOVATION AT ACCENTURE

Being an innovative company is not about using the latest technology or the latest cool project management techniques or even setting the latest design trends. It's not even about the ability to change quickly or bring new offerings to market quickly. Sure, all these may be ingredients you could observe in an innovative company, but they are just visible trappings rather than the substance.

As an example, I'll borrow light-heartedly from some of the content that currently circulates heavily in business/ innovation social media channels: I could get up at the same time in the morning as Steve Jobs, always wear the same clothes like Steve Jobs did, ask questions of yourself in the mirror every morning like Steve Jobs did, but Steve Jobs this still does not make me! Fortunately, I have recognised this fact before spending a fortune on a wardrobe full of polo-necked jumpers!

Being an innovative company is not about using the latest technology or cool project management techniques.

- Steven O'Kennedy

If we look past the trappings, we see that successful innovative companies have three 'special' abilities:

1. To *see* at the right time the necessity to *change*.
2. To *follow through* on that change without undue delay
3. To *measure* the impact of that change and if it has been a step in the right direction.

Building a company with innovation at its core requires these three things in every aspect of its operation - from tech to sales and from product to HR. It's also worth noting that the company doesn't necessarily need the same level of innovation in all of its areas at the same time. Also, the

pace of innovation and change does not need to be constant. The company should be able to flex in one or more areas faster or slower than others - as needed.

This all sounds hard enough for a brand-new company to achieve - but what about transforming an existing company to work in this fashion? It is clearly possible – a good example is Nintendo which started out its life as a playing cards manufacturer until it started to stagnate and had to reinvent itself. When trying to transform an established company and introduce innovation, an important initial goal should be to first define *what innovation actually means to the company* – and also the *types of change* that are most important to facilitate and measure. Once the aim is clarified, agreed upon, and prioritised by the leadership, then the *success factors* must be set. Defining success is critical because unreasonable demands and requirements will quickly lead to failure and abandonment of the programme, while unambitious goals may be achievable but will not lead to a return on investment. The goal should not be to prioritise pace of change, or other skewed interpretations of agility, but to focus on achieving the 3 indicators listed above.

Companies like Amazon, Netflix, and Apple innovate at pace because they have conditioned themselves to *identify change* and *measure* at pace; they have company-wide constructs in their organisations and business models that facilitate this. These constructs will not and do not exist in a company at the start of their innovation transformation programme. In fact, it is likely that the first steps in such a programme, will produce results that will not appear like innovation at all if measured against the backdrop of a Google or a Microsoft or a Tesla. But that doesn't mean that it isn't innovation for the company that's doing it.

Steven O'Kennedy is the Director of Engineering in Accenture's Global Innovation Centre at The Dock in Dublin. After working on large scale system implementation and technical transformation projects for many years as a technical architect, he now focuses on incubating innovative products and services centred around modern software architecture, AI and cloud technologies.

ANDREA KATES

Managing Director
FUTUREPROOFING : NEXT

It used to be that companies were judged as innovative based on how many ideas they could bring to market. There was a tension defined between the "innovate/explore" and "execute/exploit" mindsets. Huge debates emerged about whether a company should focus on its core or on

emerging "edge" opportunities. In today's market, three things have changed. First, the *speed of change* is unprecedented: keeping up means shifting to new arenas at a breakneck pace. Second, there are n*ew forces of change* - coming from industries outside of the ones where we are used to competing and operating – and that requires cross-industry insights. Third, the *business models themselves have shifted*, opening up new opportunities to collaborate, to build an ecosystem through relationships that transcend the traditional supply chain mindset.

The bias of most tools we use grounds our thinking in ways we're not even aware of.

- Andrea Kates

All of these conditions add up to the need to classify a company as "innovative" based on a multi-dimensional view that I call *futureproofing*, which is a four-step process: *See, Learn, Decide, and Commit*.

- *See*: How good is a company's ability to see and respond to emerging trends?
- *Learn*: How effectively can a company acquire new capabilities that will keep it relevant? I call it *Perpetual Refresh*—the ability to master new skills.
- *Decide*: How well does a company align its leaders around priorities to take action?
- *Commit*: To what extent is the culture geared to aggressively pursue new initiatives, while operating well and keeping a check on the pulse of the customers and the market. *It's not just about idea generation*.

Innovative companies focus on becoming futureproofed by adopting a new mindset, adding new capabilities, and embracing new metrics. Innovative organizations always have a clear vision about *where to head next* and they work backward to chart *a path to get there*. To adopt the futureproofing approach requires tossing out conventional tools like SWOT[4] (Strengths Weaknesses Opportunities Threats) as our sole point of departure to begin the strategic journey. The bias of most tools we use grounds our thinking in ways we're not even aware of - for example,

[4] SWOT analysis - Wikipedia

SWOT tends to focus on historical or present-day data and is generally vetted by the internal team.

By contrast, *Design Thinking*[5] can be brought in, to reflect emerging customer beliefs and needs. Or, *Lean Startup*[6] can bring in customer discovery and experimentation. While all of these are valid, it is a blended, future-proofed approach that is better suited to the dynamics of today's market.

Andrea Kates helps corporate teams and business leaders drive revenue growth through innovative routes to market, future-based insights, and cross-industry inspiration. Former tech CEO in San Francisco and now a global advisor and leader of high-impact initiatives for companies like Ford, Mayo Clinic, KK Wind, Intergraficas, and Cisco. Leadership Training, Innovation Initiatives, Thought Leadership/ Keynotes, Board Member.

SOFIA FERNANDES

Director of Business Development
BGI

Given my experience with startups and corporations on Open Innovation programs, I would say that a company is innovative when it successfully launches either a product or a service that addresses a problem in such a way that was never seen before and that ultimately disrupts the market; it teaches consumers a new way to solve a problem. This is Uber, enabling users to ask for drivers through a smartphone and then rate them; or Amazon, enabling people to purchase any product always from the same store - at a distance of a click. Innovative companies introduce a new method that people learn and adopt at scale – since it solves their problem quicker, faster, cheaper.

To design such an innovative company, I would focus on forming a dream team: a diverse group of different nationalities and backgrounds - including exact scientists and social scientists with different professional experiences. An innovative company needs *dreamers* – the ones who seek the unimaginable - what everyone sees as impossible; the ones who scratch the impossible and believe it will happen. But innovative companies also need *doers* - those who look at the dreamers' plan and make it happen no matter what; the ones who are driven by results and find the ways to keep the company running and profitable. Both profiles are needed, and they have to work together - sometimes disagreeing; sometimes leading the company into the future.

[5] Design thinking - Wikipedia
[6] Lean startup - Wikipedia

Transforming an established company to become more innovative is tougher though. In this case, companies need a 'Kamikaze' team – an external team that reports to the head of each department. The mission of this special team is to identify bottlenecks in internal processes, spot those highly motivated individuals inside the corporation, understand the current status quo and capture feedback on improvements; to spot problems with current clients, benchmark with competitors, and gather insights about other aspects of the company that may be crucial for understanding how it is being run, what works and what does not.

To design an innovative company, focus on forming a Dream Team.

- Sofia Fernandes

Among other aspects, this team must analyze the employees' dynamics and patterns – e.g. their career development in the company, reasons why they leave and companies they go to, etc. The 'Kamikaze' team will then produce a report on all these aspects – problems and opportunities for improvement along with guidelines and best-in-class examples on how to solve the problems and implement the improvements. Then, they work together with the head of each department to define goals and a timeline to achieve them. Then, following a top-down approach, they implement the new 'system' as the basis for a more innovative version of the company.

Looking out there in the market, the most innovative company for me is Google. They never fail to invest in the biggest asset a company can have - People. And I know what you are thinking: "Here we go again with the same old idea that people are key". But they are. Thinking that anyone is replaceable, not only is inaccurate, but it also proved wrong several times. It is like a football team: one member can make the difference, because that influences not only the way the team plays but also the way the energy flows. In every team, each person plays an important role as a motivator, a leader, an enabler. Google has always been there scouting for the best, for those who show the potential to bring the right energy to the table.

And that all comes down, in my opinion, to the balance between dreamers and doers: you need the crazy guys that come up with ideas

everyone considers to be ridiculous, and then you need the doers that start figuring out how these ideas could be brought out to daylight. This is what startups are all about, and Google, not only started like that but also quickly realized that this is the future. This is why they have an extremely strong team always looking for startups that have the potential to be the next big thing - just like Google a few decades ago. And they immediately buy those companies and incorporate their culture. And that is pure magic. Furthermore, they understand that people no longer have the baby boomers' culture of being driven by money. In our era, people are mostly driven by happiness and fulfilment; they are inspired by collaborating with creative, energized individuals in pursuing a meaningful purpose.

Do not fail to invest in the biggest asset a company can have - People.

- Sofia Fernandes

Truly innovative companies have a strong culture – this is what creates leaders, heroes, and role models. Being scalable is not enough. Being digital is not enough. Being authentic and unique is not enough. You need a team that can secure what you have built long after your reign is over. This is an infinite game, and this is how truly innovative companies manage to never die.

Sofia Fernandes is a strategist with extensive experience in working with both startups and corporations in launching new products. Sofia manages a portfolio of over 100 startups and focuses on designing and aligning strategies, motivating teams, and assuring flawless implementation.

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DO COMPANIES NEED A CHIEF INNOVATION OFFICER?

This is an exciting topic that sets the basis for a very interesting debate: does corporate innovation need a Chief and a dedicated team or is it everyone's 'responsibility' to innovate? Even if the latter is true, do companies need an orchestrator of the innovation process? If so, do all companies need a CINO, regardless of their size, maturity in terms of innovation processes, or organizational complexity?

In this chapter, we are asking our leaders to describe the role of the Chief Innovation Officer (CINO), its mission, and also explain the type of companies that need such a role. Enjoy the diversity of perspectives from Tom Goodwin, Vincent Pirenne, François Candelon, Alex Adamopoulos, Warwick Peel, Frederic Laluyaux, Patrick Van der Pijl, Daniel Burrus, Scott D. Anthony.

Do companies need a Chief Innovation Officer?

TOM GOODWIN

Co-Founder
ALL WE HAVE IS NOW

The role of a Chief Innovation Officer (CINO) is to create a movement for change – to drive a shift towards a culture that fosters change. Considering this definition, it's not the case that every company needs a CINO. While we tend to look at businesses that are being disrupted by new technologies, there companies out there that, simply, might not need to change. For instance, if you're a company that has been making wonderful lager, in Copenhagen for the last 500 years, the reality is that you might not need a CINO because your world is not significantly different; you might not need to invest in D2C[1] or change your business model or drive a digital transformation strategy. Hence, the first important question is, *does your company actually need to change?* And then the second one is *how deep this change needs to be?*

For example, if you're a department store, your entire business model may be already totally disrupted and hence you need to go through a process of very deep existential thought about what the future of your industry is; you need to be open in making incredibly significant changes.

If the Chief Innovation Officer is given a team, then amazing things happen.

– Tom Goodwin

But if you are a medium-sized regional bakery, your need for change is probably limited to figuring out if you should be doing local delivery, what partnerships you can do with global retailers or franchise programs - but this is not a digital exercise, it's more of growth exercise. So, you have to decide the degree of change that you need and then plan the way to go about that - and this will define if your company needs a CINO or not.

[1] Direct-to-consumer

On the other hand, those large traditional companies such as CPG, FMCG, Banks, Insurers, etc., probably need a CINO to, not only drive the cultural shift but also signal to the financial markets and the press that this company realizes the need for change. Therefore, the CINO must demonstrate a deep understanding of how the world is changing and how the company needs to react – this increases the level of confidence of shareholders and stakeholders and signals that this company's leadership realizes they need to change, and they have a plan about it.

In general, a CINO must be the champion of change - so they act as evangelists, they attract attention, and bring in the right people to form a team and drive the required change and cultural shift. The beautiful thing that a good Chief Innovation Officer does, is that they create momentum – they attract other innovators, they gravitate people with the right mindset and similar swagger energy – and then the transformation evolves organically. In this sense you could say that success for a CINO is, essentially to make themselves redundant as, in the long run, people take that on themselves.

Sometimes Chief Innovation Officers are given a microphone with no actual support.

– Tom Goodwin

If the Chief Innovation Officer is given a team, then amazing things happen. But by far, the most common problem is that Chief Innovation Officers are given a microphone with no actual support. For example, if they don't have a team, then they either just get fed up with the fact that they're by themselves and they can't do anything; and they leave, which is the most common or they just learn to become rather passive and sanitized - they no longer have difficult conversations, and they no longer feel that different.

In terms of profile and background, the Chief Innovation Officer must have a special mindset and business attitude. What you really need is either somebody who actually does have a track record of getting large companies to change or someone who has succeeded in running a company that has grown fairly quickly and extolled the values of innovation. People with such experience are keen to take risks and they're happy to immerse themselves in technology and they are obsessed with

customers. This is quite odd, but ideally, you want someone who doesn't actually need the job – for example unconventional, independent, and wealthy people who are going to fight for change. You need people who can challenge things and question decisions – ready to barge into the CEO's office and just say, what have you done? You've just cut my budget? How dare you? In reality though, what companies tend to have is 'career' Chief Innovation Officers who are not that experienced in this domain - they instead have evolved as such or been asked to take this professional path.

A risk I see linked with having an Innovation Officer and a dedicated innovation team is that the rest of the organization may feel disconnected from innovation. The moment you say there is this person, and they're going to be doing x, it implies that you're not supposed to do x anymore. Just imagine that you are in a company, and you're being quite creative, but then someone comes in as the Chief Creative Officer. There's a degree of human instinct, a reaction like, alright, that means I'm not supposed to do that anymore. And I think that the big danger is that having an Innovation Officer or a dedicated innovation team, makes people feel that innovation is beyond their role and responsibility. For example, when there is a separate innovation group, of a different culture - the 'crazy' ones, can make the rest of the people in the organization feel like they're even more corporate - because, simply, that's not expected of them anymore. This creates a situation where the innovation unit faces a risk of 'organ rejection' - where the rest of the body or the entity feels like that's a tribe of people that think totally differently.

Tom Goodwin is a writer, speaker and advertising and media provocateur and consultant. He has been voted a top 10 voice in Marketing by LinkedIn, one of 30 people to follow on Twitter by Business Insider, and a 'must-follow' by Fast Company. An industry commentator on the future of marketing and business, he is a columnist for TechCrunch and Forbes and frequent contributor to The Guardian, GQ, Ad Age, Wired, Ad Week, Inc, MediaPost & Digiday.

VINCENT PIRENNE

Partner & Founder Board of Innovation USA
BOARD OF INNOVATION US

No. Successful companies don't need a Chief Innovation Officer to be innovative. The Wright Brothers and Hendry Ford didn't have one, and it didn't stop them from inventing the plane and the car. When we think of great innovations, we don't think of Chief Innovation Officers. We think of passionate, creative, and stubborn entrepreneurs.

Do companies need a Chief Innovation Officer?

In 2021, innovation should be running through the veins of every company. Innovation is a necessary condition for growth and even for survival. Innovation is what will lead us out of the biggest crisis since World War II. Isn't it contradictory to give just one man or one woman the Chief Innovation Officer title? Shouldn't every employee be an innovation officer nowadays? And if every employee is an innovation officer, doesn't that automatically make the CEO also the Chief Innovation Officer?

Face it, my first impulsive answer to this question is wishful thinking. Not every company is a buzzing breeding ground for innovation. Most companies are not. The Chief Innovation Officer is not indispensable, it's not written in stone that every company should appoint one in order to stay innovative. But it would be a bridge too far to claim that the Chief Innovation Officer is obsolete.

A good Chief Innovation Officer knows when to switch between exploration and execution.

- Vincent Pirenne

Most companies need a Chief Innovation Officer since the role increases the accountability of the organization to deliver results beyond its day-to-day operations. In the past year, a lot of companies were totally absorbed by short-term problems and challenges. The Chief Innovation Officer went beyond the everyday humdrum and kept eyes on the long term. At the same time, the Chief Innovation Officer is the one who gets things done while the CEO focuses on the strategy. In the age where speed trumps perfection the Chief Innovation Officer knows when to put the pedal to the medal and implement good ideas.

So, a Chief Innovation Officer can definitely add value to most organizations. But of course, it all depends on the profile. A company that goes through a true transformation needs a different Chief Innovation Officer than a company that is still exploring new offerings and new markets. Internally oriented innovation ambitions require different skills and a different style of leadership than externally oriented innovation ambitions.

A good Chief Innovation Officer knows when to switch between the short term and between the long term, between exploration and execution. He or she also knows when to step up and when to back down. Some Chief Innovation Officers tend to centralize and control all

innovation initiatives, they act like the innovation police. Not all employees should be innovators, that is an illusion. But innovation is still way too versatile and goes way too fast for just one gatekeeper. The almighty, know-it-all Chief Innovation Officer is the best way to kill innovation.

Vincent Pirenne is a serial entrepreneur who founded Board of Innovation in NY. As a part of Board of Innovation he has advised some of the biggest global companies around the globe and solved some of their biggest challenges through meaningful innovation.

FRANÇOIS CANDELON

Managing Director and Senior Partner, BCG
Global Director, BCG Henderson Institute

A truly innovative company needs neither a Chief Innovation Officer (CINO) nor Chief Digital Officer. Innovation is sown into the very fabric of the firm. This shows up in the design of the firm's innovation operating model: a small, cross-functional board of decision-makers shapes the portfolio and steers large innovation projects. In this desired end-state, innovation is not distinct from the core business. Amazon and Microsoft are such firms of course and neither has a CINO or CDO - which illustrates that these roles are only needed temporarily.

A truly innovative company needs neither a Chief Innovation Officer nor Chief Digital Officer.

- François Candelon

Yet few firms are in a similar state to Amazon or Microsoft - in terms of having innovation sewn into their fabric. To jump-start their journey to being a high innovation performer, a CINO is a powerful lever.

Appointing a CINO, signals to the entire organization the importance of innovation. It also yields tangible success: our research has found that

companies that make innovation a top-three C-level priority are twice as likely to win in innovation. More qualified talent will seek to work in organizations prioritizing innovation, launching an upward spiral.

Simply appointing executives is a vane act, though. For innovation to be effective, the innovation function must have the power to drive *significant change* that the organization itself is likely to resist at first. Take, for example, this alteration to the operating model: shifting from measuring *sales growth* and *return on investment* today to *measuring quality* is an extremely difficult change - it requires *a shift in perspective*. 3M pioneered this measurement shift many years ago by introducing the *New Product Viability Index*. The index measures the percentage of sales generated by products that did not exist five years earlier. While it may be hard to define "new" products—are they completely new products or incremental innovation? — the metric exemplifies 3M's leadership in innovation. Introducing an innovation-focused metric, such as the percentage of sales from innovation, is not as intuitive as the more traditional metric of sales growth. Once the business unit team gets used to it though, the metric will help provide insights into whether sales growth is long-term, as opposed to one-off.

Appointing a CINO, signals to the entire organization the importance of innovation.

- François Candelon

In my work with CINOs, I have seen stellar CINOs and struggling CINOs. The defining difference between them has been *their ability to influence their respective organizations and shape the behavior of other stakeholders*. To do so, they need *credibility* and their own agenda.

Weak CINOs are often managers who have little to no experience in building a business or expanding it. Therefore, they lead innovation endeavors with theoretical strategic concepts and by establishing rigid processes. Stronger CINOs, by contrast, often join the firm from outside from comparable, yet more dynamic industries. Around a decade ago, for example, many innovation managers from the telecommunications industry moved to invigorate the energy sector. While an external hire is not mandatory, it inherently provides a perspective that is often conducive to success.

Do companies need a Chief Innovation Officer?

Effective CINOs eventually all have their own P&L responsibilities and mandates to drive business for the company. For example, the current CINO of a leading European utility firm started out overseeing singular activities, such as decentralized photovoltaic and battery solutions and smart city solutions. He not only acquired an array of new ventures and set up a small venture fund, but also formulated a clear vision for all future business activities for the utility and folded those together under one business with one P&L.

However, such responsibility is most often *earned*, not *awarded* from the onset. We often observe innovation happening in sub-critical units far away from the core. The acts of piecing those innovation activities together from adjacent business units, acquiring new ventures, and forming a new unit or function at the very center of the firm drive innovation and new business. That is what distinguishes great CINOs from mediocre CINOs.

François Candelon joined Boston Consulting Group in 1993. He has worked in several European countries, led BCG's global telecommunications work from 2008 to 2012, and spent 7 years in China where he worked with the most advanced tech companies.

ALEX ADAMOPOULOS

Chief Executive Officer
EMERGN

A few years ago, I was part of a CIO event held in New York. This event was an invitation-only conference that included 120 of the Fortune 500 CIOs and was designed to bring them together to share insights on several topics that they think about in their work. I had the opportunity to co-chair a private session with twenty of them and my co-chair was a Fortune 10 CIO. Our topic for discussion was whether the role of the Chief Digital Officer is needed or not. I can tell you that this was one of the liveliest meetings I've ever been in. There were lots of opinions being shared and we never did come out of that room with any agreement for or against the CDO role.

Today we have many people who hold this position in companies of all sizes, and it seems that organizations have trialled a few different organizational models to make it work. I believe there is still a bit of controversy about the value of this role, and I wonder if the Chief Innovation Officer role fuels the same type of debate. Similar to the CDO role, the introduction of a Chief Innovation Officer raises a series of questions:

- Does the introduction of this role negate others from taking the initiative to innovate?
- Will we need to create a new and separate budget to fund the role, any direct reports, and specific programs?
- How will this role effectively interact with other executive roles across business and technology?
- Are we collapsing business and technology and following the lead of this new role?

The questions won't stop there. Perhaps the most important question that the organization needs to answer first is what they mean by the word innovation. When it comes to their specific market, sector and customer focus, how is innovation defined for them? Innovation is contextual and fluid. It doesn't live in a corner office or a product lab. Many companies would argue that it's the mindset of the team and something they want to embed in their thinking and practice.

Perhaps the most important question to answer is what companies mean by the word 'innovation'.

- Alex Adamopoulos

Another consideration is what innovation actually addresses or impacts. Most of us might default to thinking about innovation as an advancement in technology, process, or something digital. Innovation can also include how organizations fund work and growth, how learning and development is advanced, how a company responds to diversity and social topics. In other words, the reach of innovation is vast and while we might not always use the word 'innovation' to describe our advancements and change, it might be the right word to use.

That said, a Chief Innovation Officer would need to have a very well-defined role with boundaries so there is clarity on what they will or won't get involved with. If the role centres around digital topics or business agility, then it needs to play well with others who have equal responsibility and influence for such things.

The last point to make is that some large enterprises have started combining the role of the CIO and CDO where the person is using both titles. Why? Because in some cases, it comes down to the person's experience and track record, allowing for the company to trust both functions to a single individual. This raises another important question: are we creating new roles because there is a clearly defined gap and need or are we reacting to a lack of talent and experience in our organizations and believe the way to solve some of it is to add another executive layer?

Alex Adamopoulos has a career of more than 30+ years working in technology products and services. Along with founding Emergn in 2009, he has served in several leadership roles and worked with some of the best people in the industry and in life, with an emphasis on building high-performing teams and developing leaders.

WARWICK PEEL

Innovation Leader, Asia Pacific
IDEASCALE

The jury is out. Innovation is just a bunch of cool kids sitting in bean bags doing Design Sprints[2] and playing with colourful post-it notes that end up in the bin. Wrong. In actual fact, innovation and new business models, reshaping the market is what will drive EBITDA post-pandemic and into 2023. Business-as-usual means dwindling revenues and a rapid runway to insolvency or bankruptcy.

Allow the Chief Innovation Officer to build an internal team and also hire outside-in entrepreneurs.

- Warwick Peel

So, yes companies need to invest in a Chief Innovation Officer, an executive who has both the strategic foresight to provide clarity in the

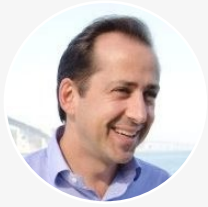
[2] Design sprint - Wikipedia

Horizon 3 vision[3], but also someone who can influence the CFO and execute mastery in balance sheet management to get Board sign-off on risk capital. This leadership role requires someone with the gravitas to speak the language of fail fast, lessons learnt; someone with an entrepreneurial capacity building across the organisation to transform the culture towards risk-taking, running experiments, and building new businesses.

The Chief Innovation Officer should report directly to the CEO and also present quarterly at board meetings. In fact, they should also sit on the Boards' innovation sub-committee that should have representatives from the audit & risk committee, and the HR & remuneration committee, along with other independent directors.

Done from lower ranks, the innovation manager does not have the weaponry to be able to fight the umpteen naysayers who resist change. So hire a Chief Innovation Officer and allow them to build both a combination of an internal team and give them the freedom to hire outside-in entrepreneurs whose task it is to find problems and throw wicked hand grenades of big bold ideas into new ventures and adjacent markets.

Warwick Peel is an innovation-led entrepreneur, currently driving innovation excellence across Asia Pacific with IdeaScale. Continuing to mentor founders, he is part of Inspiring Rarebirds Female Founders in 2020. A board member for the United Nations Association of Australia (Victoria), he is passionate about steering impact towards the UN SDGs. He is also an advisor to startups, mentor to FYA Young Social Pioneers, active in the A.I for Good community, as well as Co-Founder of Entrepreneurs&Co.



FREDERIC LALUYAUX

President and CEO
AERA TECHNOLOGY

All of us are connected and empowered by digital technology in ways we could not have possibly imagined as children. We are informed and empowered by a wealth of online information to be selective about the brands we choose to patronize. If companies cannot satisfy our appetites for constantly improving products, services, and experiences, we quickly shift our loyalties to those that can.

This reality has created a highly competitive business climate in which the big can no longer expect to quickly consume the small. Instead, we're seeing more instances where the quick and agile are devouring the slow and sedentary – which is why I believe sizable companies should consider hiring a Chief Innovation Officer.

[3] Enduring Ideas: The three horizons of growth | McKinsey

Do companies need a Chief Innovation Officer?

Every experienced leader knows that the bigger a company gets, the more difficult it is to turn the ship and embrace new and disruptive ideas. Indeed, companies like IBM and Microsoft are famous for waiting until the right moment to swoop into own promising technologies. But with technologies like artificial intelligence (AI), machine learning (ML), and cognitive automation accelerating the pace of innovation, clinging to such conservative approaches could prove disastrous for sizable organizations.

Senior innovation executives only exist in about 30% of Fortune 500 companies, according to an Egon Zehnder study[4]. That is surprising considering their potential for stimulating business-critical change. When given the license and budget to do so, effective Chief Innovation Officers can foster a culture that promotes ingenuity and continual improvements across the entire organization. What does that mean? It means they bring a startup mentality to the table. They encourage and reward calculated risk-taking – even if it does not lead to success or is an outright failure – in the interest of being more competitive and more relevant. They encourage their organizations to be more like Amazon, which includes "bias for action" in its leadership principles. "Speed matters in business," the company says. "Many decisions and actions are reversible and do not need extensive study." They remind their peers of companies like Facebook whose early motto was "move fast and break things."

The bigger a company gets, the more difficult it is to embrace new and disruptive ideas.

- Frederic Laluyaux

Chief Innovation Officers also engage in thought-provoking discussions with different leaders and operators aimed at shaking pre-conceived notions about innovation. They also push their teams to deliver products that meet the needs of the outside world instead of what they personally find cool and interesting.

Hiring a Chief Innovation Officer will not be for everyone. In some more technology-oriented organizations, that role is often handled by other CxO types. But in my experience, asking someone to deliver

[4] What Kind of Chief Innovation Officer Does Your Company Need? (hbr.org)

products or financial results on time and also spur innovation is unreasonable. Instead, organizations need someone whose main professional purpose is keeping them at the forefront of innovation. That person doesn't need a Chief Innovation Officer title. But they do need to wear that hat.

Frederic Laluyaux is an entrepreneur at heart, Fred founded his first company at the age of 23. Prior to launching Aera, Fred was the CEO of Anaplan, which he grew from 20 to 650 employees, and a $1B+ valuation. Before that, he held several executive positions at SAP, Business Objects, and ALG software.

PATRICK VAN DER PIJL

CEO, Best Selling Author, Speaker
BUSINESS MODELS INC.

It is becoming more and more important to look into the mix of the two ecosystems – execution and innovation: how you organize the innovation side versus the execution side, and how it all comes together. For example, in the context of a large software company, on the execution side there could be a product board facilitating the process of product development and management – ensuring that they keep executing, performing well, and scaling. On the innovation side, the focus would be on new ideas and the overall process - the innovation funnel. Hence, there needs to be somebody managing the governance, the structure, the responsibilities, the process, and the supply of ideas.

The CINO manages the innovation side, to ensure rapid iterations for product-market fit.

- Patrick Van der Pijl

The two sides – execution and innovation - require different capabilities, skills, and resources. For example, at IKEA, there's one team responsible for the process and there's another one responsible for the teams and together, they make sure that ideas scale much faster. However, you

must have somebody to manage and steer the innovation side and also connect with the execution side.

And this is precisely the role of the Chief Innovation Officer (CINO): He/she manages the innovation side, to ensure fast pace and rapid iterations towards a product-market fit, and also networks and communicates with the execution side – so they eventually take control over the innovation artifacts that mature throughout the innovation process.

Patrick Van der Pijl is the founder and CEO of Business Models Inc (BMI), a global design agency on strategy and innovation in 2009 with offices in US, UK, Europe, Australia and Taiwan. Patrick has a passion for strategic visioning, graphic facilitation and storytelling. BMI was awarded with the Pioneer Design Award for democratization of the innovation and strategy tools.

DANIEL BURRUS

CEO
BURRUS RESEARCH

Absolutely. As a matter of fact, in a couple of articles I wrote for Harvard Business Review I talked about the role of the Chief Information Officer and explained that actually, as information is not as important as how you apply it, we don't really need a Chief Information Officer, we need a Chief Innovation Officer.

The CIO should be the Chief Innovation Officer accelerating innovation using exponential technology.

- Daniel Burrus

Because technology enables innovation, it empowers innovation, so, I don't want to just look at information; the CIO should be the Chief Innovation Officer accelerating innovation using exponential technology. In another HBR article, I said the definition of CTO, is obsolete. The Chief Technology Officer should now be the Chief Transformation Officer,

because every product, every service, every process, can be transformed right now, using new technology and we need a C-Suite executive leading transformation who understands technology!

Daniel Burrus is one of the world's leading global futurists and disruptive innovation experts. He is the author of seven bestselling books including The Anticipatory Organization and a strategic advisor to leading C-Suite executives worldwide.

SCOTT D. ANTHONY

Senior Partner
INNOSIGHT

Do companies need a Chief Innovation Officer? Of course. In a world where technologies improve exponentially, competitive lines blur rapidly, customer demands shift suddenly and macroeconomic shocks occur frequently, innovation isn't a nicety, it is a necessity. Any organization with any reasonable amount of scale should have someone fully focused on maximizing their organization's innovation potential. The more foundational question is how to set up a Chief Innovation Officer for success.

The more foundational question is how to set up a Chief Innovation Officer for success.

- Scott D. Anthony

There are three keys to success. First, recognize that there are two fundamental archetypes for the role. Archetype one is the familiar role of spearheading the creation of new products, services and business models. This approach is based on the belief that certain types of innovations, typically ones that push further from the core business model, require focus and dedication to succeed. The role of the Chief Innovation Officer, therefore, is to actively identify attractive opportunity spaces and develop and test innovative ideas. Archetype two is the less familiar role of enabling, inspiring and evangelizing innovation within an organization. This archetype is based on the belief that the organization has latent innovation potential, and the Chief Innovation Officer's role is to release,

harness, and amplify this energy. This is the approach that DBS Bank in Singapore has followed. As part of a broader effort to transform from a slowly moving, risk-adverse bank to a nimble digital innovator DBS experimented with different ways to organize its innovation function. It ultimately decided to give the innovation function wide latitude as long as it adhered to one boundary condition: under no circumstance should it actually innovate. The innovation team at DBS coaches and catalyses innovators within DBS versus driving innovation on its own.

The second key to success is to ensure that the organization design and structure matches the chosen archetype. For example, archetype one can be less integrated into existing operations, though it shouldn't be too isolated. The incumbent's opportunity is to combine unique assets of scale with entrepreneurial energy to do something that no pure-play start-up could hope to do on its own. Fully isolating innovation opportunities denies that opportunity, and companies are better off just investing in or acquiring start-up companies.

Chief Innovation Officers need to have enough alien DNA to push the innovation frontier.

- Scott D. Anthony

This balance points to the third key to success: putting the right type of person in the role. Of course, Chief Innovation Officers naturally should be up to date in leading innovation practices, ranging from ethnographic research to the design and execution of market-facing experiments to address key uncertainties. However, it's even more critical that their DNA blends strands of an alien with that of a diplomat.

An alien brings a fresh perspective to problems. Innovation, after all, is something different that creates value. Chief Innovation Officers need to have enough alien DNA to push the innovation frontier. At the same time, Chief Innovation Officers need to have some diplomat DNA. They need to be able to "speak" core and alien, arbitrate differences between the two, know who to call to get things done and influence critical executives.

Balancing these two DNA strands is not easy. Too much alien gets rejected by the organization. Organizations that bias to bringing in external talent from the hot innovation company of the day are often

disappointed as impact fails to translate to a new environment. Too much diplomat creates a different problem—nothing ever gets done.

Chief Innovation Officers have their work cut out for them. After all, innovation isn't a natural act inside established organizations that are designed to do what they are currently doing more effectively and efficiently. The right person in the right role, however, can help to make innovation magic happen.

Scott D. Anthony is a Senior Partner at Innosight. He has written eight books, including most recently Eat, Sleep, Innovate (2020) and Dual Transformation (2017), which describe how forward-thinking organizations can navigate disruptive change and own the future.

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WHAT IS THE ROLE OF THE C-SUITE IN EMPOWERING INNOVATION?

Innovation in a corporate environment faces various challenges – related to culture, organizational silos, resistance to change, and slow pace when it comes to exploration of new ideas. There seems to be a consensus on the importance of strong leadership - to address these challenges and drive real innovation. But what exactly is the role of the leadership in shaping the 'innovation agenda' of the organization? How should leaders encourage innovation on a day-to-day basis? How could they inspire people and 'lead by example'? Should corporate leaders engage with the innovation process?

Enjoy unique perspectives from Rosemarie Diegnan, François Candelon, Lisa Seacat DeLuca, Tom Goodwin, Mark Settle, Marica Labrou, Scott D. Anthony, Alex Adamopoulos, Frederic Laluyaux, Warwick Peel.

What is the role of the C-Suite in empowering innovation?

ROSEMARIE DIEGNAN

Chief Strategy & Product Officer
WAZOKU

Innovation can only happen and be successful if the organisation's leadership *shares* and visibly *reinforces* a transparent and consistent framework for *what innovation means and how it will be applied across the organisation*. To be effective, the innovation framework must start with what may seem obvious, but is often unclear: *a specific and actionable definition of what innovation means to the organisation*. Each organisation will have its own, nuanced definition, but one I like to start with is:

Innovation is a process through which new products and services are developed, or existing products and services are enhanced, to create new forms of value.

Leaders must visibly reinforce a transparent and consistent framework for what innovation means.

- Rosemarie Diegnan

Once *innovation* has been defined for the organisation, you can begin to build an *innovation framework* that meets your specific objectives. There are three important aspects of the innovation framework:

- *Process*. Too often, organisations are reluctant to create a robust process around their innovation activities because they fear it will kill creativity and new ways of thinking. The opposite is actually true - because, without a clear process that everyone understands and is encouraged to work within, the innovation that happens is usually unfocused and disconnected from organisational objectives, resulting in little or no generation of new value. Instead, the leadership must provide a clear process that decentralises decision-making and

encourages and supports structured experimentation with regular stage gates and methods for killing unsuccessful projects (at least temporarily), and provides adequate resources and opportunities for those *promising projects* to thrive. The innovation process should encourage everyone to *experiment 'locally'* and *scale globally* rather than relying on a centralised team attempting to control all innovation activity. Meanwhile, the centralised team can act as an 'Innovation Centre of Excellence' that supports everyone throughout the organisation to innovate. Through this Centre of Excellence, the organisation can build a portfolio of innovation capability and resources that teams throughout the organisation can tap into to deliver against the wider organisation innovation goals.

- *People*. People are an organisation's greatest asset, but the value of this asset can only be realised if leadership actively seeks to tap into the potential of everyone – whether employee, contractor, freelancer, partner, supplier and even customers. Leadership teams that recognise and value this asset encourage and provide opportunities for everyone to innovate – not just during annual 'innovation competitions', but on a daily basis. Start small – encouraging everyone to improve their day-to-day working life – and watch your workforce gain confidence and begin to see themselves as *more than just employees*: they will gradually see themselves as *innovators*. By opening up innovation to everyone, leadership teams move innovation from a hidden, unattainable activity acted upon by others without any clear understanding of how it fits within the organisation, to a way of working that makes everyone feel confident in their ability to participate and contribute.
- *Platform*. With a clear process and an energised team of innovators, leadership must also ensure that they have put the right tools in place to allow innovation to happen across the organisation in a consistent, transparent, and coordinated way. With an open platform of problems, ideas, projects, successes, and failures, everyone can learn from what has been tried but failed and what is being actively worked on to avoid duplication and encourage collaboration. The innovation platform becomes the organisation's institutional memory to ensure that no idea is ever lost. An idea or project that is not right today may become the innovation for tomorrow, and being able to quickly reactivate that idea, along with all the learning, trials, and failures, will accelerate your ability to benefit from it when you are ready.

Now that you have your three 'P's in place, the hard part happens – you need to make sure that the organisation is focused on the right things. This is where leadership has to take an active role in guiding their

teams – both by setting the innovation agenda and ensuring the organisation is focused on the right problems.

As leadership teams, we are usually very good at setting the business strategy and ensuring that all the functions are acting in accordance with that strategy. When it comes to innovation, however, too often there is no clear line between the innovation activities and the overall business strategic objectives. To ensure that innovation brings real value, leadership must be clear about the areas in which the organisation is prepared and able to invest. Identifying innovations that will never be implemented at scale because they are inconsistent with the overall business strategy, won't receive the necessary resources, or bring the desired value to the organisation, is a waste of time and ultimately demotivating.

Leadership must do one more thing: stop asking for solutions and start asking for problems.

- Rosemarie Diegnan

Instead, leadership must clearly articulate the innovation agenda so that it encourages the right mix of explore (innovating for tomorrow) and exploit (innovating for today) activities. Getting this balance right will allow the organisation to grow the core while building for future growth.

To get that balance right, leadership must do one more big thing: stop asking for solutions and start asking for problems. This may seem counterintuitive, but to be truly successful, the organisation should be identifying the problems they are trying to solve. Focus on asking the right questions – that are neither too broad as to be too abstract (how can we improve the business) or too narrow as to really be solutions masquerading as questions. Take the time to really think about the problem, looking at it from many different angles, and only then start looking for solutions.

Rosemarie Diegnan is an experienced product leader having led product teams across a number of internet businesses in the USA and UK. Rosemarie joined Wazoku in 2012 and has led the design and delivery of its market-leading innovation suite including an Enterprise Innovation Platform, Idea Management Software and Open Innovation Marketplace.

What is the role of the C-Suite in empowering innovation?

FRANÇOIS CANDELON

Managing Director and Senior Partner, BCG
GLOBAL DIRECTOR, BCG HENDERSON INSTITUTE

Getting serious about innovation entails public C-level commitment and some heartfelt contemplation of the goals and ambition. The key role of leadership is to elevate the importance of innovation and set the direction for the firm. Many companies already fail here. Trying to innovate because it is en vogue will most certainly flounder. Therefore, leadership must be clear on why it wants and needs to innovate—and what it wants to achieve. The ambition should relate to a long-term goal, such as a five-year revenue growth target for the entire firm. Subsequently, leadership can define a strategy to reach a specified target. At best, the strategy should lay out the opportunity spaces in which the firm is best suited, and those where it is not.

Leadership must elevate the importance of innovation and set the direction for the firm.

- François Candelon

Firms often mistake the pursuit of trends for a strategy. All too often, they focus on specific technologies that receive vast attention, but not enough on customer needs and whether those technologies are relevant to attaining the firm's goals. I have observed several firms deciding to invest heavily in Artificial Intelligence - the single most hyped technology field to invest in. Make no mistake, AI is a powerful technology, and applying it can yield impeccable results. But the decision to invest in AI must be derived directly from the firm's strategic goals. Siemens' mobility division, for example, is using AI to connect critical railway infrastructure and train data in its cloud software solution to help customers improve the safety, efficiency, and flexibility of their operations. By starting with user needs, Siemens successfully used AI to achieve strategic goals. The Siemens example also illustrates another important C-level priority: to steer and safeguard resources. Funding for innovation must be protected from the pressures and urgencies of daily business.

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The C-level is also instrumental in providing innovation with a clear, incontestable mandate. Such a mandate is important for two main reasons. One, to ensure that innovation operating models that work across functions are effective. And second, to empower organizations to make risky, "'non-consensus" bets. For an innovation agenda to achieve strategic advantage, it must deviate from the market consensus.

Funding for innovation must be protected from the pressures and urgencies of daily business.

- François Candelon

The role of CEOs has to be singled out for innovation. CEOs serve as antennae and impulse givers. No other individual is as intertwined into the firm's ecosystem, and therefore able to pick up weak signals and connect them into a bigger picture. The CEO of a software-as-a-service unicorn I recently spoke with, reflected on his role and remarked that he often felt he was in seemingly unrelated conversations with partners, investors, clients, or competitor CEOs. While he did not pursue any specific agenda, over the course of several weeks, new ideas for a product or a twist in strategy would emerge for him - as a result of weeks of these unrelated conversations, reading, and reflection. When he introduced those ideas to his C-level team, they sometimes seemed to appear out of nowhere.

Jeff Bezos, the CEO of Amazon, had a deep personal involvement in developing the Amazon Fire phone. His involvement made it no less a failure. However, that failure paved the way for the development of Amazon Echo, which is now Alexa.

Effective CEOs manage to pick up market signals and transmit them into their organizations. Most CEOs of innovative companies have their own strong opinions but, at the same time, they are open to changing their priorities based on new evidence. They empower their teams to take decisions themselves after providing them with impulses and, most importantly, understanding their own limits in driving solutions.

François Candelon joined Boston Consulting Group in 1993. He has worked in several European countries, led BCG's global telecommunications work from 2008 to 2012, and spent seven years in China where he worked with the most advanced tech companies.

What is the role of the C-Suite in empowering innovation?

LISA SEACAT DELUCA

Director Emerging Solutions, Distinguished Engineer
IBM

I've been really lucky at IBM, because innovation is strongly encouraged – it comes from the top down, where our senior leaders stress the importance of innovation in getting people excited to learn more and engage. By having that culture of innovation, and acceptance of innovation, it's made it easier for me and other IBMers to become prolific inventors.

It is important to include people in the decision-making process.

- Lisa Seacat DeLuca

On the other hand, I think that C-Suites can squash innovation - for example, when people feel that they are always being told ‘no’ without a justification they can become disheartened. A lot of C-Suites are all about the strategy and vision of the company and moving towards “how do we grow as a business”? So, in many cases, they just have to say no. But it is important for the C-Suite to understand how to say no in a way that still encourages their employees to continue to grow, and focus their innovation towards the projects that matter to the company.

It’s important to include people in the decision-making process. By dictating to people "This is how it's going to be done", you’ll likely get a lot of pushback, while the decisions have already been made. This defeats the purpose, and people get upset and angry. But if you include people in the decision-making process, and you hear both sides of why it's a good or bad idea, then as a group, everyone feels like their voices are heard, when trying to figure out what the ultimate decision or direction of the company is going to be. That’s one mistake, a lot of the C suite do - just share the outcome as opposed to including people in that decision-making process.

Of course, it is hard to include everyone in the decision-making process. One way to have that extended reach is to hold office hours where, those C-suites and mid-level executives, talk about the kind of things on their mind and stuff going on at the company. It's a regular reoccurring

meeting, checkpoints where you're constantly having that exposure to executives, and everyone can ask questions and provide feedback.

Lisa Seacat DeLuca is the Director & Distinguished Engineer of Emerging Solutions within the AI Applications business unit within IBM currently focused on modernizing our Weather Business Solutions and the Aviation portfolios. Lisa holds a Masters of Science in Technology Commercialization from the University of Texas McCombs School of Business, and a Bachelors of Science in Computer Science from Carnegie Mellon University with minors in Business Administration and Multimedia Productions.

TOM GOODWIN

Co-Founder
ALL WE HAVE IS NOW

The C-Suite has an important role to play for innovation - they are the ones who should be shaping the vision and setting the broad parameters and objectives – thus defining the space in which the company must innovate. Thus, the C-Suite must truly understand what needs to happen in the context of innovation and then give it enormous support - where support is not only financial or comms, i.e., just writing the check and doing the opening speech for innovation, but also cultural.

The C-Suite must create the right innovation agenda.

- Tom Goodwin

The power of the C-Suite is actually in their ability to shape the innovation culture of the organization – it is their responsibility to create the right innovation agenda and use every opportunity to reinforce the fact that change is required to achieve the associated business goals. It is the consistency and the commitment to this innovation agenda, along with the signals on the importance and the prioritization of innovation, that shape a true culture of innovation.

However, as most C-Suites are more interested in things that have a quicker payback, they tend to be more interested in initiatives that involve less personal risk. As a result, they often don't mean their statements and commitments to innovation: companies are forced to say the 'right' things and to do the right dances – for example, certain companies feel

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they are supposed to have an opinion on blockchain and they are expected to be talking about crypto; others believe that they are supposed to be talking about 5G, and AI. This often leads to cynical, disingenuous projects, which are not really based on actual transformation and they don't get enough support. So, I think the C-Suite need to have long, deep, hard conversations about the degree to which they really need innovation – they need to be honest about the reality and the ambition of the innovation projects.

Tom Goodwin is a writer, speaker and advertising and media provocateur and consultant. He has been voted a top 10 voice in Marketing by LinkedIn, one of 30 people to follow on Twitter by Business Insider, and a 'must-follow' by Fast Company. An industry commentator on the future of marketing and business, he is a columnist for TechCrunch and Forbes and frequent contributor to The Guardian, GQ, Ad Age, Wired, Ad Week, Inc, MediaPost & Digiday.

MARK SETTLE

7X CIO and Author

C-suite executives play a critical role in licensing innovation within their companies and also ensuring that innovation pays practical business dividends. Although it might seem a contradiction in terms, innovation in commercial enterprises needs to be managed to ensure that time and energy isn't needlessly wasted pursuing ideas that are unlikely to have any practical benefit.

Leaders need to also reward project teams that have failed.

- Mark Settle

Commercial enterprises are not academic universities conducting basic research to discover new mathematical theorems or invent new technologies. They are money-making ventures seeking to adapt new concepts and tools to their business models in ways that can increase their revenues or profitability.

All too frequently innovation is described in terms of new technologies but innovation can also occur by adopting new methodologies such

What is the role of the C-Suite in empowering innovation?

as Agile development[1] or DevOps[2] engineering. It can also occur simply by recruiting new staff members who have deep expertise in technologies that a company is already employing. For example, a company that has experimentally moved 10% of its computing workloads to a public cloud service would be well advised to hire individuals with deep expertise in cloud operations if it plans to move an additional 50% of its legacy workloads to the cloud over the next 18 months.

C-level execs must ensure that innovation is a team sport within their organizations.

- Mark Settle

C-level executives are responsible for ensuring that innovation is a team sport within their organizations. They should insist on *developing the broadest possible pipeline of innovation opportunities*, develop explicit criteria for funding individual projects, establish interim milestones for innovation initiatives and hold project teams accountable for achieving those milestones before continuing to fund such efforts. The scope of the innovation pipeline and the progress of approved initiatives should be communicated as broadly as possible across the corporation to mobilize the tribal knowledge of the entire organization.

Large companies frequently have employees who possess skills, knowledge, or past experience that can directly contribute to the selection, planning, and conduct of innovation projects. All too often, their expertise comes to light after something has gone wrong or a project has failed to achieve an interim milestone. They politely inform the sponsors or leaders of such efforts that 'I could have told you that if I had known what you were trying to do'.

It's obvious that C-level leaders should praise and reward individuals and teams who have spearheaded successful innovation projects. Perhaps more importantly, they need to *reward project teams that have failed* and, more specifically, celebrate the learnings obtained through failure. *Failing fast and failing forward* are popular catchphrases within the high tech startup community but these concepts are equally applicable to innovation in large companies.

[1] Agile software development - Wikipedia
[2] DevOps - Wikipedia

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Finally, C-level executives bear the greatest responsibility for achieving maximum business benefit from successful innovation projects by scaling the enterprise-wide adoption of such initiatives. It's great that a mobile application development team has doubled their delivery velocity through the use of DevOps practices, or that robotic process automation (RPA)[3] tools have doubled the productivity of the accounts receivable team, or that a new machine learning (ML) algorithm has reduced stock-outs in the metal stamping plants by 50%. But what are senior executives doing to accelerate the adoption of these DevOps, RPA and ML methodologies throughout the corporation? Large organizations spend way too much time conducting prototyping projects and proof-of-concept experiments. They need to overcome their natural lethargy and double down on innovation investments that show early signs of success and scale them as rapidly as possible throughout their companies.

Mark Settle is a seven-time CIO, three-time CIO 100 award winner, two-time book author. Seven members of Mark Settle's former management teams are currently sitting CIOs in publicly traded companies.

MARICA LABROU

Senior Business Advisor • Writer • BoD member
DEPA, ENTERSOFT, FOCUS BARI

There is plenty of discussions around innovation in recent years - there is plenty of studies, articles, courses, conferences, congresses, even prizes. There is little understanding, though, on the actual accelerators and inhibitors of applying innovation in a real business environment.

The stance of C-level executives, and especially that of the CEO, plays a tremendously decisive role in this direction. Most often than not, it is the Executive Committee that gives the innovation "tone" within a company. There might be lots of innovation initiatives presented and even decided, but only those "blessed" and embraced by top management will proceed successfully. The reason is simple: if top management approves, supports, and encourages an innovation proposal, then resources (capital, people, tools, *time*, and *effort*) are relatively easy to be provided. In this way, the innovation project is highly likely to end up successfully.

Nevertheless, innovation initiatives are mainly *not* leadership's initiatives. They *should not* be leadership's initiatives, either. The best innovative ideas come from the "people in the field", those who are operationally

[3] Robotic process automation - Wikipedia

involved with the products and processes of the company, those who "breathe" in the heart of business operations. They know best; they are the first to face the problems and the first to think of the solutions. Often, they are the ones to think further to what they are asked for, and this is where innovation starts! These people should be empowered to submit their proposals, they should be encouraged to provide bold aspects, they should be allowed to become disruptive if this seems to be the most appropriate approach.

It is the Executive Committee that gives the innovation "tone" within a company.

-Marica Labrou

For all the above to be realized, there must be *trust* between leadership and employees, both directions. If the employees feel trusted, they will make the extra mile, they will think beyond what is expected, they will submit audacious, innovative proposals. If the leaders are open-minded and give their trust, they will establish a productive environment where bold ideas and accountability come together, where many different alternatives are tried, where mistakes are not regarded as crimes. If leaders are short-sighted a culture of fear and low engagement will prevail. No innovative approach or idea can be developed or flourish in such environments.

Except for leadership commitment, innovation also needs the willingness to invest. There is no such thing as "cheap" innovation; if it is "cheap", most probably it is not innovation at all. Money is only one part of the investment equation; there are other particularly important parts, too: technology, processes, best practices from outside, *change* perspective. However, investment-of-time and freedom-to-fail-again-and-again are the two most critical parameters. The above being approved by Leadership is the most robust example of "walking the talk" regarding innovation. Authentic leaders, who respect their teams and their people, are also respectful toward innovation proposals. They are also clever enough to realize that employees' proposals are highly valuable for the organization, therefore these leaders build and encourage an open-discussion environment where people feel responsible and proud to express their opinions toward the common shared vision of the company. The Leaders are

there to ensure that any innovation initiative approved and applied is contributing to the long-term purpose of the company.

Today's complex business environment is evolving day-by-day in numerous directions. One must be innovative to be kept in the game! C-level executives have all the authority to embrace innovation for the benefit of their organizations and for their own career advancement, too! The ones who miss adapting will soon be found out of the "field".

Marica Labrou is a senior Business Advisor, BoD member (DEPA, Entersoft, Focus Bari), Business books writer. More than 30 years of successful executive experience in major multinational and Greek companies (BSH, HP, Microsoft, SingularLogic, KAFKAS), the last 15 years in CEO roles. Chemical Engineer and MBA holder.

SCOTT D. ANTHONY

Senior Partner
INNOSIGHT

One of the most impressive examples of innovation-driven transformation comes from Intuit, a financial services software company. More than a decade ago, Intuit's founder and still active Board Chair Scott Cook[4] set a goal with then-CEO Brad Smith[5] of making Intuit one of the world's most innovative companies. In 2017, Intuit achieved this goal as Fast Company named it as one of the top 10 most innovative companies in design, and, in 2019, Innosight research identified it as one of the top 20 strategic transformations of the past decade. From 2010 to 2019 its stock price increased by 25 percent a year. Intuit's innovation transformation was multi-faceted, of course, but there are two general lessons innovation-minded executives can take from it.

The first lesson is what Cook dubs "learning by doing, by everyone." Leader role modelling is a staple of any kind of change management process. That can be a real challenge for leaders seeking to encourage innovation habits, because those habits are probably least familiar to them. "The top execs have to change," Cook said in a panel discussion at an Innosight event in 2018. "It is their habits that drive the company, and it is their habits that are the barriers to change."

Cook learned that the best way for leaders to make the transition was to get them to experience new ways of working first-hand. So Intuit's top 25 leaders formed groups of three and performed foundational research on pre-determined topics, such as changes in finance in China, Artificial Intelligence, and how young people interact with computing. "The leaders

[4] Scott Cook - Wikipedia
[5] Brad D. Smith - Wikipedia

in the case were actively driving the discovery process," Cook noted. "They couldn't delegate it. A number of them wanted to delegate to their teams because that's what they do. But not in this case. You had to do it yourself, which means you had to be on the plane to China."

Of course, changing 25 people doesn't change the culture. Hence the "by everyone" part of Cook's advice. By analogy, he described how US auto manufacturers struggled for decades to decode the famous Toyota Production System, even though Toyota happily shared its process openly and widely. "If you send one guy to see the new process," Cook said, "and that guy gets all excited and comes back and tries to teach the other 10,000 people it never works."

Leaders should use "discovery" questions to encourage innovation.

- Scott D. Anthony

So, preceding a major company meeting, Intuit had all 8,000 people "take a day to do our innovation process from the beginning of understanding the customer problem all the way through to designing the experience," Cook said. At the meeting, teams would bring in what they observed and work on developing solutions to the customer problems they observed.

The second lesson is to use "discovery" questions to encourage innovation. One of the quickest ways to learn how a company really thinks about innovation is to be a fly on the wall during budget discussions or project reviews. Those are magic moments where words are given to often unstated assumptions. It happens when a leader draws in their breath and speaks. Do they make a declarative statement? That could signal that the company suffers from what Google calls the HIPPO problem, where decisions are made by the highest-paid person's opinion. Do they ask a thoughtful question? That could signal that it is an environment that tolerates collective exploration of the unknown.

"A company grows to reflect its leaders. The questions leaders ask are really important," Cook said. "We had to make sure we were asking the questions that insisted and evoked the behaviours that we were teaching. Questions like, 'What experiment are you going to run next week?' If they don't have an experiment planned for next week, let's talk

about that. If they have a proposal, we'll ask, 'What experiments did you run that prove out the leap of faith assumptions?' These are all the things we teach, but if we're not asking for it, if we're looking at the spreadsheet and saying that looks good and are not asking for how they got to the answer we're not teaching and re-enforcing the same behaviours."

We call "what experiment are you going to run next week?" a discovery question that encourages dialogue and opens possibilities versus a delivery question that forces a decision and narrows choices. Another way to frame the distinction is that discovery questions create possibilities, while delivery questions demand proof. You can prove the past, but you need the possibility to innovate and create the future. Other great discovery questions include the Google classic "what would it take to make something 10x better than what exists?" or thought leader Roger Martin's[6] classic "what would need to be true for this to be interesting?"

Learning by doing, by everyone, coupled with leaders persistently asking discovery questions helped Intuit to transform. The same practices can empower and enable innovation inside any organization.

Scott D. Anthony is a Senior Partner at Innosight. He has written eight books, including most recently Eat, Sleep, Innovate (2020), from which this piece was adapted, and Dual Transformation (2017), which describe how forward-thinking organizations can navigate disruptive change and own the future.

ALEX ADAMOPOULOS

Chief Executive Officer
EMERGN

I can unequivocally say that the role of the C-Suite in empowering innovation must be a top priority - with no exceptions. For years, studies on change programs and large-scale transformation tell us that the failure of such efforts is often due to the lack of senior management support. There's nothing new under the sun, this will always be the case. If your leadership isn't behind it then it's already failed, you just don't know it yet.

The innovation agenda for the leadership starts with the organization's stated values and guiding principles. We all have them. Whether *we live by them* is the question. It's not always straightforward but one of the best practices we can employ in order to support innovation is to always be asking *if our decision-making criteria reflect our values*.

[6] Roger Martin (professor) - Wikipedia

What is the role of the C-Suite in empowering innovation?

Our approach to decision-making largely influences the ways we view and support innovation. The mistakes that leadership teams often make when it comes to supporting innovation is that they see it as someone else's responsibility and not theirs. To avoid this trap, leadership teams need to practice the repetition of their *stated values* and *guiding principles*. We can do that by asking if this investment, this initiative, this decision represents what we say about ourselves and what we believe.

Innovation thrives when it's grounded in an organization that lives what it says it believes. This starts with the C-Suite. It's the old Roman proverb that 'fish rot from the head', as leaders we're all at risk of not leading well and not remaining consistent in the support of needed change and innovation in our businesses.

If leadership isn't behind innovation then it's already failed, you just don't know it yet.

- Alex Adamopoulos

Regardless of who has been tasked with leading innovation in the business, the C-Suite can *lead by example* and keep the organization moving in the right direction by being deliberate to:

- *Communicate often with the company* on the importance of driving positive change and innovation in the business.
- *Being present* to participate in key meetings on the topic of innovation even if they're not leading the discussion.
- *Actively engage leaders* from all parts of the business to do the same.

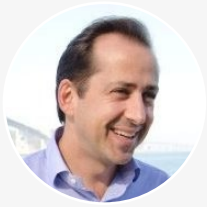
One great example I witnessed in a large enterprise was a decision that the C-Suite made to have a glossary of terms published that had their definitions of important words. Words like, *agile, transformation, change*, and *innovation* were all defined in the context of that company. This was distributed to every employee and used as a point of reference to get everyone on the same page when it came to describing what they meant by such words. It helped establish a level of continuity in how everyone looked at the business.

What is the role of the C-Suite in empowering innovation?

Peter Drucker[7] often said that "culture eats strategy for breakfast" – this inferred that the way leaders shaped and led their organizations had the most effective impact vs only employing a strategy effort. Another way to think about this would be to say that *the purpose of the leadership in any company is to foster an innovative (discovery) culture* - and that will ultimately shape the strategy - it doesn't just end with a statement.

Innovation is a big word with many facets. It permeates the entire being of the business and you want the leaders thinking about what it means to them, in their role and function. It also means that we then come together to ensure our respective views are aligned with the company's purpose. It's the stated values that then help us as leaders to always be asking better questions that lead to better outcomes.

Alex Adamopoulos has a career of more than 30+ years working in technology products and services. Along with founding Emergn in 2009, he has served in several leadership roles and worked with some of the best people in the industry and in life, with an emphasis on building high-performing teams and developing leaders.



FREDERIC LALUYAUX

President and CEO
AERA TECHNOLOGY

Instilling a spirit of innovation in an organization cannot only be about words. The C-Suite has to play an active role in making it happen at every level of their organizations. In some instances, this will mean rolling up their sleeves and working with peers and colleagues to determine what should come next and how to deliver on that. In other cases, it will mean giving people in product development and marketing organizations the aircover and independence to pursue innovation they believe might set their company apart and quite possibly even change the world.

That does not happen with traditional cultures that reward success and punish failure. Entrepreneurs rarely operate this way, and it's one of the reasons they're sometimes able to outflank much larger and better-resourced competitors. Their executives lead by example. They are transparent about business goals and priorities. They genuinely share their own successes and failures around innovation. And they do their utmost to relay any useful lessons they've taken away from their experiences.

I think too many leaders believe it's fine to point the way to innovation, then turn around and hand the responsibility for it over to someone else, such as their Chief Innovation Officer or Chief Digital Officer. Sure, that

[7] Peter Drucker - Wikipedia

What is the role of the C-Suite in empowering innovation?

can work. But is it working as effectively as it could or should? No way. A leader can't say "I'm the CEO, that's your job, now go do it" and expect to achieve the outcomes that the C-Suite, board, or shareholders desire.

Do not allow your teams to fall prey to paralysis by analysis.

- Frederic Laluyaux

Senior leaders should play a more active role. When they do, businesses invariably do better. In fact, among companies that outperform their peers on innovation (as measured by their share of sales from new products and services), nearly 90% demonstrate clear C-Suite ownership compared with only 20% of underperformers, according to a recent Boston Consulting Group survey[8].

In addition to playing an active role, senior leaders also need to promote *meaningful brainstorming*. This might involve flattening the organization so diverse groups of talent can come together and openly exchange ideas without fear of recrimination from someone holding a bigger title. It also means trying to strike that fine balance between giving people enough time to mull their ideas while nudging them toward some conclusions.

With a few leading ideas in hand, the C-Suite must then put ruthless execution behind them. For an idea to become useful, it has to make it into a work project and be tested. Senior leaders cannot allow their teams to fall prey to paralysis by analysis. They must keep everyone's eyes on the prize and implement processes to facilitate the delivery of products to market.

Frederic Laluyaux is an entrepreneur at heart, Fred founded his first company at the age of 23. Prior to launching Aera, Fred was the CEO of Anaplan, which he grew from 20 to 650 employees, and a $1B+ valuation. Before that, he held several executive positions at SAP, Business Objects, and ALG software.

[8] CEO Innovation & A Commitment to Innovation | BCG

What is the role of the C-Suite in empowering innovation?

WARWICK PEEL

Innovation Leader, Asia Pacific
IDEASCALE

The role of the C-suite in advancing innovation is to intimately understand the Chief Innovation Officer's vision, and to be able to articulate the mission to drive the culture of innovation. More importantly, the C-suite must activate innovation and get the board to sign off on a long-term innovation agenda with a serious commitment to risk capital and adapting to change. The C-suite ultimately needs to also drive change in the boardroom to bring on more Entrepreneur-in-Residence type Non-Executive appointments to set the organisation up to deliver value for all stakeholders in what are two tectonic plates shifting; digital and innovation governance, and intergenerational diversity.

Warwick is an innovation-led entrepreneur, currently driving innovation excellence across Asia Pacific with IdeaScale. Continuing to mentor founders, he is part of Inspiring Rarebirds Female Founders in 2020. A board member for the United Nations Association of Australia (Victoria), he is passionate about steering impact towards the UN SDGs. He is also an advisor to startups, mentor to FYA Young Social Pioneers, active in the AI for Good community, as well as Co-Founder of Entrepreneurs&Co.

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4

WHAT ARE THE ESSENTIAL ROLES, AND SKILLS IN A TRULY INNOVATIVE ENVIRONMENT?

A truly innovative environment requires a certain mindset, a great innovation culture. But it also needs certain skills and profiles to be there.

We are asking our leaders to discuss particular innovation roles like the 'Innovator', the 'Inventor' or the 'Innovation leader' and also to spot the essential skills for aspiring innovators. Scott D. Anthony, Mark Settle, Eric Martin, Patrick Van der Pijl, Davide Matteo Falasconi, and Carlos Oliveira share their unique views.

What are the essential roles, and skills in a truly innovative environment?

SCOTT D. ANTHONY

Senior Partner
INNOSIGHT

A few years ago, DBS, a leading bank based in Singapore, was visiting Netflix to learn leading-edge practices to improve its effort to become more agile and innovative. At one point, a DBS executive started to grumble. “All of this sounds nice,” the DBS executive said. “But let’s be honest. You just hire the best and brightest young engineers from schools near Silicon Valley. We can’t replicate that.”

A leader must create the conditions where employees can release their inner innovator.

- Scott D. Anthony

The Netflix executive paused and asked the DBS team to say more about their engineering team. “How old is your average engineer?” the Netflix executive asked. The DBS executive said that its average engineer was in their 40s. “So is ours,” the Netflix executive said. “In fact, we hire many of our engineers from banks like you. We just get out of their way.”

Companies that look with envy at organizations that seem to have cultures of innovation, which we define as ones in which the behaviours that drive innovation success come naturally, often assume that their people just aren’t up to the task. Our experience is that just about everyone has an innovator inside of them. Spending time with children reaffirms this viewpoint. You don’t have to teach children to be curious and try new things. They do it naturally. We systematically unlearn how to behave like innovators.

That means that the question isn’t really about roles, skills, and profiles. Rather, it is about encouraging specific behaviours and shaping the environment to support following those behaviours consistently and reliably. Our research and field work suggests that innovators follow five specific behaviours.

What are the essential roles, and skills in a truly innovative environment?

- First, they are curious. Innovators regularly question the status quo. A simple way to encourage curiosity is to make a regular habit of asking questions like, “What if?” “How might we?” or “Why?” Those simple prompts can surface innovation opportunities.
- Second, they are customer-obsessed, seeking out problems that are worth solving. Encourage colleagues to triple the amount of time they spend with customers, suppliers, stakeholders, colleagues or whomever is their innovation target. No matter how much time they are spending, it is not enough.
- Third, they are collaborative. One of the most persistent findings in the innovation literature is that innovation magic happens at the intersections, when different mindsets and skills collide. Help people get to intersections by bringing external voices into your organization or by encouraging employees to attend trade shows in different industries or find other ways to explore different fields.
- Fourth, they are adept in ambiguity. Every innovative idea starts its life partially right and partially wrong. Success comes not from detailed analysis and research but from trial-and-error experimentation. Give your team the tools and space to run experiments and learn.
- Fifth, they are empowered. You can’t do something different that creates value—our definition of innovation—unless you do something. Lower the bar to act, accept the fact that not everything is going to work, and recognize that’s a good thing.

These behaviours are all relatively straightforward. You can, of course, get better at each of them through structured practice with the guidance of a skilled expert. However, the biggest thing a leader can do is create the conditions where employees can release their inner innovator.

The easiest way to do that is to encourage what Harvard Business School Professor Amy Edmondson[1] calls intelligent failure. Not all failure is good. Not all failure should be encouraged. Failure can be painful. When it could have been prevented by the proper training, following known standard operating procedures, or more thoughtfully approach uncertainty, it should absolutely be punished. However, in circumstances where an innovator designed and executed a risk-bounded experiment to learn about something that was otherwise unknown and unknowable, a good thing has happened. If the experiment succeeds, great, you proceed on. If it doesn’t, great, you have learned what doesn’t work in an efficient and effective way. You have “failed,” but in an intelligent way.

Some organizations have rituals to celebrate intelligent failure. The Tata Group, India’s largest conglomerate, for example, gives out a

[1] Amy Edmondson - Wikipedia

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prize every year called *Dare to Try*. As the name connotes, the prize goes to a team that tried to do something that did not work but learned something during the process. Spotify has a "failure wall" where people publicly share times when they failed, removing failure's stigma. Supercell, a Finnish gaming company owned by Chinese giant Tencent, publicly says Cheers to Failure by popping open a bottle of champagne when a development team admits defeat.

Innovation is not mystical. It is not magical. It is a discipline that can be mastered, measured, and improved with careful practice. Release the innovators in your organization by encouraging the five behaviours that drive innovation success and supporting intelligent failure. You will be amazed by what your people of achieving—with the right support.

Scott D. Anthony is a Senior Partner at Innosight. He has written eight books, including most recently Eat, Sleep, Innovate (2020) and Dual Transformation (2017), which describe how forward-thinking organizations can navigate disruptive change and own the future.

MARK SETTLE

7X CIO and Author

Successful business innovation requires a unique marriage between individuals possessing *deep domain expertise* in current business operations and others who have *intimate familiarity with new technologies* or methodologies. Many innovation projects have fallen flat on their face because they produced stunning technical results that had limited applicability to current business operations. Conversely, innovation projects planned and executed by current business practitioners generally produce marginal improvements in operational performance. Existing practitioners may be delighted with 10-20% gains and find it difficult to imagine how performance could be improved by 50% or more.

In recognition of this fact, the first step in many innovation projects is to immerse the project team in one or more operational units to see how work is actually being performed today. Invariably, the team's problem statement and initial plans will be significantly altered after they've spent four weeks on the manufacturing floor, at a retail outlet, or in the customer service center. The CIO of a well-known American airline once told me that he sent a two-person team to a nearby airport every Thursday to observe the way passengers were using self-service kiosks to check in for their flights. This team always returned to the office with two or three ideas about how to make the check-in experience more intuitive and error-free.

What are the essential roles, and skills in a truly innovative environment?

Licensing innovation in a commercial enterprise is a difficult balancing act. Many companies try to create a dedicated environment for innovation by establishing physical facilities and reserving explicit staff time to pursue innovation ideas.

The two enduring traits of successful innovators are a healthy curiosity and a proactive compulsion to learn.

- Mark Settle

Others create a wholly separate group whose sole job is to explore innovation opportunities. Either scenario can result in *an undesirable cultural distinction* between the 'cool kids' who get to play with new tools in a dedicated sandbox and 'the rest of us' who are simply expected to maintain current operations. While there's no universally accepted model for organizing and managing effective innovation teams, experience has shown that it's generally better to *cycle interested staff members* with proven accomplishments through such teams rather than setting innovation teams apart in wholly separate organizations and physical facilities. Too many innovation labs are sponsored by senior executives as public symbols of their commitment to fostering innovation when in reality such labs are viewed as useless ivory towers by most company employees.

The two enduring traits of successful business innovators are a *healthy curiosity* in the ways in which work is performed within their companies and a *proactive compulsion to learn more* about how equivalent work is being performed elsewhere. Successful innovators typically have broad professional networks, both within their companies and their industries. They aren't afraid to ask stupid questions and they frequently possess an uncommon ability to uncover systemic problems and opportunities through intuitive pattern matching. Successful innovators can expand their technical skills and business knowledge through intentional learning. The traits and aptitudes referenced above are frequently innate.

What are the essential roles, and skills in a truly innovative environment?

Two of the most famous textbooks on business innovation are actually novels. The Goal[2] by Eliyahu Goldratt is an iconic novel describing the adoption of robotic manufacturing practices within an automotive assembly plant. It's basically a detective novel in which the protagonist – Alex Rogo – attempts to determine why the newly installed robots are not producing the improvements in plant productivity that were originally planned.

Licensing innovation in a commercial enterprise is a difficult balancing act.

- Mark Settle

In a similar vein, The Phoenix Project[3] by Gene Kim describes the trials and tribulations of Bill Palmer, the fictitious leader of an IT group that is trying to reverse the fortunes of an aging auto parts manufacturing company through the use of new IT capabilities. Both books succeed at being entertaining and profoundly educational at the same time.

Mark Settle is a seven-time CIO, three-time CIO 100 award winner, two-time book author. Seven members of Mark Settle's former management teams are currently sitting CIOs in publicly traded companies.

ERIC MARTIN

Director, Galant Center for Innovation & Entrepreneurship
UNIVERSITY OF VIRGINIA

Truly innovative environments are not commonplace, particularly among large companies. This is not a reflection of poor management. Rather, it is a natural outcome of the way in which organizations grow. Every company begins its existence as a startup. That's easy to forget. But, there was once a very small team at every (currently) Global 50 enterprise playing something akin to sandlot baseball or pickup soccer

[2] The Goal (novel) - Wikipedia
[3] The Phoenix Project: A Novel about IT, DevOps, and Helping Your Business Win - Amazon.com

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(football) in which the players (the founders) took on any role necessary at the moment. Collaboration… and inventiveness… was high, driven by close contact, shared observations and insights, a common mission, and, often, scarce resources. If any meaningful success was achieved, role specialization was the normal outcome, followed by process development, hiring to job requirements, and, finally, structure for scaling—particularly, a hierarchy of some type.

Innovative organizations operate at the intersection of critical thinking and creativity.

- Eric Martin

It is the requirements for scaling, driven by a need to deliver predictable levels of value and profit, that necessarily begets the operational silos, undifferentiated hiring, and immune response to all things new and uncertain that, over time, drive out all but the most pedestrian innovation.

To combat the calcification that can occur through the scaling process, organizations must intentionally hire outside the warm comfort zone of "cogs in the machine" job descriptions, elevate original thinkers and thinking to a place of prominence, redefine failure as learning, and manage for agility and speed.

The problem is existing organizations were built to operate through managed processes with leadership members who came to their positions by being a "steady hand." In their mature state, they tend to operate based on critical thinking. Innovative organizations, by contrast, operate at the intersection of critical thinking and creativity. Both are necessary, and true genius emerges from their interplay.

So, who must play the important roles in establishing an innovative environment? Four main skills are required for any successful innovation effort:

- People who see the world that we see, but very differently, looking through different lenses, making lateral connections, and driving breakthrough insights.
- People who, inspired by breakthrough insights, develop many, many ways in which those insights can fuel powerful (or silly seeming) concepts.

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- People who can, from a multitude of ideas, identify the few which have the best promise of delighting customers and meeting corporate objectives simultaneously.
- People who make the innovation happen- the get it done folks.

Note that these four skills are not exhaustive, nor are they intended to imply four different people are required. Entrepreneurs must often exercise all four skills, though in practice it is difficult to perform with excellence across the entirety. The advantage that large companies *should* have is that they can support people in each category working in harmony. In practice, for the reasons noted above, few do. There just aren't that many companies that hire and nurture the "crazy ones" to borrow from Apple.

There just aren't that many companies that hire and nurture the "crazy ones".

- Eric Martin

This is not to say that incremental innovation can't occur broadly in traditional corporations. In fact, years ago during an innovators round table I held with the CINOs of several well-known and long-established companies, I learned that *all* considered innovation to be every employee's job. When pressed, these executives acknowledged that the vast majority of innovation was either process-focused or what Christensen[4] would describe as *sustaining in nature*. Anything disruptive to the market and, more importantly, to the company itself, came from various forms of specially assembled teams.

This makes sense. Since companies don't have the luxury of remaking themselves overnight— swapping out employees, changing incentives, reinventing culture, and the like— creating a team or a unit comprised of individuals with the skills noted above (plus, critically, others central to the task at hand) provides some hope of generating breakout innovation. These people are, if not the crazy ones, at least a bit quirky. They are hungry for tough challenges. They tend to be polymaths. They have a growth mindset. And, invariably, they are curious.

[4] Clayton Christensen - Wikipedia

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With all of these attributes, it's still not enough. These teams require senior air cover and funding and structure and a basic understanding of an innovation process, not to mention a well-designed and properly timed handoff back into the core business where traditional structures are best suited to produce scale.

Those eager to build a career around innovation need not look to a single course of study to propel them; innovators come from backgrounds in design and the arts, engineering, and coding, business, poetry, and nearly any other discipline you can name. The key is to exercise your passion to create solutions to problems and to bring those solutions to life. Build a portfolio of projects that are interesting and that display your prowess in one field or another. Explore topics broadly, but go deep in at least one field that intrigues you. Certainly, seek out a course or a program that can provide at least a basic introduction to innovation. But don't just study. Do.

Eric Martin is a professor at and faculty co-founder and Director of the Galant Center for Innovation & Entrepreneurship at the University of Virginia's McIntire School of Commerce. Eric's thirty-year career includes successful operating experience as a Chief Executive (Software, Consumer Products & Services, Professional Services), Strategist (Global Consultancy Partner), Entrepreneur, Change Agent (Business Transformation, Turnarounds, and Start-Ups), and Professor.

PATRICK VAN DER PIJL

CEO, Best Selling Author, Speaker
BUSINESS MODELS INC.

When I started Business Models Inc. 11 years ago we self-published Business Model Generation, a book that is all about the business model canvas tool. We received questions from companies asking things like where is innovation happening? Do you need to do it inside your organization or outside? And there were lots of ideas, but in the end, it was Steve Blank[5] who gave good insights to make a distinction between exploit and explore or search and execution – and what I find interesting about that insight is that it's about certainty and uncertainty. In this sense, given that the traditional Master of Business Administration skillset focuses on the execution side, we might actually need a Master of Business Ambiguity - that points to a different skillset.

Dealing with ambiguity and uncertainty is not easy - in my company here in the Netherlands we have 30 people, and even though we do innovation for companies, people do not always like that feeling of dealing

[5] Steve Blank - Wikipedia

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with uncertainty and different things every single day. There are people who prefer to do the everyday business and be good at it: they feel comfortable with the certainty side and less comfortable with new ideas. But it is the most revolutionary people who challenge the status quo - Shannon Lucas calls them *catalysts*.

When it comes to the distinction between a search and execute it is clearly about certainty and uncertainty which is then a matter of management skills versus design skills. I think that the melting pot right now is more about this nonlinear way of thinking: in the past, we followed a linear process because there was no advanced Information Technology to connect us with information and resources.

We might actually need a Master of Business Ambiguity.

- Patrick Van der Pijl

So it was always a subsequent order of activities - you were always lagging behind in terms of information, simply because there was no software to provide streams of data, content, and insights. But now we have real-time flows of information along with the digital means to process it and collaborate – and that introduces a nonlinear way of thinking, which is more complex because there is no right order - it is all mixed up. In this context, people's profiles and skills need to be much more design-oriented: people should look at customers first and learn through experimentation. To become more innovative, companies need more visual thinkers who like to challenge the status quo and feel comfortable with being uncomfortable.

In terms of setup, companies need a combination of innovation capabilities along with specialized teams. For example, the innovation team, the execution team, and possibly a group of people in-between – those who make the connection between the two teams. For instance, at BMW there's a department that makes the connection between the search and execute functions; at IKEA there is, at some point, a process to hand over innovation work to the organization. A formal, institutionalized process to connect the two- innovation and execution - prevents the 'innovation guys' from getting excited, carried away, and finally disconnected from the core business.

Patrick Van der Pijl is the founder and CEO of Business Models Inc (BMI), a global design agency on strategy and innovation in 2009 with offices in US, UK, Europe, Australia

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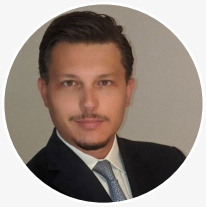
and Taiwan. Patrick has a passion for strategic visioning, graphic facilitation and storytelling. BMI was awarded with the Pioneer Design Award for democratization of the innovation and strategy tools.



DAVIDE MATTEO FALASCONI

Chief Innovation Officer
ITALIAN MINISTRY OF TECHNOLOGICAL INNOVATION AND DIGITAL TRANSITION

Former CEO of Google Eric Schmidt[6] said that we are in the world of combinatorial innovation, which is *the process of creating innovation from combining new or existing ideas, services, and products*. This concept can help in differentiating between the two typical characters in innovation: the *inventor* and the *innovator*.

The primary goal of the innovator is to develop and disseminate solutions that create impact.

- Davide Falasconi

The *inventor* is focused on leveraging own knowledge, research, and expertise to create totally novel ideas, solutions that could be even patented. The primary goal of the *innovator* though is to develop and disseminate solutions that create *impact* – *by* combining and applying existing knowledge and inventions from others. Thus, being an innovator means having robust technical skills (to be able to foster the development of new solutions and to talk to inventors) and extraordinarily strong emotional intelligence. *Communication skills* are also paramount to support an innovation opportunity being shaped (the problem), developed (the invention), successfully understood, and adopted (the communication).

Lastly, the ability to leverage *project management methods and tools* is another differentiating factor – as this allows innovators to structure

[6] Eric Schmidt - Wikipedia

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and smoothly combine different sources of innovation. The same can be applied to a company: a structured *portfolio management* (e.g., funneling) and *project management* approach is critical for any company that aims at fostering innovation. For instance, companies can set a specialized function that operates as an *innovation factory* with a 'dream team' (for instance to develop machine learning use cases and modules). Typically, the dream team includes people who can *talk with potential customers*, *understand customer needs* (business experts), define and *build solutions* (solution engineers), *think laterally* (inventors), *communicate the solution* (marketers), *testing with users,* and setting up the "iterate & adapt" process: *listen, create, test, select, communicate and again.*

Furthermore, companies should take a more widespread approach to innovation that involves the whole organization (e.g., 'playing' with problems and solutions with gamification), and introduce Agile methods and Open Innovation programs. However, I don't think there is a single recipe to innovation success. Instead, I could highlight some critical success factors – such as *the presence of a multidimensional team* that is well-connected to end-users, and *an organized mechanism of incentives* (which ranges from self/group recognition to monetary). It is also very important to avoid considering "monetization/return on investment" as the primary driver for innovation.

I don't think there is a single recipe to innovation success.

- Davide Falasconi

Moreover, teams must be open to accepting failure and waste to some extent (from investments, trial-and-error activities, or initiatives dedicated to exploring something new). Discovering, trying, and doing something new implies risks, and pursuing innovation has a sort of "sunk cost" for any approach and team. Nevertheless, this can also turn into an enabling factor to let *natural innovation* flourish with impressive outcomes: Google has stimulated its employees to dedicate 20 percent of their time to their own ideas – an approach which is said to have led to products such as Gmail, Google Maps, Twitter, Slack, and Groupon as side projects.

Davide Falasconi has a wide international career in strategic transformations, innovation, and digitization, being a manager, advisor, and start-up investor. He worked at

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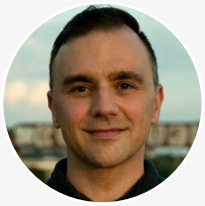
Pirelli, McKinsey, and recently in the Public Sector. Davide holds MSc and BSc in Engineering and MBA at LBS.



CARLOS OLIVEIRA

Co-Founder & Principal
ADAPTIVEX

The most innovative organizations put their customers first through the *continuous discovery* and *early delivery of value*. In these organizations, leaders place emphasis on evaluating and testing for *successful outcomes* over simply delivering outputs.

Fall in love with the problem, not with the solutions themselves.

- Carlos Oliveira

In these scenarios, the emphasis is on understanding and falling in love with the problem while iterating and refining solutions – not on the solutions themselves. Leaders must cultivate an experimentation and growth mindset, which is all about seeking value, trying something new that has never been done before, and being comfortable making decisions when the results aren't always guaranteed.

To achieve a truly innovative environment requires leaders to elevate these skills and behaviors in various job roles throughout the organization:

- *Taking a curious mindset by asking more questions* – in many organizations, people don't feel comfortable in challenging the status quo or asking difficult and tough questions. Leaders play a key role in creating a safe environment. This means making it safe to ask questions by not penalizing or jumping too quickly to judgment, and by also exhibiting the same level of *curiosity* and *open thinking*. Asking more questions helps team members to probe the right level of insights, gather the data and define the problem with a more accurate lens in

order to provide more appropriate solutions versus jumping too quickly into solutions that may not produce results.

- *Having a bias towards action* – Cunningham's[7] law states "the best way to get the right answer on the internet is not to ask a question: it's to post the wrong answer." In doing so, we learn, even if it's at the expense of failure. The key is to *fail fast* and *small*, learning with each attempt and iteration. A bias towards action, allows teams to experiment with an idea and avoid *analysis paralysis*. To do this successfully, leaders need to create the space and provide the air cover that allows this to happen. Providing training and coaching on various iterative design and development frameworks helps to ensure that team members understand that learning is the goal, and "failure" is a normalized part of that journey. In so doing, these small failures aren't reasons to lose faith or get down, but to adjust and move forward. In a learning, action-orienting team, failing is absorbed into the process and can be just as energizing as success.
- *Fostering high levels of collaboration and cooperation* is a critical factor in highly innovative environments. Innovation is a team sport that is about harnessing the conflict that occurs in a creative process when you bring together many diverse perspectives and ideas. The best way to address conflict is not through avoidance or accommodation but through collaboration and effective coordination. In these environments, leaders are careful to incentivize teams and not individuals and encourage healthy debate and invalidation of ideas.
- *Making the results transparent* – sharing the good, the bad, and the ugly to help make better decisions, learn from mistakes and provide relevant insights to others throughout the organization is another critical skill and behavior of innovators inside organizations. Leaders can inspire followers to share their learnings from failure and mistakes by sharing their own key learnings and failures in public, making it safe to fail.
- *Making space for discovery and learning* – a learning organization provides the much-needed resources - time and tools - for continuous learning. Organizations that invest in people through knowledge and skill development with coaching and training opportunities are more likely to succeed at implementing key principles and practices of innovation.

Organizations don't need to isolate these skills only to a group of innovators in a specific area, but more importantly, they need to develop these skills throughout the organization and *embed them in the fabric of all employees*. Working with *risk* and *uncertainty* is more common in

[7] Ward Cunningham - Wikipedia

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product and software development; however, solving big problems and looking for innovative and creative solutions can happen anywhere, from HR, to operations, and marketing. Teams that are trained in working with complex business challenges and who can leverage the appropriate skills and behaviors are more likely to succeed in testing and delivering more value in their endeavors.

A bias towards action, allows teams to experiment with ideas and avoid analysis paralysis.

- Carlos Oliveira

Companies don't need a dream team per se to become "innovative," but will benefit most from an innovation learning and development program that can teach people from all corners of the organization how to innovate and leverage the knowledge and skills above to maximize learning and capture more value for the business.

Having champions representing different areas or groups who can come together to carry the innovation mandate forward will be of huge benefit to the organization and will support the cross-organization pollination effort tremendously.

Carlos Oliveira is Co-Founder and Principal of adaptiveX, an innovation and design sprint agency. adaptiveX helps organizations reinvent the world by empowering people and teams to solve meaningful problems in a more creative, collaborative, and human-centered way. We're uncovering better ways of developing solutions and helping others do it.

ENJOYED THIS QUESTION?

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HOW IS INNOVATION DIFFERENT IN STARTUPS?

Startups are different -- in so many ways. Compared to established corporations, Startups tend to be more agile and innovative, they have more appetite for risk, and usually, they are more experimental in nature.

What could big corporations learn from Startups when it comes to innovation? Do Startups innovate in different ways than typical, established companies? Do they follow a special innovation process, and do they need one? Are Startups really that innovative?

Discover innovation in the Startup world according to the great perspectives and unique insights by Niko Bonatsos, Maria Paula Oliveira, Dr. Marily Nika, Steven O'Kennedy, Jesse Nieminen, Enrique Dans, Andrea Kates.

NIKO BONATSOS

Managing Director
GENERAL CATALYST

The greatest advantage startups have over other companies or the public sector is that they are *insanely focused on finding product-market fit*. This is accomplished by virtue of doing extensive customer development and focusing on building a tightly focused product for a very narrow set of customers in the beginning. Startups normally lack the legacy (and the experience) that often clouds the judgment of the larger players and the incumbents. As such, startups can afford to try things differently in a more audacious manner; perhaps often attempting new ideas that sound stupid, controversial, or "this will never work; we tried it 10 years ago" to the "domain expert" of the field.

Startups that are the most likely to succeed in finding true market fit are often founded by tech-savvy founders. Most often, they are also trying to solve a problem for themselves. This provides them with the right level of intuition and shorter feedback loops to rapidly iterate on the product front. Young upstarts win over their larger and better-funded competitors thanks to their ability to innovate quickly. The very best tech founders we work with at the early stage, release new or kill existing product features every couple of weeks at least! Their strong focus and lack of stringent processes required to be approved by corporate attorneys let them operate in this often semi-chaotic environment!

Big corporations can learn a lot from young upstarts.

– Niko Bonatsos

Having a strong entrepreneurial DNA, constantly being in touch with your end-user/ customer, and being able to move quickly, are the top 3 things I'd highlight. Larger companies can acquire young startups to learn these things; but of course, most M&A fails :(

Niko Bonatsos is the Managing Director of General Catalyst.

MARIA PAULA OLIVEIRA

MENA Innovation Leader
EY

When we talk about corporate innovation, we tend to think of it in the context of large, established corporations – and it makes sense since those are the ones usually most in need of what I call 'innovation muscles': the processes, talent and technologies to thrive through change. Nevertheless, the discipline and practices of innovation management can and should be applied to startups across their journey from early-stage through the growth and scale phases, all the way to their maturity.

I like to think of startups as a love story - the tale of an idea in search for the right business model.

- Maria Paula Oliveira

Before we discuss those practices, though, it is critical to understand that not all new or small businesses should be considered a startup. A new bakery, a recently established hairdresser, an accountant's office, a retail store – those are all traditional SME (small & medium enterprises). They all have something that a startup doesn't have: *a well-known business model*. They know who their customers are, how to produce their products or services, and how to commercialize them. A startup founder with a crazy innovative idea doesn't know any of that.

I like to think of startups as a love story - the tale of an idea in search for the right business model. In this story, the entrepreneur's job is to find a business model that will make their idea viable. When they begin their search, things like customer, operations, and monetization models are all unknowns. It is precisely due to this high level of uncertainty that startup founders cannot resort to traditional financing mechanisms (i.e.: bank loans) and need to access funding from venture capitalists. Only VCs have the appetite for risk required to help bring a crazy idea to life. In exchange, VCs expect founders to find ways to grow exponentially,

achieving scale at speed and returning multiple times the investment received.

There are two operative words here: *uncertainty* and *speed*. A founder's job is to run disciplined experiments that will quickly reduce uncertainty while investors will progressively increase investment. And that's where innovation methods and tools come to support founders on their journey. To find the right business model for their idea, smart startup founders will deploy innovation techniques like the ones we use in large corporations, such as:

- *Design Thinking*: a great methodology for building human-centric businesses, design thinking helps its users empathize with the customer, define the right pain point to address, ideate multiple possible solutions, pilot and test the most viable ones. As an iterative process, it gradually guides the discovery of crucial elements for a successful realization of a crazy idea.
- *Business Model Canvas*: once a problem worth solving has been identified and a possible solution selected, founders can use the business model canvas (BMC)[1] to design and test multiple alternatives of business structure and monetization strategy.
- *Value Proposition Canvas*: complementary to the BMC, the value proposition canvas can be used to dive deeper into the understanding of customers – their jobs to be done, pains they want to avoid and gains they want to achieve – and refine the solution.
- *Agile*: once the founder has reached a potentially viable business model for their crazy idea, they need to execute at pace. To achieve that, Agile, the most modern product management framework, comes in handy. Its iterative approach to delivering a product or a project in smaller increments (rather than only at the end) promotes the flexibility and velocity necessary to run *disciplined experiments*, ensuring that the startup is constantly learning and adapting.
- *Innovation accounting*: to ensure that these disciplined experiments are leading to progress, founders can apply what is called Innovation Accounting, a framework of indicators that shows learning and evolution when traditional metrics of success for established businesses (profits, revenue, margin, number of customers) are not applicable – which is precisely the case of a venture-backed crazy idea.

One great example of a venture-backed business that used innovation tools is Airbnb. Back in 2009, when the company was generating only $200 per week, the founders applied design thinking principles to empathize with users, by interviewing customers listing properties. Using the

[1] Business Model Canvas - Wikipedia

insights from these conversations to improve the product, they doubled their weekly revenue. To this day, the ethos of first-hand experimentation permeates Airbnb: each new member takes a trip in their first weeks with the company and shares their observations with their team.

The entrepreneur's job is to find a business model that will make their idea viable.

- Maria Paula Oliveira

Startups are innovation in action. They do not need the same corporate structure required to transform larger, well-established companies – such as an innovation leader and a dedicated team – because a startup's core purpose is to transform the status quo. Nevertheless, applying the methodologies discussed here will increase the chances of a 'happily ever after' end to the startup love story.

Maria Paula Oliveira's mission is to ensure companies have strong 'innovation muscles': the processes, talent and technologies to thrive through change. Four times innovation leader and twice an entrepreneur, MP has worked in Latin America, Silicon Valley, Asia Pacific, and the Middle East.

DR. MARILY NIKA

AI Product Leader
TECH COMPANIES IN THE BAY AREA

Innovation in the startup world is raw. It is rough around the edges, it's risky, it's quick. The faster a startup moves when testing new features, the more efficient it will be when needing to cut losses and pivot during testing. Pivots will enable even more ideas which will eventually be fruitful, without having wasted too much time or resources.

I came across a few startups throughout my career and here's my personal take on what has worked. Startups don't need a formal innovation process in place. (Most) startups aren't fully formed or defined to start with. Instead, they are based on an idea, a 'bet', if you will. They are scrappy, they move fast and they try to maximize their odds of success

by removing any preconceived frameworks and ideas, and by being authentic. There is no need to be polished. If you are part of a startup, rely on your gut and get lots of feedback. Crave it, ask for it from everyone around you - advisors, investors, directors, early testers.

Startups don't need a formal innovation process in place.

- Marily Nika

There is something called 'repurposing' in innovation. And a lot of startups operate with this mindset. This entails focusing on a business model that has worked before, and adopting it to solve a user problem in a different area, for example, 'uber for x'. Innovation doesn't always mean 'reinventing the wheel' but it means thinking strategically about what we can do for a particular user segment at a particular point in time.

Marily Nika is an AI Product Leader based in San Francisco that has worked for Google and Facebook. She holds a Ph.D. in Computing Science from Imperial College London and is currently a teaching fellow at Harvard Business School. Outside of her day role, Marily acts as advisor to early stage startups and also empowers the women in tech community in various ways.

STEVEN O'KENNEDY

Associate Director of Engineering
GLOBAL CENTRE FOR INNOVATION AT ACCENTURE

Start-ups and innovation go together so much that it begs the question, is it even possible to have a successful start-up that is not innovative? That being said – and ignoring the luck that is intrinsically linked with start-up success – the nature of the innovation that drives a start-up is usually different from the type and style of innovation in larger enterprises. It is in the nature of a start-up to be innovative because a start-up that cannot react is one that folds. From this, you can extrapolate that any start-up that hasn't yet folded is sufficiently innovative to have survived their last need to evolve – at least for the time being. To have to continually evolve in this manner, a start-up is forced to act like a person who is perpetually tripping over their feet – they need to either find a place to put their foot down and regain their balance immediately or

reach out for something to hold onto, to avoid falling on their face. Large enterprises or mature SMEs don't have this problem to the same degree - as they often have at least some reserves, e.g. an existing loyal customer base, or assets that they can leverage to buy them time to evolve and innovate at less of a breakneck pace.

Start-ups have very little inertia because of their small size.

- Steven O'Kennedy

Another consideration, about how innovation is different for start-ups is decision making. Successful start-ups are often small and usually have a shared goal and vision throughout the team. It is challenging for a larger company to achieve the same degree of collective thought. This often affects the speed of decision-making. It can be quick if everyone is aligned in thought and direction, but ponderously slow where there is misalignment or entrenched thought patterns and behaviours.

Coupled with decision-making is inertia. Inertia affects how quickly a business can enact a change once the decision to change has been made. Start-ups have very little inertia because of their small size and because they have not been around long enough to accumulate baggage. Not so for an established business – moving to a new house as a student is easy when everything you own fits in your backpack, but it's a whole different story for a family of five moving their family home. So, do start-ups need an innovation programme to be successful? Probably not. For most start-ups to innovate and evolve means to survive. The success factor is making the right change rather than how the right change is made. Would an innovation programme be useful to a start-up? Most definitely – as long as it is lightweight, flexible, and can be applied by the team without undue effort. With the multitude of things that have to be dealt with as quickly as possible for a start-up, anything that takes away effort and thought is a good thing. Using a defined and well-tested programme for innovation removes the need to think through problems around idea structure or impact measurement or ideation management.

Stand on the shoulders of giants whenever it is possible unless they are the giants you are aiming your sling at!

Steven O'Kennedy is the Director of Engineering in Accenture's Global Innovation Centre at The Dock in Dublin. After working on large scale system implementation and technical trans-formation projects for many years as a technical architect, he now

focuses on incubating innovative products and services centred around modern software architecture, AI and cloud technologies.

JESSE NIEMINEN

Co-founder & Chairman
VIIMA

In reality, every organization that creates something new has an innovation process. It's just that often that process isn't very rigid or explicitly documented – and this is also the case with most startups. Startups can often get away without formalizing and documenting their processes for a couple of simple reasons: there are so few people that communication and direction usually aren't issues.

Where startups and established companies differ is the kinds of innovations they pursue.

- Jesse Nieminen

At the same time, and due to the same reason, there is much less variance in the quality of work. As the team grows, startups will naturally adopt more formal processes in many areas - and innovation is no different. In the very beginning, a formal innovation process doesn't probably create a lot of value, but at some point, it will start to make sense. However, where startups and established companies differ is the kinds of innovations they can pursue.

A large company can easily make millions of additional profits every year with small incremental improvements in their products or internal processes. On the other hand, if you consider a 1% efficiency improvement for a startup with annual revenue in the thousands, the outcome is virtually worthless. Also, if the product of a startup is 5% better than that of an established competitor, almost no one will buy the product. The difference simply isn't worth the higher risk associated with buying from an unproven company.

How is innovation different in startups?

In my experience, many, if not most, successful startups aim to be 10x better than the existing competition in whatever it is that they do so that even if they fall slightly short of that, they still have a feasible business. And I think that this kind of 10x mindset is what many large corporations could really learn from. Many of them are just so used to squeezing out a few percentages each year with some small improvements here and there that they don't really think how they could create 10x the value for their customers, or their shareholders, by challenging and reimagining the way they currently do things.

Jesse Nieminen is the Co-founder, Chief Growth Officer & Chairman of Viima, and an entrepreneurial leader with a passion for building businesses and growing organizations to scale in the digital age.

ENRIQUE DANS

Professor of Innovation
IE Business School

Startups typically emerge with a particular innovation in mind, following the opportunity that a new approach, methodology, or technology is able to generate in the market. They are typically identified by such an approach, "the company that applies this to that", while their established competitors normally disregard the approach or discard it considering the new differential approach as wrong, anecdotal, unsafe, or simply impossible.

Contrary to common beliefs, startups are not especially innovative.

- Enrique Dans

Startups need strong innovation processes to be able to sustain their competitive advantage in the long term: since they normally depend on a specific innovation around which they have been able to develop a significant level of expertise, adopting a new approach due to a change in the competitive landscape or in the technology panorama requires a

strong methodology to avoid falling behind. Since slack resources are typically not abundant in startups, they need to set special priorities and use fast, agile, and frugal methodologies to make sure they don't overlook anything that could potentially generate new competitive advantages.

Besides that, startups are typically small, so finding a diverse culture able to pursue different approaches and interests becomes, in many cases, another challenge. Contrary to common beliefs, startups are not especially innovative, or not necessarily more than consolidated companies. The apparent dynamism of startups is typically reached due to the fast turnaround in the whole population, not to an individual ability to innovate. To a certain extent, *startups are able to innovate once, which doesn't ensure they will be able to innovate again when they need to do so*. Startups are born and die quickly, and that provides the impression that whenever there's an interesting opportunity, a startup is there, trying to exploit it.

Many startups face big struggles when it comes to scaling up innovation.

- Enrique Dans

But many startups, due to the lack of resources, face big struggles when it comes to scaling up innovation. If anything, established companies should learn how to sustain an innovative culture in an agile and frugal way, making sure it permeates the whole organization and consistently trying to avoid restricting innovation to a specific department or unit. Organizations do not innovate: people do, and organizations become innovative when they allow this individual innovation to inspire and permeate the whole company. A good example of an innovative startup would be BigML, a small company working on making machine learning beautiful and simple. The pace at which they are able to constantly generate and integrate new functionalities in such a rapidly changing field is absolutely stunning.

Enrique Dans is a professor of innovation at IE Business School since 1990, and Senior Advisor on Innovation and Digital Transformation at IE University.

ANDREA KATES

Managing Director
FUTUREPROOFING : NEXT

Startups usually begin with an innovative idea for a product or service that will challenge the status quo. The downside is that startups can be like a horse with blinders on, seeing the world only through their own lens and being single-focused on getting their solution to market. So, the check that startups need is to land on metrics that matter and not to be too convinced that their disruptive view of the world will rule supreme.

Startups innovate differently than established companies in three critical ways:

- They start on day one with their eyes on the problem of achieving "escape velocity" or scale.
- They focus on finding ways to go from *incremental growth* toward a true sea-change of adoption. For instance, this could happen through partner relationships, a breakthrough business model, or a new ecosystem play.
- They consider *scale* in different ways than larger companies - because *scale* for a large company can be built into their existing business capacity.

Large companies need the hunger of a startup as part of their innovation DNA.

- Andrea Kates

By contrast, large companies need a different process. They need the hunger of a startup as part of their innovation DNA combined with an internal way to grease the wheels - to enable innovation and gain internal sponsorship at critical junctures.

In terms of innovative startups - there are so many out there. In fintech (one area where I work) I like Lunar based in Denmark because their work with Astralis and the gaming community went to the heart of building a tribe of authentic and loyal customers. In Latin America, I would call out Rappi – a company that started as a simple meal delivery

service and has now emerged into a geographically diverse super-app serving multiple industry verticals. Inspiring!

Andrea Kates helps corporate teams and business leaders drive revenue growth through innovative routes to market, future-based insights, and cross-industry inspiration. Former tech CEO in San Francisco and now a global advisor and leader of high-impact initiatives for companies like Ford, Mayo Clinic, KK Wind, Intergraficas, and Cisco. Leadership Training, Innovation Initiatives, Thought Leadership/Keynotes, Board Member.

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6

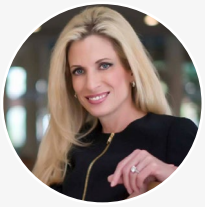
HOW DO YOU SPOT INNOVATION OPPORTUNITIES?

Opportunities for innovation may come from anywhere – random moments of inspiration, signals from the market and the competition, or challenging problems worth solving.

The key question is how to create an environment that increases the chances to spot these opportunities and how to optimize, to streamline the reaction of the organization to the identified opportunities. For instance, having identified an innovation opportunity – a promising solution to a real, massive problem – the organization must be able to react fast by leveraging the right validation methods and tools in order to make good decisions for further development of the concept.

Dr. Diane Hamilton, Lisa Seacat DeLuca, and Misha de Sterke share their thoughts on how to drive the supply of ideas and how to inspire people to submit ideas in alignment with the objectives of the organization.

How do you spot innovation opportunities?



DR. DIANE HAMILTON

CEO
TONERRA

Leaders often state that they want to have innovative organizations, yet they can neglect to do the one thing that would help ensure innovation. That is, they must empower their employees to be curious. If you research successful people like Warren Buffett and Oprah Winfrey, you will find quotes praising the value of curiosity. Opportunities for innovation come from asking about why things are done (or not done) in a certain way. To discover opportunities, we must question things. The problem is that many leaders believe they encourage curiosity, where research from Francesca Gino at Harvard shows that employees do not feel they are as encouraged to be curious as their leaders believe[1].

Leaders must empower their employees to be curious.

- Diane Hamilton

To drive new ideas, leaders must model the *curiosity culture* they seek. That means letting down their guard a bit and showing their employees that they do not know everything. Leaders must be willing to ask questions that they normally believed might make them look bad. Their perception that they must know everything will filter down to their employees, who will hold back questions to show they know everything as well. That will inhibit the questions needed to be asked to get out of status-quo behaviors. To inspire their followers, leaders must not only allow input but reward it.

Internal events like hackathons can be helpful. They are more of an event-based solution rather than a day-in and day-out expectation. They can be great to get the ball rolling; however, it is critical to make curiosity a core value. They must take what they learn from events like a hackathon and run with them. They can also learn from what others have done to inspire curiosity. Organizations like Novartis reward employees for

[1] The Business Case for Curiosity (hbr.org)

learning 100+ hours of new things each year[2]. They have a 'curiosity month' to encourage their employees by bringing in guest speakers. They hold events where employees can teach others. SurveyMonkey holds skip-level meetings to ensure ideas make it to the top[3]. Verizon creates short videos that showcase individuals within the company who have been highly curious and have used that to become successful.

Leaders often assume that a great idea must be expensive. That is not always the case. It is critical to create a plan that shows the value proposition for any suggested idea. When proposed innovation can be quantified, the need to fund it will become clear. Even the craziest sounding ideas can be shown to have potential with good market research.

Dr. Diane Hamilton is the CEO of Tonerra, author, radio host, keynote speaker, and former MBA Program Chair at the Forbes School of Business. Thinkers50 Radar chose her as one of the top minds in management and leadership.

LISA SEACAT DELUCA

Director Emerging Solutions, Distinguished Engineer
IBM

There's definitely no shortage of ideas. Every day, I see multiple ideas that are patentable - the hard part is actually figuring out which ones to pursue – the ones that may have the best business value to my company and to the products that I'm working on are where I typically focus. Ideas just come to me – for example, when you're interacting with something, and it doesn't quite work the way you want it to work. Or you think about whatever it is you're interacting with and there is some new hot technology that's coming out and it's pretty easy to jump to, "oh, this could be a cool innovation." Sometimes people in the company come to me and describe potential opportunities. More often it happens naturally as part of conversations, for example when you're talking through some of the pain points you're hearing from customers, or when presenting a demo of how a product works. All these everyday conversations can lead to new ideas.

Hackathons can sometimes help uncover new ideas. But at the same time, they can bring a lot of noise. For example, when the goal is to submit patents or come up with innovations, then everyone just dumps all their ideas, and then it's, all of a sudden, very overwhelming for the experts to assess them for what is actually a solution to a larger need.

[2] Curiosity and Learning - The CEO & Chief People and Organization Officer Perspective | LinkedIn
[3] The Power Of The Curious with Zander Lurie (drdianehamilton.com)

How do you spot innovation opportunities?

Sometimes it is better just to naturally uncover those ideas as you're going about your regular day. When facing a problem that is actually stemming from the work that you're doing it is more likely to be a higher-value idea - as opposed to the "alright, let's just sit around and think of new ideas" approach. At IBM, we have *invention development teams*, for example, I run our Internet of Things (IoT) board. All ideas that are related to IoT and sensors come to my board. And on it sits a bunch of volunteers that are subject matter experts around IoT.

Hackathons can help uncover new ideas - but they can also bring a lot of noise.

- Lisa Seacat DeLuca

Inventor teams submit ideas - they come, and they present their ideas - and then this board of experts discusses prior art and asks questions. Then the inventor team has to rapid-fire respond and defend their idea. This makes it time efficient to uncover ideas that might be valuable - and also for the invention teams to understand the prior art in the corresponding area to improve their inventing technique for future submissions.

Lisa Seacat DeLuca is the Director & Distinguished Engineer of Emerging Solutions within the AI Applications business unit within IBM currently focused on modernizing our Weather Business Solutions and the Aviation portfolios. Lisa holds a Masters of Science in Technology Commercialization from the University of Texas McCombs School of Business, and a Bachelors of Science in Computer Science from Carnegie Mellon University with minors in Business Administration and Multimedia Productions.

MISHA DE STERKE

Senior Partner at Innoleaps & Author '10X Growth Machine'
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To understand how to spot innovation opportunities, we first need to define what an opportunity is for a corporation. If you are a company that makes a 100 billion turnover, then a 1 million dollar opportunity is insignificant, compared to a company that makes 10 million in revenue. Large

companies have problems detecting 'small' opportunities because it dilutes their growth rate - and this is a weakness since some of these small opportunities could be tomorrow's big businesses - hence the stories about Netflix disrupting Blockbuster and other known examples. In order to make innovation work within a corporate environment, innovation teams must consider this weakness when reviewing ideas and designing innovation processes.

More specifically, innovation leaders must provide predictable timelines along with an end-to-end innovation process. Most of the time innovation is seen as a 'black box'. The lack of understanding of what's happening inside this 'black box' - the potential of certain innovation activities - usually makes leaders question the return on investment of innovation programs. As a result, innovation programs or teams and labs are usually put on hold or shut down – only to be resumed/ re-established afterward - a costly and time/energy-consuming situation. In an end-to-end innovation process – one that takes an idea from concept to implementation and then to scale - there are pre-defined metrics, goals, and deliverables per phase – and the innovation/ venture team has to demonstrate progress against these goals at certain points throughout this process.

Leaders must provide predictable timelines along with an end-to-end innovation process.

- Misha de Sterke

For instance, in the first phase, which we can call 'customer discovery' we focus on presenting proof from the market regarding [a] the customer - how big the pain points and the potential gain are [b] market sizing - how many people have these pain points and are not happy with existing solutions [c] right to win –can we make a competitive and differentiated solution that solves the pain point? Following the 'customer discovery' phase, the innovation/venture team starts forming solutions and applies rapid prototyping techniques[4] to visualize them and test different variations with real consumers. In parallel, the venture team must provide answers to questions like: [a] Recruiting potential customers - how

[4] Rapid prototyping - Wikipedia

does the acquisition mechanism work? Which channels are effective? [b] Monetization and pricing models - can we sell the product for a good price point? Can we sell it more than once? Is the solution scalable in multiple markets?

Good answers on the above backed by sufficient data make the opportunity legitimate candidate for further investment. Considering that this is a process in a corporate environment - not in a startup context – the venture team must secure the required funds and resources - which in the corporate world are competing with other programs and initiatives. Therefore the investment pitch should focus on answering the following:

- Is the opportunity scalable and therefore big enough to pursue? In the 100 billion turnover company, you will probabaly not get resources and funds if the opportunity is too small. So you have to present how you can make it bigger, e.g. by targeting more markets? More products in the portfolio? Higher price?
- Can we scale this product or service with the resources the company has? Does it fit an existing brand? If yes, then we can use the sales and marketing people of the brand.
- Can we differentiate from competitors and protect IP?

This way, you help your corporate investors to better assess the opportunity and make a good funding decision – if and how to fund the initiative to scale.

The leadership must stay connected with the R&D department.

- Misha de Sterke

In terms of spotting opportunities in large corporate environments, leaders must be aware of the existing assets - technologies, knowledge, IP – along with customer needs and strategic priorities - and be able to effectively connect the dots. In large companies with a mature R&D department, there are a lot of technologies at early stages – ones that have not been fully developed or commercialized yet. The leadership must stay connected with the R&D department and be fully aware of the portfolio of inventions. This way, leaders can connect R&D people and

technical assets with marketing people and their insights about consumer pain points - and thus help in spotting and shaping high-potential opportunities. At the same time, corporate leaders must be fully aware of the talent available in the organization and potentially provide the flexibility to work on all kinds of 'crazy' ideas – which in general is rarely the case in large companies.

A more structured approach could be through a hackathon, where different cross-functional teams and outsiders work on solving pre-formulated business challenges. One important topic to address here is that the problem/opportunity space should come from the leadership of the organization. This way, when there are interesting solutions to the stated problem, it is easier to get support for further exploration or the actual development the solution. In general, there is nothing worse for a team's morale than running hackathons and design sprints without concrete actions and follow-up. Instead, provided that there are good opportunities identified, the next step following a hackathon or a design sprint would be to join the first phase of the end-to-end innovation process - to de-risk the business idea, drive it throughout the process and potentially launch it and scale it up to multiple markets.

Misha de Sterke is a Dutch creative entrepreneur and a boardroom innovation advisor. He helps in building new businesses with large (FMCG) companies and helps early-stage companies get investment ready within 8-14 months - helped raise more than 25 million of investments.

DOES CORPORATE INNOVATION NEED A METHODOLOGY?

Innovation certainly needs creativity and inspiration. But does it need a specific methodology? For example, do companies need an innovation framework that provides a structured approach for innovation? There are at least two schools of thought here – the one that states that 'pen and paper' is more than enough for businesses to innovate and the one that states that a methodology is essential for corporate innovation.

I would argue that both are true to some extent depending on the context. A good methodology and well-designed innovation framework can accelerate innovation within an organization – by improving communication, information sharing; by providing the tools to frame problems, test ideas, and experiment with business concepts at a fast pace. But this is just me – read on in this chapter perspectives from Eric Martin, Erik Schumb, Mathew (Mat) Hughes, Evangelos Simoudis, Kelly Dawson, Richard Turrin, Anthony Mills, Alex Farcet, Vincent Pirenne.

Does corporate innovation need a methodology?

ERIC MARTIN

Director, Galant Center for Innovation & Entrepreneurship
UNIVERSITY OF VIRGINIA

It is said that even a blind squirrel occasionally finds a nut. If faced with betting on the blind squirrel or a company without a process, appropriate hiring, and a supportive culture developing a disruptive innovation, I will put money on the squirrel.

The answer would be a bit different if all a company desires is incremental innovation (whether they desire more or not, and for a host of reasons, incremental efforts account for the bulk of corporate innovation). Changing a product's color or a feature in a service infrequently demands a complex process—a small, focused team, or perhaps just an individual generally will suffice.

Blend team members from prior projects onto new ones, even when the addition may be non-obvious.

- Eric Martin

But projects that will be disruptive to the market (both to customers and competitors) and/or the company require more cross-functional collaboration, deeper and more powerful insights, a longer and often more convoluted learning loop, larger budgets, more time, and, inevitably, the acceptance of greater risk.

For decades, the structure that was seen as driving innovation was the stage-gate process. It was fashioned as a funnel with projects receiving approvals and funding based on the achievement of a set of goals. Hit the mark and move to the next stage. Of course, this process didn't really drive innovation; it managed it, often rather badly. The process that drives innovation isn't very mysterious and, frankly, looks rather much the same across innovative companies and consultancies. It generally is

composed of four or five steps, often with clever names[1]. At their most basic level, these activities include:

- Observing
- Drawing Insights
- Ideating
- Narrowing and Experimenting
- Launching to Learn

Of course, the process as stated appears quite linear. But anyone with experience innovating knows that the process is filled with messiness and loops and learning. All of these steps are required for a corporation to drive innovation. Through years of practical experience, teaching, and research, one step stands out as pivotal…and it may not be the one you imagine. Most people intellectually and in practice jump to ideating as the critical step in any successful innovation process. It is undeniably true that ideation is required, as is, say, experimentation. But without developing breakthrough insights, ideas tend toward the pedestrian and the process's output incremental improvement. Only with breakthrough insights does one stand a chance of delivering truly disruptive innovation, and developing breakthrough insights is very hard work (thus, why I will bet on the blind squirrel).

How does one get broad participation in an effective process that puts to work the five steps above? One successful way to put the process into action is regularly presenting that broad employee base with a wicked innovation challenge, the first stage of which is Observation and Insights. Each subsequent stage builds on the *collective* output from the prior one, so that, as an example, Ideation is undertaken based on the best insights from all teams competing. To provide additional support to the team and encourage learning, each is provided a mentor who is both quite senior in the company and trained in the process (including tools that may enable at each step along the path). There are "winners" at each stage and one or more teams are offered funding to experiment with their innovative concept. Of course, having a framework, while necessary for material innovation, is also insufficient. Companies must also provide a supportive culture, incentives, diverse talent, and a willingness to experiment within the constraints of *affordable loss*[2], among other things, to create a productive innovation ecosystem.

Critically, no innovation becomes a reality unless it both meets the objectives of the enterprise and delivers the value sought in the market. Ensuring that from early in a project those working on the innovation understand and agree how to articulate and measure these outcomes is

[1] Designing for Growth: A Design Thinking Tool Kit for Managers - Google Books
[2] The Affordable Loss Principle by Nicholas Dew, Saras D. Sarasvathy :: SSRN

crucial. From this understanding, the company can then determine the investment they are willing to make to, at a minimum, gain a return on learning through the journey[3]. Finally, to preserve the value created in the project and to ensure learning is leveraged, blend team members from prior projects onto new ones, even when the addition may be non-obvious. A talented innovator will likely be able to get up to speed on the new effort, but the new team is unlikely to leverage past learnings without the presence of someone who has lived them.

Eric Martin is a professor at and faculty co-founder and Director of the Galant Center for Innovation & Entrepreneurship at the University of Virginia's McIntire School of Commerce. Eric's thirty-year career includes successful operating experience as a Chief Executive (Software, Consumer Products & Services, Professional Services), Strategist (Global Consultancy Partner), Entrepreneur, Change Agent (Business Transformation, Turnarounds, and Start-Ups), and Professor.

ERIK SCHUMB

Founder & CXO
AGILE SPRINTS

Corporate innovation definitely needs a methodology. In fact, not only one but rather many! I see the following four types of methodologies/ tools/ frameworks that should be in the 'master toolbox' – enabling companies to:

1. *Shape a clear company vision & mission.* Attention follows intention and innovation should follow a clearly worded company vision & mission. This helps teams to stay focused and not get lost in the many directions innovation can take.
2. *Shape a special innovation mindset at both individual and organizational levels*, e.g. Theory U[4] or other change management methods. Innovation works best with intrinsically motivated people who feel responsible and want to make a change; it needs the right mindset of all participants, and more specifically: a) the *open mind* - readiness to accept that something new or different is necessary; b) *the open heart* - readiness to make a change crossing old borders and patterns with courage; c) *the open will* – readiness to actively make or at least participate in the change with commitment, respect and focus. This works best *top-down* - with the leadership embracing an innovative mindset - in combination with a *bottom-up* approach from the

[3] Effectuation: Elements of Entrepreneurial Expertise - Saras D. Sarasvathy - Google Books
[4] Theory U - Wikipedia

grassroots of each organization: the employees. Quite often innovation starts as a soft revolution with a few inspired persons and then evolves and influences the entire organization. If the latter is the goal, then a powerful change management framework should be leveraged - powerful in the sense that it enables employees, teams, organizational units, business units, and finally the whole corporation. Here I´m thinking about frameworks for *coaching*, *team development*, and others related to *organizational development*.

3. *Ideate - activate imagination and creativity*, e.g. Design Thinking, TRIZ/TIPS[5]. Innovation needs ideas & solutions – either when incrementally improving existing solutions or when attempting to solve new complex problems that have never been solved before. Out-of-the-box thinking is essential for innovation.
4. *Execute - decide on the right solution and build it*, e.g. Scrum[6], SAFE[7], KanBan[8]. Companies need methods and tools to assess the complexity of an idea or solution and pick the most impactful one for implementation – based on the right framework. I´m thinking here about two sub-categories: First, tools and methods to drive the *execution of complicated solutions* - a traditional type of project management system might serve well – e.g. a classical waterfall approach. Second, tools and methods that are typically aligned to the Agile Way of Working e.g. Scrum, Kanban, etc. These will typically work better for complex digital solutions.

These four types of methodologies are not siloed - in practice, many of the methods and tools serve simultaneously more than one of the above four purposes. For example, Design Thinking is a great framework, not only to ideate and prototype but also to develop the Vision & Mission and shape the right mindset. Similarly, Scrum, whilst focuses on project management and execution, equally serves in building a special mindset.

From these methods and tools, I would put a special emphasis on the second category mentioned above – the ones to '*Shape a special innovation mindset at both individual and organizational levels.*' I would also emphasize *Sustainability* as a common ground and purpose for each initiative relating to innovation – this helps innovators to address the special challenges of our century and the tasks of our generation. There are various initiatives on a global scale that provide unique tools and methodologies to help build *sustainable organizations, for a sustainable world*, including *17 SDGs of the United Nations[9], Theory U, Economy of the*

[5] TRIZ - Wikipedia
[6] Scrum (software development) - Wikipedia
[7] Scaled agile framework - Wikipedia
[8] Kanban - Wikipedia
[9] The 17 Goals | Sustainable Development (un.org)

Common Good[10]. A framework for sustainability should be considered as a ´must have´ when shaping the vision & mission of a corporation - to set the direction and their unique 'innovative path´. It should be the master framework on top of all other frameworks and methodologies applied.

The next most important class of tools in my opinion is the 'Ideate - activate imagination and creativity.' The greatest resource any corporation has – its employees – needs to be activated with their whole power of imagination and creativity.

A framework for sustainability is a ´must have´ when shaping the vision & mission of a corporation.

- Erik Schumb

To encourage people to participate in the innovation process I would start top-down, from the organizational level: leadership should embrace a culture of diversity, give employees the appreciation for what they are and what they know - give them purpose and perspective. In parallel, an innovation culture should be established – on top of the special mindset described above, one that accepts failure. And as part of the organizational structure, there should be dedicated room and space for free-thinking - *playgrounds* and *sandboxes* as garden and soil where people meet, innovate and give innovation birth & growth. Sustainable business value is then ensured if innovation follows a systemic, holistic approach. This means that innovation activities must:

- *Be aligned to the vision and mission* of the whole corporation so there is purpose in it.
- *Span across organizational silos* and consider all relevant types of internal and external stakeholders.
- *Be open* to identifying and addressing blind spots.

[10] Economy for the common good – An economic model for the future (ecogood.org)

- *Be focused*, ideating towards an expected outcome whilst accepting unexpected solutions.
- *Have stage gates* and tools to filter the most impactful ideas and solutions – the ones combining desirability, feasibility, and viability.
- *Be driven* and executed to boost *organizational synergies*.
- *Consciously apply the appropriate methodologies*, e.g. agile and/or non-agile frameworks to execute, whichever fits best.

Erik Schumb is an Agile Strategist & Coach. He is the founder & CXO of Agile Sprints and Chief Facilitation Officer of AllStarTeams. Previously he has been a Market Analyst, Information Broker, Strategic Researcher, Digital Transformation Manager, Innovation Consultant, Agile Coach.

MATHEW (MAT) HUGHES

Professor of Entrepreneurship and Innovation
LOUGHBOROUGH UNIVERSITY

Does corporate innovation need a methodology? Yes, and emphatically so. There are four reasons why it is essential for organizations to have a methodology for corporate innovation.

The first is relatively simple insofar as without a methodology, corporate innovation is left to happenstance or random chance. The second reason is more a function of probability: left to its own devices, why might one organization innovate more than another? The organization that innovates more possesses a greater organizational readiness for innovation and has in place an internal environment that enables employees to innovate. Third, a methodology for corporate innovation is essential to ensure that the firm meets the objectives of its innovation strategy: be that to achieve incremental, stable, exploitative improvements in product-service quality, efficiency, functionality, and the like; or to achieve truly new breakthrough product-services through exploration, discovery, experimentation, and entrepreneurship. The fourth and final reason is to achieve a balance of both innovation strategies (explorative and exploitative) so that the firm renews its revenue streams while investing in the breakthroughs that will enrich its future. This is what has become known as 'organizational ambidexterity'[11].

It is now quite clear that organizational viability relies on the willingness and ability to innovate, so we cannot possibly feel satisfied if we leave corporate innovation to chance. To resolve this problem, managers must focus on three interrelated areas: *senior management vision* (and

[11] Ambidextrous organization - Wikipedia

strategy), *the structure of the organization*, and *how it measures and rewards performance*. I will discuss each in turn.

A corporate vision and strategy for innovation. For managers to say "we want innovation" masks a series of nuances that matter for the ultimate outcome: *the form of innovation itself*. Not all innovations are equal. For instance, an exploitation-focused innovation strategy places emphasis on superior execution, refinement of a product or a service or the processes that underpin it, improved cost efficiency or quality, or the incremental addition of new features. Take for example a Samsung phone. Every new iteration brings incremental better software, better camera, a new feature or two, sharper screen, etc. This is an e*xploitation-focused innovation strategy*. It's safe, relatively low cost, will pacify and satisfy the majority of existing customers, and keeps competitors locked in an arms race for incrementally better devices. In other words, this strategy also compels rivals to play catch up.

Organizational viability relies on its willingness and ability to innovate.

- Mathew (Mat) Hughes

However, consider an *exploration-focused innovation strategy*. Here, innovations born from experimentation, play, discovery, and entrepreneurship are sought with the intention of making a step-change or breakthrough into new products and services, new technologies, new markets, etc., or a combination therein. This is far riskier, but with the potential for far greater reward and new market leadership. Let us revisit the Samsung example. To think of Samsung as a product business is a mistake. Their strategy has long been to control and pioneer a range of underlying technologies. In doing so, they can then build and incrementally improve products made from these technologies (e.g., microchips, memory, screens, etc.). This is why Samsung both competes with and supplies many of its rivals. This distinction is highly significant for innovation strategy because it builds a fundamentally different business. Ideally, we should strive for a combination of both innovation strategies—organizational ambidexterity—to serve the customers of today while shaping the markets of tomorrow.

Does corporate innovation need a methodology?

To structure for innovation, we must start with the implications of our innovation strategy. If organizational survival ultimately relies on ambidexterity, what the firm has to grapple with is *managing diametrically opposed innovation strategies*. A solution to this is a structural separation where more exploratory innovation activity is shielded under a separate organizational structure that facilitates and rewards research, experimentation, freedom of thought, etc., and the remainder of the organization gears towards the improvement of its existing initiatives.

Exploitation-focused innovation strategy benefits from a more mechanistic structure intended to produce efficiency and refine execution; an exploration-focused innovation strategy relies on organic structure and the space to research, develop and test new ideas. This can be done in a variety of ways including *corporate venture units*, *skunkworks*, *accelerators* or *incubators*, or just separate production lines. For example, Lockheed-Martin's classic skunkworks concept speaks to exploration-focused innovation strategy as much as does Harley Davidson's custom motorcycle line. The intent is the same: to give space to new ideas and innovations to germinate, develop and grow but without sacrificing the 'bread and butter' of the organization.

A methodology is important to ensure that innovation is not left to happenstance.

- Mathew (Mat) Hughes

A counter solution is to provide employees with space and decision-making latitude to innovate as part of their work. For instance, 3M, Google, and other organizations are well known for a form of twenty percent rule', where employees can spend part of their working week exploring new ideas. The challenge is corralling these employees to ensure that productive ideas gain momentum while unproductive, tenuous ideas are managed out. This is a delicate dance for managers, relies on trust, and relies on deep networks within and across the organization to germinate ideas, co-develop them, secure support and resources, and handbrake those ideas that are tenuous or unproductive. The natural consequence of this is the need to carefully monitor employee satisfaction and some inevitable frustration.

The entrepreneurial employee is the subject of why measuring and rewarding performance matters substantially to successful corporate innovation methodology. When managers ask employees to innovate (or contribute to innovation), managers are essentially asking employees to sue their creative agency for the benefit of the organization. The consequence is two-fold: their agency must be rewarded; frustrating their agency raises the likelihood that these entrepreneurial, innovative individuals will leave. This is where the measurement and rewarding of performance becomes essential. First, at this juncture, the question of "what you measure is what you get?" has vital importance. Innovation and results are not the same things; *managers must align the control system with the reward system*; and tight control is your enemy, not your friend.

For instance, rewarding employees by measuring short-term, 12-month or quarterly financial performance means to the employee that the focal points of the firm are exclusively profitability and cost, not innovation. This is incompatible with an exploration-focused innovation strategy and at best will drive incremental, exploitation-focused innovation (if that). Profits and cost reductions are best achieved by reducing expenditure and waste.

Firms must encourage people to be actively involved in the organization's future.

- Mathew (Mat) Hughes

Innovation, however minor, carries an inevitable risk of failure, more so as we aim for medium to longer-term breakthroughs or new developments. This, by measuring and rewarding short-term financial performance, we signal to employees that our true strategy is short-term profit and cost, irrespective of innovation strategy. The alignment is critical. Where there is an elaborate system of control, the work of the employee is reduced to mere tick-boxing, removing their responsibility for medium- or longer-term objectives for which greater responsibility and more creative work is required.

In conclusion, then, a methodology for corporate innovation is important to ensure that innovation is not left to happenstance, or, as I have attempted to outline here, be suffocated by organizational conditions that work against innovation. Firms must have a clear vision and

commensurate structures and processes that encourage people to be actively involved in the organization's future. If employees are not innovating, look first for contradictions in the business and a disconnect between its intended innovation strategy and what it realizes through structure, measurement, and reward. Ultimately, employees act within the rubric set by managers, and this may have intended and unintended consequences.

Professor Mathew (Mat) Hughes is Professor of Entrepreneurship and Innovation at the School of Business and Economics, Loughborough University. Professor Hughes is also the Co-founder and Co-director of the Centre for Corporate Entrepreneurship and Innovation. He previously held appointments as Reader in Entrepreneurial Management at Durham University, and Lecturer then Associate Professor of Entrepreneurship and Innovation at the University of Nottingham.

EVANGELOS SIMOUDIS

Managing Director
SYNAPSE PARTNERS

Corporations with incumbent status in industries as diverse as agriculture, manufacturing, logistics retail, and financial services are being disrupted at an unprecedented rate by a variety of innovations. From technological breakthroughs in cloud computing and big data analytics to disruptions like crowdfunding and social engagement, most of these innovations are created by startups. As corporations attempt to address the implications of these disruptions and become more innovative, it is important that they adopt an innovation framework that incorporates many of the elements used by successful startups to disrupt.

The term innovation has a different meaning for each of us. First, we have to recognize that there are innovations used to keep an existing product or service competitive, the so-called sustaining innovations, and innovations that alter or disrupt markets, or disruptive innovations.

The word "possible" means we are looking to capitalize on what is known and what we can create from what is known. Innovation may involve invention, but the two are not synonymous. The word "transformation" implies a focus on execution. The world "valuable" implies that we are looking for transformations that provide value. To be effective, innovation must be continuous and must involve the solution to a problem — perceived or still unperceived.

Disruptive innovation is the innovation that can change industry structures and, in the process, alter technologies, business models, and other characteristics. It is about creating new value. Amazon was a

disruptive innovator in the book-selling industry, Apple disrupted the music industry, and Salesforce the enterprise software industry.

Traditionally the Corporate R&D and Corporate Strategy organizations were tasked with "looking over the horizon" — analyzing market developments, applying emerging technologies, and exploring trends to identify potential disruptors to the corporation's business. However, during the last 15-20 years, corporate R&D organizations became providers of sustaining innovations that protect and prolong the life of existing products, and business models.

Innovation is the transformation of what is possible into something valuable.

- Evangelos Simoudis

There are six reasons that the existing corporate R&D model is becoming less capable of addressing a corporation's disruptive innovation needs:

- *Accelerating pace of technology innovations*: The existing R&D model cannot keep pace with the accelerating pace of information technologies (cloud computing, AI, big data, mobility, internet of things), biotechnologies (genomic analysis, precision medicine), and materials (nanomaterials, 3D printing).
- *Innovations are generated globally*: Corporate R&D alone cannot address the reality that disruptive innovation is now created by thousands of startups from around the world
- *Slow to determine Product/Market Fit*: Traditionally R&D does not combine technology with business model innovation, to develop solutions to customer problems.
- *Abundant capital is enabling the formation of more startups*: Startups can innovate at a faster pace than large corporations.
- *Collaboration with internal groups is cumbersome*: Primarily due to misalignment of objectives.
- *Using the wrong success metrics*: It lacks well-defined ROI metrics to assess its value to the corporation and its customers.

Does corporate innovation need a methodology?

In the face of the rapidly changing innovation environment — and the increasing importance of innovation to corporate growth initiatives — it is becoming apparent that corporations need to reinvent their innovation model, creating one that enables them to innovate:

- at a faster rate and more cost-effectively,
- from inside and outside by leveraging intrapreneurship and entrepreneurship,
- by combining technology with business model innovations,
- by establishing the right timelines for each type of innovation.

Using these principles, our work with hundreds of corporations from a variety of industries, and decades-long experience in investing and growing high-tech startups we have developed the 'Startup-Driven Corporate Innovation Framework'. The Framework enables the corporation to blend internally-generated with externally-developed innovation principally developed by startups. It incorporates what startups do best. In rapid succession startups ideate, build, measure, and iterate through the Minimum Viable Product in their effort to find the right Product/Market Fit. They assimilate fast both success and failure.

At the heart of the Framework are four organizations that enable rapid experimentation before scaling. These innovation enablers include corporate venturing, incubation, startup R&D, strategy and corporate development, and business development. They:

- Incubate the ideas of intrapreneurs and outside entrepreneurs by providing the right environment, and seed capital to establish and grow innovative startups.
- Invest in external startups, often in collaboration with institutional investors.
- Acquire innovative companies regardless of their size.
- Partner with startups that provide strategic advantages to the corporation.

Our era is characterized by breakneck innovation pace occurring in many fields that is impacting all industries. The Startup-Driven Corporate Innovation Framework incorporates our experiences in Silicon Valley's startup ecosystem and provides a successfully tested approach enabling corporations to create and take advantage of disruptive innovations.

Evangelos Simoudis is a seasoned venture investor, senior advisor to global corporations, and a recognized thought leader in new mobility, digital platforms, and corporate innovation - with over 30 years of experience in Silicon Valley. He is also the author of 'The Big Data Opportunity In Our Driverless Future', and the 'Transportation Transformation'. He earned a Ph.D. in computer science (machine learning) from Brandeis University and a B.S. in electrical engineering from Caltech.

KELLY DAWSON

Head of Insight & Innovation
KINNEIR DUFORT DESIGN (KD)

A structured approach to innovation and an innovation framework, in particular, helps to guide and direct everybody in a team. However, no single framework is likely to suit the array of innovation types that can happen in corporations, for example, long-term challenges vs. quick wins for the next 1-2 years. This is a challenge that can often hinder innovation potential. Rigid frameworks can be an aspect that can stifle the freedom and flexibility required for innovation. Instinct is a powerful aspect of innovation and 'discovering the new' – and quite the opposite of process.

However, it is difficult to navigate teams in the same direction without a guide on where you are heading. You can only move as fast as those you take with you. A 'must have' innovation capability is the *discovery of insights* – it is the single most important element; it all starts here. Whether the methodology is ethnography, video diaries, one-to-one discussions with consumers, this stage of uncovering and 'discovering the why' is often overlooked and underinvested. The *discovery of insights* is ultimately the foundation for ideas to grow from.

No single framework is likely to suit the array of innovation types that happen in corporations.

- Kelly Dawson

To encourage participation in the innovation process, I would advise every team member to get more involved in hearing from real people around the world. *Hearing and witnessing first-hand* the challenges that people incur is invaluable - and no survey or quant can provide the richness of meeting people first-hand to understand what matters most. Secondly, encouraging a forum to explore ideas is a great way to democratize the process. Yes, the innovation workshop has become 'corporate theatre' in some way, but it is important to gain everyone's perspectives and input to pull together mixed disciplines and skillsets.

The greatest business value from innovation activities comes when starting with a real need – a 'consumer pull'. It is often what's hidden in plain sight, or a micro-insight that can create something unique to the market. All too often there are assumptions on what consumers value. I would advise testing these assumptions and hypotheses to learn early on – it is far better value to discover this before developing a product or service too far. Finally, get real quick. Bringing to life ideas and getting them in front of people is invaluable, but be wary not to overload too much in one *concept*. Focussing on *one key benefit* or *feature* is a useful tactic to avoid overlooking a concept without understanding why.

Kelly Dawson is a strategic thinker, driving innovation by discovering unmet needs with global consumers, as well as defining longer-term horizon opportunities. Previously a Design Partner for Unilever, working on global sustainability programs for some of the world's best-known brands. Before Unilever, she led innovation projects for brands such as Samsung and BT. An accomplished leader with almost 20 years' experience, able to convert abstract strategies and insights into innovation.

RICHARD TURRIN

Author of 'Innovation Lab Excellence' and 'Cashless'

Using a methodology to spur innovation in your company sounds like a great idea, but the concept that your innovation program should fit into prescribed "rules" is misguided. Innovation comes in many shapes and sizes and generally abhors a rules-based environment which seeks to constrain or force it into a particular form or shape.

I've had the privilege of running an innovation lab that was uniquely positioned to do two things: sell technology to other labs and act as a "developer for hire" to create fintech for financial service clients. This meant innovation labs and innovators were both my clients and my colleagues. This gave me a unique point of view that has allowed me to analyze first-hand their failures and successes. Running IBM's innovation efforts in fintech within their "cognitive studio" I've seen what corporate innovation practices work and which clearly do not. What became abundantly clear is that no single lab or program is a perfect model for success (or failure).

Out of this environment, I started to consider what series or group of practices could be used to foster innovation in the corporate environment. This stemmed from an analysis of what conditions led to success, and which led to failure. From this, I devised a list of best practices – essentially rules of conduct – that facilitate the adoption of innovation. Instead of taking an approach that is prescriptive in a cookie-cutter way (do this, do that), these practices help foster innovation in an ever-

changing and inherently unpredictable set of circumstances. Which ones we adopt or reject specifically isn't as important as recognizing that these practices in sum and in part help foster a holistic, company-wide innovation mindset.

Promote people's relationship to technology rather than promoting the technology itself.

- Rich Turrin

The list of best practices represents remedies for a host of symptoms that may plague labs and corporate innovation programs -- even those with the best-intentioned management and staff. Each of these best practices is merely a suggestion to be considered and adopted as needed. The best practices I promote for innovation labs and by extension to larger-scale innovation programs are as follows:

1. *Be highly visible*: The innovation lab must be highly visible to the business units it supports. The free flow of ideas between these groups is critical to bringing digital innovation to the company.
2. *Calculate return on investment (ROI)*: Innovation labs should demonstrate an understanding of the ROI of the projects they propose in hard dollars, with soft dollars only if absolutely necessary. The discipline of calculating return gives the lab common ground with management and increases credibility.
3. *Focus on people, not tech*: The focus of the lab must be on promoting people's relationship to technology rather than promoting the technology itself. Implementing technology is most successful when it has the backing of the people who use it. Technology unto itself doesn't transform your company, people using it will.
4. *Say no to carte blanche*: Labs need freedom to innovate, but moderate boundaries help them perform better because all parties have clearer expectations on outcomes. Labs should never have carte blanche to freely innovate.
5. *Balance staffing*: Finding balance between staff with domain experience and digital innovators who by nature lack this experience is critical and a constant challenge. Most labs tilt toward having a majority

of new digital employees who must be trained to understand your business.

6. *Avoid the "big plan:"* Labs should recalibrate their desire for a "big plan" with large ambitions to smaller, more achievable projects that show consistent progress.
7. *Buy, don't build*: In most cases, labs should not be building their own technology but instead be buying tech from the open market. This reduces time to market, lowers costs, and ensures that the best solutions are implemented.
8. *Use disciplined project management*: Acknowledge that project management with innovation is difficult. It requires flexibility and toughness in equal measure. Many project goals are challenging to attain. Killing off projects that have failed or stalled is humane and conserves tight resources.

The concept that your innovation program should fit into prescribed "rules" is misguided.

- Rich Turrin

9. *Flip your hackathon*: Hackathons for staff greatly promote internal innovation. Hackathons for students are yesterday's solution and do little to bring innovation to your lab or for that matter reach promising students.
10. *Transform, not disrupt:* Your lab's goal should be *transformation*, not *disruption*. This helps to help foster an environment of inclusion among your staff and avoids the fear and confrontation that can occur when lab staff attempt to undercut processes or procedures.
11. *The CINO vs the CIO:* A Chief Innovation Officer is necessary as a focal point for promoting innovation to senior management. It may seem expedient to hand innovation to your CIO or CTO, but both may view innovation as a secondary objective.
12. *Avoid inflated expectations:* Inflated expectations for labs are common, and building a lab unto itself is not sufficient to bring innovation to your company. The interplay between your lab, business units, and

internal control functions like IT and compliance all need to be examined for success.

Each of the above conditions comes from direct observation of labs and programs that were successes and failures. Note that I've visited far more labs that struck me as failing than those that appeared successful.

A factor here may be that given a sympathetic ear, lab personnel will gripe that no one gets what they want to do, but overriding this is the fact that labs and innovation programs are frequently still in the experimental stages. The rules for management haven't been standardized and all companies are feeling their way through this new resource as best as they can. No one starts innovating with the intent of failure but through benign neglect or displaced good intentions many innovation labs and programs simply aren't living up to expectations.

Rich Turrin is the international best-selling author of 'Innovation Lab Excellence' and 'Cashless: China's Digital Currency Revolution'. He is an award-winning executive previously heading fintech teams at IBM, following a twenty-year career heading innovation teams at global investment banks. Living in Shanghai for the last decade, Rich experienced China going cashless first-hand and has a unique combination of banking and technology skills. Rich is an independent consultant whose views on China's fintech developments are widely sought by international media and private clients.

ANTHONY MILLS

Founder & CEO, Executive Director
LEGACY INNOVATION GROUP & GLOBAL INNOVATION INSTITUTE

If you ask people about their perceptions of their organization's corporate innovation program, you will find yourself getting very polarized answers. On the one hand, some will swear it is the most wonderful thing their organization has ever done; on the other hand, others will swear it is an utter waste of time and a complete failure. Either way, people tend to be very passionate about their answers. This polarization stems from the fact that members of the organization – often including its own leaders – are unsure of what constitutes success for such a program. In other words, the program is not well-governed, and consequently the results it produces – and the impacts those results have – may or may not be what the organization needs.

As a result, there is a wide spectrum of perspectives on how people from across different organizations perceive corporate innovation in general. On one side, it can be recognized as the true lifeblood of the organization's future, making significant head roads into defining the path of that future. On the other side, it can be seen as merely a

playground where the organization's inventors and tinkerers go to play around, but which no self-respecting professional would ever be caught in. The truth is that the success or failure of corporate innovation lies very much on the shoulders of those executives who must cast its vision, sponsor its endeavours, and lead its activities. The right leadership – using the right framework and methods – will determine whether the program is a success or a failure.

Corporate innovation must be based on a proper architecture, and it must employ certain key methodologies.

- Anthony Mills

Let's begin with the end in mind. The end goal for corporate innovation is to produce real, tangible outcomes that, in and of themselves, produce real, tangible impact for the organization and its constituents – in a manner that is consistent with the organization's corporate strategy and that consequently advances the goals and aims of that strategy over the short, medium, and long-terms. That is the end game.

Given this end game, it should already be clear that corporate innovation cannot run itself and produce such an outcome. Nor will a haphazard or half-thought-out approach. Instead, corporate innovation – like any serious organizational initiative – has to be based on a proper architecture (how it is designed and orchestrated for success), and it must employ certain key methodologies.

From an overarching architecture framework, a framework like the GInI Enterprise Innovation Architecture provides the necessary framework for architecting and orchestrating the overall program. Inside of that, one must use a proper Innovation Management process to drive a consistent and reliable Innovation Pipeline in the organization – in an ongoing, cyclical manner. This is true whether it is pursuing top-down innovation only, bottom-up innovation only, or a mix of both.

Most better – more innovative – organizations will operate a program involving both top-down and bottom-up innovation. However, a number of elements are required to operate a healthy bottom-up

innovation program – including mechanisms of engagement, incentives, rewards, recognition, and enablers like *training*, *resources*, *infrastructure*, *technologies*, *access to insights*, *networks*, and *business ecosystems* – not to mention highly flexible and agile approaches to *funding the projects* the program will sponsor, some of which will come in waves. Moreover, inside of the mechanisms of engagement are numerous activities that organizations can employ, like *communities of passion*, *ideation campaigns*, *hackathons*, *innovation tournaments*, *flash builds*, *design sprints*, *business plan competitions*, and more. Better organizations understand they have to employ a *portfolio* of these so that they can engage the largest possible cross-section of the organization – as certain mechanisms will resonate with certain people more than others. People can then engage in whatever mechanism suits them best.

The end goal for corporate innovation is to produce real, tangible outcomes and tangible impact for the organization.

- Anthony Mills

Guiding all of the above is the official Innovation / Growth Strategy. We divide it into three strategies for each of the three strategic horizons – an Innovation Strategy for Horizon 1, a Leadership Strategy for Horizon 2, and a Future Shaping Strategy for Horizon 3 – which together constitute the overall Growth Strategy. Either way, corporate innovation – regardless of how good its architecture and processes are – will fail if it does not have an appropriate strategy to follow. It is imperative therefore that the organization's leaders establish this strategy upfront and maintain it thereafter. This ensures that when they do engage the organization, what they are asking them for completely aligns with where they want to take the organization. Moreover, better organizations also operate a formal *Future Shaping* (Strategic Foresight / Futuring) operation, and the work of that operation is used to constantly inform the emergent Growth Strategy that guides the innovation program.

The organization will also want to introduce selected methodologies at the tactical level. For most organizations, Design Thinking will prove

extremely beneficial and profitable to their efforts. Highly technical and engineering-driven organizations might also wish to consider a technical methodology like TRIZ[12] or SIT[13]. Beyond this, the organization will want to employ the Lean Startup methodology in its experimentation practices, so they can validate new concepts as quickly and as early on as possible, before wasting time and resources where there will not be a return on the investment.

Better organizations also benefit from operating one or more Innovation Labs – parts of which are used to facilitate Advanced Innovation Groups working on more advanced Horizon 2 and 3 initiatives – and parts of which are made available to the entire organization as a "garage" where people can collaborate together to run experiments and try out new ideas. The success or failure of such an asset comes down entirely to how well it is integrated into – and managed as a part of the overall corporate innovation program. It has to be managed properly and cultivated just like any other asset. Most bad perceptions of Innovation Labs stem from those labs not being properly governed and managed – not the labs themselves.

Finally, many better organizations augment their corporate innovation programs by engaging in Corporate Venturing and otherwise engaging with new startups who are trying out new business models and approaches that the organization itself would never consider or entertain. This serves as yet another form of insurance for further futureproofing the organization and its work.

If all of the above is done properly – and intelligently – and the organization institutes the right mechanisms for executing and implementing its new innovations – then corporate innovation can be extremely successful, particularly with respect to ensuring the future of the organization.

Anthony Mills is a globally sought-after thought leader on emerging markets, proactive growth strategies, corporate innovation, workplace experience, entrepreneurship, product design, and Design Thinking. His work has had a profound and lasting impact on businesses all over the world.

[12] TRIZ - Wikipedia
[13] Systematic inventive thinking - Wikipedia

Does corporate innovation need a methodology?

ALEX FARCET

Partner & co-founder
RAINMAKING

Imagine you're applying for the role of Senior VP of Innovation at a Fortune 100 corporation. The CEO is hard-charging, under pressure, and keen to hire someone who will deliver results. You have a ton of experience, having held similar positions in other companies, and you're focused on setting up the right relationship, and expectations, from the get-go in case you get hired.

- *Corporate CEO*: Hello, would-be-Innovation-SVP, I'm keen to discuss your application for the position of Senior VP of Innovation. So, talk to me about your approach - which innovation methodology will you be applying to our corporation?
- *Would-be Innovation SVP*: It depends on what you mean by methodology. If you mean a set of processes to follow within a rigid framework then I would argue that's not the solution.

  I would focus on an *overall approach* - a set of guidelines adapted to a particular context. You're looking for someone to 'run innovation' - I get it - but I wouldn't focus on a methodology. I would apply a set of *lessons learned* supported by *practical guidelines*.
- *CEO*: Hmmm, okay, that sounds pretty woolly as well…
- *Inno SVP*: If you hire me, I will focus on three topics: *context*, *diversification,* and *iteration*.

  Adapting to context is half of the problem. Context includes current performance, longer-term prospects, and the hugely important topic of *culture*. I've had the opportunity to work with a number of large corporates and their contexts, and in terms of culture they were are vastly different. To give you an oversimplified example, IKEA, a privately held business focused on consumer happiness and affordable prices, has an entirely different culture than, say, Maersk, a publicly listed shipping giant focused on safety and procedure.

  Their toolbox may be the same, but the tools don't get applied, or sold internally, in the same way in those two contexts. What is pitched internally at IKEA as a Bootcamp with a long-term view of promoting co-creation and the democratisation of innovation might sound totally woolly to Maersk leadership which may want to hear about implementation and immediate impact on margins.
- *CEO*: We are certainly not IKEA.
- *Inno SVP*: The first task of anyone implementing innovation is to adapt to a particular context otherwise projects get shut down,

probably for the wrong reasons, before they even take off. So I will look to you and a broad section of employees for guidance on the context of your organization.

- *CEO*: I'll tell you this, you won't have much time to demonstrate results - we're under pressure.
- *Inno SVP*: That brings up the next topic: *diversification*. All too often I've observed a heroic internal champion who fought valiantly to get their pet project - say an internal accelerator - funded for one year. Any continued investment is riding on the success of that initial project which creates both rigidity ("it took me 2 years to get this project funded, I have to stick to what I sold") and places one more egg in one basket.

  It's practically impossible to predict which individual innovation initiatives will succeed. The very best venture capitalists only get it right one or two times out of ten. Diversification, or applying a *portfolio approach*, is key. I will fight for a broad innovation budget with as little upfront commitment on specific innovation projects.

  Let us run a number of experiments – I have very specific ideas in mind of course – and we'll *iterate* our way to success. This shouldn't be a run-of-the-mill CapEx intensive project backed by data and reliable projections.

  We will have to source internally for pockets of innovation, we will have to engage with startups and scaleups, we will have to explore if a corporate VC makes sense; we should look at venture building – all with the context of your organization in mind, by placing multiple bets and by iterating!
- CEO: Alright, let me bring in my CFO and talk about what a budget would look like and also hear her opinion on this diversification topic.

Focus on three principles - context, diversification, iteration.

- Alex Farcet

In this context, the Innovation leader might be tempted to turn to specific solutions, e.g. "We should focus on intrapreneurship only, you have 500.000 employees, surely there are excellent ideas you're not exploiting; here's how we did it at my previous company..." - and all these are valid. However, it is the focus on the three principles - *context, diversification,*

and *iteration* – that will provide the SVP room to be ambitious without putting him/herself into a corner too early.

Alex Farcet is the co-founder of Startupbootcamp, a global network of industry-focused accelerator with over 1000 startup alumni, and Rainmaking, an innovation and venture building firm. He is French, was born in Spain, grew up in Africa, and lives in Copenhagen.

VINCENT PIRENNE

Partner & Founder Board of Innovation USA
BOARD OF INNOVATION US

One of the biggest issues when it comes to innovation is what I would describe as 'failure culture'. Principles such as 'fail fast' have definitely proven their worth and they have enabled great innovations. But the last few years it sometimes feels like failure is no longer a means to an end, but it has become the end itself.

Innovation methodologies structure and simplify the what and the how of innovation.

- Vincent Pirenne

The value of an innovation framework is that it captures learnings of what to do and what not to do. Failure is important. Without failure, there's no improvement and no innovation. Almost every innovation is the result of some kind of failure and the urge to do better the second time. Or third time. And so on. But it should always be our goal to not make the same mistake twice. Innovation methodologies make things easier and sound alarm bells when we are on our way to fall into the same trap.

In an era where speed is probably the most important competitive advantage for companies, methodologies and frameworks accelerate innovation. Almost everything has been done before. Yet, a lot of companies keep on reinventing the wheel over and over again when it comes to innovation. Innovation methodologies structure and simplify the what

and the how of innovation. They make sure you don't need to start from scratch anymore. You can build on what you – and others – have done before. That means you can also avoid the mistakes you – and others – have made before. When you do fail, at least you fail faster.

It takes some time and some experimenting to find the right innovation methodologies that fit your organization. Customer centricity and lean thinking are essential in a modern environment to make sure solutions meet the needs of customers and are launched quickly and efficiently. Lately, innovation methodologies based on the principles of behavior design also show great results.

A lot of companies are so in love with methodologies that they get lost in them.

- Vincent Pirenne

Depending on the organizational culture innovation frameworks can be formal or informal. They can't be too 'heavy'. It is a bit like balancing on a tightrope: innovation methodologies structure, simplify and accelerate innovation. But when they become too complex and too rigid, all those advantages melt away and innovation slows down. A lot of companies are so in love with methodologies that they get lost in them. Ticking box after box after box clashes with true innovation.

Contrary to popular belief, innovation is not a science. Methodologies and frameworks facilitate innovation, but there is no such thing as a waterproof, foolproof method.

Vincent Pirenne is a serial entrepreneur who founded Board of Innovation in NY. As a part of Board of Innovation he has advised some of the biggest global companies around the globe and solved some of their biggest challenges through meaningful innovation.

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WHAT ARE THE ESSENTIAL DIGITAL TOOLS FOR INNOVATION?

Innovation in a corporate environment can benefit from capabilities like idea management, digital collaboration environments, and prototyping tools. But is there an essential stack of digital technologies that helps companies accelerate the innovation process? And if so, what would be the key criteria for selecting such digital innovation tools? What technologies should a company use for managing the knowledge and insights produced through a streamlined innovation process in a corporate environment?

Erik Schumb, Gijs Van Wulfen, Alf Rehn, Pedro Costa, Adi Mazor Kario share their valuable insights.

ERIK SCHUMB

Founder & CXO
AGILE SPRINTS

I would suggest the following digital tools for innovation – organized in four types, each accelerating the innovation process in a particular way:

1. *Business Intelligence tools.* This includes analytical systems that provide an overview of the idea management process at the organization level e.g., via dashboards and special reports that present the progress of the innovation activities and insights that help functions such as budget allocation.
2. *Enterprise Agile Planning tools.* This includes systems that support the execution and management of digital programs and projects e.g., Jira or other cloud-based services.

Digital creative workspaces and rooms can make innovation processes more effective and agile.

- Erik Schumb

3. *Digital creative workspaces and rooms.* These are primarily communication and collaboration platforms such as Microsoft Teams, Zoom, Miro, Mural, HowSpace, etc. They are especially useful by supporting both asynchronous and synchronous innovation activities in a central, virtual, collaboration space. They support remote, visual collaboration and they have become even more important since COVID19 made in-person innovation spaces obsolete. Such platforms connect remote and hybrid teams and can make innovation processes even more effective and agile. These types of tools span in their functionality between pure online conferencing tools, visual

whiteboards, and virtual mid-/long-term rooms to host and document a whole innovation project.

4. *Functionally focused digital tools*. In this category, I enlist tools to communicate (like Slack or WhatsApp), tools to enrich workshop settings with additional functionality like polls (e.g., Menti.com), tools to prototype solutions (like video, storytelling, simulations, wireframes, mock-ups, 3D modelling, etc.), virtual visual whiteboards to collaborate and creatively ideate. Also, I would include tools that help to distribute work and make workflows transparent, e.g., electronic Kanban-Boards (like Trello), cloud-based document repositories (e.g., OneDrive, SharePoint, File Exchange)

Selecting the right tools for your business needs is not always straightforward. I would recommend to first specify the exact digital requirements of your innovation initiatives and then prioritize these requirements as ´must have´ digital functionality down to ´nice to have.' Then I would suggest the following key criteria that can help the process of selecting the right digital innovation tools:

- *Effectiveness and efficiency*. How does the digital tool help us get the expected outcome – e.g., faster and cheaper? For example, today´s virtual settings are very powerful, inclusive, and easy to adopt. At the same time, they minimize costs and efforts associated with meeting planning and business traveling. If facilitated well, communication and collaboration on virtual platforms can be at least as effective as in-person settings - whilst being unbeatable with respect to efficiency.
- *Impact on mindset and collaboration patterns*. Here I would ask questions like Does a digital tool support the innovation mindset or could it be counterproductive? For example, digital Kanban-Boards are most flexible in helping re-prioritize to-do lists in line with shifting client requirements and provide transparency to all participants of an innovation project. They are very much appreciated to organize and execute innovation projects.
- *Instant availability vs. upgrade vs. make or buy*. Well, digitally supported innovation is complex enough. To lower the barrier, it is recommended to first check with the IT department which tools are readily available. Other digital functionality might be available as an upgrade of the existing digital infrastructure. For example, Microsoft Teams is already powerful in its basic installation. Through the Microsoft Appstore, MS Teams can be easily expanded in its functionality (e.g. Mural is available as a more powerful visual whiteboard than MS Teams´ proprietary whiteboard). It can be easier to convince your IT department to upgrade an existing system than to implement

something completely new. For reasons like data protection and security quite often the IT policies of an organization do not easily accept tools that just promise higher effectiveness and are fancier. Either an innovation team will invest some efforts to convince the IT department, or it will start bypassing the official policies and build a shadow IT which might introduce a certain level of risk on the initiative.

- *Likeliness for end-user adoption.* People more easily accept and apply tools that they have used before. However, in innovation teams, there are typically early adopters who like to try new gadgets. The team must consider the benefits of these new 'gadgets' or 'tools', versus the cost of adoption – both in terms of taking it through IT compliance process and in terms of adoption from the broader team.
- *Redundancy.* Before introducing yet another digital tool, it is essential to ask if there are digital solutions readily available that serve the same purpose? For example, there are so many tools for instant messaging like WhatsApp, Slack, MS Teams, and many teams use more than one tool just to do that: chat! This lowers effectiveness and efficiency and eventually confuses people.

There is also a very special capability that is essential for innovation: knowledge management. My recommendation here is to first think about the elements of knowledge & insights to keep along with the purpose they serve and the intended audience/stakeholders. In all cases, you have to keep it lean – only keep knowledge on a highly condensed level, keep the nitty-gritty and avoid the details. Then chose a simple technology *under common use* to organize this knowledge and ensure that other people and teams can access and benefit from it.

Erik Schumb is an Agile Strategist & Coach. He is the founder & CXO of Agile Sprints and Chief Facilitation Officer of AllStarTeams. Previously he has been a Market Analyst, Information Broker, Strategic Researcher, Digital Transformation Manager, Innovation Consultant, Agile Coach.

GIJS VAN WULFEN

Founder
FORTH INNOVATION METHODOLOGY

Innovation is not just about having a clear process, it is just as much about sharing ideas, sparking new ways of thinking, and interacting with each other. Most of us are familiar with in-person workshops where most of these things - if facilitated well - are present. This is different when

collaborating online to get the best results from a team and to keep them engaged. Therefore, it is important to use a well-thought-through selection of online tools.

Innovation is also about sharing ideas and sparking new ways of thinking.

- Gijs van Wulfen

For online innovation, there are a lot of great tools for different activities like online collaboration, video conferencing, prototyping, planning and creating workshops, brainstorming, communication, and much more. In in-person innovation workshops, facilitators use all kinds of tangible materials and tools for collaboration.

Think of post-it notes, markers for writing and drawing, brown paper to put on the wall on which participants can put their post-its and other relevant content, poster-sized templates to be used in the different steps of an innovation process, whiteboards, digital screens, and so on. With the progression of a workshop or project, the room the team works in will fill up with all kinds of input. You want to capture all that content to be able to go back to it in a next workshop or when working on a longer project.

It is not always possible to leave it all in the room since you may have run a workshop in an external, rented venue or you have to tidy up the office space or meeting room for next users. You will then probably end up photographing everything that's on the wall, rolling up brown papers and flip charts, and store it all somewhere for later use. Or you find yourself typing out all the handwritten text to digest the input or to be able to share it with the participants, colleagues, decision-makers or your client.

For online innovation, there are some great tools that make your life so much easier... Tools like Miro and Mural are cloud-based whiteboard tools with a lot of great features, which – if combined with the right video conferencing tools – facilitate online collaboration very well. And all the content is directly available in a digital format, and accessible for everyone (if they have the rights) 24/7.

We brought the FORTH innovation methodology 100% online by combining Zoom with Miro, where all the templates and the whole process

have been made 100% digitally, with great results. Online innovation is here to stay!

Gijs van Wulfen is a worldwide authority in innovation and design thinking. He is the founder of the FORTH innovation method, LinkedIn Influencer with 330.000 followers, and author of 5 books on innovation, among which ONLINE INNOVATION (2021).

ALF REHN

Professor of innovation, design, and management
UNIVERSITY OF SOUTHERN DENMARK

Before one starts discussing the specifics of digital tools, I believe it is important to discuss innovation tools more generally. Sure, digitalization can be a tremendous help, and our new tools can be nigh magical in their capabilities, but one shouldn't imagine that innovation cannot be done in an analog fashion as well.

Consider what I believe to be one of the most essential tools for creativity and innovation – the humble notebook. Sure, today I have a wonderful digital notebook that never runs out of space, translates my scribbles to text, and works as a reading device as well. All that said, it is still the simple act of putting pen to paper that is the very beating heart of innovation work – the capture of ideas and the material act of starting to execute the same. Something similar could be said for the much-derided suggestion box for ideas, the black-/whiteboard, or the humble archive cabinet for storing documents about prior tests and experiments.

What I find is that companies far too often get over-excited about the potential and capabilities of digital tools, and miss out on the core fact of any tool: A tool in itself is nothing, and the proof is in the use. You can invest any amount of money in the fanciest idea management system, but unless people use it, it is worthless. You can get everyone on your team the most expensive tablet on the market, but if they only use them for email and Netflix, you've done nothing innovation-wise. Conversely, a culture where people are keen to capture and document ideas can do wonders with nothing fancier than cheap legal pads and pencils.

So, do invest in the best possible tools for your culture, but make sure your culture is up to scratch first. This also means that you should pay heed to the old adage "softly, softly, catchee monkey". Too often I've seen companies thinking that they should build their stack of innovation tools in one fell swoop, without considering that this might in fact overload and overtax the organization. Every new tool – no matter the interface – is a new thing to learn, a new potential for cognitive overload. Thus it is

important to choose one's battles and pick new tools *not only for their potential but also for their fit*.

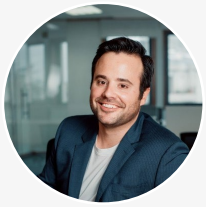
One shouldn't imagine that innovation cannot be done in an analog fashion as well.

- Professor Alf Rehn

Leaders need to understand the existing innovation culture, and introduce new digital tools with a look at how well these align with the way people in the organization are used to work. It is easy to get too arrogant here, and just assume that people will start using the tools they're told, but *innovation takes engagement and enthusiasm*. If people feel that they are forced to submit their will to the workings of a specific digital tool, they will use them, but not in a very productive or value-generating way.

So, are there "essential" digital tools for innovation? No. Not one. An organization can innovate with little more than pen and paper. That said, there is a way to make digital tools essential for innovation. That is to introduce new tools with a sensitivity to how people are used to working, how the culture adapts to new tools, and being humble and attentive when it comes to what people want from their tools. Over time, an organization can build a full digital stack of innovation tools, and have people use them too, but getting there takes work and being attuned to what people want from their tools – and from their managers.

Professor Alf Rehn is a thought-leader in innovation and creativity, as well as an author, strategic advisor, and speaker. His latest book is Innovation for the Fatigued, and he can be found at alfrehn.com or on social media as @alfrehn



PEDRO COSTA

Head of Corporate Innovation, EurA-AG Brussels and Portugal
EURA AG

It is becoming of most importance for large corporations to focus on attracting talent. Since the '90s money became more available for start-ups and they, due to their flexibility and less bureaucratic hierarchy

structures have been able to attract more and more talent over the years, developing attractive recruitment projects and having dedicated teams dealing with employee satisfaction and retention. Attracting the right talent is key for innovation, is obvious that you need to have the technical skills to overcome the technical challenges, but the challenges of innovation in an era of technical expertise "abundance" (when compared to the last century) are shifting towards the need to find people with the entrepreneurial spirit.

Attracting the right talent is key for innovation.

-Pedro Costa

From the shareholders to the CEO, to product managers and shop floor workers, large corporations have implemented a risk-averse culture. Investors of large corporations are happy with moderated returns as long as they keep the risks near to zero, meaning, doing business as usual with small improvements. This has been the recipe for success for many years. But now, the rules of the game changed. Industries are being disrupted completely driven by innovative business models, supported many times by simple technology and flexible and autonomous teams able to steer the business fast. In this sense, I would argue that the most essential asset for innovation is in fact the entrepreneurial spirit and the ability to foster an agile organization (fail fast and safe spirit).

Large companies have been trying from different angles to improve their entrepreneurial culture. From hiring ex entrepreneurs to run innovation departments, creating separated companies for product development and innovation, develop intrapreneurial programs to spark the innovation inside their doors. Many have succeeded and many have failed, and for this one thing is sure is not a simple recipe.

Like there are no recipes, there are not definite tools that if applied to the wrong spirits can and will work. Nevertheless, having been asked to provide tools I'd like to mention one in particular that I have used and that I observed being used with success in many successful organizations. I'm talking about the Google Design Sprint method. This method uses Design Thinking, fast prototyping, and usability tests as a way to reduce the risk of creating enormous elephant projects, that in the end do not match with the future client expectations. The Google Design Sprint has

5 phases, typically one day of the week per phase[1]. Meaning that you can go from a blank page to a concrete prototype to an evaluation of your customer in just one week!

It all starts with finding a suitable room, preferably not a meeting room. Just a room, more comfortable and closer to a regular living room as possible where people can talk freely and let the ideas flow. Then material for brainstorming, nothing special - just some board, paper, pen, and post-its. Second, you need to choose a diverse team. Facebook mix interns from several departments and they make a final contest, while at Google this method is used in all hierarchies - so the importance here is diversity. After dealing with preparation the sprint will take you a week at full speed. In a very summarized way, by:

- Monday you'll map out the problem and pick an important place to focus, you need to end the day with a concrete goal of what you want.
- Tuesday, you'll start drawing competing solutions on paper. The importance here is to focus on two or three ideas that aggregate the majority of people in the room.
- Wednesday, you'll choose one of the ideas, testing hypothesis and thinking already on a way this could be prototyped.
- Thursday, its prototype day, pick PowerPoint, paper, cardboard, or whatever it takes to draw a prototype of your product.
- Friday, bring your customer to the room, observe while they are using your prototype, gather feedback and decide if go, no go, or adapt.

This is just one of the tools, for me a valuable one that sparks innovation and creativity but with a concrete goal. Of course, there are no recipes for success in innovation. If you're competing in a technological field, then technical expertise must be there; however, it is not the single most important thing. I would argue that technical expertise is the qualifier and the entrepreneurial spirit and culture the order winner.

Pedro Costa has background experience in delivering highly complex projects in European, North and Latin American, and African countries. He is now the Head Corporate Innovation at EurA AG, an innovation consultancy firm specialized in the creation and development of innovation ecosystems, helping the largest companies in Europe to profit from collaborative innovation.

[1] The Design Sprint — GV

ADI MAZOR KARIO

Product Innovation and Value Creation expert
INVINCIBLE INNOVATION

Many companies that are starting their way with innovation struggle to select the right tools and methodologies. Depending on the priorities, the structure of the innovation team, the leadership, and their goals, companies might need to build tailored innovation processes supported by the right tools and methods. And there are plenty of such innovation tools out there, for instance, tools to manage a portfolio of innovation projects, facilitate ideation sessions, set up innovation challenges, and develop prototypes. Similarly, there are several methodologies like Design Thinking, Lean startup, etc.

Tools and methods are important but they cannot simply make a company innovative.

- Adi Mazor Kario

However, these are just tools and methodologies – they are important but they cannot make a company innovative without the right mindset from the people engaging with these methods - the leaders, the managers, and the employees. For example, are people open to change? Can they balance business as usual versus future work, vision, and goals? Do they strive to create new solutions and grow in new directions? Are they willing to take risks? Are they ready to react to the fast-changing world?

After all, innovation is about handling the unknown and working under conditions of uncertainty, and hence, this special mindset is the most important part, the missing piece of the puzzle. Without this mindset innovation attempts are bound to fail - no matter how much effort and resources you place on innovation, people will not cooperate and in some cases even purposefully go against it. In addition to the mindset, a company should be aware of its strengths for innovation and utilize them in the process. For example, the internal resources - the leaders who could promote and push innovation further and the right people to participate

in the innovation process. Or the external resources like the right suppliers and partners and also customers, academia, startups, etc.

Once you have the right mindset along with awareness of your innovation strengths and clear goals, you then have to select the right innovation tools. For instance, to engage with your employees, partners, suppliers, and clients you may run an innovation challenge. To streamline your ideation sessions, improve their facilitation and engage with remote teams you may leverage digital collaboration tools, workshops/ tools, etc. Having defined a product to build, you might need to consider prototyping tools to help you de-risk your project, work faster and get insights. Having a prototype you may consider using tools to test it widely, collect insights and support your data-driven decisions. At a higher level, you might need a portfolio management tool for easier control of multiple innovation initiatives.

Beyond the tools and the methodologies, companies should ask themselves if they have the required know-how, expertise, and skills within the company. If not, they need to bring in experts - hire the right consultants or employees to pass on the knowledge to the organization, train current teams and bring the desired innovation mindset. Innovation is hard but it is also critical: it will certainly determine if your company survives in the future and thus you should treat it accordingly.

Adi Mazor Kario is known for her ability to take creative business ideas and turn them into massive revenue. Adi has worked with IBM, Intel, Google, and Waze — along with hundreds of startups in Israel, the "Startup Nation," and played a crucial role in the Google Accelerator.

9

HOW DO YOU MEASURE INNOVATION OUTPUT & IMPACT?

Measuring innovation is tough – as this depends on the viewpoint - the perspective and the actual definition of innovation.

A good measurement framework should quantify both outputs and outcomes in the appropriate time frame. In this context, we ask our leaders to name the top three innovation KPIs that reflect the 'health' of a corporate innovation system/ program and to describe ways to make them actionable – to steer the innovation process depending on the levels of these KPIs.

Read great insights from François Candelon, Alf Rehn, Mathew (Mat) Hughes, Davide Matteo Falasconi.

FRANÇOIS CANDELON

Managing Director and Senior Partner, BCG
GLOBAL DIRECTOR, BCG HENDERSON INSTITUTE

In measuring innovation, we generally observe three *levels of maturity*.

- First level – *focus on output of innovation*. Around 70% of firms get stuck on this first level of maturity - they focus on the *output* of innovation. There is little transparency of the performance of their innovations in the market and no clear metrics to measure the outcome, such as in terms of percentage of sales or the net promoter score.
- Second Level - *focus on output of innovation, yet measure it incredibly well*. This is about 20% of the firms. As a result of steering based on output, these organizations tend to optimize for *predictable output*, and thus, they often produce a stream of highly incremental, safe-bet innovations.
- Third Level – *focus on the outcome* of innovation. Only around 10% of companies reach this level of maturity and measure the *outcome*.

Often, we observe that engineering-driven, industrial goods businesses are stuck at maturity level two. They lack the ability to perform non-incremental innovation that involves risky bets, cross-business-unit plays, and non-core innovation that has spill-over effects.

Only about 10% of organizations manage to optimize innovation activities for their outcomes.

- François Candelon

Arriving at the third level of maturity, 10% of organizations manage to optimize innovation activities for their outcomes. Their success requires that they have separate processes in place to manage breakthrough projects, as well as different metrics that focus on *throughput and learning*, not output.

One industry-leading retailer takes this insight to a near-flawless level of execution through a system of mirrored central and regional teams, in which team member roles are matched on a one-to-one basis. This ensures direct exchange and accountability, as well as clear channels of feedback to the central team on local customer needs. To avoid local bottlenecks, the company tracks product managers' performance centrally, starting from product development and continuing through rollout. To address a common obstacle to effective scaling, it established a central launch support team to share insights and discoveries from multiple regions and to make experienced backup resources available as needed.

A firm's health can be assessed by looking at an array of indicators, the first of which is its *share of non-consensus bets*. This can be measured through an internal voting market. Next, the *balance between false positive and false negative decisions* gives an idea of a firm's current state. Such an indicator requires a *post-mortem analysis of decisions and projects*, which few firms do. One firm that successfully implemented post-mortem analysis is Amazon. An innovation funnel with stage-gate processes to select ideas provides another indicator for the health of an innovation system of a firm. The shape of the funnel provides insight into the vitals of the firm. Finally, several validation tests can be run across projects to assess the health of innovation activity. Such tests measure *how fast the organization is learning* and validates that speed with a simple *risk-burn down methodology*. It specifies open questions and risks and assigns hypotheses to test against.

But even for the most mature firms that measure outcomes — not simply the output of innovation — there are still challenges in measuring innovation: feedback cycles between measured outcomes and the actions preceding it are long and organizations tend to mistake metrics and KPIs for the actual work. If one could overcome these obstacles, innovation would be more effective. *Gamification* may be one interesting lever to solve problems. For gamification to be effective, it would need to introduce more frequent and playful measurement that directly links desired behavior to rewards. *Successful serial innovators are made, not born.*

François Candelon joined Boston Consulting Group in 1993. He has worked in several European countries, led BCG's global telecommunications work from 2008 to 2012, and spent seven years in China where he worked with the most advanced tech companies.

ALF REHN

Professor of innovation, design, and management
UNIVERSITY OF SOUTHERN DENMARK

I find this question exceptionally important, but not as important as the way it is usually posited – including here. Ever since we started to talk about innovation as a specific output of human ingenuity, we've been obsessed with measuring the same. Yet we've never fully succeeded, owing to the intractable complexity of innovation. We might measure patents, and miss all the things that cannot be patented (not to mention overcounting – seeing as the real correlation patents/lawyers, not patents/innovation). We might measure profits, and miss out on the profits we might have made with another innovation trajectory. We may clumsily count new products, and remain blind to how the industry/environment might be shifting under our feet. Not to mention the fact that many of the most important issues of innovation, such as impact and human progress, simply may lack clear-cut metrics.

It isn't enough to measure post hoc, we need to think about what goes into the process.

- Professor Alf Rehn

For me, however, the problem of innovation metrics is a small one compared to the true failure of *contemporary innovation discourse*, namely the fact that we're continuously ignoring *inputs*. We live in an age where the innovation inputs have never been greater. Looking just at financial expenditures, I've taken the OECD figures and estimated that the global spend on innovation is at a minimum 3000 billion dollars – and I could easily argue for a much higher sum. This should be compounded with the fact that we've never had more people working on innovation, never more books and other materials on innovation, never more innovation consultants around, not to mention that most of the people working in advanced economies walk around carrying a minimum of one supercomputer with access to more information than any previous generation in their trouser-pocket. Put in this context, the actual innovation outputs of our global society are far from impressive. Instead, they are rather

pitiful. Thus, the real issue to be solved is not to find some kind of perfect innovation metric, but rather to solve the more complex dilemma of ROII – Return On Innovation Investment. Such a measure would not just look at output in a simplistic way, but ask whether there is a meaningful and productive connection between *effort and resources used* and *output and impact received*. This might seem a somewhat limited way to portray the issue, but I would contend it can actually solve some of the dilemmas of innovation.

Each singular innovation instance is but a single pearl in a very long necklace.

- Professor Alf Rehn

A meaningful measure of ROII would, by the very nature of innovation, have to accept that mere financial or quantitative measures are not in and of themselves enough. Investments in innovation have to also reflect an impact beyond the financial one, as the inputs are far greater than monetary. Taking into account the complexities of inputs, including the fact that many of these have long histories and are embedded into social wholes, would require from us a more complex understanding of outputs as well. More to the point, understanding that any innovation engagement is part of a long chain of inputs, might make us see that merely presenting a short-term business case is fundamentally anti-innovation. Instead, an innovation output needs to have a social impact and also be a foundation for upcoming engagements to build on.

What I am trying to say here is that we need far more robust ways of talking about innovation and metrics. It isn't enough to measure post hoc, we need to think about what goes into the process. Further, it isn't enough to only measure at one point in time. Instead, we need to think of how each singular innovation instance is but a single pearl in a very long necklace – and that we need to both pay heed to what came before and what might come after.

Professor Alf Rehn is a thought-leader in innovation and creativity, as well as an author, strategic advisor, and speaker. His latest book is Innovation for the Fatigued, and he can be found at alfrehn.com or on social media as @alfrehn

MATHEW (MAT) HUGHES

Professor of Entrepreneurship and Innovation
LOUGHBOROUGH UNIVERSITY

Measuring innovation output and its impact matters a great deal. Ultimately, senior managers must demonstrate to shareholders and investors that their innovation strategy works. So fundamentally their KPIs are built around *shareholder wealth* and *investor reward* (by that share price, dividend payments, and measures therein such as ROI[1], ROE[2], and Tobin's q[3]). However, these KPIs are meaningless to other employees.

For an employee, the strongest signals come from what is measured and rewarded.

- Mathew (Mat) Hughes

What matters to employees further down the organization is where their work is rewarded. So for senior managers, for their innovation strategy to succeed, they must incentivize behaviors that coordinate with the intended innovation strategy, reward those behaviors and outputs (there is an important difference here), and ensure that outcomes and their impact align with innovation strategy.

On the surface this seems deceptively simple: implement a performance reward system and get the desired performance. Unfortunately, this is not so. First, what is measured and what is rewarded sends signals to employees about what their priorities should be. Managers may have simple or elaborate innovation strategies. But employees further down the organization experience a phenomenon called 'hierarchical erosion': *the greater their distance from senior managers, the lower their understanding and recall of strategy, and organizational goals and objectives*. For the daily work and life of the employee then, the strongest signals come from what is measured and what is rewarded.

For example, in the following chart, the measures on the left reward *cost control*, which at best steers the employee to incrementally innovate.

[1] Return on investment - Wikipedia
[2] Return on equity - Wikipedia
[3] Tobin's q - Wikipedia

But even then, a far simpler solution is to not undertake such expenditure and simply come in under budget. They are then rewarded, irrespective of any innovation. The measures in the right-hand column steer more towards at least some form of innovation activity, encouraging this behavior from employees and rewarding them accordingly.

Short term	*Medium-long term*
Innovation will be relegated against the surety of hitting financial targets	More scope for innovation to become a priority
Quarterly financials	20% of 12-months sales from new products
12-months' sales or profitability	30% of sales in 3 years from new products
Sticking to or coming in under budgets	New patents, brands, categories or IP
Cost reduction	Achieve strategic change
ROA	ROI
Retention	Growth

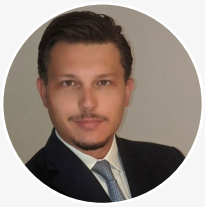
Innovation strategy again matters. If the firm seeks breakthroughs to fundamentally change its historical performance frontier, it must drive an exploration-focused innovation strategy. In turn, heavy (or exclusive) financial control or short-term-focused measures are incompatible with such a strategy. To reemphasize, an exploration-focused strategy cannot succeed when employees are incentivized to act in ways that mitigate such a strategy. There must be some tolerance of failure by senior managers and an acceptance that not all innovations will succeed. While managers can vocally claim such a position, to the employee any such claim is moot if it is not reflected in the measurement, management, and rewarding of performance.

There is no magic template of performance measures and rewards that will ensure innovation output. But based on what I have discussed so far, there are general rules that should be considered:

- Do not control for one thing but reward based on another. *The reward criteria always take priority*.
- Loosen the rigidity of a control system by reducing reliance on tock-boxes that eliminate employee responsibility for innovation.
- Decentralize control and some reward schemes by co-opting middle-managers to deliver on innovation strategy.

- Measures and rewards must be transparent and align with innovation strategy (otherwise the strategy loses its authenticity, and the reward criteria will always take precedence).
- Mix financial and strategic.
- Beware of over-relying on or over-emphasizing financial control (use it strategically, e.g., innovate costs out of the business).
- Acknowledge and celebrate your goals.

Mathew (Mat) Hughes is a Professor of Entrepreneurship and Innovation at the School of Business and Economics, Loughborough University. Professor Hughes is also the Co-founder and Co-director of the Centre for Corporate Entrepreneurship and Innovation. He previously held appointments as Reader in Entrepreneurial Management at Durham University, and Lecturer then Associate Professor of Entrepreneurship and Innovation at the University of Nottingham.



DAVIDE MATTEO FALASCONI

Chief Innovation Officer
ITALIAN MINISTRY OF TECHNOLOGICAL INNOVATION AND DIGITAL TRANSITION

I think that innovation, to be considered so, must be something that has brought a significant improvement - on life, economical system, etc. – and thus it is of critical importance to be able to measure its impact. While invention output can be measured in terms of scientific papers produced, patents, and new prototypes, the measurement of innovation comes with significant, but not insurmountable, challenges – and this is due to its complex activities and relationships[4].

I believe that innovation can be seen as the product of three complementary but independent variables: *invention*, *experimentation*, and *commercialization*. Experimentation refers to the capability that allows companies to define, prototype, and test new solutions – possibly combining new or existing services and products. Commercialization refers to the ability to foster adoption and scale-up solutions in the market. These three variables are all relevant and important: even a small or marginal *invention*, when massively scaled, can bring an impressive *innovation*. To be a little bit provocative, you could take the example of Apple's iPod and argue that it was not a relevant *invention*. When compared to USB Pendrive for listening to music, the latter could provide complete usability and even more cross-device portability. However, Apple iPod was a dramatic *innovation* if we consider its diffusion, how it reinvented the user

[4] Oslo Manual 2018: Guidelines for Collecting, Reporting and Using Data on Innovation

experience, and the novelty of associating a sort of sensorial feeling when listening to music.

From a company's perspective, managing and measuring innovation output should start with a portfolio view and then cover some traditional components, such as R&D and sales from new or innovative products. A couple of these indicators are *the ratio of R&D spend and sales from new products* (focus on efficiency) and *the ratio of gross margin from new/innovative products to sales* (focus on the effectiveness on bottom-line)[5,6].

To make such KPIs actionable, the best technique is to evaluate them vs rolling averages over defined periods and within the same industry. They could also work well across industries - the important choice to be made is about the innovation timeline or the R&D cycle to evaluate the rolling average - which is typically easier when the comparison is performed with the same industry.

Innovation can be seen as the product of three variables: invention, experimentation, and commercialization.

- Davide Falasconi

Furthermore, when moving from a companys' view to a single initiative or a limited cluster of initiatives to assess, the difficulties of measuring innovation become even harder. The main reason is that just a few initiatives out of the innovation funnel typically produce tangible impact and the results cannot be guaranteed ex-ante. Basically, you must search for single events subject to low probability (depending on the phase that is under analysis). While post-mortem analysis can be useful, it would not cover the ongoing process of monitoring, directing, and deciding on innovation initiatives. Although counterintuitive, I believe that some approaches from Risk Management could be leveraged - those related to the assessment and intervention of very rare but extremely severe events. This approach, applied in innovation management, would use

[5] Taking the measure of innovation with conversion metrics | McKinsey
[6] Metrics for measuring innovation | McKinsey

certain KPIs to monitor and get a sort of reverse "early warning system/signal", that would return a "star" flag instead of a "red" one.

Davide Falasconi has a wide international career in strategic transformations, innovation, and digitization, being a manager, advisor, and start-up investor. He worked at Pirelli, McKinsey, and recently in the Public Sector. Davide holds MSc and BSc in Engineering and MBA at LBS.

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10 HOW IMPORTANT IS CULTURE FOR CORPORATE INNOVATION?

Culture is considered a very important element for corporate innovation. But how could we define this special culture of innovation? What are the elements and the ingredients of this collective mindset? And how could a company accelerate the formation of the right culture?

In this chapter, we also explore the importance of accepting failure and ways to encourage people to take calculated risks and adopt mechanisms for handling failure. Read unique insights from Anthony Mills, Cris Beswick, Enrico Gentili, Dr. Diane Hamilton, Tony Ulwick, Michael Stephen Crickmore.

How important is culture for corporate innovation?

ANTHONY MILLS

Founder & CEO, Executive Director
LEGACY INNOVATION GROUP & GLOBAL INNOVATION INSTITUTE

If an organization were to have the most well-architected corporate innovation program, together with the most well-conceived innovation practices, and yet had a culture that was toxic to experimentation, failure, and consequently innovation – then it would never, ever succeed in getting corporate innovation off the ground. Such a program would simply be dead on arrival.

Cultivating a culture of innovation begins with the organization's leadership.

- Anthony Mills

The right culture is absolutely imperative to achieving success in corporate innovation. We actually call this a "culture of relevance" more than a culture of innovation, per se, since innovation itself is not the end goal, but rather a means to an end, that end being *the ongoing relevance of the organization* and its long-term *resilience to change*. What a "culture of relevance" looks like is one that:

- *Pursues a higher purpose* – one that seeks to make the world a better place rather than simply generate profits for its stockholders.
- *Sees new innovation as a way of making meaning of the world* - toward that higher purpose.
- *Understands that the world around it is constantly changing* - at an exponential pace.
- *Fearlessly embraces that change* - along with the uncertainty it holds.
- *Is, in the balance of things, more optimistic than pessimistic*, and consequently sees change as an "opportunity" to be tapped into, rather than as a "threat" to be avoided.

How important is culture for corporate innovation?

- *Is committed to being proactive and pre-emptive* so as to be the driving force in its industry and markets - so that it can take hold of the future and shape it to its own needs and purposes.
- *Is open to experimentation* - from the most basic to the most radical – to find those new concepts that will take hold and empower it to shape and own the future before it.
- *Is perfectly fine with limited failure* - as long as we can learn early and quickly and then leverage that knowledge to be more successful further down the road.
- *Is open to self-cannibalization* - in the interest of remaining at the forefront of its markets.
- *Is very open to broad ecosystem collaboration* - for delivering new forms of value that it could never deliver alone.
- *Cultivates a workplace environment where workers are treated like adults*, and consequently given the autonomy to work in the ways that make them most successful with their teams.
- *Recognizes that excellence in what we do today is what funds our quest to be a leader tomorrow*.
- *Is very stakeholder-aware* and strives to serve the needs of all of its stakeholders holistically.
- *Prioritizes customers* (both those of today and of tomorrow) and *workers* before stockholders, and consequently works out of an obsession with *customer experience* and *worker experience*.

If an organization can cultivate a culture that is all of the above, then it will have a very productive and fruitful corporate innovation program. Otherwise, it will struggle to succeed in this area.

Cultivating such a culture begins with the organization's leadership. Firstly, its leaders must articulate that they are driving this type of culture. Secondly, they must act on this – at every turn, taking immediate action to reinforce the culture and the type of environment it seeks to produce. This means making key investments in certain enablers like *Innovation Labs*, *Innovation Training*, *supporting technologies*, and more – as well as setting up the necessary *Leaders* and *Champions* in the organization to lead and encourage the culture at every turn.

Senior Leaders must also ensure that all those who work for them are equally aligned to this culture, and that any who are not, are replaced by those who are – there simply cannot be "holes" and "leaks" in the leadership of the culture – it must be airtight, otherwise, a few sour apples will spoil their effort. Indeed, such a culture is a fragile thing… it doesn't take much to punch holes in it, and when that happens, workers become cynical and embittered. This culture must thus be nurtured like the fragile

thing it is. Of course, the longer the organization maintains this culture, the more robust it becomes. But it is never immune to being harmed.

The best way to truly reinforce this culture is to recognize and reward those workers – especially the more frontline workers who have actually taken these risks – even if they encountered failures. If leaders will find the people who have actually taken these risks – both successes and failures – and brightly recognize and reward them out in front of the entire organization – then it will send the signal that these leaders are dead serious about such a culture and the efforts they are trying to get the organization to do therein. When workers start to see their colleagues honoured and celebrated for their risk-taking efforts – rather than punished for them – that is when the light goes on, and the organization turns the corner toward having this become the defacto culture for the organization. But it takes leaders being willing to constantly recognize and reward these individuals – at every level – who are doing the things needing to be done in this cultural paradigm.

Finally, leaders must issue a formal "mandate for innovation" across the organization. In such a mandate, everyone – at every level – is held accountable for engaging in, and helping to deliver, a certain amount of new innovation each year. As is well-known, the behaviors that get measured and rewarded are the behaviors that workers will exhibit. Consequently, formalizing the expectation of delivering new innovation via a formal mandate will further drive tangible behaviours in the workforce that reinforce this culture.

Anthony Mills is a globally sought-after thought leader on emerging markets, proactive growth strategies, corporate innovation, workplace experience, entrepreneurship, product design, and Design Thinking. His work has had a profound and lasting impact on businesses all over the world.

CRIS BESWICK

Strategic Advisor & Co-founder
OUTCOME

Think of an ant nest. A superficial glance might give an impression of purposeless activity. But the more you look, the more you come to understand just how interconnected all of the actions, movements, behaviours and relationships are; every ant playing its part in delivering food, stability and longevity to the colony.

Now think of your organisation's innovation efforts. Are they streamlined and interconnected? Are they a 'system' designed to deliver a cohesive vision? Or are your people just doing lots and lots of stuff, measuring

actions rather than outcomes in some vague hope that innovation and growth will follow? The difference between the two scenarios is, quite simply, culture!

However, on the face of it, it's not challenging to disagree. You might say leadership or strategy are critical determinants of innovation. And yes, leadership plays its part, but only if that leadership is committed to building a culture of innovation. And yes, strategy plays its role, but only if that strategy has been designed specifically around the pursuit of innovation-led outcomes. Quite simply, you can't just overlay the pursuit of innovation onto an existing structure and hope to get away with it. True innovation - innovation that delivers real change and makes fundamental differences - requires a root and branch change. And that only happens within a system where strategy, leadership and culture align every individual and every process around the same pursuit.

True innovation requires a root and branch change.

-Cris Beswick

So, a culture of innovation is inclusive and collaborative, enabling engaged, informed, and most importantly, willing people to work together to deliver against a shared purpose. But that doesn't happen overnight. To transform an organisation into one where innovation is a repeatable outcome means understanding the start point. Just like a satellite navigation system in your car, plotting an efficient and pragmatic route to the desired destination requires the accurate triangulation of your current location. Building a culture of innovation is no different and ideally starts with understanding the organisation's current level of innovation maturity. Scaling capability and embedding it into culture only comes to fruition once the building blocks of strategy, leadership and culture are combined into a cohesive system. In this system, purpose, empathy, human-centricity, design, communication et al. are firmly in place. Moreover, just like the ant nest, a culture of innovation is not a one-off project. It requires ongoing care and attention, refining and reinterpreting it to ensure that it continues to remain relevant.

I used the word ‘inclusive’ deliberately in the previous paragraph because it is people that carry organisations through transformation, and it is people that innovate, not organisations. The more inclusive the culture, the more people feel able and 'willing' to contribute. So much so that a

How important is culture for corporate innovation?

2019 Accenture report[1] revealed that the more equal and inclusive the culture, the more employees were likely to engage in innovation activities. Perhaps the most striking statistic in this report was that 85% of people in the 'most equal cultures' stated that they are 'less afraid to fail' in comparison to just 36% in the least equal cultures.

Creating that culture of equality and inclusivity, one in which people are encouraged to experiment and look for more than simply carrying out day-to-day tasks and maintaining the status quo, doesn't always come easily. It starts at the top and permeates every aspect of the organisational system. It impacts your entire people search and onboarding process. It is reflected in employee contracts and rewards. And it is evidenced through the respect and purpose which accompanies every action and interaction.

Without the right culture in place, innovation efforts sink in the quicksand of frantic effort without purpose.

-Cris Beswick

You might be concerned that an innovation-centric organisation could lead to chaos with everyone experimenting as they wish. Yes, that can happen if the drive to innovate has been forced on top of an existing structure. But let's go back to the ant analogy here. As Dr. Robinson from the University of York commented[2], within an ant colony, *"the individual works in a set of parameters which creates group behaviour when extended throughout the colony."* In other words, build the right system, one designed for the pursuit of 'better', around the pursuit of outcomes that can genuinely be considered innovative. Build a system where engagement around these components means people become accountable and self-monitoring, uniting to deliver a cohesive plan.

How important is culture for corporate innovation? Quite simply, without the right culture in place, innovation efforts sink in the quicksand of frantic effort without purpose, now widely referred to as 'innovation

[1] Equality & Innovation in the Workplace | Accenture
[2] Ant research provides efficiency lesson - News and events, University of York

theatre'. The traditional ingredients used to deliver corporate success, i.e., top-down hierarchies, fixed processes, risk aversion, short-term resilience, and so on, are at odds with the world we now have to operate in. Predictability, control, and management had currency when the world was more predictable and linear. But our world is now neither predictable, controllable, or manageable in the traditional way.

Above all else, organisations must remain relevant! A purpose-driven culture designed around the pursuit of innovation encourages creativity, unorthodox thinking, exploration, experimentation, smart risk, empathy, human-centricity et al. to allow innovation to flow through the organisation as an outcome. That, in short, is how organisations will stay relevant!

Cris Beswick is the co-founder of 'Outcome', a boutique innovation advisory firm, best selling author of 'Building a Culture of Innovation: A practical guide for placing innovation at the core of your business' and a leading thinker and strategic advisor on innovation leadership & culture.

ENRICO GENTILI

Associate Director and Master Technology Architect
ACCENTURE

Simply put, there is no corporate innovation without a well-established innovation culture. Innovating is a revolutionary act - it's all about breaking the rules, going against them, taking calculated risks, and pushing the boundaries of the norm to define a new norm. You can't innovate if you follow the known, safe paths that somebody else laid down before you.

Innovating is a revolutionary act - it's all about breaking the rules

- Enrico Gentili

Accepting this definition and acting accordingly can be very difficult in corporations where success is often based on very well-defined, repeatable processes, strong management infrastructures, rigid reporting lines, along with KPIs and rules that are risk-averse and focus on short-term growth.

How important is culture for corporate innovation?

The traditional command-and-control management approach works extremely well in situations where the expected outcome is well known and where the focus is on predictability. However, I don't believe it is suitable in contexts where innovation is the expected outcome. To become more innovative, companies must move from control to empowerment. This move is not easy – as it requires a drastic cultural shift. In fact, cultural change is where most corporations fail in their innovation transformation journeys.

To adopt this special culture, corporations should accept the fact that innovation doesn't follow the rules of hierarchy, seniority, or even specific skillsets. Everyone, at every level, can innovate if given the space and the tools to do it. You need to accept the fact that the next big idea could be brought to the table (or to life) by the most junior person in the team. Acknowledging this leads to the next point: how can we build an environment where everyone's idea is valued and nurtured? This is where an enterprise innovation culture becomes key. It's like preparing the best soil for growing plants in your garden. You need to supply all the right nutriments, protect the sprouts, remove those weeds that just deplete the soil, create space for the sun to bathe your crops. You need to recognise and facilitate those interactions between people with different skills to allow cross-pollination and mutual enrichment for the greater good of the entire team and the entire corporation.

The next big idea could be brought to the table by the most junior person in the team.

- Enrico Gentili

In my experience, there are few key ingredients for a truly innovative culture: *respect* for everyone's contribution, *trust*, and *collective ownership* of both *successes* and *failures*.

- *Respect*. You need to build an environment where everyone, regardless of their skills, feels respected and valued. This goes beyond the classic dichotomy of business vs. technology. With the advent of design thinking and customer focus, with the push coming from newer technologies and business models, the ability to look at a problem through various lenses has increased dramatically. To take full

advantage of this multi-disciplinary approach to innovation it is then imperative to create an inclusive culture where people feel safe and empowered to contribute and bring their expertise while recognizing the value of the views and experience brought by others.

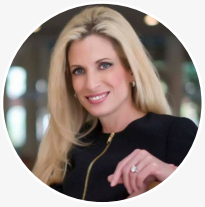
- *Trust*. The principle of trust is about recognizing the professionalism of all the people in your team. There is no point in hiring someone for their skills and then do not trust them to do their job. Of course, trust can be revoked but as a leader, you should see this as a failure to avoid - by providing the conditions for everyone to own their contribution and act accordingly.
- *Collective ownership*. This is about getting obsessed with the bigger purpose and contributing beyond formal roles and job descriptions. For example, if a new product is being developed, each member of the team, from the designer owning the UI to the Engineer owning the back-end to the BA owning the business interaction, everyone should feel the ownership for the entire product end-to-end not only for their parts. A single team working towards an inspiring, big goal.

The innovation process is by its own nature a “trial and error” one where you continuously and meticulously define experiments, question your assumptions, and continue redefining your paths - accepting, along the way, that some of them might lead nowhere. In this context, the leadership must pay special attention to adopting strategies for accepting and handling failure.

A good innovation culture should celebrate success stories, but not only: failure must be also accepted as part of a mechanism to learn and progress the entire team towards future successes. I dare to say that failures are even more important than successes, provided that the right processes are in place to leverage these failures as learning opportunities.

Enrico Gentili is an Associated Director and Master Technology Architect with Accenture. He has more than 20 years of experience in medium to large scale project delivery and IT consulting for a wide set of Accenture's clients. Enrico has been one of the founders of the Accenture Global Innovation Center in Dublin where he established the Engineering team that he served as Director from the initial set-up till 2018. Since 2020 he is an active member of the Global Corporate Citizen Technology Advisory Group.

How important is culture for corporate innovation?



DR. DIANE HAMILTON

CEO
TONERRA

Culture flows from the top to the bottom. If leaders do not embrace the innovative culture they want their employees to display, innovation will be challenging. There are many organizations in the news that share how they value an innovative culture.

Google is often cited as allowing employees to work on their pet projects. Their culture was made so clear that the media picked up on it and shared it with the world. That shared with the rest of the organizations that their culture does not have to be so strict. Organizations can give some leeway to allow time for unique ideas to be brought to the table. Giving people the freedom to express their curiosity can allow employees to be more engaged. Gallup has shared that organizations lose more than $550 billion a year in the U.S. due to low engagement[3]. If the culture supports curious exploration, not only can organizations become more innovative, they can become more engaged as well.

Sometimes the best things learned are through 'failures.'

- Diane Hamilton

Innovation can look different in each organization. For Google, it might mean a new way to configure an algorithm; for a pharmaceutical company, it might look like blocking a new receptor. Whatever the end product, the culture must reward coming up with ideas. Sometimes it might mean rewarding ideas that do not necessarily make it to market. Sometimes the best things learned are through "failures." If organizations only reward the winning ideas, then people will be hesitant to provide any ideas that could potentially fail.

Leaders can begin by asking employees about the kind of culture that would motivate them to be innovative. Some of the best things organizations learn are from their employees. Leaders should share the organization's values and what those values mean to the success of everyone involved. This could mean repeating values in meetings or asking

[3] How to Tackle U.S. Employees' Stagnating Engagement (gallup.com)

employees to share their ideas with an explanation of how their ideas tie into those values.

All change has some risk of failure. It is our perception of what failure tells us that is critical: If we look at failure as just a roadmap for how not to do something, and guidance for how to do it a better way, it is not something that will shut down ideation. Individuals will take risks if they believe they will not be punished for taking those risks. Leaders must demonstrate that they encourage risk-taking and reward new ideas. Leaders can showcase their own failures to show what they learned and how critical those failures were to their eventual success.

Dr. Diane Hamilton is the CEO of Tonerra, author, radio host, keynote speaker, and former MBA Program Chair at the Forbes School of Business. Thinkers50 Radar chose her as one of the top minds in management and leadership.

TONY ULWICK

Inventor, Founder and CEO, Author and Innovation Thought Leader
STRATEGYN

I think a culture of corporate innovation as it's typically conceived is pretty unimportant. Many company managers believe, "Everyone's responsible for innovation," and that "We need to create an environment that fosters innovation." They talk about the need to encourage innovation by setting up a risk-free environment and making people feel that it's okay to fail. They're focused on trying to motivate people and encourage ideas.

A culture of corporate innovation as it's typically conceived is pretty unimportant.

- Tony Ulwick

This is misguided because people are already naturally innovative, they're inventive, they're problem-solvers. They're doing a great job at generating ideas and innovating—but maybe not around the challenges

that are most important to their customers. This is the crux of the issue with innovation culture.

Building a culture of innovation, in my view, isn't about providing an innovation-friendly environment. It's about providing the right customer insights—the right information and data—to the people who need it, when they need it. Furthermore, this responsibility lies with management, not with "everybody." Management has to be responsible for providing employees with the information they need to innovate—and most of them don't recognize this responsibility.

This notion that "innovation culture" is about creating a safe environment for idea generation is wrongheaded.

- Tony Ulwick

What management often fails to realize is that the key ingredient for innovation is not ideas. The key ingredient for innovation is a clear and shared understanding of the customer's unmet needs. Most management teams do very little to make sure the organization has a shared, common understanding of customer needs. In fact, the biggest problem with innovation is that 95% of product teams have no agreement as to what a customer need even is—never mind what those customer needs are and which needs are unmet.

Why is this such a common situation? Many companies:

- Employ failed innovation practices.
- Fail to fund the type of customer research that is required to inform innovation.
- Don't have the patience to obtain the required data before taking action.

Consequently, the customer research that is critical for ensuring success at innovation never takes place, leaving product teams uninformed—or worse yet, misinformed.

Traditional innovation culture is built around an ideas-first approach to innovation. People brainstorm, experiment, they fail fast, and they

pivot. That might define innovation culture, but to me, that's just inefficiency that's been pushed down in the organization by a failure of management to recognize the real problem: lack of a shared understanding of customer needs across the organization. And until an organization has that shared agreement, innovation is going to be chaotic and unpredictable.

My belief is that innovation would flourish if management would make a true commitment to their organization and say, "We are going to make sure that everyone and every product team has a shared, true understanding of its customer's needs." All the other mechanisms are already there. People are creative, people are motivated, people are risk-takers. This notion that "innovation culture" is about creating a safe environment for idea generation is wrongheaded. It's time for managers to recognize the true issue with innovation—and resolve it.

Tony Ulwick is the pioneer of jobs-to-be-done theory and the inventor of Outcome-Driven Innovation. His work has helped the world's leading companies launch winning products and services with a success rate that is five times the industry average. His best-selling book, "What Customers Want," and his articles in the Harvard Business Review and MIT Sloan Management Review have been cited in hundreds of publications. His work has defined a new era in customer-centric innovation.

MICHAEL STEPHEN CRICKMORE

Chief Fvtvrist • Corporate Venture Builder
FVTVRE

Culture can be simply defined as the way things are done around a work environment - it is the way your employees operate, collaborate, and communicate with each other that makes up your corporate culture. So, how important is culture for corporate innovation? Company culture is the backbone of your entire organization. Simply put, when you have a culture that embeds innovation, you create more opportunities for your organization. It's something corporations like Netflix tout and stand by as a part of their hiring, promoting, and even firing process: if you don't fit the culture, little else matters.

Leadership needs to have a clear narrative of profitable growth and innovation to tell the board and outside world. But how do you motivate and include an entire organization to tell this story? Whether your company consists of 100 or 100,000 employees, it is essential that everyone is on the same page about the results they are trying to achieve and how their jobs connect to those results. Culture is at the core for any business

How important is culture for corporate innovation?

looking to use innovation to tell this *growth story* - and experience shows that this has to be a forethought, not an afterthought.

Culture is essential to corporate innovation – it makes up the building blocks to everything you are trying to achieve. If your company has a lack-luster culture, you are going to achieve lackluster results. The most progressive clients I have worked with, implement a positive work environment and *a culture that encourages personal growth and development*. This mindset allows employees to focus on improving themselves while improving the company - by working cohesively as a team under the same shared objectives and principles.

A culture that embeds innovation, leads to more opportunities for your organization.

- Michael Stephen Crickmore

To change your culture to be more productive and innovative, it is essential to *define clear objectives - what you want to achieve*. This may seem very simplistic, but in practice, this activity lacks the time and attention it requires. Objectives become a superficial and often vague attempt at saying 'we want growth for growth's sake'. Following the definition of clear objectives, you then need to define *the values* you want your employees to hold. Keeping your workforce focused on *propelling toward the desired results in a purposeful way*, will, in time, change your culture to focus on *growth through innovation*.

A culture of innovation is a constant balancing act of the freedom "to do," with the necessary guidance of what we need "to achieve". The board and the leadership team need to step back and allow their employees to experiment and grow toward achieving the objectives *without fear of being reprimanded for it*. The purpose of leadership is to guide those ideas to stay on the course against certain KPI's - but without micro-managing the team. Your employees are probably full of alternative views – they can bring fresh perspectives and incredible insights to your executive team. The most successful and innovative companies understand how to implement a culture of innovation that crowdsources their company's intelligence while staying focused on a clear structured timeline and set of objectives.

How important is culture for corporate innovation?

To successfully embed innovation into your corporate culture, you must first introduce the right structures and teams in your workforce. All employees should know what roles each team plays, and each team must have capabilities that are complementary to others in the company. Every team, or department, must play a role in achieving the desired objectives, as measured against well-understood KPI's. Established teams, with clear roles and purpose, make it easier for employees to understand how the operations work and how they can better collaborate with others to innovate. In order to drive innovations through to commercial success, companies need to equip these teams with core capabilities, e.g., in a digital context, User Researchers, UX Designers, Business Designers, and Developers. These cross-disciplinary, agile teams focus on building, launching, and scaling innovation through multi-channeled digital marketing strategies and continuous, iterative development. This SWAT team utilizes the culture of innovation and acts as a beacon to the rest of the organization.

A culture of innovation is about creating such high-performing teams, that are striving to achieve and exceed key results. Leaders must possess extreme empathy and EQ skills to manage their teams successfully – they must be able to understand their employees and discover the best ways to motivate them, reward them, and empower them to achieve the desired results. All these along with recognition and celebrations can shape a true culture of innovation. Ironically, in many cases, leaders get in the way of innovation because they feel the need to intervene and micromanage people. But when leaders step back and show trust in their employees to work at their full potential, the culture of innovation thrives - and this can lead to unimaginable results and exciting opportunities.

As a final thought, a culture of innovation is the best pro-active defense to ensure your company is ready for disruptions and capable of staying ahead of the competition. Innovation culture is about inspired people, able to achieve great things – people who are always eager to do more, learn more, and grow more.

Michael Stephen Crickmore is the Co-Founder of FoundersLane London and UK Head of Sustainable Business Design.

11 WHAT ARE THE MOST FREQUENT INNOVATION BLOCKERS?

Very often, innovation attempts fail, miserably. There seem to be various cultural, practical, or strategic reasons that prevent people from engaging with innovation and the leadership from creating value out of the innovation process. In this chapter, we ask our leaders to spot the most frequent blockers for innovation in a corporate environment – to name what prevents people from engaging with innovation activities.

We probe our leaders to explain how they would remove the cultural, political, and bureaucratic barriers to unblock innovation in complex corporate environments, and what 'innovation acceleration' techniques or methods they would recommend - to inspire people, boost the culture of innovation, and increase the overall engagement. Read great insights from Ger Perdisatt, Gijs Van Wulfen, Marica Labrou, Davide Matteo Falasconi, and Charlie Widdows.

What are the most frequent innovation blockers?

GER PERDISATT

Director, Technology Strategy, Western Europe
MICROSOFT

Possibly the most frequent innovation blocker I see is the cognitive dissonance that comes from how organizations think about risk. Often, companies talk a good game about innovation, but when these aspirations bump up against the realpolitik of running corporate organizations, there is typically only one winner: the status quo.

When innovation bumps up against the realpolitik of running a corporation, there is only one winner: the status quo.

- Ger Perdisatt

Most, if not all, complex, matrixed corporate organizations run on repeatable processes and distinct empowerments. *Conformity* tends to be a feature, not a bug. It's built in to manage and mitigate risk: *the risk of error*, *the risk of duplication*, *the risk of sub-optimal returns*. Many corporate organizations are great at articulating the size of these known risks. Where they struggle is *their ability to assess the opportunity cost*, the opportunities foregone by *not* challenging the status quo and embracing new, innovative practices, products, or services.

When innovation initiatives work, it's because organizations put as much thought and care into articulating these *opportunity costs* and bringing to the executive level mature, well-framed options showing the *'pain of change vs the pain of same'*. In my experience, strategic innovation initiatives tend to either flourish or flounder within the first months after launch: the initial interest and euphoria is replaced by the reality that all these great, innovative ideas are being rejected. Apathy abounds. Ideas stop being submitted. The innovation initiative collapses under its own weight. It's also important to be clear upfront with the organization

about what *kind of innovations* you're looking for, and how much risk you're willing to take. Will you consider moonshots or are you more of an iterative type of risk-taker? Are there particular strategic areas of interest or topics to focus on or avoid? What's a realistic *type of ask* (investment, headcount, executive support, etc)? What kind of *return* are you expecting – do you want incremental revenue growth, or to expand new ideas? How flexible should you be in the initial phases around your criteria?

Bring to the executive level options showing the 'pain of change vs the pain of same'.

- Ger Perdisatt

Furthermore, it's important to consider *who participates* in innovation. When it comes to digital transformation, I frequently see innovation being the preserve of the 'Chief Innovation Officer' or 'Chief Digital Officer' or the 'Transformation team' or the 'Development Unit'. If that's your model, great, but be clear then about the biases and constraints that are going to get built into your innovation idea flows: it's going to come from a subset of people, with specific agendas and experience.

Increasingly, we see organizations succeeding with what I call the 'democratization of innovation' – allowing greater numbers of employees to participate not only in the *ideation process* but increasingly in the *solution building* and *testing* processes. I see this a lot with the concept of low-code/ no-code initiatives within organizations. It's using simplified technology that allows non-technical users to build lightweight applications that still conform to corporate standards (back to the point about risk earlier). This is important as, frequently, innovation initiatives tend to generate a backlog of ideas that need some technological component – putting already stretched IT/development teams under even more pressure. By spreading the responsibility not only for the idea but also its implementation and testing, among a broader base of people, it's easier to get a critical mass faster.

Ger Perdisatt is an experienced business leader with expertise in digital transformation, cloud (IAAS, PAAS, SAAS), sales leadership, industry partnerships and GTM strategies, people and organizational transformation. Excellent track record of performance across a range of industries and functions. Postgraduate qualifications MBA, ACCA.

GIJS VAN WULFEN

Founder
FORTH INNOVATION METHODOLOGY

It is not the strongest of the species that survives, nor the most intelligent. It is the one that is the most adaptable to change. This wonderful quote of Leon C. Megginson[1] is still so relevant in this fast-changing world. That's why it's important for you to be an innovator at work. Developing and launching innovative ideas, concepts, prototypes, and business models is essential for the continuity of your firm. What makes innovation difficult is that a lot of people have to change their convictions and habits before something really new will be deployed. You can invent alone, but you can only innovate by teaming up with others in your organization. It should not be called *I-nnovation*, but *WE-nnovation*.

Real innovators turn the 'Nos' into 'Yesses'. Innovation does not stop at the first 'No'.

- Gijs van Wulfen

The single biggest obstacle at the start of innovation in one word is: *no*. Successful innovators never accept the following seven no's.

- *No, we have done it always this way…* Well, our world changes fast. When the rate of change outside is more than what is inside, we can be sure we will have a problem soon. That's why it's time to think different now: join me.
- *No, our customers won't like that…!* Are you sure? Let's go out there and ask what they think of the new concepts we've ideated and organize customer focus groups or test our ideas online.
- *No, it's not possible…* Well as Dan Brown said: "Everything is possible. The impossible just takes longer."
- *No, that's not logical…* Of course, it isn't. If it would be logical and fit our present processes it would not be innovative. Like Einstein said: "If at first the idea is not absurd, then there will be no hope for it."

[1] Leon C. Megginson (Author of Small Business Management) (goodreads.com)

What are the most frequent innovation blockers?

- *No, there's no budget…* So, what! We'll 'go underground' and proceed anyway, using the budget and resources of another project. It's easier to ask forgiveness than it is to get permission[2].
- *No, management won't agree…* Managers say yes to innovation only if doing nothing is a bigger risk[3]. Pick the right moment.
- *No, that's way too risky…* You cannot discover new oceans unless you have the courage to lose sight of the shore[4]. Innovation creates uncertainty. Reduce uncertainty with doing pilot projects or independent start-ups.

You should be prepared for 'the firing squad' every innovator will meet on his/her way. In my early days in big corporate cultures, I felt the resistance of others as a personal attack on my attempt to move the company forward. I got too excited, too emotional, too upset and at the end of the day I was very disappointed in my company, my colleagues, and myself. Then, when rationality came back, I stood up again and made a second attempt.

Successful innovators know how to get internal support for innovative ideas, concepts, prototypes, and business models. Otherwise, nothing happens. In 1928 it was the famous economist Joseph Schumpeter[5] who wrote, "Successful innovation is a feat not of intellect but of will". Real innovators turn the 'Nos' into 'Yesses'. Innovation does not stop at the first 'No'. That's the moment it really starts!

Gijs van Wulfen is a worldwide authority in innovation and design thinking. He is the founder of the FORTH innovation method, LinkedIn Influencer with 330.000 followers, and author of 5 books on innovation, among which ONLINE INNOVATION (2021).

MARICA LABROU

Senior Business Advisor • Writer • BoD member
DEPA, ENTERSOFT, FOCUS BARI

To adopt innovation, you must first embrace change. This is neither frequent nor easy in business environments. There are hundreds of reasons to "facilitate" denial of change. Communicated excuses like "we have always done it this way here and it has been successful" or "we have found the way it works, why change it now?" or "why bother with new processes?" or "are we sure it will work?" or "who has done so before?"

[2] Grace Hopper - Wikipedia
[3] Change Archives - Gijs van Wulfen
[4] André Gide - Wikipedia
[5] Joseph Schumpeter - Wikipedia

or “show me some previous successful examples of it” or “who said so?” or “they do not know…” or “let’s keep it simple” or “I am not sure it will work” or “why to spend money on something we are not confident about?” or “it cannot be applied because…” or…..

There are also hundreds of untold, inner justifications and worries in people’s minds like “I don’t know how to do it” or “I might fail” or “I preferred the old way I knew” or “why do I have to make the extra effort?” or “what if this new approach ends up to me being obsolete?” or “why do I have to try harder now that I’ve found my comfort zone?” or “I do not trust X’s ideas” or “Y managed to convince the boss again” or “none listens to my proposals” or…

Real innovation is beneficial for all parameters of the business equation.

-Marica Labrou

It is important to mention that the above thoughts and words might come from anywhere in the hierarchy pyramid of an organization; they are common also on the upper part of the “ladder”. So, it is obvious that for an organization to be innovative, *first the leaders must establish a change culture* where people provoke change instead of being afraid of it. People will love to *change* only if they see the positive impact of change on their own lives, on their everyday tasks. People will try only for something that makes their reality better; this is normal!

Innovation just for innovation is not likely to be embraced. Innovation for the benefit of the organization only will fail. Innovation for the benefit of both the people and the organization in total is more likely to be adopted. The secret here is to “link” benefits. If something is beneficial for the company but not for the employees, it cannot be supported by them. Real innovation is beneficial for all parameters of the business equation. If a process becomes faster, it gives involved employees the opportunity to deal with other more productive, more interesting activities or it just makes their routine less boring and tiring; this is positive for them! It is an obvious benefit! But if the innovation results in them losing their jobs, with no other alternative in front of them, of course, they will not be willing to participate in the innovation process in any way.

On the other hand, if innovation is approached as a competitive advantage that will help the organization to survive and thrive *and* this success is shared with employees, people will be more than willing to alter the barriers, to remove the blocking factors to apply innovation in the organization. In short, if people see their future well-being included in the picture of an innovative, and therefore successful, organization, they are hugely motivated to contribute toward the innovation direction.

But even if the internal resistance is resolved, there are also other external factors to be managed: *bureaucracy*, *insufficient funding mechanisms*, etc. These issues differ from country to country, but in any case, the states around the world must be favorable to entrepreneurship, and a sign to prove this is being supportive to innovative initiatives taken by organizations.

Marica Labrou is a senior Business Advisor, BoD member (DEPA, Entersoft, Focus Bari), Business books writer. More than 30 years of successful executive experience in major multinational and Greek companies (BSH, HP, Microsoft, SingularLogic, KAFKAS), the last 15 years in CEO roles. Chemical Engineer and MBA holder.

DAVIDE MATTEO FALASCONI

Chief Innovation Officer
ITALIAN MINISTRY OF TECHNOLOGICAL INNOVATION AND DIGITAL TRANSITION

Innovating own products and services is hard and adopting a structured approach to innovation is even harder - for any company – as it typically implies a major transformation. Moreover, many transformations fail to achieve their own goals - a report from McKinsey[6] suggests that this number is around 70%. Some of the typical innovation blockers found in the literature are:

- *Financial constraints*. Companies do limited investments in new markets - often new markets appear as too small to be efficient, and the cost structure is prohibitive to enter at sensible margins.
- *Inertia.* Companies tend to prefer *optimization of established processes* (i.e., Ford effect - the car is not the evolution of the horse).
- *Innovator's dilemma*. Does the cannibalization of ourselves make sense in the longer term? (i.e., Kodak effect - one of the first commercializable digital camera was developed by Kodak, but it was considered potential cannibalization of Kodak's market)

[6] The 'how' of transformation | McKinsey

What are the most frequent innovation blockers?

- *Inability to experiment*. Lack of readiness and commitment in experimenting with new ideas and introduction of new innovations.

In my experience, the top three barriers can be linked to *limited ability to identify and manage where to deploy innovation efforts* (e.g., similar/improved vs completely new products or services), *lack of commitment and collaboration from upper/top management*, and *budget, resource or investment constraints*. The latter is particularly relevant when we consider SMEs that would need to significantly invest in new or specific resources and capabilities.

Companies prefer the optimization of established processes.

- Davide Falasconi

Beyond these barriers, I think that governments also play a critical role in enabling innovation to flourish. Traditionally, we can see policymakers incentivizing certain industries or technological developments for innovation – and thus help companies overcome part of the above-mentioned financial constraints. However, the role of policymakers can be far more important, on both the supply and demand sides. Let's take the example of A.I. and the evolution of autonomous or semi-autonomous vehicles. On the one hand, the policymaker has the duty to *ensure that innovation is responsible* and that it follows certain ethical principles (e.g., those recently defined by the EU[7] - being human-centric, trustworthy, etc.). On the other hand, it has the opportunity to *remove barriers through the enhancement of the policy framework itself*. For instance, creating special conditions to run tests regardless of traditional legislation bans (e.g., with a regulatory sandbox) or creating special processes to allow derogations could reduce the level of uncertainty in the market. On the other side, public administration can become a major customer for innovative products and digital technologies too. This would not only provide a major driver for market development but also dramatically benefit public administration efficiency as well as citizens' life.

Davide Falasconi has a wide international career in strategic transformations, innovation, and digitization, being a manager, advisor, and start-up investor. He worked at Pirelli, McKinsey, and recently in the Public Sector. Davide holds MSc and BSc in Engineering and MBA at LBS.

[7] Ethics guidelines for trustworthy AI | Shaping Europe's digital future (europa.eu)

What are the most frequent innovation blockers?

CHARLIE WIDDOWS

Co-founder
SOLVERBOARD

In my opinion, organisational culture is one of the biggest blockers to innovation and change. For real change to happen an entire organisation needs to be on board and be willing to embrace new ways of working. Organisations that are wary of change will not only be slow to adapt, but they will also struggle to attract and hold onto people who are drawn to new ideas. By contrast, a healthy culture of change will be more dynamic and better able to capitalise on new opportunities.

Gaining clarity over the meaning of change, transformation, and innovation is a fundamental step.

- Charlie Widdows

According to IBM, only 20% of organisations are successful in managing change effectively[8]. It is part of a leader's role to create this healthy culture, and also to encourage people to support change, transformation, and innovation. So how can the leader create this culture, and what is their role within it?

- *Using the right language and defining change.* Words like *change*, *transformation*, and *innovation* are not interchangeable. Gaining clarity over the meaning of these words in your organisation is a fundamental step for leaders to avoid confusion when communicating with staff. For example, when describing your change management projects or asking staff to submit innovative ideas.
- *Proving the value of change.* Once you know what *change* means to your organisation, you must define the right metrics to measure whether your organisation is progressing and succeeding on its path towards change. For example, staff retention might be a key metric if

[8] IBM Institute for Business Value (ibm.com)

the organisation is trying to improve the workplace. Measuring performance is essential for proving the value of change to staff, customers, and shareholders.

- *Encouraging ownership.* Leaders decide when and how the change happens. They must own the organisation's change agenda by setting the right strategy and vision, inspiring staff to change, and offering the right tools to achieve the desired change. Once your goals are set and people are inspired to engage with the process, the ownership of ideas and outcomes will fall to different teams, so as a leader you must make it clear who is responsible for what.
- *Supporting new ideas and ways of working.* Leaders are under pressure to deliver short-term results. Their ideas are scrutinised by everyone, and as a result, they can be fairly risk-averse. This can create a culture where maintaining the status quo is the order of the day. Changing behaviour is hard, and change will not happen without the support of leadership. To create a healthy culture of change, leaders must lean towards new ideas and ways of working and develop ways for employees to be as involved in the process as possible.
- *Developing the right process.* As the telling IBM statistic reveals, most organisations don't have a process for managing change effectively. This makes the role of managers and contributors to change programs unclear and chaotic, and people give up. A good structure helps to keep people engaged, builds trust, and gives a sense of shared ownership and teamwork. Yet the process needs to allow for *creativity* and *a natural flow of ideas* so that people don't feel stifled. Getting this balance right is the role of a good leader, and it will take time and effort to perfect.
- *Bringing together the right skills.* Once you have defined the problem you are trying to solve, or the change you want to implement, you must ensure that the team has the right set of skills to meet the organisational goals.
- *Overcoming fear of failure.* This may be last on my list, but it is not the least important aspect of leading change. It's discussed a lot, but not many organisations adopt a culture where failing is okay. Getting the balance right is key – because there are some failures that will always need to be avoided, such as not abiding by the law or creating a security breach. However, when it comes to change, a different approach will be needed to allow people to try new ways of working and find what works and sometimes, more importantly, what doesn't.

Without a healthy culture it is easy for leaders to keep investing in what they've always done and 'business-as-usual'.

What are the most frequent innovation blockers?

Charlie Widdows is the co-founder of Solverboard and the founder of two innovation networks – groups of enterprise innovators who meet weekly to discuss the impact innovation has on the world.

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HOW WOULD YOU ESTABLISH AN EXPERIMENTATION MINDSET?

Business experimentation is becoming one of those buzzwords – and hence it is worth defining it and explaining how it fits in a modern product development and a broader innovation context.

I would define a business experiment as any structured, repeatable process to achieve objective measurements that help in either making more informed decisions or setting the direction for further exploration (of a product or a concept).

We asked several leaders to describe the context and the conditions under which such business experiments provide value and how techniques like 'rapid prototyping' and methods like the 'Design Sprint' help the innovation process. Read on what Tony Ulwick, Carlos Oliveira, Carlo Rivis, Misha de Sterke, and Narjeet Singh Soni shared on the topic.

How would you establish an experimentation mindset?

TONY ULWICK

Inventor, Founder, and CEO - Author and Innovation Thought Leader
STRATEGYN

The best way to create an experimentation mindset is to change the way the team thinks about experimentation. A lot of traditional experimentation, like prototyping, is designed to test your concept to see if it addresses unmet needs in the market. The problem is that most companies don't know what all those unmet needs are up front—they're learning as they go. What typically happens is this:

- You stumble across what *you think* is an unmet need.
- You go prototype a feature or solution that addresses it.
- You go out and you talk to customers about your idea, and they tell you if it satisfies a need and if there are still other unmet needs.
- You iterate, come up with the next prototype, and go back out to test it with customers. They say, "Yeah, that's better, but there are still some other needs that are unmet."
- Repeat.

Most companies don't know what all those unmet customer needs are upfront.

- Tony Ulwick

This failing fast or rapid prototyping approach to experimentation is actually highly inefficient. These are the wrong kind of experiments to run.

When it comes to innovation, we're trying to come up with solutions that help customers get a job done better and more cheaply. If you can prove that the concept you're thinking of developing would better satisfy customers' unmet needs, and you could predict that it will get the job done better and cheaper before you start developing it, that's a great experiment. You wouldn't be spending time and money prototyping and

How would you establish an experimentation mindset?

iterating and guessing. Here's what a needs-based approach to experimentation looks like:

- Conduct research to understand all of the customer's needs (using Outcome-Driven Innovation methods[1]).
- Determine which needs are unmet and by how much.
- Decide which unmet needs to target for growth and innovation.
- Brainstorm solutions that address each of the targeted unmet needs.
- Refine the concepts to optimize each.
- Determine which concept will create the most value (best satisfy the targeted needs) for the least cost, the least effort, and the least technical risk.
- Determine just how much better and more cheaply people will be able to get the job done.

In this case, experimentation focuses on testing solutions against a defined set of customer needs—the customer's desired outcomes. These are the metrics people use to measure the successful execution of the customer's job-to-be-done. If the solution addresses the outcomes, you know your solution will win in the market, and your experiment is over. You can bring a winning product to market faster and for less money when you know the product you are about to develop will win in the marketplace.

Tony Ulwick is is the pioneer of jobs-to-be-done theory and the inventor of Outcome-Driven Innovation. His work has helped the world's leading companies launch winning products and services with a success rate that is five times the industry average. His best-selling book, "What Customers Want," and his articles in the Harvard Business Review and MIT Sloan Management Review have been cited in hundreds of publications. His work has defined a new era in customer-centric innovation.

CARLOS OLIVEIRA

Co-Founder & Principal
ADAPTIVEX

A business experiment is a popular approach used in testing ideas and uncovering opportunities for an organization to innovate. Organizations use experimentation as a capability and skill to increase the chances of achieving success in their market and *delighting their customers sooner* while *reducing the cost of ideas* more likely to fail.

[1] Outcome-Driven Innovation - Wikipedia

How would you establish an experimentation mindset?

When set up and executed properly, the process of experimentation can become a competitive advantage for many organizations and an immediate boost for employee engagement and morale. A company would execute a business experiment to tackle the following scenarios:

- To quickly define and validate that a particular idea or strategic direction is the right move forward, especially where a lack of experience or evidence exists to support that direction
- To uncover problems or challenges to a particular idea or strategic direction before scaling and investing additional resources
- To make better, informed business decisions based on real data and input from potential customers or market feedback
- To reduce the risk and uncertainty with launching a major initiative, new product, or service in the market (or internally)

Experimentation can become a competitive advantage for organizations.

- Carlos Oliveira

Experimentation can be a powerful method and tool to maximize business value when solving a tough business challenge with uncertain outcomes. As an example, let's assume we have a 100+ year-old company that has been truly successful over the last century. However, the company is now at a crossroads in its business model, seeing a slow and steady decline of revenues in its cash cow business and few potential new business ideas that have large market-growth opportunities but limited market share to sustain the business and its operations.

To address the opportunity and increase the market share, the company is thinking about moving this new business opportunity from a *direct-to-retail* to a *direct-to-consumer* sales channel. The new sales channel can have a significant impact on how the company delivers the product and acquires market share with the potential to reduce the time to market as well as costs. Such a dramatic change in strategic direction is a completely new endeavor for the organization - since it has limited experience and expertise in this sales channel. The level of risk and

uncertainty with many unknowns is high, making it a perfect candidate for business experimentation.

There are many different techniques organizations can use when designing business experiments, some of which are faster to deploy than others, garnering different levels or amounts of data and evidence to support a specific *learning objective* or a *hypothesis statement*.

All experimentation starts with a *learning goal* and is generally framed around a *testable hypothesis* that comes from a leap of faith assumption. Depending on the lifecycle of an idea, organizations will have many key assumptions and therefore learning goals or critical questions that must be answered to validate and inform their strategy. For example, as explained in the "Real Startup Book"[2], we must answer questions like, "Do we have the right customer and how can we solve this problem?" to, "Is this solution working?", and more advanced questions, such as, "How do we convince them to buy and how should we optimize this marketing?", there are many different questions to ask to get to the crux of what the organization needs to learn.

Modern management philosophy recommends that organizations take *a lean approach to experimentation*, which is all about starting small and building the absolute minimum required to evaluate your most critical assumptions. We learn quickly, using the data to inform the most pressing decision, to pivot, persevere or pull the plug on the idea or strategic direction. A common experimentation technique that encompasses these principles includes *rapid prototyping* where teams quickly ideate and test a series of prospect solutions by building the smallest version first and reducing the time it takes to get it in front of people to capture real market feedback and critical insights.

A *design sprint* is another technique that combines the best theories of *design thinking*, *innovation*, and *lean experimentation* to build a solution prototype in five days or less. The structure of the design sprint brings a small team together and enables the group to quickly gather critical insights from real people on whether or not a particular strategy or solution is the right way forward. Teams use design sprints when they're looking to include both the problem framing, ideation of potential solutions along with the experimentation process all within a short time constraint. Insights and data gathered from the sprint are used to inform the team on how to build a more appropriate solution or strategy or whether or not the business team should even continue to entertain the idea and invest further. Design Sprints help to answer critical questions including:

- Do we have the right audience/ customer?

[2] The Real Startup Book: Find the Right Product for the Right Customers – (Kromatic)

How would you establish an experimentation mindset?

- Do we have a solid understanding of their pains and the job that needs to be done?
- How can we solve for this problem?
- How important is the design to our solution?
- What's the quickest solution or minimum feature set needed?
- How should we prioritize the different features?

Design sprints are powerful; they bring together a diverse group of people that can rapidly shape, prototype, and test a potential solution.

Carlos Oliveira is Co-Founder and Principal of adaptiveX, an innovation and design sprint agency. adaptiveX helps organizations reinvent the world by empowering people and teams to solve meaningful problems in a more creative, collaborative, and human-centered way. We're uncovering better ways of developing solutions and helping others do it.

CARLO RIVIS

Entrepreneur and Innovator
INNOVATION DISCOVERY

Every year companies deal with countless inventions and innovative concepts, but in the end, they adopt less than 1% of cases. This is mainly because the identified opportunities are not aligned with the company goals. Assessing a new technology concept is not easy - to properly understand its maturity you need the right insights, but, for new technologies and novel concepts, obtaining these insights is expensive and complex. Most of the companies lack a smooth and effective 'concept assessment' methodology – they use evaluation methods that are not suitable for innovative products - and often, they don't have the right culture for experimentation.

No doubt about it: it is important to understand the feasibility and the potential of a new concept before making investments in product development. But are you assessing too much? How deep must one dig before jumping on a proof of concept? A common mistake is overthinking the issues instead of taking the right actions to address them. You need the right balance between the time spent for the assessment of a concept and the time dedicated to a first implementation - to verify that this would work according to your needs. It is essential to introduce a "proof of concept" phase during the assessment of concepts – this would allow you either to 'fail-fast' and 'fail-safe' or to find the right path to success. Running a few small experiments in collaboration with the right stakeholders

How would you establish an experimentation mindset?

allows teams to understand the possible solutions deeper, examine its different aspects, and identify its strengths and weaknesses.

In terms of methods and tools, there are several different experimental approaches available - like Rapid Prototyping or Design Sprints. But the most crucial thing you must do to succeed is to engage with people from different departments (in particular R&D), throughout the entire project – from goal-setting to scouting, implementation, and validation. It is important to frequently communicate with your stakeholders, to test if the concept addresses their problems and meets their expectations. Involving different departments in the innovation process creates momentum around novel solutions and eventually helps to grow and boost the experimentation mindset.

Experimentation is all about feedback, speed, transparency.

- Carlo Rivis

Innovation is done by experiments. But companies need to educate people so they understand the process and get actively involved. Experimentation is all about feedback, speed, learning, and transparency – people should have access to results, along with the ability to discover prototypes, interact with them and provide actionable feedback. This way, you inspire people to engage and accelerate the innovation process.

Carlo Rivis is an accomplished Innovator, Business Development, and Project Manager with more than 15 years of leading complex technology projects and companies internationally. Successful experience driving the adoption of new technology innovations, processes, and best practices that reduce costs and improve efficiencies.

MISHA DE STERKE

Senior Partner at Innoleaps & Author '10X Growth Machine'
INNOLEAPS

Since we don't have data about the future, the best way to de-risk new venture ideas in a fast-changing landscape is through hypothesis-driven experimentation - and especially when innovations are addressing new markets and/or new product/service categories. In such cases we don't

How would you establish an experimentation mindset?

know who the customers might be and if they would use and pay for the new product or service. The more questions you have around 'customer, product, channel, price' the more you should experiment to find your way through the fog.

Techniques like rapid prototyping enable 'minimal viable product' thinking - a mindset focusing on learning the most while building the least you can. Rapid prototyping is about creating visual mockups of your product or create an explainer video about your service - think about the famous dropbox movie. Through social and paid advertisements you can lead quality traffic to your online landing page with the mockup of your product or service and measure user's clicking behavior to see if your audience is interested in what you have to offer.

The best way to de-risk new ideas is through hypothesis-driven experimentation.

- Misha de Sterke

For instance, in an actual client case, we got the question to help them find a differentiating and scalable solution for a plant-based beverage. Before we started creating the actual drink - based on research and internal knowledge - we went outside the building and started talking to consumers who were already using plant-based milk alternatives. From these interviews and surveys, we figured out how we could create a different solution.

Then we tested through social media ads – we found the communication message that would lead to the highest amount of interested customers, and then we drove traffic to many different landing pages – to test various pack designs, messaging, price points, and benefits.

This way we identified fast and inexpensively what would be the best product concept and for which price point we could sell it. When we got positive confirmation on those important concept aspects the client made product samples which we started selling in our Shopify webshop. This way, we could validate if people would buy the product, gather feedback on product performance, and also measure if consumers would buy the product more than once.

How would you establish an experimentation mindset?

This data from the consumers provided enough evidence for the corporate investors to scale up this initiative in multiple markets in Europe and has led to significant growth in revenues.

Misha de Sterke is a Dutch creative entrepreneur and a boardroom innovation advisor. He helps in building new businesses with large (FMCG) companies and helps early-stage companies get investment ready within 8-14 months - helped raise more than 25 million of investments.

NARJEET SINGH SONI

CEO and Co-Founder
LEANAPPS

For innovation to be successful, a company ought to think like a VC – and VC data shows that it takes more than 250 ideas to create a multi-billion $ business. This means if you are exploring only 10 new ideas every year in your corporation, it will take you 25 years to create a billion-dollar case. So to get there you should make small bets in 100s of ideas and test them at a fast pace to identify the ones that solve real problems and could have a scalable business model. This way you would de-risk your innovation investments early on, with a small investment – and also obtain data to help you decide which ideas to move further. Our experience shows that 70-80% of ideas tested, fail. But you can't get to winners without investing in losers[3].

Experimentation helps you deal with unknowns through data.

- Narjeet Singh

To establish an experimentation mindset companies must start building a rich portfolio of ideas (remember you need 100s) and find effective ways to validate and de-risk them by analyzing aspects like:

1. *Desirability* i.e. Do customers want this solution? Who are the target customers of the solution and how big is the problem being solved? How do they solve it today and are they actively looking for a solution?

[3] You Can't Pick The Winners Without Investing in The Losers | LinkedIn

How would you establish an experimentation mindset?

2. *Viability* i.e. Should we do this? How big is the target market and who are the main competitors? How would we acquire our customers and how will our solution generate revenue?
3. *Feasibility* i.e. Can we do this? What is the biggest technical or engineering challenge? Are there any legal, compliance, or regulatory hurdles? Do we have the financial resources? Do we have access to the right talent to make it happen?

Experimentation helps you deal with these unknowns through data. For example, validate assumptions around the problem, you can run experiments leveraging landing pages promoted via online ads, to get signals about the market demand.

When you are in solution design mode, you can run experiments leveraging functional prototypes. And once you reach the stage where you need to test the viability of your business model, you can run experiments involving a fake check-out process or actual pre-orders.

A lot of companies use Design Sprints to test their idea - but I believe Design Sprints only provide opinions and do not help to validate the problem and tell if customers are willing to pay for the solution. Experimentation is much better and faster at collecting such evidence about customer behavior. I recommend using Design Sprints after experimentation to dig deeper into the Solution and to define the scope of your first MVP. This approach of testing 100s of new business models and building quick "throwaway" MVPs (initial versions of products built to learn and NOT necessarily scale) has helped Bayer[4] to create a potential of 1 billion $ new revenue from innovation in 4 years.

Narjeet Singh is the CEO and Co-Founder, LeanApps. Narjeet is passionate about experimentation and he is helping companies to learn how to test new business ideas and take them to product-market-fit.

[4] Fostering Employee Innovation at a 150-Year-Old Company (hbr.org)

13

DO COMPANIES NEED A ‘COMMUNITY OF INNOVATORS’?

I believe that a genuine culture of innovation can only grow organically – inspired by genuine leadership messages and a core of authentic innovators. This core of innovators can then evolve into a ‘community of innovators’ -- a self-organizing, loosely coupled group of people who believe in innovation as the means of achieving the organizational purpose and work together to achieve their goals and ambitions.

But how could leaders support the formation and growth of such a community? How could a company measure the impact of this community and balance between ‘normal’ work and informal ‘innovation activities’? These and other very interesting topics are covered by our great panel: Jonne Kuyt, Adrián Heredia Iglesias, Warwick Peel, Vincent Pirenne, Patrick Van der Pijl, and Charlie Widdows.

JONNE KUYT

Director of design driven innovation
EDENSPIEKERMANN

My earliest memories of a genuine aha-moment were when I dismantled a mechanical doorbell as a seven-year-old kid. That was such an overwhelming feeling of joy that I soon ran into many troubles with my parents after dismantling the whole electronics and mechanical collection; vacuum cleaners, irons, drills, sanding machines, radio's, cassette players, amplifiers, bikes, TVs and so on. As Richard Feynmann[1] puts it; It's was just the pleasure of finding things out".

Wouldn't it be a great to stimulate innovation-driven thinking company-wide?

- Jonne Kuyt

Most people are born curious. It's an essential and beneficial setting for survival because it allows you to quickly build competitive advantages in a hostile environment, like in any market. The more you understand and the faster you connect the dots, the higher the chance you will survive in existential challenges. It will train you to have an open and flexible mind. But how does this work in organizations?

Organizations do not effectively stimulate curiosity. People work in roles and procedures that deliver an efficient, predictable, reliable process and outcome. If you want to challenge that framework with alternative ideas, it will demand stamina and confidence. Not everyone is gifted for fighting powers that be.

Curiosity and invention are therefore most of the time set apart - which makes sense when there is ambition to transform the organisation (you can't change anything inside the existing structures and processes). But setting it apart also grows the risk of disconnection with the organization's core purpose, acute featuritis, or the so-called, ‘innovation

[1] Richard Feynman - Wikipedia

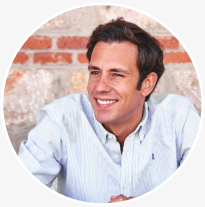
theatre'. Wouldn't it be a great benefit for any organization to stimulate innovation-driven thinking company-wide? To have a workforce that is better prepared, trained, and has the cognitive leniency to mitigate risks and unlock opportunities for a world that is more VUCA (Volatile, Uncertain, Complex, and Ambiguous)? Isn't this what the future of work should look like - that you are empowered and enabled to deliver value to customers?

To make that a success, we should stop calling it innovation. We should stop using the language that makes innovation a thing that we do to the side. We should not separate it into new groups, committees, or departments. We should stimulate (but not force) a general experimentation-driven mindset and a process to support to take great ideas from stage to stage. Build a culture that values and stimulates curiosity.

That will only work if we start changing the language we use. We have seen it in many projects. The narrative of what we do as a whole will define how we interpret reality and the future, define success and failure as a company. A common language to talk about innovations will make the whole organisation the community. Language can help establish more equality, inclusion, and business success.

My chronic curiosity brings me to many exciting places. But above all, it brings me to a place I can work together with people I understand. Not organized or structured or according to the rules but based on a mutual understanding of what we dream of and try to accomplish.

Jonne Kuyt is the Director of design driven innovation in mobility and partner at Edenspiekermann. He helps businesses adapt to digital change and innovate.



ADRIÁN HEREDIA IGLESIAS

Founder & CEO
BYLD

If they want to survive, yes. Companies - no matter their size - need to embed innovation within the organization. In words of Klaus Schwab[2]: "In the new world, it is not the big fish which eats the small fish, it's the fast fish which eats the slow fish."

During the last few years, the market dynamics have changed completely the way innovation is built around the world. Yesterday, innovation was about R&D and companies with enough resources to design complex technologies and create competitive advantages and run years ahead of their competitors. Several examples from the last few years

[2] Klaus Schwab - Founder and executive chairman of the World Economic Forum (Wikipedia)

illustrate that it now takes less time than ever to build a large company. In just five years after launch, Facebook's valuation was 15B USD (2004-2009) and Uber's 40B USD (2009-2014). Looking at the time required to reach 1B USD in revenue from inception, Dell took 9 years (1984-1993), Office Depot took 5 years (1986-1991) and Groupon took only 2 years (2008-2010).

The main consequence of this new market reality is the *speed* required for innovation. Thus, if a company wants to maintain a strong position within its industry while defending itself from external threats, it is mandatory to design, reward and maintain a deep presence of an innovation culture that is fully embedded throughout the organization. This is the main challenge that big corporations need to face: *they need to evolve if they want to survive*. When an innovation opportunity arises in such companies, it's very common to see the "corporate antibodies" entering the room kicking and attacking the innovation.

It is very common to see "corporate antibodies" attacking innovation.

- Adrián Heredia Iglesias

Deepening in the barriers that corporates need to pass to create innovation, I usually like to talk about 4 main topics:

- *Focus*. Core business always comes first; there is always pressure to deliver short-term results and a focus on extracting value from the activities the company already excels at. And when a difficult situation kicks in, it is difficult to give innovation the credit and value it deserves.
- *Processes and agility*. Big corporations need to be efficient. Efficiency demands structure. Due to long bureaucratic processes, communication and decision-making are extremely slow. It is understandable for the business as usual, but when we talk about innovation...well... it does not work.
- *Politics*. Dynamics such as: "we just need to be aligned with the other department" might seem harmless, but it can outright stop or severely hamper innovation.

- *Talent*. The limited ability of established corporations to attract and retain best-in-class talent. For example, in many cases, MBA's do not want to work in large, slow, hierarchical, and boring organizations. They thrive to impact the bottom line and this is possible only in agile organizations. Also considering the arrival of new generations, this creates a disadvantage for big corporations.

In summary, corporations are focused on the efficiency of their processes and core business, with hierarchical structures, specialized jobs, and internal bureaucracy. This allows them to tackle their operational innovation – the first Horizon of McKinsey's 'three horizons framework'[3] - but not the second and third (new business models and disruptive innovation) which would allow them to become an industry leader in the long term. Quoting Narry Singh[4] (Global Head, Growth & Strategy for Accenture Digital), "Corporate innovation does not work".

There are several ways of creating and maintaining a community of innovators: entrepreneurship programmes, HR policies, etcetera. However, there is one thing that stays above all of them: leadership. If the top management does not like this way of thinking (which usually leads to photographic innovation - run two intrapreneurship programmes, take the photo and go to the media) it is not going to work. Never.

Adrián Heredia Iglesias has a deep knowledge of how technology is disrupting business models thanks to many entrepreneurial battles over his shoulders. He founded Byld after 6 years involved in the design, launch, and consolidation of Sonar Ventures, one of the first venture builders in Spain. He is also a mentor and professor in different business schools and universities, and advisor to different public and private organizations (e.g: EIT Urban Mobility, a public body of the European Union).

WARWICK PEEL

Innovation Leader, Asia Pacific
IDEASCALE

A Chief Innovation Officer needs to create a team of champions, sometimes referred to as the 'intrapreneurs' or innovation catalysts. There will always be more naysayers than less, so one needs to build a coalition of the willing. If we ask two questions, "who wants change?", all hands go up, then, "who wants to change?", then there's often silence.

The innovation catalysts are the ones who know that innovation is 1% inspiration, 99% perspiration, so they are the ones that get sh!t done. They know that there will be failures, and they refer to them as learnings or

[3] Enduring Ideas: The three horizons of growth | McKinsey
[4] Narry Singh | LinkedIn

lessons learnt. Some of these innovation catalysts are entrepreneurs, they are proud of the scars of their entrepreneur journey and the lessons learnt. They are the ones who can be somewhat comfortable in uncomfortable environments, they live and breathe ambiguity and they have the resilience to forge ahead no matter what. Companies who build innovation catalysts will build long-term value, they will be the companies that go from good to great.

Warwick is an innovation-led entrepreneur, currently driving innovation excellence across Asia Pacific with IdeaScale. Continuing to mentor founders, he is part of Inspiring Rarebirds Female Founders in 2020. A board member for the United Nations Association of Australia (Victoria), he is passionate about steering impact towards the UN SDGs. He is also an advisor to startups, mentor to FYA Young Social Pioneers, active in the AI for Good community, as well as Co-Founder of Entrepreneurs&Co.

VINCENT PIRENNE

Partner & Founder Board of Innovation USA
BOARD OF INNOVATION US

Due to its high risk, innovation is very fragile in an organization. Innovation is vulnerable to organizational changes. When a new CEO takes the lead and decides that the ROI of innovation should be accelerated, that puts pressure on the existing portfolio and innovation programs. In the worst-case scenario, they get killed and innovation goes back to square one.

When innovation is in a company's DNA, it is thanks to the informal community of innovators.

- Vincent Pirenne

A so-called 'community of innovators' creates a decentralized and less fragile space for innovation to exist and grow. Such a community is often not an 'official' body or structure. It has no fixed place in the

company's hierarchy or organizational chart. It wasn't created by some executive, but it has grown in a spontaneous and organic way. Therefore, when new leadership is introduced, it is the community of innovators that keeps the innovation culture, the tools, and the methodologies alive. It is the community of innovators that ensures continuity.

Companies should cherish their community of innovators. When innovation is in a company's DNA, it is usually not thanks to the CEO, the board, or the shareholders. It is thanks to the informal community of innovators. They change the company's mindset and they create the support base for innovation projects and investments.

So, how do you create the breeding ground for a community of innovators? By giving visibility to big and small success stories employees will be triggered to be a part of those stories. Both on the individual level and team level, rooted in different departments and divisions. Everyone should understand the why of innovation and the possible ways to contribute, but there's no use in forcing people into being a part of the community of innovators.

Not every employee is an innovator, not every employee is an intrapreneur. Some people feel more comfortable executing other's ideas. There is nothing wrong with that. You don't just need designers and developers, you also need people actually building stuff. Companies can't involve all their employees in their innovation projects, companies can't try out (let alone execute) *every* cool idea. That's a waste of time and money. Innovating bottom-up does not mean including every single employee in the process. That is a misconception.

A community of innovators is a great thing, but only when the community has real business impact. If it doesn't have an impact on simplifying processes, speeding up the go-to-market of new solutions, or the launch of new initiatives, it doesn't create value. If the community only creates innovation theatre, it is counterproductive and undermines the overall perception of innovation.

Vincent Pirenne is a serial entrepreneur who founded Board of Innovation in NY. As a part of Board of Innovation he has advised some of the biggest global companies around the globe and solved some of their biggest challenges through meaningful innovation.

PATRICK VAN DER PIJL

CEO, Best Selling Author, Speaker
BUSINESS MODELS INC.

Companies need a community of innovators on the internal side - I call them *catalysts*. And they play an important role because the fastest way to establish an innovative way of thinking is to use an existing network of people who have this affinity or association with it: it is much easier to connect to those people instead of convincing others that innovation is 'a cool thing'.

But outside communities are important as well - and we see more and more that companies need to be able to access these communities continually – so they can effectively test their new ideas and capture insights. This can be done, for example, by submitting questions to the community, via an app and then collecting and analyzing interaction data and direct feedback. For our customers, we 'expose' a product to a target audience, then record the user experience, and then, using our AI-powered back-end, we extract patterns and get detailed insights that help the product development decision-making process.

Patrick is the founder and CEO of Business Models Inc (BMI), a global design agency on strategy and innovation in 2009 with offices in US, UK, Europe, Australia and Taiwan. Patrick has a passion for strategic visioning, graphic facilitation and storytelling. BMI was awarded with the Pioneer Design Award for democratization of the innovation and strategy tools.

CHARLIE WIDDOWS

Co-founder
SOLVERBOARD

It's important to have internal communities that are focused on achieving the organisational goals. Usually, these communities are split by function – such as product development, finance, or marketing – and they form teams around these functions. Sometimes a few functions will work together and become known as a department.

Innovation as a recognised profession is relatively new, and it can happen within any function, team, or department. The companies that lead the way in innovation are ahead of the curve in viewing it as a professionalised process. Some of these subscribe to the belief that they should have a defined community of innovators, such as an innovation team. Meanwhile, others believe that this is not necessary and instead, they choose to cultivate a culture of innovation throughout the whole

business, for example through *innovation champions*. Some businesses will also tap into external communities of innovators – in the context of *Open Innovation*. Engaging with these external groups is often the responsibility of the Innovation Manager, who must be driving collaboration and engagement. Meanwhile, other business leaders would argue that companies need to empower anyone in the organisation to be an innovator.

Often, the approach a company decides to take will depend on its size. In a large organisation, creating a community of innovators will help to provide mutual support and guidance and avoid innovation becoming siloed. In a small company, the innovation community may exist as part of the founder's wider network, for example. Either way, the community needs to be diverse and to represent the voices of all the company's stakeholders, including its current or potential customers.

The success of an innovation community largely depends on whether the company is ready to absorb their input. For innovation to thrive, the role of the innovation community must be clearly defined and understood by the whole company and there must be a mandate for the innovation community to contribute. There must be a clear innovation strategy that is aligned to the overall business strategy and goals.

The community must be diverse and represent the voices of all the company's stakeholders.

- Charlie Widdows

Providing the right context for innovation to thrive will help with both *forming* this community and *nurturing its growth*. Innovation is not just about making more money or selling more things. The compelling reason for the organisation to exist, reflected in the company mission, must be communicated clearly by the leadership. If the mission of the company is well understood, employees and teams have the right context to constantly question whether their innovation work is helping the organisation to achieve this mission or not.

Leaders must ensure that there is a safe space for employees to try doing things differently. This could involve providing the right tools for them to gather ideas, try different approaches, and measure success. To achieve this, you need to have a leader who is good at managing risk, is

comfortable with learning from failure, and is invested in creating the right culture. This will help your community of innovators to grow and succeed.

Charlie Widdows is the co-founder of Solverboard and the founder of two innovation networks – groups of enterprise innovators who meet weekly to discuss the impact innovation has on the world.

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HOW DOES INNOVATION BLEND WITH AGILE PRODUCT DEVELOPMENT?

Innovation can be thought of as a standalone organizational entity or as a fully embedded process in the product development function. The latter raises various interesting questions, such as: How should product innovation be orchestrated after launching the MVP in the market? How can product innovation continue as part of the ongoing product development – through the fast iterations of the agile approach? What kind of innovation processes, methods, and tools do modern companies apply when building a digital product?

Isaac Sacolick, Rosemarie Diegnan, Fabrizio Ferrandina, Adi Mazor Kario, and Johanna Rothman share their valuable insights.

How does innovation blend with agile product development?

ISAAC SACOLICK

President • CIO • Digital Transformation • Founder • Author
StarCIO

Let's simplify the industry jargon on ideation, innovation, product management, product development, design thinking, minimal viable products, and agile product development. Most organizations look to conceive new ideas from a broad range of people across the enterprise. They want to select the best concepts, invest in them, bring them to market, and continue innovating to grow revenue and improve customer experiences.

Agile product development processes provide a framework for sustainable innovation.

- Isaac Sacolick

The typical challenges are about defining a process for selecting the best ideas, establishing how minimally viable products get defined, leveraging customer feedback to improve the offering, and choosing which KPIs help guide the innovation process. My recipe for addressing these challenges starts in the center of where ideas turn to plans and realities. Agile product development is the central planning and delivery process. Sustainable innovation, ideation, and product management practices depend on a collaborative, flexible, and consistent agile planning and delivery process.

Agile product development processes provide a framework for sustainable innovation. Central to the process is enabling multi-disciplinary teams to plan and deliver product improvements to customers in incremental releases and reviewable enhancements in sprints. There are three aspects of the process that are central to successful product development:

How does innovation blend with agile product development?

- *A product owner* who defines customers, personas, and value propositions and is responsible for prioritizing a backlog of capabilities and improvements.
- *Teams* that understand customer values, align on business goals, define acceptance criteria, recommend solutions, and commit to completing plans and implementations every sprint.
- *A feedback process* that shares customers' voices, customer satisfaction scores, usage metrics, operational factors, and financial impacts to the product owners and teams so they can reconsider priorities and plans.

Inside and surrounding the agile product development process are innovation processes for understanding market needs, customer values, user experience considerations, regulations, business model factors, and competitive dynamics. These practices fit neatly into agile methodologies:

- *Innovation processes* such as commissioning market research, organizing brainstorming sessions, adopting design thinking practices, and conducting focus groups all help teams formulate product strategy, design, and requirements. These are the inputs to epics, features, and user stories teams plan and deliver in sprints and releases.
- *Practices* such as A/B testing, feature flagging, inline polls, and capturing usage data are all best innovation practices that teams engineer in the delivery process.
- Lastly, innovation also plays a role in *interpreting customer feedback* by recognizing which signals are most important to pay attention to and how best to implement product adjustments.

There are many tools to consider when maturing innovation and agile practices. Teams need a collaboration tool like Jira Software or Monday.com for managing their backlogs, requirements, and sprints. Larger organizations can manage the product development and ideation process with tools like Jira Align and Aha! There are many different tools for designing user experiences, testing features, and capturing user feedback.

So if agile product development is at the center and innovation practices focus on optimizing customer experiences, how should organizations figure out what ideas to pursue? In Driving Digital[1], I address this question by starting with a very lightweight, one-page vision statement to articulate customer definition, value proposition, and strategic alignment. Suppose there's a team ready to pursue the idea and have drafted their vision statement. In that case, their objective is to develop a product

[1] Driving Digital: The Leader's Guide to Business Transformation Through Technology

plan by articulating several starting questions that qualify the offering and quantify the benefits. Commissioned teams then use agile sprints to perform research, brainstorming, experimenting, testing, and other innovation activities to answer their questions and ask new ones. They go through one release of this planning and then report back their recommendations on whether to pivot or kill the idea. The better ideas may require further planning, or the team may move to justify investment for a PoC, pilot, or MVP.

In a steady state, the product already has an MVP or pilot in front of customers. In these cases, the product owner fills the backlog and sprints with a mix of innovation, planning, and delivery activities. The magic of delighting customers and growing business happens with a blending of these activities so that teams are consistently delivering new capabilities and improving user experiences for their customers. That's agile innovation!

Isaac Sacolick (@NYIke) is StarCIO's President and guides business leaders on succeeding with data and technology while executing smarter, faster, safer, and more innovative transformation programs. He authored the Amazon bestseller, Driving Digital: The Leader's Guide to Biz Transformation Through Technology, has over 700 articles published, and keynotes on digital transformation topics.

ROSEMARIE DIEGNAN

Chief Strategy & Product Officer
WAZOKU

Using agile product development methodologies to drive your innovation processes will allow you to innovate faster, more efficiently, and more effectively. Agile product development is not a universal process, but rather a mindset that encourages cross-functional teams to develop products iteratively and collaboratively - rather than waiting to deliver a final 'finished' product.

Agile product development was born out of the inefficient practices of traditional software development, where consecutive, disconnected activities led to products that often failed to live up to expectations or meet the end customer's needs. Moving to more agile methods - where development is broken into small, iterative parts - allows everyone to work collaboratively and quickly adjust *if*, and more likely *when*, initial expectations do not meet the specific needs of the end-user. As early iterations are developed, everyone is able to provide feedback and suggest changes and enhancements leading to faster delivery and better end results. Innovation processes – whether related to the development of

digital products or other services – benefit when agile principles and methodologies are applied.

Agile product development is not a universal process, but rather a mindset.

- Rosemarie Diegnan

To do so successfully, you must use similar tools and processes to manage what activities will be pursued and in what order. I recommend the following agile methodology:

- *Start with an open and transparent platform that clearly articulates the problem you seeking to solve*. In response to this problem statement, you allow all of your stakeholders – both internal and external - to contribute ideas about how to solve the defined problem.
- *Identify and clearly articulate the evaluation criteria* to be used to both prioritise and select the ideas you will pursue initially and in later iterations. This is a very important step because often *the decision to not do something* is more important and beneficial *than the decision to do something*.
- *Articulate a well-defined minimal viable product (MVP)* that solves one specific problem independently and successfully. If you define your MVP to do too much, everything will be done incompletely or with unnecessary compromise, rather than focusing on building the one thing that shows the capability to come over time.
- *Adopt a project management methodology based on short cycles* (usually 2-4 weeks), each producing a working prototype. By limiting an iteration to something that can be independently tested, you provide yourself with the ability to gather stakeholder feedback quickly and timely – with direct and immediate effect on your next iteration.
- *Engage and nurture a consistent group of stakeholders* that are incentivised to test and *provide honest, impartial feedback*. To have the greatest impact on the success of your innovation, engage both internal and external stakeholders as early and frequently as possible. The time spent in these early feedback loops will lead to your eventual success.

How does innovation blend with agile product development?

- *Approach each iteration with a willingness to stop the project* if the feedback suggests the innovation is not on target to solve the defined problem and generate value. This can be the hardest step because we become invested in our projects over time, but if you are focused on true innovation and the development of value, you will embrace this step and learn the lessons, so the next innovation project can result in real value.
- *Define a clear process for managing the backlog* of enhancements and changes to apply only after the initial MVP. Don't start adding ideas or enhancements from this backlog before you have launched your MVP, as it will only encourage *scope creep* (remember the well-defined MVP?). You can and should capture the backlog of ideas (using the same platform you used to define your problem) throughout your early iterations, but need to resist the pressure to increase the scope of your MVP, which will only result in delays.

Most importantly - remember that once the MVP is launched, each future iteration should follow the same steps with the only difference being it is applied to an existing offering. With each new enhancement, you must continue to ask what specific problem is being addressed and will the suggested change bring value to your customers and your organisation.

Rosemarie Diegnan is an experienced product leader having led product teams across a number of internet businesses in the USA and UK. Rosemarie joined Wazoku in 2012 and has led the design and delivery of its market-leading innovation suite including an Enterprise Innovation Platform, Idea Management Software and Open Innovation Marketplace.

FABRIZIO FERRANDINA

CEO
ZÜHLKE GROUP

Innovation thrives when collaboration is fostered by encouraging agile practices, when teams feel free to bring up out-of-the-box ideas, and when user feedback is used effectively. Agile practices match well with the Build-Measure-Learn[2] innovation processes that test ideas early with customers. Customer feedback then directs the product backlog, out of which the product is delivered in small working increments. Such continuous feedback cycles allow products to evolve efficiently, whereby the 'ideas repository' continuously feeds into the product backlog. Ideas can

[2] The Lean Startup | Methodology

How does innovation blend with agile product development?

be prioritized using strategically aligned OKRs[3]. Alternatively, tools like solution opportunity trees or ideation workshops are used to design experiments that are then fed into the product backlog for development.

Feedback from early adopters may trigger decisions regarding the evolution of the MVP.

- Fabrizio Ferrandina

When building digital products, we rely on the following four pillars for successful innovation:

- We use the process of Build-Measure-Learn to develop minimal viable products (MVPs) for testing with customers. The focus is on doing the minimal amount of work to validate/prove that the product is viable before launching it, then working to iterate, deploy, and scale based on evidence.
- We employ Design Thinking[4] to ensure that we are designing and building products that are 'fit for purpose'. It's imperative that we speak to actual customers for this and don't try to second-guess based on what we 'think' we know.
- With continuous discovery, we run cross-functional discovery teams (including representatives of user research, design, analysis, and technology) that continuously explore and refine upcoming features from the ideas backlog. This ensures that the development backlog always represents the latest product thinking based on feedback from real customers and lean experiments.
- Strategyzer's methodology on product portfolio management is currently the best resource on the market for how to manage a portfolio of products at various stages of their lifecycle. It lays out the differences between managing products in the innovation or start-up stage versus later development stages.

After launching the MVP, feedback and data from early adopters is gathered and may trigger decisions regarding the evolution of the MVP. 'What works for the customer and what does not?' is the central question.

[3] OKR - Wikipedia
[4] Design thinking - Wikipedia

How does innovation blend with agile product development?

At this stage, we employ user research to understand if the product meets the customer's needs and how it should evolve. Real-time data capture and analytics can be embedded within the products and their supporting platforms. This data provides authentic feedback as the product begins to scale beyond the early adopters. Continuous discovery in this context means that once we have gathered feedback, we continuously revisit and revise our product backlog, using the design thinking approach to define and prioritize features yet to be developed.

However, successful innovation requires more than methodological fitness. Company culture and the management approach is much of what provides the right platform for fostering innovation within an organization. Buy-in across the organization, ample resources, and a certain tolerance for failures enable ongoing experimentation.

Fabrizio Ferrandina is Group CEO of Zühlke, a global innovation service provider. His career has been dedicated to driving software and system projects for clients all over the world. Until 2018 Fabrizio Ferrandina was CEO of the German subsidiary and member of the Zühlke Group Executive Board.

ADI MAZOR KARIO

Product Innovation and Value Creation expert
INVINCIBLE INNOVATION

The Agile methodology was born for software development – it evolved as an approach for managing a (software) project by breaking it up into several pieces – thus achieving flexibility to build smaller units as needed and move the overall execution/ development process faster. The main advantage of the Agile methodology is that it helps companies deliver results much faster.

Agile helps companies to deliver results much faster.

- Adi Mazor Kario

Moreover, the Agile process allows frequent and effective collaboration both within the development team and with the broader group of stakeholders - and this is vital for the success of the project. In contrary

How does innovation blend with agile product development?

to lengthy, expensive, and risky projects, the ‘agile way’ provides the means to get feedback fast and adapt accordingly – it enables a continuous improvement process throughout the development of the product.

Many companies make significant efforts to adopt "Agile" working patterns as this would enable them to become more open to the outside world, more flexible, and faster - by constantly and continuously creating new products and services. However, “Agile” does not mean magic for every company and every project: if you don't know precisely the why and what, Agile will not be enough. It is only after you know why you are innovating and what you want to build, that Agile helps teams execute better, with fewer risks.

The "Lean startup" method helps companies make better decisions and move through the product lifecycle faster, "Just like a startup". This is crucial for companies that need to go from an idea to market faster and to effectively compete with startups in their industry. More specifically, the Lean method allows companies to: [a] Understand what has changed in the outside world in terms of users and their needs [b] Conceive ideas as solutions that might serve these needs [c] Build tangible "beta" solutions or Minimum Viable Products - MVPs [d] Test related assumptions and de-risk the product [e] Make decisions: grow, kill or pivot.

The ‘agile way’ provides the means to get feedback fast and adapt accordingly.

- Adi Mazor Kario

However, leaders have to consider that the biggest downside of the "Lean startup" is that it was created for startups, without taking into account the strengths and assets of established companies. These assets should be incorporated into the lean approach in order to help the new ventures to grow and succeed.

Both "Agile" and "Lean" are effective in helping companies to get from an idea to the MVP or beta stage. However, being "Agile" and "Lean" is not enough – as these methods don’t provide the tools to grow a venture into a substantial company. Once a startup has launched the MVP and starts to see results in terms of customer traction, they would invest more energy in boosting their marketing and sales efforts and in securing funding that would allow them to grow.

How does innovation blend with agile product development?

The same processes are also relevant and required for a corporate startup venture - but surprisingly enough, this is sometimes more complex within a corporation than it is in a startup. The "merging" of a new venture and the core business requires a change in strategy, efforts, resources, and internal dynamics and, as a result, in many cases, such ventures fail to grow. Corporate leaders should be aware that the investment for creating new business ventures should carefully consider the required resources and growth strategies, upfront.

Adi Mazor Kario is known for her ability to take creative business ideas and turn them into massive revenue. Adi has worked with IBM, Intel, Google, and Waze — along with hundreds of startups in Israel, the "Startup Nation," and played a crucial role in the Google Accelerator.

JOHANNA ROTHMAN

Consultant, speaker, writer
ROTHMAN CONSULTING GROUP, INC.

Many people think that agile approaches allow for faster delivery. That might be true. However, the real power of the agile approach is the fast(er) feedback. As the team creates a possible product or solution, the team and the Product Owner (PO) offer each other fast feedback. Then, once the team agrees that a particular set of features will solve the problem, the PO (and with any luck) the team can receive direct feedback from the customer.

Short feedback loops help the entire organization to decide what to do next.

- Johanna Rothman

The product team uses the customer feedback to refine the features and also to decide on the next direction for the product backlog. The more frequently the PO and product team can address and progress the product backlog, the more feedback the team can offer to people who decide about the project portfolio.

How does innovation blend with agile product development?

However, having efficient feedback loops is only one of the pieces for an environment of innovation: we also need experimentation. The faster the feedback loop, the easier it is for any team to experiment. The product team may experiment with prototypes, or with minimum viable products in order to gauge customer reactions and measure engagement.

I happen to like experiments that disprove my hypothesis. Here's a hypothesis I use a lot. We think we will attract some percentage of possible customers with a new offering, such as 10% of the total clicks. The experiment consists of creating a landing page and asking for an email signup or some other equally easy task. We receive 1000 visitors to that page. We receive 9 clicks. That's less than the 10% we expected which is strong evidence to disprove that particular hypothesis. However, since we didn't spend a lot of time or energy on this experiment, the team can continue experimenting with other potential offerings – different ideas attempting to solve the customer's problem.

The more a product team experiments, the more focused and valuable their backlog can be. The product people might create a long *backlog of ideas* or *experiments*, but the actual *product backlog* can be much shorter. This allows the *project portfolio team* to create and run experiments with projects. Too often though, the project portfolio team has a long, long list of projects and too few teams to run them. Fast experimentation and validation helps the project portfolio team to better prioritize the portfolio, set the focus and assign the most promising projects to teams for execution. The more often the managers 'optimize' the project portfolio, the more likely the organization is to find a possibly transformative product.

With short feedback loops and experimentation at any level, the organization can create its own innovation, in terms of both process and product.

Johanna Rothman, known as the "Pragmatic Manager," offers frank advice for your tough problems. She helps leaders and teams do reasonable things that work. See her 18 books, blog, and other resources at jrothman.com and createadaptablelife.com

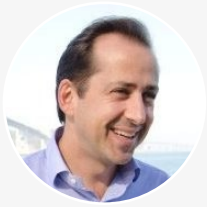
15

HOW WOULD YOU DEFINE THE TRULY AGILE ORGANIZATION?

Nearly every company claims to be agile (and innovative). But the reality is that most people don't truly understand these terms. In this chapter, we examine how the term *agile* - which became popular through the agile engineering processes and the lean startup – can be used to describe a certain class of companies.

We asked five leaders to identify the essential characteristics, behaviors, and cultural elements that make a company 'agile' and explain how 'being agile' brings impact to the business, employees, and teams. Frederic Laluyaux, Tony Ulwick, Johanna Rothman, Adrián Heredia Iglesias, Isaac Sacolick, and David Blake shed light on one of the most popular business buzzwords of our era.

How would you define the truly agile organization?



FREDERIC LALUYAUX

President and CEO
AERA TECHNOLOGY

No matter how you slice it, organizational agility depends on one thing: *a strong culture backed by modern technology*. I define a strong culture as an environment where there is a consistent process in place for making business decisions quickly and efficiently. It's really that simple. Leaders need to constantly encourage brainstorming and ideation across the organization. They need to always strive for the ability to bring products and services to market quickly without unnecessary hurdles. And they must be able to quickly shift gears when business, market, political, social, environmental, or other forces indicate it's time to do so. A strong culture enables all of that.

Leaders must encourage brainstorming and ideation across the organization.

- Frederic Laluyaux

Truly agile organizations also tend to be flatter, running with fewer levels of hierarchy. By removing layers of bureaucracy and eliminating internal hierarchies, people are empowered to think and act more freely and proactively. They can stop spending so much time on internal justifications, and actually look outside the company to see what's happening in the market and world at large. They're also able to detect signals that might advise them on where the company should or should not go – and then potentially lead it in the right direction.

Agile companies are built this way. People are encouraged to look and think outside the box and to pursue projects that could wind up being the next big thing. They are rewarded for their ingenuity and for staying connected to ecosystems outside of their companies.

Sure, the lion's share of this work might end up on scrap room floor. But innovation isn't a one-shot deal. It's a numbers game. For every 10,000 interesting ideas, you may only end up with about a dozen that are

worth pursuing and just one or two worth an investment. More conservative leaders might look at those numbers and say, " I don't like the odds. We're going to continue selling the same way we always have and protect our revenues."

Leaders of agile companies, on the other hand, know they must be culturally and organizationally ready to make innovative decisions at a moment's notice. They recognize change is accelerating and that customer preferences are constantly shifting while channels are rapidly evolving. They know it only takes one Netflix, Uber, or Zoom to completely displace tried-and-true products or services. And they recognize innovation success depends on rapid decision making.

Agility also relies on technology, such as Artificial Intelligence, Machine Learning and Cognitive Automation.

- Frederic Laluyaux

That said, in the near future, agility will not only depend on the ability of people to keep pace with change. It will also rely on automated technologies, such as AI, ML, and cognitive automation. Tech vendors are fond of saying 90% of the world's data has been created in the last two years alone[1]. While a suspect statistic (for so many reasons), it is undeniable that the amount of data organizations are capturing when searching for insights to inform decision-making is spinning out of control. It's too overwhelming for mere mortals to evaluate. So, they either prioritize making only the big "strategic" decisions or attempt to make as many decisions as possible without the requisite assessment and analysis. Neither of these choices is ideal.

But by turning to technologies capable of mining, organizing, analyzing, and making recommendations for actionable decisions by using this data, everything changes. Suddenly, organizations become vastly more agile. They're able to draw conclusions in minutes – on what might have taken weeks or months otherwise. That's the power of blending strong

[1] How Much Data Do We Create Every Day? TMind-Blowing Stats (forbes.com)

cultures with automated technologies, and I am certain this will be how decisions regarding innovation will be reached before too long.

Frederic Laluyaux is an entrepreneur at heart, Fred founded his first company at the age of 23. Prior to launching Aera, Fred was the CEO of Anaplan, which he grew from 20 to 650 employees, and a $1B+ valuation. Before that, he held several executive positions at SAP, Business Objects, and ALG software.

TONY ULWICK

Inventor, Founder and CEO, Author and Innovation Thought Leader
STRATEGYN

The truly agile organization does two things. First, *agile is all about doing things right*. In my experience, companies do a lot of things well, especially when it comes to product development. They're developing products all the time. Developers develop code very efficiently. Hardware producers develop hardware very efficiently. That's the first part of the equation.

A truly agile organization is not just failing fast and iterating because they got it wrong in the first place.

- Tony Ulwick

But a truly agile organization also has to *do the right things*. For example, they don't just create products—they create products that will win in the marketplace. And they know that they're going to win before they even start developing them. The truly agile organization is not just failing fast and iterating because they got it wrong in the first place.

One of the biggest problems is that companies need to separate what I call *the innovation process* from *the development process*. The innovation process is all about coming up with the right product concept. This product concept should be finalized, with evidence it's going to win in the

How would you define the truly agile organization?

marketplace (it will get the job done 15-20% better and/or cheaper than alternatives), before development begins. That's a dominant strategy that always wins.

If you can bolt this innovation process onto the front end of your agile development, then you're a truly agile organization. But many companies are intertwining innovation and development, not finalizing the product concept until development is well underway, then getting stuck in rounds of iteration.

Companies need to separate the innovation process from the development process.

- Tony Ulwick

If you want to unlock your business's innovation potential and leapfrog the competition, you need to understand the full agile equation—not just the first part of it. If you can do the right things, to begin with, you've just eliminated a ton of need for agile downstream. One of my projects with Pratt & Whitney aircraft provides the perfect example.

We were looking at engine materials that could potentially be used to hide under radars. At first glance, these materials would require a significant amount of experimentation to see if they would achieve the goals. But once we figured out what outcomes the pilots were looking for and which ones were most important, we were able to reorganize the order in which the tests would occur. We executed the test to predict failure along the key outcomes first, which allowed us to cut testing down from a couple hundred tests to about 80. We also reduced test time from a couple of years to about six months. Pratt & Whitney was conducting tests correctly—but they weren't conducting the right tests in the right order. That's the kind of inefficiency a truly agile organization roots out and corrects.

Tony Ulwick is the pioneer of jobs-to-be-done theory and the inventor of Outcome-Driven Innovation. His work has helped the world's leading companies launch winning products and services with a success rate that is five times the industry average. His best-selling book, "What Customers Want," and his articles in the Harvard Business Review and MIT Sloan Management Review have been cited in hundreds of publications. His work has defined a new era in customer-centric innovation.

How would you define the truly agile organization?

JOHANNA ROTHMAN

Consultant, Speaker, Writer
ROTHMAN CONSULTING GROUP, INC.

Agile organizations share several characteristics:

- The people collaborate at all levels to achieve an overarching goal.
- The organization rewards experimentation and collaboration.
- Managers trust people to do their jobs.

While these three characteristics are easy to describe, they might be impossibly difficult to achieve. That's because they require a total behaviour change on the part of managers.

Agile organizations create overarching goals.

- Johanna Rothman

Many managers say they want people to *collaborate in teams*. However, the reward system and culture reinforce *individual work*. HR asks managers to isolate each person's work and to reward the person. Managers attempt to isolate the work by taking some corporate goal and cascading down outputs to each person. Have you noticed what I've noticed? All those outputs rarely create that overarching goal that the organization wants.

Aside from a focus on outputs, we create other problems. When we reward people for individual work, we are less likely to see long-term collaboration. We might see short-term collaboration—only until the managers give rewards. As soon as people realize they need to work alone to maximize their salary and any bonus, they stop collaborating. Worse, when managers assign outputs, people don't see how their work connects to that goal. When people no longer connect to a goal, they optimize for their own careers, salaries, and bonuses.

Agile organizations create overarching goals. They ask teams at all levels to achieve those goals. In my experience, it's even more important for managers to create collaborative teams. When managers focus on collaborating and reward teamwork, the entire organization coalesces around a larger goal. Very few reward systems work this way right now.

How would you define the truly agile organization?

One way to change the reward system is to encourage experimentation. If organizations reward predictability, they won't get short experiments. That's because it won't be safe for people to experiment. Instead of trying something small and assessing how well it works, we ask people to predict lots of work. Then we reward them based on their adherence to a schedule. That kind of predictability is anti-agility.

I'm not saying we don't need gross predictions of the investment we might want to spend on a piece of work. However, detailed estimates and predictions are not useful if we want experimentation. Instead of detailed estimates and predictions, we can *reward the speed of learning* (experiments). And we can *reward collaboration* to help us learn faster as a team. If we want to reward fast experimentation and collaboration, managers must not micromanage. That means we need to *trust people to do their jobs*.

Instead of detailed estimates and predictions, we can reward speed of learning.

- Johanna Rothman

Many years ago - with the emphasis on *many* - I was a great programmer. I chose several ways to prove my competence. I showed demos of my work as I finished it. I asked for review and help when I was stuck. I used transparency to show my team and my manager what I did and when I needed help or support. That's how agile teams work now. This means that managers should not micromanage people. Especially if the people collaborate as part of a team. Yet how many managers still try to direct each person's work in supposedly agile organizations? In my experience, too many.

When I work with managers to understand why, they tell me that they, as a manager, have the team's deliverable as their deliverable. Yes, their salary or bonus depends on the team finishing the team's work. Even if the organization asks the team to do too many simultaneous projects. Or if the organization decides a different project is more important.

The manager's salary and bonus are at risk if the team doesn't deliver. How can a manager trust the team to deliver when the organization doesn't trust the manager? That's why I say that organizational agility

How would you define the truly agile organization?

requires a culture change - especially around *what the organization rewards*. If you want an agile organization, ask these questions:

- How well do we collaborate at all levels to deliver our overarching goal?
- How well do we reward experimentation and collaboration?
- How well do we trust the people to do their jobs?

The answers to these questions might show you how far you are on your journey to be an agile organization.

Johanna Rothman, known as the "Pragmatic Manager," offers frank advice for your tough problems. She helps leaders and teams do reasonable things that work. See her 18 books, blog, and other resources at jrothman.com and createadaptablelife.com

ADRIÁN HEREDIA IGLESIAS

Founder & CEO
BYLD

An organization is truly agile when it acts like a living organism, where different teams make decisions quickly thanks to technology, a strong people-centered culture, and a powerful purpose and leadership.

Although traditional organizations are built for stability, they usually have complex governance structures that take slow decisions top-down. Their teams are structured in deep silos, a condition that creates difficulties to compete in complex, uncertain, and VUCA[2] conditions. The world has changed, and the revolution that came with technology has transformed economies, societies, and the way we do business and build teams in every organization. This is reflected in two big trends:

- *The environment changes fast*. Not only customers are evolving rapidly, but partners demand quick actions due to the fast pace of competitors' innovations. Commoditized and established businesses are replaced by faster companies that have agility and technology in their DNA. The enormous amount of knowledge easily accessible for anyone and the "simplification" of technology (meaning its use) demands that organizations adapt quickly and become faster in communicating across their stakeholders.
- *Talent is selective*. A colleague told me the other day about this quote from Santiago Ramón y Cajal[3]: "The one who observes from afar that

[2] Volatility, uncertainty, complexity and ambiguity - Wikipedia
[3] Santiago Ramón y Cajal - a Spanish neuroscientist (Nobel prize in Medicine in 1906) - Wikipedia

seems to be squandering and dispersing his energy, when in fact he is channelling and strengthening it. [...]". He was clearly talking about the "learning workers", those who look for organizations in which they can develop themselves in a creative, learning-based and challenging environment. It is difficult to attract and retain this kind of talent for traditional, slow, non-agile organizations.

No company is going to be truly agile if the management does not believe in it.

- Adrián Heredia Iglesias

That is why a small number of old companies have survived over time: less than 9% of listed companies in the S&P 500 in 1983 are alive now. So, what does it mean to be agile? We can clearly detect four main characteristics in truly agile organizations:

- *Clear, strong, and shared purpose and vision*. In these companies, strategy is at the center of everything they do, it is shared amongst the employees, and actions are guided by the "why".
- *Entrepreneurial team.* The team shares the same values and has a clear vision. People are committed to the vision and are driven by an entrepreneurial spirit.
- *Rapid decision-making processes*. Following the lean startup[4] mantra (Build, Measure, Learn) with quick validation cycles, these companies measure their evolution with the validated learnings from the previous cycles; they value *performance* over deliverables.
- *Agile structures*. Accountability, transparency, and communication powered by systems and tools, are typical in truly agile companies.

We are talking about big, old organizations, but what is the take for startups? While it is common to think that agile means chaotic, with the appropriate execution and strategy it is not. For a startup, you need to shift from "frenetic" to "responsive", from "losing focus" to "learning from failures" and from "uncoordinated" to "collaborative". Add some stability to agility. But there is one thing staying above all those characteristics: leadership. No company is going to be truly agile if the management does

[4] Lean startup - Wikipedia

How would you define the truly agile organization?

not believe in it. So many organizations have created big, enormous agile teams, purchased expensive tools, and hired amazing scrum masters. But again, it does not matter, as they don't know where the ship goes.

Adrián Heredia Iglesias has a deep knowledge of how technology is disrupting business models thanks to many entrepreneurial battles over his shoulders. He founded Byld after 6 years involved in the design, launch and consolidation of Sonar Ventures, one of the first venture builders in Spain. He is also a mentor and professor in different business schools and universities, and advisor to different public and private organizations (e.g: EIT Urban Mobility, a public body of the European Union).

ISAAC SACOLICK

President • CIO • Digital Transformation • Founder • Author
StarCIO

Are you practicing Scrum, Kanban, or a mix of agile methodologies? Are teams prioritizing backlogs, writing user stories, conducting daily standups, demoing results, and using retrospectives to prioritize process improvements? While agile practices are instrumental to delivering innovation, product improvements, insightful analytics, and customer experience enhancements, they are just the building blocks to a truly agile organization. Agile organizations exhibit the following behaviors, characteristics, and cultural elements that they develop and mature:

- Apply agile methodologies across the whole organization, not just in one function or department.
- Drive agility at the leadership level by communicating strategy, driving transformation, and overseeing initiatives following agile practices and cadences.
- Define agile principles and a standard operating model, so people understand their roles and responsibilities, process standards, planning requirements, and delivery expectations.
- Promote agile mindsets and behaviors, including market and customer obsession, user experience, feedback-driven prioritization, speed to market, minimally viable deliverables, experimentation, data-driven, intelligent risk-taking, blameless postmortems, diverse team mindset, learning passion, and inclusive behaviors.
- Seek feedback, especially from customers, perform market research, establish meaningful KPIs, promote data-driven decision making, and accelerate the adoption of low-code and self-service technologies.

How would you define the truly agile organization?

- Establish and document quality expectations, security non-negotiables, data governance policies, rules on addressing defects, prioritization standards, and other constraints that establish guidelines for agile teams.
- Leverage flexible sourcing models by partnering with outside experts, co-creating with service providers, engaging freelancers, and investing in employee skill and leadership development.
- Obsess on using digital tools for communications, collaborations, documentation, knowledge sharing, learning, and networking.

Agile organizations use these elements to drive smarter, faster, safer, and more innovative digital and business transformations. But this isn't an easy list to check the box, nor is it complete. For example, there are also industry-specific agile organizational principles such as *editorial excellence* in media, *customer service* in retail, or *worker safety* in manufacturing. Agile organizations determine what it means to demonstrate business agility and formally recognize the drivers and tradeoffs so that the entire organization collaborates on driving change.

Truly agile companies apply agile methodologies across the organization, not just in one function or department.

- Isaac Sacolick

Truly agile organizations define simple one-page vision statements that enable teams to align on planning and execution. They run agile program management offices and recognize that prioritizing and aligning to a few meaningful initiatives yields more significant impacts – they understand that spreading the organization across too many priorities is a recipe for poor performance. They reward teams, not just for results, but for how teams accomplish their goals and follow agile principles that yield sustainable results. Here are some of the things that inhibit agile organizations

- *Enabling leaders who buy into agile concepts but don't practice the working principles.* These leaders demand a fixed scope delivered on

a timeline, specify the solutions they want teams to implement, and blame teams when there are issues. These are not behaviors of an agile organization and can ripple down into the organization if left unaddressed.

- *Allowing the tail to wag the dog* - by that I mean, allowing accounting reporting functions, quarterly financial results, and micro-managing people's time to govern how leaders manage initiatives, teams, and people. These management practices are outdated, especially for organizations that are driving digital, product, and organizational transformation.
- While agile is a framework for using feedback to prioritize and pivot initiatives, it is not a license to start and stop initiatives on a dime, overload the portfolio with too many initiatives, or chase after every techno-squirrel that appears on the horizon. *Agile organizations are disciplined and select the right timing, data, and decision-making process for resetting strategy and realigning priorities*.

Leaders driving agile organizations are more likely to see sustainable business impacts than those that follow rigid top-down, command-and-control management practices. That's because agile organizations aim to get the whole company on teams and with defined roles in a feedback-driven transformation process. When new opportunities, risks, and new choices appear daily, an agile organization has the culture, processes, learning mechanisms, and technology to listen, align, and deliver business impacts.

Isaac Sacolick (@NYIke) is StarCIO's President and guides business leaders on succeeding with data and technology while executing smarter, faster, safer, and more innovative transformation programs. He authored the Amazon bestseller, Driving Digital: The Leader's Guide to Biz Transformation Through Technology, has over 700 articles published, and keynotes on digital transformation topics.

DAVID BLAKE

Co-author, The Expertise Economy
DEGREED, LEARN IN

Agile = ability to adapt. Thomas Friedman asserts the rate at which technology is scaling outpaced the rate at which humanity can adapt sometime circa ~2007[5]. That has led to a world in which advantages are compounding; and the gulf to overcome disadvantages is widening. As an organization, that means the stakes are getting ever higher. The

[5] Thomas L. Friedman: Technology moves in steps | McKinsey

How would you define the truly agile organization?

constraint to agility is speed of learning. The organization that can outlearn its competitors will accrue compounding advantages. In a world of a growing skills gap, lifelong learning carries an increasing premium; expertise carries an increasing premium; experts carry an increasing premium. So, to be truly agile, get insanely good at learning and creating a culture of learning at scale within your organization.

To be truly agile, get insanely good at learning and creating a culture of learning.

- David Blake

In the past, learning at any level—university or corporate training programs—looked akin to building a railroad. It was a heavy infrastructure project. You could lay tracks between a few destinations, but you had to choose carefully, and were ultimately, very constrained. The choices were optimized for the masses—what routes would get the most amount of people from some central point to another central destination. Railroads are blind to where your journey actually begins, and where you are actually trying to get.

The future of learning will reflect the present reality of transportation today, with the GPS on our phones, which pinpoints exactly where we are, after which we can identify any destination, and Google Maps will create multiple routes between those points, using any combination of modes of transportation. That is learning agility at scale.

To do that for our organizations we need to build the capacity to measure individuals skills in real-time, to be able to reflect any objective back in terms of what skills are required to accomplish or unlock the objective; then present the routes between those points, using the many pathways and combinations of learning resources and programs to close that gap. To quote Eric Hoffer[6], "In a world of change, the learners shall inherit the earth, while the learned shall find themselves perfectly suited for a world that no longer exists." Here is to a future where learning can take us anywhere, everywhere, with infinite agility.

David Blake is the creator of The Future of Work Studios and the CEO of Learn In. He is a Sr. Advisor to McKinsey. David is also the Executive Chairman and Co-founder of

[6] Eric Hoffer - Wikipedia

How would you define the truly agile organization?

Degreed. Prior, he helped launch a competency-based, accredited university and was a founding team member of university admissions startup Zinch (acquired by NASDQ: CHGG).

ENJOYED THIS QUESTION?

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16 DO PUBLIC-SECTOR COMPANIES INNOVATE?

Public sector companies have special structures and organizational attributes that, in some cases, slow down or even block innovation.

In this chapter, we explore how innovation is different in public sector organizations and the factors that might affect the velocity and pace of their innovation efforts. We ask our leaders to point to the most 'innovative public sector companies out there' and share their thoughts on how to accelerate public sector innovation and even rethink public sector companies with innovation at the core. Steven O'Kennedy, Enrique Dans, and Jesse Nieminen share their valuable perspectives.

STEVEN O'KENNEDY

Associate Director of Engineering
GLOBAL CENTRE FOR INNOVATION AT ACCENTURE

Every company innovates – even those who think they can't, think they don't, or fail because they are left behind by their competition; even public sector companies - which are often externally thought of as slow-moving and outdated. So, the key value to measure should not be "can a public sector company innovate", but around their *ability to innovate at speed* and to *innovate wisely*.

Public sector companies can and do innovate – and can do so at speed - when the need arises.

- Steven O'Kennedy

Firstly though, it is worth acknowledging that there are challenges in the public sector that are more prevalent than in other sectors and make innovation a challenging problem to approach:

- *The size of the workforce.* In the private sector, businesses are often classed by size into small (maybe <100 employees), medium (100-1,000), large (1,000-10,000), and very large (10,000+) and most companies are not very large. In comparison, it was estimated in 2020 that there were over 5.5M people working in the public sector in the UK, with ~32% of those (~1.76M)[1] solely working in the NHS. This is a staggering difference in scale even in comparison to some of the largest corporations in the world, for example, Microsoft (~166,000)[2], Volkswagen (~670,000)[3], or Amazon (~1,125,000). This huge volume of employees creates a change management problem of a scale undreamt of by 90%+ of other companies. It can also lead to problems with inertia and make the enactment of change and innovation

[1] Public sector employment by parliamentary constituency - House of Commons Library
[2] Microsoft - Wikipedia
[3] List of largest employers - Wikipedia

programmes slow and unwieldy. The sheer size of the public sector bodies also necessitates large organisational structures, divisions, and sub-divisions which complicates communication and hampers the structuring of effective innovation programmes.

- *A unionised workforce and a history of change made (or perceived to be made) for the wrong reasons.* While this situation is not in any way unique or specific only to the public sector, it is common for public sector workers and their rights to be protected and watched over by one or more unions, or other collective bargaining agents, acting on their behalf. These unions play a necessary part in the fabric of the economy ensuring that the employees cannot be treated unfairly or be disadvantaged. In this environment, change and innovation can be difficult to achieve because the vested interests of the multiple parties on all sides often do not align. There can also be problems with perception around the *reasons* and *goals* of change. Public service bodies are not driven by profitability or market share in the same way as private companies, but they do share the key metrics of cost and value of service. Unfortunately, all too often change in the public sector has been driven solely by the former based on government budgets and policies. Because of this, a large number of changes or innovation programmes encounter resistance – they are perceived by public servants as changes that were motivated solely by the desire to cut costs[4]. This brings up additional concerns that should be taken into account when planning an innovation programme - how to protect workers alongside an innovation agenda and how to avoid this kind of perception.
- *A unique decision-making structure.* Private sector companies in the S&P 500 change their CEO on average somewhere around every 10.2 years[5]. Public sector bodies have a slightly different model, at least in democratic countries, where the public has the potential to change the key decision-maker every 4-5 years or so. This is also slightly more dramatic: when governmental power shifts, it often means that a new party takes over the main policy-making roles. Compare this to the private sector - how often does a private company replace its CEO and the entire board of directors at the same time? Worse, in some countries, e.g. U.S, some key public sector positions are politically appointed and may also change at the same time, possibly along with their staff – so the CEO, board of directors, and key senior management changing all at the same time.

This backdrop presents a reasonably unique challenge around long-term planning - as bodies are subject not only to budget and policy

[4] Public service perceptions (irishtimes.com)
[5] New Thinking Emerges on Optimal Tenure for a CEO - WSJ

changes but also to change in leadership direction and goals. Achieving meaningful innovative change then potentially means [a] prioritizing and aligning the long-term objectives in early stages - to give some room for continuity, [b] keeping innovation programmes and goals small and incremental, [c] hoping that the need for change is so obvious that the direction will remain constant even when the hands on the wheel change.

But even in the face of all these challenges, public sector innovation, reformation and change remain possible and present. One only has to look at the recent COVID19 crisis to see ample evidence of rapid innovation coming from all aspects of public bodies around the world - from the initial mobilisation of personnel to monitor and attempt to slow the spread of the virus, through the creation of economic stimulus and support schemes for businesses and individuals to the largest simultaneous global vaccine drive in human history[6].

The COVID crisis provides ample evidence of innovation from public bodies worldwide.

- Steven O'Kennedy

No one will argue that these initiatives have been perfect or perfectly executed - some will even go further and claim that things need to be better. But it's not possible to argue that the public bodies have not succeeded in adapting, innovating, and evolving themselves in order to achieve what's been done. And faster, perhaps, than was previously considered possible. So, public sector companies can and do innovate – and can do so at speed - when the need really arises.

So why does this question arise in the first place? Where does the image of public sector bodies not innovating come from? Perhaps we should consider that innovation looks different from everyone's perspective depending on what they are used to, what they want to do, and what they have to deal with. We should set our expectations for what innovation is, differently for public sector vs private sector companies because they face different sets of challenges and have different goals – in the same way that we set our expectations for innovation differently for an

[6] Inside the Mammoth Undertaking of Global Vaccine Distribution (who.int)

SME with moderate growth targets versus a technology giant with an $18.75M R&D budget[7].

Steven O'Kennedy is the Director of Engineering in Accenture's Global Innovation Centre at The Dock in Dublin. After working on large scale system implementation and technical transformation projects for many years as a technical architect, he now focuses on incubating innovative products and services centred around modern software architecture, AI and cloud technologies.

ENRIQUE DANS

Professor of Innovation
IE BUSINESS SCHOOL

Public sector companies are usually not subjected to the same market forces that drive innovation in the private sector, and therefore, have more difficulties when justifying the investment to promote innovation. Besides that, most public sector companies offer *lifetime employment*, and that level of stability, in many cases, tends to promote a lack of innovation. Narrowly defined functions and a lack of focus on improvement make innovation in public-sector companies a true challenge that typically depends on individual initiatives.

To accelerate the innovation process in public sector organizations, it is crucial to establish a citizen-centric culture.

- Enrique Dans

In order to accelerate the innovation process in public sector organizations, it is crucial to establish *a citizen-centric culture*, and make sure that innovation gets directed towards improving strategically designed metrics obtained from the users. Creating incentives to spur innovation is challenging in public sector companies, but not impossible, as is

[7] The Critical Role of High-Tech R&D in the COVID-19 Era | Technology | TechNewsWorld

bringing actors from different departments together to collaborate through the innovation process.

Open data policies also improve innovation, making it visible throughout the process and making sure, via transparency, that innovation gets properly measured and perceived by all stakeholders. In many countries, the most innovative public sector agencies are those related to the ministry of finance and treasury: taxing citizens requires a huge amount of supervision and dynamism to stay informed about every new potential loophole. Combined with extremely clear and straightforward metrics, this provides a strong foundation to try to establish a culture of innovation.

Enrique Dans is a professor of innovation at IE Business School since 1990, and Senior Advisor on Innovation and Digital Transformation at IE University.

JESSE NIEMINEN

Co-founder & Chairman
VIIMA

If innovation is difficult for large corporations, it's usually even more so for public-sector companies. Public sector organizations are often more complex with even more stakeholders, interests, and metrics to consider – it isn't as simple as just making as much money as possible. In addition, many of the decisions being made can be political by nature. I do personally consider the majority of politicians in most countries to be well-intentioned, but unfortunately, they aren't usually known for their ability to run organizations effectively. Plus, traditionally the public sector hasn't necessarily been the employer of choice for dynamic and ambitious innovation-minded people.

In this sense, many public sector organizations don't necessarily have the ideal prerequisites for innovation. But that isn't to say that the public sector couldn't innovate - on the contrary! It is exactly because there's been so little innovation, that many of these organizations are actually ripe for plenty of innovation and positive change. It all starts by first clarifying the priorities for the organization: what are your true goals, how could you create as much value as possible for citizens and taxpayers with as little resources as possible? With that clarified, it usually isn't too difficult to come up with a large number of ideas and innovations that could help move the organization in the right direction. Then once you're off the ground, accelerating innovation happens just like it does in any other organization: by creating a systematic process of identifying the

most promising ideas and making as many of those into reality as quickly as possible.

In my experience, many public sector organizations, just like other large companies, are organized in functional silos. While in theory, this can be a more efficient way, it usually leads to a lot of communication problems, misaligned incentives, and increased complexity in decision-making. The way to solve this is by reorganizing at least the most important parts of the organization in order to best serve the interests of the client - in this case, the taxpayer. By ensuring that all the key skills and capabilities are included in each of these units, you will get an organization that is more effective in creating value – and this is what innovation is ultimately all about.

The best example of public sector innovation would have to be Estonia at large.

- Jesse Nieminen

I am aware of a number of public sector organizations that have done a pretty good job with innovation, for example in the UK and Finland. Still, the best example would have to be Estonia at large. The country has systematically embraced digitalization and hasn't just adapted the same practices that the rest of the world seemingly uses. They've really approached the whole public sector with fresh eyes, and that's led to some pretty remarkable results, such as their e-residency program.

Jesse Nieminen is the Co-founder, Chief Growth Officer & Chairman of Viima, and an entrepreneurial leader with a passion for building businesses and growing organizations to scale in the digital age.

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DIGITAL TRANSFORMATION – WHAT IS IT ALL ABOUT?

Along with being agile and innovative, companies typically claim that they are also (being) digitally transformed. But, is Digital Transformation yet another business buzzword? We asked seven leaders to explain what Digital Transformation is and how technology, processes, and culture are interlinked in this context.

In this chapter, our leaders describe the conditions under which companies need such a program – they also explain how to set up a team to drive the efforts and the role of the leadership. We also touch on the extremely important topic of measuring the success of digital transformation initiatives.

Read eye-opening insights from Daniel Burrus, Tom Goodwin, Ger Perdisatt, Erik Schumb, Jonne Kuyt, Dimitris Livas and Jonathan Rose.

DANIEL BURRUS

CEO
BURRUS RESEARCH

Excellent question. Let's talk about the word transformation because I think we understand *digital* but the key stumbling block, I believe, is *transformation*. And one thing I've found is that how you define the word gives you an entrepreneurial advantage. For example, I see people that say they're good at *communicating*; but actually, they're really good at *informing*, because they don't know the difference: informing is one-way and static while communicating is two-way and dynamic.

Transformation always comes from the inside out.

- Daniel Burrus

Similarly, people would say, we're good at *collaborating* when they're really only good at *cooperating* because they don't know the difference: you cooperate because you have to while you collaborate because you want to; cooperation is based on scarcity - I have to work with you so I'm going to protect and defend my piece of the economic pie while collaboration, is how can we work together to create a bigger pie for you and me. We get new collaborative software, and we cooperate with it; we get new communication tools, and we inform with it.

So why did I bring that up? Because we say we're *transforming* a process, a product, or service when we're really just *changing* it. And this is because we don't know the difference - and the difference makes all the difference. So let me give you a quick example: Change always comes from the outside in and it forces us to *react*, *respond* - and that's where *agility* comes in.

Agility is a *reactionary* defensive strategy, it's reacting as fast as you can to a problem *after* it happens or a disruption *after* it disrupts, to something incoming, something that's happening now. To deal with rapid change being agile is very important, but, as the 2020 pandemic has taught us, reacting quickly, no matter how agile you are, is no longer good enough. We now need to become *anticipatory*, using *hard trends* based

on future facts to anticipate disruptions before they disrupt turning disruption into a choice. Anticipate problems before you have them so that we can pre-solve them. Agility represents *a defensive strategy*, and it represents only one side of a two-sided strategy coin when it comes to dealing with accelerating exponential change. The *anticipatory side* is an *offensive strategy*, and it allows you to become what I call a *positive disruptor* by using the certainty of *hard trends* to create the transformations that need to happen to elevate relevance and accelerate growth.

We need to become anticipatory, to use hard trends based on future facts to anticipate disruptions.

- Daniel Burrus

Transformation is quite different than *change*: whether it's a personal transformation or business transformation, it always comes from the inside out. For example, BlackBerry *changed* how we handle email - they put it in a phone so that we could handle emails while on the go. Apple *transformed* the phone - it gave us the ability to do photography and video, watch movies and so many other things.

Another example of change is the international chain of bookstores Barnes and Noble. What they did with bookstores, instead of it being a small bookstore in the corner, they put it in a big store, they put pianos in their stores, they offered cappuccino, they made it an experience – and in doing so, they *changed* how you buy books. But Amazon *transformed* how you buy books - in other words, Amazon doesn't look at all like a book store including Barnes and Nobel - it functions totally differently.

When you create a change you made something bigger, smaller, taller, thinner, wider, or you hire more staff, you make a pivot of some kind; but that's not transformation. So, making a bookstore bigger and hiring more people is not transformation, it is *change*. Amazon transformed bookstores - by selling books online. Amazon didn't resemble a bookstore, it didn't organize its products like a bookstore, and it didn't have a sales staff; It was totally different.

So, I would say that most companies that are claiming to be implementing *digital transformation*, are actually implementing *digital change*. And that's why they're not getting the transformational advantage. Those that are *anticipatory innovators*, or entrepreneurs don't implement change; they use *hard trends* to have the certainty and the confidence to make bold moves, to transform – and in doing so, they redefine and reinvent their processes, products, and/or services. *Anticipatory entrepreneurs have a transformation mindset*. They're looking at entirely new ways of innovating and solving problems.

The anticipatory side is an offensive strategy, that allows you to become a positive disruptor.

- Daniel Burrus

For example, one of my early companies offered the first ballistically launched parachute for ultralight aircraft. If you had a malfunction, you could deploy a parachute attached to the plane and you could parachute yourself and the whole plane safely down. That was back in the early 80s. Now you can get that solution for small aircraft like Cessna's and Piper Cubs and the like. That was out-of-the-box thinking - putting a parachute on an airplane. You know it's transformative when people, look at it and go, "Wow, never thought of that" or "I never knew that could be done". And one of the best ways of doing something transformative is using technology - because technology lets you do what used to be impossible.

The essence of innovation is really about eliminating those barriers in your mind and making sure that you don't get trapped in your own box. One of the ways entrepreneurs can get trapped is by falling in love with their idea. So often, we create our own trap "I just built a new box. And it's really cool" - but maybe now you're back in the old box again.

Daniel Burrus is one of the world's leading global futurists and disruptive innovation experts. He is the author of seven bestselling books including The Anticipatory Organization and a strategic advisor to leading C-Suite executives worldwide.

TOM GOODWIN

Co-Founder
ALL WE HAVE IS NOW

Digital transformation is one of those terms everyone talks about, and everyone nods. However, there's no real agreement on what it actually means. For me, there are two separate notions – one is *digitalization* and the other *digital transformation*. Digitalization is modernizing what you already have - by adding a surface of new technology which makes you appear slightly more contemporary. For example, if you're a fast-food restaurant, and you start buying ads on YouTube, and you put a digital kiosk in one or two of your stores, then you are doing digitalization, not digital transformation. If you're a big chain of fast food, and you decide that all of your stores should have digital kiosks and that your entire workflow behind the scenes should be rethought and you start working with partners to deliver food to people – that's closer to the notion of digital transformation.

For real digital transformation, the most important thing you need is a vision for your company.

- Tom Goodwin

On the assumption that we're talking about real digital transformation, the most important thing you need is a vision for your company. You need to challenge all the assumptions that have shaped your business so far and rethink all its core aspects - its structure, the core processes, the business model. This refined model of your company would then become the foundation on which to define and start growing the right culture. And, while digital transformation is powered by technology, it is not about technology: technology runs in the background, and to use an analogy, technology is like crayons: No art is about the crayon but crayons make art possible.

The tough question regarding transformation is about the right timing. There are moments when the world changes quite a lot, where

consumer behaviors shift, and new consumer patterns emerge. If you believe that such a shift or new pattern in consumer behavior will be persistent, then that would be a good time to consider a digital transformation initiative. For example, with COVID, everyone moved to e-commerce but then they'll slowly come back a bit. So actually, now is not a great time to completely transform an e-commerce business. But if you are in banking, you must realize how companies like N26, and Monzo have changed loyalty towards banks, indicating that there is a big consumer behavior shift – and hence it is a good time to think about digital transformation and ponder these questions.

While digital transformation is powered by technology, it is not about technology.

- Tom Goodwin

Another element that may define the timing – when to initiate a transformation program - is the state of technology and the associated trends. Actually, there is *a right time* to jump on a technology, but this is usually incredibly difficult to spot. For example, if you decided 15 years ago to reinvent your core banking systems, then you probably would have been building a tech foundation, which today would be nearly obsolete. In a way, you almost needed to wait for scalable architecture and advanced APIs to exist.

To drive real digital transformation, you must also invest in culture – which comes down to people's tolerance for risk, their willingness to change, and their motivation to make a difference. In reality - and none of these things are said in a disparaging way – for many people in many companies, and in many cultures, the primary need is to feel secure in employment - and that is what drives almost all of their behaviors. For example, in many big companies, there are people who would prefer to be invisible, who hope to never get noticed. This attitude results in behaviors like agreeing with consensus, following the processes strictly, and avoiding blame - because everything is about not getting noticed. And then there is a small number of people who believe that the ends justify the means - and they are all about making something they are proud to be part of. Those people are just oriented very differently – they strive

towards visibility, not from an ego perspective, but more from a sense of personal pride in the fact that they accomplished something important.

I think we have this obsession with *changing the culture* rather than *building the culture*. The reality is that not many large companies have actually changed significantly their culture – and this explained partially by how people choose to work for a company: maybe they enter through a graduate training scheme and they like practical aspects such as the fact that their offices are on the edge of town or they appreciate that they have a structured training program or the fact it looks good on their resume and that their parents will be proud of them - and therefore, you get *highly compliant people*. And then we assume that if a company is going to change, then we have to keep the same people, so we reduce the number of changes that we have to handle. In this sense, companies tend to prefer to reassign people internally and help them develop their roles - rather than bring in people with the right profile, risk appetite, motivation, and willingness to change things.

To drive real digital transformation, you must also invest in culture.

- Tom Goodwin

However, I think we're being very naïve - if we think that we can tell people to wear more casual clothes on a Thursday afternoon and stick them up in a little room with some funny sofas and whiteboards and somehow expect that is going to lead to people radically changing the very wiring of who they are as a person. There are people out there with a genuine entrepreneurial mindset who are seeking opportunities to launch a crazy company - and they would 'beg' people for money, and they would get laughed at by their friends in pubs – but those are the people who are going to create really interesting new things and one should be aware that those people don't exist in large companies. If a company is willing to transform itself and become more innovative, then it will need to recruit people like these. Moreover, they would probably need to create a new entity that is just utterly different.

For example, if you're a big established company, just setting up a new digital transformation team within the corporation is not enough. Nor is having a new, crazy team of people that are reinventing your

existing product and they co-exist as just another brand. It is more likely that you need a very different entity that probably works from a different location and is allowed to use different software tools and has different policies regarding compensation. An entity of this form should be loosely aligned to the parent corporation - quite adjacent and separate. Digital transformation, in my opinion, it's about being brave enough to find and create the things that end up cannibalizing the parent company.

Tom Goodwin is a writer, speaker and advertising and media provocateur and consultant. He has been voted a top 10 voice in Marketing by LinkedIn, one of 30 people to follow on Twitter by Business Insider, and a 'must-follow' by Fast Company. An industry commentator on the future of marketing and business, he is a columnist for TechCrunch and Forbes and a frequent contributor to The Guardian, GQ, Ad Age, Wired, Ad Week, Inc, MediaPost & Digiday.

GER PERDISATT

Director, Technology Strategy, Western Europe
MICROSOFT

Given both the ubiquity and also the ambiguity of the term 'digital transformation' there is no 'typical' digital transformation project. Each one is different, responding to a different catalyst, and taking place within a unique organizational and cultural context. However, I've seen two distinct flavors of digital transformation: those driven by *exogenous* factors and those driven by *endogenous* ones.

In my experience, digital transformation programs emanating from an internal, endogenous impulse to capture a new opportunity, mitigate an emergent risk, sustain or grow a particular business line, differentiate from a competitor – these programs tend to have more executive buy-in, more organizational investment, and greater momentum and longevity. It's because the catalyst for change is rooted in *something specific that the organization feels, senses, hopes*. The change is contextualized within the culture, the coda, the unique language, and artifacts of the organization. These organizations also typically enjoy a higher degree of 'first- or second-mover advantage' – in many cases because the impulse for change was driven by a desire to break out of a particular competitive landscape into an adjacent (or sometimes altogether different) area of business.

When digital transformation projects are driven by endogenous factors, my experience has been that the likelihood of success is lower. There's an element of 'me too' thinking factoring into a decision to go on a 'digital transformation journey. These are often journeys with no

specific destination in mind and driven by a sense that because competitors are embracing digital, the organization must too. Without a strong intrinsic sense of *why* the digital transformation is important, the organization creates a 'burning platform' moment – but without any clear sense of what they're jumping from, and jumping into.

In either scenario, one principle remains consistent: digital transformation programs are not about technology. The technology is simply the tool to deliver business value to the customers of the organization in more effective ways. This is a critical point. It's all too easy for organizations to fall into the trap of a digital transformation program that becomes an exercise in arcane technical details and architectures. As mentioned earlier, being able to locate (and relocate) the program in the *why*, the context for change, is so critical. Digital Transformation, like any other large-scale change, is typically about people, processes, and tools/technology. If organizations can focus on people and processes, invariably the technology will exist (in virtually every case) to capture the underlying business problem or opportunity that's being solved for.

Digital transformation programs are not about technology.

- Ger Perdisatt

This places a significant premium on leadership styles that are comfortable with leading through ambiguity and driving large-scale cultural and organizational change. If you're a leader expecting a technological silver bullet, a software panacea to all your business problems, without touching your people and processes, then you're going to struggle to derive value from a digital transformation program. In fact, this type of scenario can be detrimental to business value, as it becomes a significant distraction to the business, a point of friction between technology teams and business units, and sows a (deeper) distrust of technology.

In order to succeed at digital transformation, organizations need to have a strong, diverse, multi-disciplinary team drawn from across the business units impacted by the change. It needs technology expertise, but expertise that can bring business clarity and simplicity to technical details. It needs a strong alignment across the leadership team. It needs a well-resourced and clearly defined *change management* organization, as well as a *program management office*. It also needs to feed into more mundane elements such as *performance* and *compensation plans* –

because to some extent, with Digital Transformation, as with any other initiative, 'you get what you measure'. If you're building a transformative initiative but your organization remains compensated in old ways of working, then don't be surprised when your initiative struggles. I've personally seen situations where companies have adopted the 'change is everyone's business' mantra; frankly, it's a bit of a fallacy, as if it's everyone's responsibility, inevitably it's nobody's responsibility.

Measuring the success of digital transformation tends to be both art and science.

- Ger Perdisatt

Measuring the success of digital transformation initiatives tends to be a balance of both art and science. You can absolutely measure qualitative impacts around both activity and/or outcome *e.g. levels of inter-team collaboration, faster development of applications and processes, increased process automation* and its impact on customer NPS, etc. There's also a qualitative element: *how are the teams feeling about the impact on their work*, the impact on customers experience; does it make their working day easier or better, etc.

Regardless of whether you're measuring activity or outcome, qualitatively or quantitatively, it's important to focus on what your measures are *telling* you: are you getting better, or worse? Is anything changing? Are different teams displaying different engagement levels, and if so why? It's also important to set the expectations upfront that the measures themselves may change. Some measures might be replaced, retired, or reworked – which is fine, as long as you focus on *why* you're measuring, and *what* your measures are telling you. And build as many 'doors and windows' into your reviews/ tuning of your Digital Transformation initiatives. The organizations that are willing to constantly *tune, iterate, learn, renew* are the ones best able to harness the potential of Digital Transformation. You won't get it right the first time.

Ger Perdisatt is an experienced business leader with expertise in digital transformation, cloud (IAAS, PAAS, SAAS), sales leadership, industry partnerships and GTM strategies, people and organizational transformation. Excellent track record of performance across a range of industries and functions. Postgraduate qualifications MBA, ACCA.

ERIK SCHUMB

Founder & CXO
AGILE SPRINTS

There are three types of digital transformation programs:

- *Type 1: digitalization of the internal business processes.* This includes both the *generic processes* that all companies have e.g. HR, CRM, SCM, F&A, etc. and the *industry-specific processes* e.g., *policy management* (Insurance), *administration of banking accounts, credit assignment* (Banking), *management of health records* (Healthcare), etc. The goal of transformation programs of this type is to increase profitability and competitiveness through leaner and more efficient processes. Such programs typically aim at reduced operating costs and improved customer satisfaction, and therefore retention.
- *Type 2: Development of new products and services.* This goes beyond the incremental improvement of current products and services to the strategic development of completely new ones. Programs of this type have high external visibility and are the most common and obvious forms of digital transformation.
- *Type 3: Holistic programs that combine Types 1 & 2.* There are industries in which products and services are closely connected with the performance of internal, back-office systems and processes – for example, Banking, Insurance, and those types of industries that have a strong e-commerce or online element – e.g., Retailers.

StartUps evolve quickly, from sailing boats to tankers in either ´Red Oceans´or 'Blue Oceans'.

- Erik Schumb

Yes, technology plays a major role in all the above types of digital transformation programs. But that is not what makes a digital transformation difficult - technology can be addressed properly by the right experts. Digital transformation is more than technology though; it is rather a mindset and a culture of people and organizations – and this is what adds huge complexity to any digital transformation program. It is not

easy to establish this ´agile mindset´ - as this requires a massive change in people's way of thinking, at both leadership and employee levels.

Behavioral and organizational change can be driven by systemic and simultaneous tackling of *exploitation of the current basic* and the *exploration of the unknown future* towards innovation. This is what the term *organizational ambidexterity*[1] means. It is nothing else than what IT organizations are already driving, for years now, with their DevOps initiatives: they operate the existing IT and in parallel develop and innovate it further.

That underlies a special mindset that needs to be shaped and established. Gartner uses the nice metaphor of 'Samurai & Ninja'[2]: *"two distinct but coherent approaches, deeply different, both essential."* So, it is the 'Samurai mindset' that operates within the borders and hierarchy - a Samurai is reliable, plan-driven, linear, and not that creative. Then there is the Ninja mindset that operates towards the new, the untapped space being close to the customer, reactive to their needs and therefore iterative, creative, non-linear, and good at dealing with uncertainty. To establish this mindset, a special leadership style is required. New denominations are describing leadership styles like the ´Servant leader`, the ´People Leader´ which are characterized by the following common things[3]:

- *Leaders are not expected to make the right decisions themselves alone*; instead, they are encouraged to share their responsibility with team members who might be much better suited to solve complicated problems.
- *Leaders are 'servant leaders'* – they assist their teammates to do their work in a collaborative, transparent manner. Servant leaders clear the difficulties out of the way.
- Leaders play the keyboard from *exploitation of the current* to *exploration of the new*.

In my opinion, every company needs such a program. Until recently, organizations and corporations in highly regulated environments like Banking and Insurance used to be hesitant about digital transformation. But those who don't face the challenges of our VUCA[4] world will not be able to stand the high pressure from their demanding digital customers. The vibrant energy of the global intelligent human digital crowd forms StartUps that meet customer needs in a never-seen-before way. Those little StartUps evolve quickly, from sailing boats, to tankers on ´Red Oceans´ - the existing, traditional, highly competitive markets. Or those little StartUps suddenly sail on their own unique unexpected ´Blue Ocean'

[1] Organisational ambidexterity | London Business School
[2] Bimodal – delivering on the promise - Gartner
[3] What Servant Leadership Is Not | INSEAD Knowledge
[4] What VUCA Really Means for You (hbr.org)

- the new market that they created and had not been imagined before. The old ´Red Oceans" get softly supplanted.

Only a few industries are lacking behind – typically governmental-owned companies or other companies in monopolistic niche markets are not so much under pressure from their clients to go for a digital transformation. Other drives for change play stronger here like governmental cost-cutting demanding for a higher level of automation or just the ´war for talent` as such organizations appear unattractive for new talent.

Running a digital transformation program requires a very special team – having among others, the following characteristics:

- *Heterogeneous, inclusive, representative.* The DS team should represent the combined brainpower of all internal experts from all business areas and all hierarchical levels. It could include external experts or moderators, as needed - for example, to help identify blind spots.
- *Empowered.* It should be authorized to run the program with ongoing support from the top. Hence, the best to implement it on the headquarter level in proximity to the C-level minus one.
- *Digitally Enabled.* Able to work effectively in a fast-paced, agile mode.
- *Connected to the world.* Externally connected to get signals and inspiration.

In terms of planning and execution of Digital Transformation programs, I find OKRs[5] (Objectives & Key Results) very useful – also as the means to measure success and steer the program accordingly. OKRs are closely linked to the long-term Vision & Mission of a company which usually spans 3 to 5 years.

While the Vision/Mission provides the North Star, OKRs break down this long-term goal to smaller short and mid-term objectives that can be achieved within a year. The more qualitative objectives can be further broken down to key results which are measured with quantitative KPIs (Key Performance Indicators). OKRs therefore can be seen as the ´agile operating system for modern organizations´[6].

Erik Schumb is an Agile Strategist & Coach. He is the founder & CXO of Agile Sprints and Chief Facilitation Officer of AllStarTeams. Previously he has been a Market Analyst, Information Broker, Strategic Researcher, Digital Transformation Manager, Innovation Consultant, Agile Coach.

[5] OKR - Wikipedia
[6] Objectives & Key Results: The agile OS for modern organizations (Lobacher & Jacob)

JONNE KUYT

Director of design driven innovation
EDENSPIEKERMANN

Above all, transformation is about people. We may define digital transformation as "installing a process for using digital technology to change customer experiences, business processes and culture to meet changing business & market requirements".

Like this, it sounds like a straightforward program to execute - anyone would probably start with understanding the new market and business requirements - then base a clear vision and strategy on that. The gap analyses would show the desired changes for technology, capabilities, and processes, and you would ideally fit that into a program, and there you go; transformation in action. Hooray.

Make digital transformation a human-centric process.

- Jonne Kuyt

Reality is, of course, a bit tougher. And the toughness lies in the biggest challenge of all; the transformation of people. The biggest challenge of this process is the necessity to radically transform the thinking and doing of the people and stakeholders involved. Many books describe it (Neil Perkin is a great reference), but if organizations don't change people first, they will end up with solutions that look like transformation but are nothing more than temporary features and innovation theatre.

Organizations are set up for repetitive business. Do one thing that is in demand and do that as efficiently and effectively as possible. And after years and years of tweaking, the organization, hierarchy, management, processes, people, and incentives are optimized to deliver a great product. But what you also got is an organization that is a collection of fully optimized blackbelt inside-out thinkers. Along the way, they lost the ability to look through the eyes of their customers. And that is where digital transformation starts.

Learning something new needs a safe space. So let's say you run a car factory and now you find out your customers want more mobility solutions like bikes and electric scooters. If you would ask you the car manufacturing people to design a bike they will say things like: 'Our systems can't make bikes', 'The sales department says that their clients aren't

interested in bikes' or 'We'll never be able to hire bike mechanics' and even' Bikes are less profitable than cars'. These are some examples of common barriers to progress towards change. As a result, the mechanics will deliver a bike that looks too much like a car to be relevant for customers. So before anything else, it is crucial to create a context outside of the existing structure. You need a place where people will experiment and develop skills and competencies that deliver tangible value for customers. Like Erik Ries[7] says: "In most companies, the problem is not a lack of ideas, but the lack of a process to test out those ideas and to take them out of the lab and commercialize them."

Success comes when digital capabilities are turned into core capabilities.

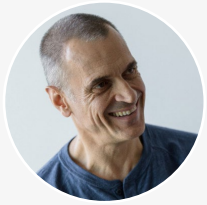
- Jonne Kuyt

Transforming means going from A to B. Within digital, it's not clear from the start when you will be ready or done. It's for sure not about the deployment of technology. It's not only about the implementation of Agile work processes. It's not about customer-centricity alone.

The transformation is successful when digital capabilities are turned into your core capabilities and they have married the in-depth knowledge of user needs & operational processes with digitally skilled professionals. It's all about people. If you make digital transformation an intrinsically human-centric process rather than a technology-focused one, I'm sure you will meet objectives faster and be more relevant for your customers sooner.

Jonne Kuyt is the Director of design driven innovation in mobility and partner at Edenspiekermann. He helps businesses adapt to digital change and innovate.

[7] Eric Ries - Wikipedia



DIMITRIS LIVAS

Co-Founder and Managing Partner
AGILE ACTORS

Advances in digital technology have led to an era of continuous innovation where existing services are challenged by new innovative ones that typically provide an enhanced, more appealing experience. A few decades ago, a service could last and hold the scepters as a service of preference in the market for many years. Nowadays, the lifespan of a service - from the moment it is introduced to the market to the time that it becomes obsolete or replaced by a more advanced one - is getting shorter and shorter.

A digital transformation program aims to change the company itself.

- Dimitris Livas

A digital transformation program aims to change the company itself – to transform it into a new, evolved, and drastically improved organization. To do so, a digital transformation program must effectively transform multiple layers of the organization - established processes, structures, technologies. Moreover, given that all these are operated by people, a digital transformation program must also improve the culture and redefine the skillset available in the organization. More specifically, Digital Transformation is about transforming three layers of the organization:

- *Processes.* Transforming an organization to a simpler, more efficient, and effective one requires changes of the existing processes - including the organizational structure and roles. In the future, we will also see higher-order digital transformations where organizations will be applying alternative digital transformations dynamically - to utilize different strategies of operation and service provision.
- *Technology.* Modern technology provides new opportunities for efficient, 'intelligent' automation of complex processes – and this is getting more and more sophisticated at an accelerating pace. For example, Artificial Intelligence and Cloud Services can be used to automate

complex tasks and processes, across domains and industries. Such technologies are game-changers - they are evolving fast and they drive change or even disruption to established organizations: business leaders need to rethink the ways they operate and get things done.

- *Culture*. In a typical organization, people grow their skills and knowledge in alignment with the established processes, systems, and technology; they adopted certain routines and ceremonies that help them to be effective in this established 'system'. As a result, the transformation of the processes and the technological layer of the organization is typically challenged by people's resistance to change – their fear to move out of their comfort zone. Hence, it is essential to create a strategy for helping people to prepare for digital transformation - as they will have to unlearn skills, knowledge, and habits and learn new ones. People may have to leave the organization and new ones with specialized skills may have to join.

Digital transformation impacts multiple layers of the company - processes, technology, culture.

- Dimitris Livas

In an era where transformation happens more often than before, companies must develop a culture with the following elements:

- Transparency – provide access to information, ideas, strategies
- Adaptability - encourage continuous learning and unlearning
- Curiosity – encourage people to challenge the status quo
- Purposefulness – advocate the organizational purpose
- Accountability – promote proactiveness and ownership

The success of a digital transformation requires a leadership style that arouses an eagerness to the people about the forthcoming change. Leaders have to inspire people, guide them to understand the new order of things, and find a meaningful and developmental purpose for each of them. Building a strong, structured, and knowledgeable team of early adopters and influencers is of the highest importance: members of this team will act as role models, train others and guide them to the 'new'.

This team will inspire and acquire new members until the majority of the organization becomes part of it.

To measure the success of a digital transformation initiative, companies need to obtain insights and understanding of the initial state – a baseline to be used for measuring progress throughout the transformational journey and calibrate the direction of the program. Progress measurement happens against certain KPIs that reflect different aspects of the business - including user and customer satisfaction, cost and operational effectiveness and efficiency, security, and compliance among others. The ability of an organization to perform continuous 'micro transformations' - guided by the ongoing monitoring of the KPIs can lead to the state where higher-order transformations are possible. In this state, the organization is able to dynamically apply strategies and reshape itself by making alternative compositions of essential processes, teams, and technologies. These organizations are characterized by their agile management practices and autonomous and continuous developmental mentality of their people and teams.

Dimitris Livas is a collaborative leader focusing on motivating people to achieve challenging goals and objectives. He has decades of experience in the development of technology professionals and the management of large software development units.

JONATHAN ROSE

Digital Transformation & Innovation Lead
::PROJECTIVE

Those of us who have been evangelists for digital transformation for many years can find a silver lining from the economic impact of the pandemic. Namely, the pandemic has helped the whole C-suite to truly understand that digital transformation and innovation are not just fuzzy buzzwords. Many now get the joke that it has become a crucial requirement to ensure the business can thrive in the new competitive landscape and the realities of the world of flexible working which is now upon us.

If senior executives don't take the opportunity to surf this innovation wave sweeping the market they will soon find it crashing over their heads! The laggards will find themselves with higher costs of doing business than their competitors coupled with the threat of losing the war for talent as retention and productivity fall behind the market leaders.

When it comes to digital transformation too often the top-down lens jumps to the crudest short-term metrics to measure success. Unfortunately, doing so can choke the life from the return on investment which is on offer. A classic example is only incentivizing programs targeting

support departments with the sole carrot of achieving headcount reductions.

For too long digitisation in these areas has only been able to secure investment if it comes wedded to this poisoned chalice. The bottom-up reality of programs with such a mandate is that they almost never realise *the gains targeted on the way in*. The most obvious reason for this is that employees are far less motivated to collaborate or engage with the digitisation agenda if it's a thin veneer for the axe man.

The laggards will find themselves with higher costs of doing business than their competitors.

- Jonathan Rose

So, what can be done to escape this typical digital transformation trap? One way to break this paradigm is to start small by giving enough rope to the transformation department to investigate the organisation's potential for digitisation - before making grandiose assumptions on possible gains - and then come back to the board with a realistic and tested business case which can warrant deeper investment.

With the right detectives in action within two months, a comprehensive picture can be built of the whole organisation to uncover which of the closets are loaded with skeletons and so ripe for disruption. For these investigators, it can be hugely effective, and disarming to 'automation anxiety', if we flip the typical script when engaging the teams in the trenches. For example, asking questions such as:

- *What's the least motivating and draining part of your role?* Very often this will lead you to a treasure trove of operational excellence and potentially intelligent automation use cases where your team's valuable talent is being wasted on the most incredibly menial activities!
- *What new outcomes could your team achieve if everyone was able to recoup an hour a day?* Suddenly we're not talking about saving headcount, but potentially higher value target activities such as the team's ability to realise avenues for [a] new revenue creation, [b] achieving the absorption of targeted future business growth without throwing more bodies at the workflow, [c] reducing procedural issues incurring

daily negative financial impacts and, [d] mitigating regulatory exposure.

When it comes time to wrap this back up for the board the goal is to show that there are many more ways to prove that your digitisation agenda is having the desired transformative effect. Investment in these more creative use cases can unleash a far broader range of tangible wins for the company's clients, employees, and shareholders than the axe man ever will!

Jonathan Rose supports clients in financial services to leverage ::projective's digital innovation solutions to deliver value from front-line teams to the C suite. He focuses on creating and developing new revenue streams with banks and fintech companies and unlocking the business case within digitisation strategies.

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WHAT IS 'OPEN INNOVATION' AND WHAT IS THE VALUE FOR THE INVOLVED PARTIES?

One could argue that some of the greatest achievements of our times are related to our ability to self-organize in groups and communities that work together to create value – having other than monetary drivers. This naturally extends to the organizational level, where companies become part of an ecosystem of knowledge exchange and co-creation.

We ask seven leaders to explain the most essential forms of open innovation and present real-world scenarios. We also touch on the societal benefits of Open Innovation. Read expert insights from Ralf Wilden, Lisa Seacat DeLuca, Pedro Costa, Dermot Roche, and Sofia Fernandes.

What is 'Open Innovation' and what is the value for the involved parties?

RALF WILDEN

Associate Professor of Strategy & Innovation
MACQUARIE UNIVERSITY

Open innovation represents a break with the common approach to innovation, in which all innovation-related activities ought to be conducted within the confines of a focal organization. It suggests that organizations benefit from collaborating with external stakeholders such as suppliers and customers, *in search for and acquisition of external knowledge* to drive innovation and performance. It has to be noted that firms engaging in open innovation may face internal constraints, such as the 'not-invented-here' syndrome, lack of management support, and increased complexity. This complexity of collaborative innovation is amplified by greater sophistication of customer requirements, faster development cycles, and advanced technologies; growing the prevalence of intermediaries in service innovation to involve stakeholders within an ecosystem.

Cultural and leadership barriers to open innovation such as the "not-invented-here" syndrome are detrimental.

- Ralf Wilden

Several mechanisms for open innovation exist. The most common approach is *crowdsourcing*, through which organizations (i.e., seekers) pursue innovations through an "open call" for ideas and a "broadcast search" for solutions to innovation problems using a large group of relevant stakeholders (i.e., solvers). In our benchmarking of successful firms, we have identified four important levers that managers need to orchestrate to drive open innovation: (ii) *engage* with and *understand* your stakeholders, (ii) *develop necessary organizational capabilities*, (iii) *develop an organizational culture and leadership* that fosters open

innovation, and (iv) *develop a service-dominant orientation* to stimulate open innovation.

- *Engage With & Understand Your Stakeholders.* Efficient design of open innovation initiatives needs to account for differences in participants. To drive motivation to co-create innovation, seekers need to: *manage the solver pool size*; *manage the solvers' technical marginality* (i.e., the distance between the solver's knowledge and the problem domain); *carefully design incentives*; and *understand the solvers' provision of cognitive, emotional, and physical resources into the open innovation process* (i.e., solver engagement). As solvers are not formally tied to the seekers as are their employees, there is a need for seekers to engage with the solvers carefully to precisely define a solution space, attract their assistance, and align their efforts with the seekers' objects.
- *Develop an Organizational Culture and Leadership That Fosters Open Innovation.* We have multiple times seen the importance of organizational factors such as *culture and leadership* in both the motivation and capability of organizations to openly collaborate with external partners, and hence, the importance of aligning these with open innovation practices. Thus, to further professionalize open innovation, senior executive buy-in as well as strategic intent, as well as a culture that is "open" to open innovation is critical to implement successful open innovation projects. Cultural and leadership barriers to open innovation such as the "not-invented-here" syndrome are detrimental.
- *Develop a Service-Dominant Orientation to Stimulate Open Innovation.* Focusing on the market and customers enables organizations to constantly collect information about target customers' needs and competitors. Research has highlighted the importance of focusing on *relationships, mutual trust, and win-win exchanges* between the organization and its stakeholders by developing a *service-dominant orientation*, which has been defined as a way of conducting business that is based on guiding principles that emphasize value co-creation in service exchanges through collaboration with customers and other stakeholders. Such service-dominant orientation influences strategic decisions and actions within the organization, and it will also help the organization embrace stakeholder-centric thinking. A service-dominant orientation emphasizes commitment for dialogue and engagement between stakeholders through relational processes.
- *Develop Essential Organizational Capabilities.* Managers need to professionalize their approach to open innovation by developing necessary capabilities to *institutionalize open innovation*. This professionalization of internal processes and systems is important to conduct

open innovation projects more effectively and efficiently. Specifically, organizations need to sense relevant innovation opportunities that lend themselves to the use of open innovation; this can be achieved through customer-linked sensing, system sensing, internal sensing, and technology exploration. To then seize innovation opportunities, organizations need to invest in capabilities fostering identifying stakeholder interactions, structuring the development process, and adopting new revenue mechanisms as crucial processes. Finally, reconfiguring for innovation comprises *orchestration of the ecosystem*, balancing product- and service-innovation-related assets, and the development of *a stakeholder-oriented mental model*.

To sum up, open innovation has been shown to create societal value in healthcare (e.g., patient-driven innovation) and governmental institutions (e.g., open government), but also to create value for customers and firms in for-profit organizations. Value for organizations may lie in reduced innovation costs, increased innovation speed, and higher diversity of problem solutions. The benefits for customers lie in better solutions to their problems, the feeling of being involved in the development process, a stronger connection to organizations, or simply in receiving a financial reward for their inputs (may it be through a one-off incentive or prize, or ongoing participation in IP royalties).

Ralf Wilden is an Associate Professor of Strategy & Innovation at Macquarie University. He advises organizations on service-oriented business models and organizational change to help organizations sense, shape, and seize market opportunities and improve their strategic performance.

LISA SEACAT DELUCA

Director Emerging Solutions, Distinguished Engineer
IBM

With the acquisition of Red Hat, Open Source, in general, has become a huge part of IBM. It's always been there - from the early days, IBM has been contributing to open-source and giving back patents, especially to the startup and the open-source communities for as long as we've been patent leaders. Open Innovation is a similar concept to open source; it's all about making some ideas known so that people can build on top of an idea so it becomes stronger because of just the sheer number of people that are helping to grow it. And there's a lot of companies that are supportive of that type of environment, IBM being a major contributor.

However, there are challenges associated with Open Innovation - mostly from the inventor's standpoint. Many "inventors" don't want to file

a patent. Because they "don't believe in the patent system" or they "think everyone should have access to these ideas". But the biggest challenge is those people that are not sharing their ideas don't realize that the patent system, in general, was put in place *to share* ideas. With the patent system, there's a defined period that a granted patent is valid for - when it expires anyone can take it and run with it. So, the greater inventor community is losing out on expanding these proprietary ideas if the inventors don't participate in sharing their ideas.

Lisa Seacat DeLuca is the Director & Distinguished Engineer of Emerging Solutions within the AI Applications business unit within IBM currently focused on modernizing our Weather Business Solutions and the Aviation portfolios. Lisa holds a Masters of Science in Technology Commercialization from the University of Texas McCombs School of Business, and a Bachelors of Science in Computer Science from Carnegie Mellon University with minors in Business Administration and Multimedia Productions.

PEDRO COSTA

Head of Corporate Innovation, EurA-AG Brussels and Portugal
EURA AG

Dealing with Open Innovation is not an easy task. During my professional experience, I have dealt with some of perhaps Europe's largest firms - many of them with solid steps taken in open innovation, others just starting or exploring how to start. It seems that it is pretty much accepted by these firms that collaborative innovation is not the future but the present.

The idea is that the organization opens its doors to external innovators and resources.

- Pedro Costa

Also a fact, innovation is not only exclusive to large corporations with vast resources; innovation happens everywhere, from garages in Silicon valley to research institutes in Europe and incubators pretty much everywhere in the world. The word "open" in open innovation is the key to this

collaboration. It is the acknowledgment that innovation is happening not only at their R&D departments but rather everywhere, and now the ability to bring these ideas, innovations and the entrepreneurial spirit inhouse is the difference between winning or losing the innovation game. Why should corporate innovation depend only on 20 PhD's if we can have 20,000 outdoors and bring them to work together?

There are mechanisms already to protect intellectual property - so the current main barriers are more cultural and ideological than practical. *So how can a large company open its doors?* Let's focus on one concrete case - the collaboration between large corporations and small and medium enterprises and/or startups. There are several mechanisms for connecting the big organizations to the outside - here is a list that I believe contains the most common ones:

- *The Startup Safaris*. This includes visits to local startup events and innovation hubs, tech hub sponsoring, and branding. Many corporates do that for awareness or as a discovery process – they visit places like incubators, accelerators to explore, and observe interesting developments.
- *Shared offices*. Startups don't have many resources; instead, they have the drive to overcome challenges. Corporates often have the opposite. So why not offer SMEs office space, technical equipment, laboratories while at the same time get a flavor of that entrepreneurial culture and attempt to mix it with the existing one – while, at the same time, hosting some of the most disruptive innovations at your own labs.
- *Matchmaking events, Hackathons, Challenges*. Finding the right start-ups, and technologies is not an easy task. Competition for quality start-ups is increasing with many of them being acquired at a very early stage. One opportunity for a corporate to attract startup attention is by launching a challenge to the outside community. This provides the corporate the chance of getting to know interesting projects and teams and hopefully getting its problem solved. For start-ups, this is a chance of finding a potentially good customer or partner - large enough to feed their need for growth.
- *Corporate incubator/accelerator programs*. Incubators enable corporations to pick an early-stage team and project, shape it and support it by providing them with financial resources (if necessary) along with technical and industry knowledge. This way, entrepreneurs connect with the real world and accelerate the market-fit validation process; they develop their ideas at a faster pace while maintaining control and equity of their companies. Accelerators deal with more matured start-ups that already have a product and want validation from the

market. Often corporations have a purely financial interest - through a Corporate Venture Capital arm- or a strategic one – in the latter case the next step would be to prove the concept, which could then lead to a scenario with the start-up becoming a supplier, being acquired, or getting financial investment from the corporation.

- *Acquisitions, Joint Ventures, Licensing.* Corporations tend to acquire companies, for their technology, business model, and or customer database. To make this process less dependent on external sources, corporations created the CVCs (Corporate Venture Capital), which are purely financial entities that leverage the industry and market knowledge of the mother company. Financial deals like joint ventures and licensing are also possible – providing startups access to a large customer base and corporations access to certain technologies.

While the mechanisms of open innovation are evolving, the main idea continues to be the same: The need to become a magnet for successful ideas, technologies, business models that have a high potential and likelihood of success.

Pedro Costa has background experience in delivering highly complex projects in European, North and Latin American, and African countries. He is now the Head Corporate Innovation at EurA AG, an innovation consultancy firm specialized in the creation and development of innovation ecosystems, helping the largest companies in Europe to profit from collaborative innovation.

DERMOT ROCHE

Patent Director
SECERNA LLP

Open innovation may have significant advantages to the development of new technologies. For many years it has been well recognised that the input of inventors from different teams and the mixing of technical expertise can stimulate new thinking and improved developments.

There are however several practical issues that should be considered at an early stage to ensure that intellectual property rights (IPR) are appropriately handled. Before starting discussions with researchers or engineers outside of your organisation, it is important to agree that these discussions will be held in confidence. The best practice would be to have all parties sign a confidentiality agreement before commencing discussions. In the absence of such an agreement, a subsequent patent application may possibly be undermined.

It is also important to agree with the other parties who will own any IPR resulting from the collaboration. The most preferable scenario is, of

course, to own the IPR and therefore have full control over future exploitation. However, it may still be beneficial if the other party owns the IPR, provided that there is an agreement to make or use the new invention by means of licensing. There are numerous legal and administrative difficulties to joint ownership of IPR, and in most cases, this type of arrangement should be avoided. Detailed legal advice is typically required to assess the pros and cons of any particular circumstance to avoid disputes associated with ownership further down the line.

The mixing of technical expertise can stimulate new thinking and improved developments.

- Dermot Roche

From a practical point of view, it is important to maintain an accurate and complete record of the people who took part in an open collaboration event. For example, in the case of a hackathon, care should be taken to monitor who contributed to each project to ensure that there is a complete list of inventors documented for any subsequent patent application.

After completion of the open innovation event, all of the participants will go their separate ways, and hence, care should be taken to collect accurate contact details of the participants for any subsequent legal requirements. For example, inventors are often required to sign administrative documentation as part of the patent process, so having their full contact details is essential.

Dermot Roche is Qualified as a Patent Attorney and a Trade Mark Attorney. More than 20 years experience in the patent profession in computer-implemented inventions and medtech. Experience in private practice and as an in-house patent counsel for Accenture and for Dolby Laboratories.

What is 'Open Innovation' and what is the value for the involved parties?

SOFIA FERNANDES

Director of Business Development
BGI

Open Innovation implies identification of problems in a corporate environment followed by a call for potential solutions from the market. It is called 'open' because anyone from the inside or outside of the company can contribute to forming a solution that aims to address a defined problem.

I would say that Open Innovation is necessary for corporations to stay relevant, to attract and maintain talent, and ultimately to win in the market. However, such programs are hard and must not be taken lightly by the management team; they should be transversal to the entire company - and usually, a third party is needed for this.

An important part of the Open Innovation process is having well-defined problems.

- Sofia Fernandes

An important part of the Open Innovation process is having well-defined problems – and this is only possible after assessing them directly with employees from all levels and also by interviewing clients. I have witnessed this process with a large Telecom company that was open enough to show its flaws, even when we are talking with a multinational leader of the sector. Above all, we involved their employees, across different business units, as mentors, coaches of startups, facilitators of the open innovation process, and most of all, as key actors in providing real and sincere feedback on the problems the company was facing.

After this process, we were able to start identifying external startups, research groups, and projects that could address the existing challenges. And of course, there were cultural barriers - for example, some hesitation on sharing a "war story". And this is why your partner in Open Innovation must, on the one hand, have experience in managing such programs and, on the other hand, focus on building a long-term relationship with your company.

What is 'Open Innovation' and what is the value for the involved parties?

When this strong relationship with the partner is there, the company can start implementing pilots - some of which will work, others won't. But when one of them proves its potential as a game-changer, the mentors and coaches become advocates, and then you start having other companies asking to become part of the program - to participate in something bigger, something unique, something that will change our future.

From the perspective of the market, this is seen as a big shoutout that you are open for business with startups, and soon the company will be not only looking for pilots but also considering proposals on how they should anticipate future larger problems.

Sofia Fernandes is a strategist with extensive experience in working with both startups and corporations in launching new products. Sofia manages a portfolio of over 100 startups and focuses on designing and aligning strategies, motivating teams, and assuring flaw-less implementation.

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TO PATENT OR NOT TO PATENT? DO COMPANIES NEED AN IP STRATEGY?

Considering that a significant percentage of patents granted is not utilized commercially and that only a small minority provides protection for IP holders or generates revenue streams via licensing, it is worth answering questions like: When should a company consider filing a patent? How important is it for a company to have a patent strategy? How could this strategy generate value for the organization? On the practical side, how early in the innovation process should ideas be evaluated for patentability? When should companies keep a trade secret versus filing a patent? Also, to connect this with the previous question, how should companies align their patent portfolios and IP strategies to Open Innovation Programs?

Three renowned experts share their valuable thoughts: Peter Hoeller, Dermot Roche, and Joe Doyle.

To patent or not to patent? Do companies need an IP strategy?

PETER HOELLER

Partner
BARTA, JONES & FOLEY, P.C.

Securing IP rights is important for any organization wanting to maintain the competitive advantage of their inventions, designs, and creative work. When implemented correctly, a robust intellectual property (IP) strategy will promote innovation activities throughout the company while also generating valuable assets that are usable for licensing and keeping competitors at bay. The largest technology companies generate billions of dollars in licensing fees from their patents. More importantly, they have patent portfolios that make their competitors think twice about entering into a particular technological field, which gives them a huge business advantage.

Think of IP assets, not in the dollars they make, but instead in the human capital they keep for you.

- Peter Hoeller

I challenge the reader to first think of IP assets, not in the dollars they make, but instead in the human capital they keep for you. Before starting an innovation program, every organization should initially settle on who is going to own the ideas and inventions that come out of such endeavors: the company, the individuals, a third party, or some combination thereof. These ownership stakes need to be clearly defined through employee or joint-development agreements. This is mission-critical to making sure an organization's innovation does not walk out the door. It will also help generate more innovation. You get what you track. Having a system set up to secure rights to inventions invariably leads to more inventions. If inventors know they cannot leave with their inventions, they are more prone to stay. Also, many engineers like the recognition of

seeing their name on a patent or company awards that honor their patents, so you will often find that a natural bi-product of any IP strategy is the retention of key innovators. Once ownership is figured out, an organization must decide what kind of IP to secure.

The most popular IP rights to protect innovation are *patents* and *trade secrets*. Patents disclose inventions to the public in exchange for granting their owners the exclusive right to stop others from making, using, or selling the disclosed inventions. If someone is using or selling a patented invention, the patent owner can sue them for patent infringement and stop the infringing use, retrieve profits the company has lost, or possibly seek punitive damages to teach the competitor a lesson. Though, one does not always need to sue to generate income from patents. The patents themselves may be licensed to third parties and used to generate substantial licensing fees. This is particularly attractive to companies that are lacking the ability to widely release products and are willing to license their technology to others. Licensing revenue can be a huge revenue source for sophisticated companies.

Inventions should only be kept as trade secrets if there is virtually no way they could be discovered independently.

- Peter Hoeller

Trade secrets are commercially valuable secrets that a company has taken a painstaking effort not to disclose publicly. When someone steals or divulges the trade secret, the owner can halt the disclosure and seek hefty damages. Unlike patents, however, if someone legitimately discovers a trade secret, it no longer is a secret, and the IP rights disappear. Whether to pursue a patent or a trade secret largely boils down to three questions.

First, what is the likelihood that a competitor will figure out the invention on its own? Patents should be used to protect inventions that may be discovered by other innovative companies. Inventions should only be kept as trade secrets if there is virtually no way they could be discovered

independently. Once again, independent discovery is a defense against claims of trade secret misappropriation, but not patent infringement.

Second, can the invention truly be kept secret by the organization? An organization must have procedures in place to protect a trade secret. This involves restricting the people inside the company who can access the secret and, from time to time, auditing the procedures to determine compliance. Trade secret audits are pretty extensive but necessary to prove the organization did, in fact, take efforts to keep the innovation a secret. These are sophisticated procedures that should always be implemented and checked by an IP lawyer.

Third, how long will the invention provide a competitive advantage? Patent rights only last for 20 years. Trade secret rights never expire, unless they stop being secret. Few inventions today are exploitable for longer than 20 years, so it is often better to file for patent protection than try to keep trade secrets secret for decades.

An organization must have procedures in place to protect a trade secret.

- Peter Hoeller

In practice, the patenting process is usually the better way to go. It may only grant an exclusivity period of twenty years, but that is a long time for most inventions. While few patents end up generating money for a company, the ones that do end up generating more than enough revenue for all of them. In other words, the patent game is usually a numbers game, and you want to make sure you have developed a strong pipeline of innovation and adequate procedures to draft strong patents.

So how can we implement a strategy that is not overly onerous on the inventors while at the same time capturing and securing the IP rights of the company? First, you should have appropriate forms that capture key details about the invention: inventor names, date of invention, a summary of the invention, date of release, etc. Once inventors provide these details, they should be sent to your patent attorney to start the process. At the time, you may want to conduct a *patentability search* using the summary of the invention provided by the inventors. This will help the attorney better assess the likelihood the invention can even be patented, given the current *prior art*. Then, allow the attorney to meet with the inventors to

discuss the invention. After that, determine whether to move forward with the patenting processing or not. You should only need the inventors to fill out a short form and talk to the attorney for about an hour to get the process well underway. The final decision about whether to move forward will likely come down to the business case for the invention, what the prior art looks like, and the appetite for the company to make the financial investment to obtain the patent. Once you implement this pipeline, the process should run pretty smoothly.

Peter Hoeller is a seasoned patent attorney with more than 15 years of experience procuring, litigating, and licensing patent rights in the high-tech industry. He represents businesses of all sizes, ranging from the Fortune 100 to start-ups, and helps his clients realize the potential of their IP assets—either in court, before the U.S. Patent and Trademark Office, or across the negotiation table.

DERMOT ROCHE

Patent Director
SECERNA LLP

Just like with any other aspect of a business, having a strategy as to how to deal with intellectual property rights (IPR), such as patents, trademarks, copyrights, trade secrets, is vitally important. The entire process of preparing and filing a patent application with a patent office and then dealing with the examination may take a number of years. There are large backlogs at the major patent offices and it may take 3 or 4 years until a patent is granted in the US or in Europe. There are significant costs associated with the patent process also. All businesses from the small individual inventor to the start-up enterprise to the large multi-national corporation should put in a place a defined plan for how to handle IPR. Part of such a patent strategy is to identify new inventions being created. The first step is to designate someone responsible for IP within the organisation – that could be a team for larger organisations or even a single person for a small SME. Regular review meetings should be conducted of the projects being worked on by the engineering or scientific teams to identify potentially patentable inventions.

The first criterion to look out for is whether the project involves anything new or different compared to what is typically done in the industry. Some basic searching could assist to confirm if there is a good candidate. From a patent perspective, it is important that the innovation is *not merely new* but also a *significant development* that would *not have been straightforward or obvious to people in the industry*. In some areas of technology, such as software, there is a further criterion of *relevance*. The

new innovation must be related to some form of *improvement* or *advance in the technology* rather than in a purely business or accounting or finance sense. An example of a technical advance would be an improved feature of a telecommunications network to enable greater bandwidth for transmission of data. A patent attorney may be engaged to assist in identifying potentially patentable inventions.

For start-up businesses, patents may be particularly important as a vehicle for generating investment.

- Dermot Roche

If a new invention is suitable for patenting, it is crucial that there is no disclosure of the idea, or publication on the internet or blogs, or presentation at a conference - until after the patent application has been filed. Otherwise, this could potentially undermine any patent protection for the new development. This is probably the most frequent error made by individual inventors or start-ups. It is acceptable to have discussions with other people, for example, suppliers or financial backers, or research partners, but only if in confidence. The best practice is to agree and sign a confidentiality agreement in this case.

The patent strategy should also consider how to commercially exploit the IPR. The traditional purpose of a patent was to be used as a fence-post to exclude potential competitors from a new market segment. Other companies use patents as an instrument to generate royalty revenues by licensing the IPR to other partners.

Patents may also be used as a defensive deterrent to discourage a competitor from enforcing its own IPR against your business. It is possible to use a patent portfolio as leverage to arrive at a mutually acceptable cross-licensing arrangement. For start-up businesses, patents may be particularly important as a vehicle for generating investment as the patent may be a very real piece of property to attract venture capital. IPRs may even be employed by some companies for marketing and sales purposes to demonstrate to customers that cutting-edge technology is being developed by the business. In some countries, there are financial

incentives, such as tax breaks, associated with filing patent applications or having a patent portfolio. These should also be considered as a potential benefit in the patent strategy.

When deciding whether to use patent protection or trade secret protection a business needs to balance many factors.

- Dermot Roche

Not all innovations are patentable. Sometimes a business may prefer to keep the new invention secret instead of filing a patent application which will eventually be published. When deciding whether to use patent protection or trade secret protection a business needs to balance many factors. If a new innovation will be sold widely and could be relatively easily reverse engineered, then there will be little if any effect of trade secret protection, and a patent would be preferable. If an innovation is not patentable, for example, because it relates to a purely economic model, and there will be close control as to who will have access to the information, then treating this as a trade secret would be appropriate. Some innovations have a relatively short life span and the maximum term of a patent of 20 years would provide plenty of protection. In other cases, trade secret protection may be more valuable because of a potentially much longer life span. External expert advice should be obtained to ensure patents are filed as early as possible.

Dermot Roche is Qualified as a Patent Attorney and a Trade Mark Attorney. More than 20 years experience in the patent profession in computer-implemented inventions and medtech. Experience in private practice and as an in-house patent counsel for Accenture and for Dolby Laboratories.

To patent or not to patent? Do companies need an IP strategy?

JOE DOYLE

Intellectual Property Manager
ENTERPRISE IRELAND

When enterprise leaders approach the subject of intellectual property (IP) for the first time, it is typically with the question: "Should we file a patent?". This is a very important question but it is not usually the right place to start as it can overly limit the IP focus of the company. Also, it often arises reactively in response to pressure from the external environment such as investor interest, a cease-and-desist letter, entering a new market, and so on. By the time events like this arise it is commonly too late to patent and it can be very expensive to remediate the situation.

A better, more proactive question is: "Do we need an IP strategy?" This is better because a) the answer is always yes b) it widens the focus to include a broader range of IP assets - which may or may not include patents c) it frames IP in the context of the business strategy and d) it changes the emphasis from resolving a short-term issue to developing a long-term plan. So why do all companies need an IP Strategy?

Most value-creating assets in business today are intangible, underpinned by knowledge.

- Joe Doyle

There is no company nor industry in the world today that is not impacted by the forces of technological innovation and digitalisation. As a result, the most value-creating assets in business today are intangible (non-physical) and underpinned by knowledge - in other words, they are 'intellectual capital'. It is estimated that about 85% of the value of today's leading global corporations is based on intangibles. For start-ups and SMEs, it is likely to be >95%. A 2019 study, commissioned by Aon Insurance plc[1], sought to assess the insurance of risks of an estimated $21 Trillion of intangible value in the S&P500 corporations. The study identified that the assets underlying this value are, largely, various forms of IP (patents, designs, trademarks, copyright, trade secrets) and commercial rights (e.g. license agreements) that are protected by the IP.

[1] 2019 Intangible Assets Financial Statement Impact Comparison Report (aon.com)

To patent or not to patent? Do companies need an IP strategy?

Other studies, on start-ups and SMEs specifically, by the European Patent Office (EPO) and the EU IP Office (EUIPO) have shown that SMEs that own registered IP, generate on average, 68% more revenue per employee than those with no IP. Furthermore, companies that adopt a broadly based IP strategy, early in their lifecycle, are 33% more likely to achieve future high growth than those that put IP on the long finger[2].

Therefore, in a world where innovation is so fundamental to enterprise success, IP is the cornerstone of Innovation and technology-led enterprises. It is the currency of many innovation-related third party engagements including collaboration, open innovation, innovation financing, M&A as well as being a key source of competitive advantage. In this context, a broadly based IP strategy is necessary to ensure that this critical store of value is appropriately identified, protected, managed, and deployed for the benefit of the business. There is a saying in the IP world that "innovation without protection is philanthropy", but unfortunately, the EPO/EUIPO studies also show that only a minority (<10%) of SMEs protect their IP[3]. Considering that a much higher proportion are innovating, a large portion of intangible value must remain uncaptured and potentially lost as spill-overs to competitors.

Intellectual Property is the cornerstone of innovation and technology-led enterprises.

- Joe Doyle

So, it is never too early to start to develop an IP Strategy. A good first step is to conduct an IP audit to identify any IP that should be protected, and also assess IP risks and review internal IP capture and management processes. This will guide the development of an IP strategy focussed on how the company will protect and utilise IP to achieve their business scaling objectives. The IP strategy will evolve as the company scales and it will involve many complex internal and external interactions. Therefore, as well as developing the internal IP culture and systems it is essential that companies access appropriate external IP expertise.

[2] High-growth firms and intellectual property rights (epo.org)
[3] Intellectual property rights and firm performance in the European Union

To patent or not to patent? Do companies need an IP strategy?

Then, “to patent or not to patent?” is no longer a binary choice. It is an IP strategic decision that must be asked repeatedly as the business and technology develop.

Framed this way there are many things to consider: Is it patentable? Is it the right time to patent? How will a patent advance our short and long-term business objectives? Are we at risk of disclosing our idea e.g. through a sale, trade show, field trial, etc? Have we collected all data necessary for the patent specification, to increase our chances of obtaining a high-quality granted patent? Have we budgeted for it in our multi-year IP protection budget? Are we comfortable making a public disclosure of our invention in a patent document or do we have the option to keep it as a trade secret? How does this patent fit with our existing IP portfolio and freedom-to-operate? And much more.

So, does a company need an IP strategy… absolutely! Should they file a patent…well, that depends!

Joe Doyle is IP Manager with Enterprise Ireland, his role is to support EI clients to integrate of IP strategy with business strategy. He has a BSc in Materials Science, M.Sc in Business Practice. Previously he held senior roles in R&D and technology commercialization.

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WHAT ARE THE TECHNOLOGIES THAT WILL DRIVE INNOVATION IN THE NEXT FEW YEARS?

Artificial Intelligence is already here and is transforming every aspect of human activity. Blockchain brings massive opportunities along with a new class of drastically different systems and services while Quantum Computing is expected to disrupt the current 'state of the art'.

We ask our leaders to name the technologies that are expected to drive disruption in the next few years and the advances that they consider to be instrumental for the next waves of innovation. Lisa Seacat DeLuca, Jonathan Rose, and Fabrizio Ferrandina share their thoughts.

What are the technologies that will drive innovation in the next few years?

LISA SEACAT DELUCA

Director Emerging Solutions, Distinguished Engineer
IBM

The pandemic is changing the way companies and individuals work - in a good way, like with opportunities for people to work from anywhere. Right now, all of a sudden, we're bringing innovation and jobs back to small cities around the world, and I think that there's a lot of good with that in driving revenue back into those smaller communities. Currently, companies are spending time improving how we efficiently work remotely, how we collaborate with people, how companies continue to sell and get their stuff and products into the hands of consumers.

AI should just become part of your DNA as a business.

- Lisa Seacat DeLuca

For example, things like buy online, pick up in-store - why weren't more companies adopting these before the pandemic? How easy is it to just pull your car up get your stuff and leave and not have to get out and shop around the store; and this is really spurring technologies and individuals to finally get to the next technical ladder that we all should have been at a long time ago - *digitization*. I think we're going to see a lot more innovation in that space. Same with health and safety. Things like Zoom and Slack and all the collaboration tools, along with those mobile applications doing health checks or showing if you had a COVID vaccine and if it is safe to go into concerts and venues and all that kind of stuff. Technologies like *edge computing* are going to be more critical, as remote workers go to their cities that are outside of the main tech hubs. It's kind of fun to see how the world is adapting and shaping to these new challenges.

AI has become critical. It's part of almost every company now. It’s just like, a few years ago, everything had to be mobile -- now it's kind of the same thing with AI and Machine Learning. It's going to get to a point where it's expected and it's just "alright what is the cool thing that you can do with it now that you've got it". We are definitely going to see more

What are the technologies that will drive innovation in the next few years?

investment in AI – as there's a lot of companies that aren't quite there yet. At the same time, I think it should just become part of your DNA as a business - you need to adopt AI and figure out how you're going to play in that game. 5G is the stepping stone that will make mobile and AI the next normal/standard. As the internet gets faster and faster, this is going to open up a lot of innovation doors that were previously closed due to compute progressing and speed.

Lisa Seacat DeLuca is the Director & Distinguished Engineer of Emerging Solutions within the AI Applications business unit within IBM currently focused on modernizing our Weather Business Solutions and the Aviation portfolios. Lisa holds a Masters of Science in Technology Commercialization from the University of Texas McCombs School of Business, and a Bachelors of Science in Computer Science from Carnegie Mellon University with minors in Business Administration and Multimedia Productions.

JONATHAN ROSE

Digital Transformation & Innovation Lead
::PROJECTIVE

On the topic of 'the next big thing' coming in technology solutions, experience has taught me to be somewhat contrarian. Too often we see the hype curve in action and hot topics such as blockchain or advanced intelligent automation solutions in machine learning or AI become a case of hammers looking for nails. It is an unfortunate reality that when a new market is created, such as with intelligent automation in recent years, you end up with a plethora of new technology firms overreaching in the fiercely competitive chase to growth and so they position these solutions as the silver bullet to every digital transformation challenge. Then the consulting firms jump on the bandwagon as they see a new angle to sell to their clients and the snowball becomes an avalanche!

The early waves of intelligent automation provide a useful cautionary tale. Early-stage Robotic Process Automation (RPA) products had, and still have, fantastic potential to sweep up the most mindless and laborious administrative tasks. They hit a very particular nail on the head, namely solving use cases where excessive employee time is consumed by repetitive data manipulation across a multitude of applications which the user has open in their work terminal at any one time. However, these capabilities became grossly oversold to imply it could cover a much wider range of problems than the core technology could support. This inevitably led to many automation programs failing to deliver on the overall identified return on investment and so setting back the organisation's

pace of automation in many institutions who took a once bitten, twice shy approach to these new wave products thereafter.

What I have repeatedly found is that C-suite executives do not want to be sold to on the wonders of leading-edge technologies - their focus is always on the domain they understand, namely the strategic business objectives they are tasked to achieve in the next number of years. Where the happy marriage occurs between C-suite priorities and new technology is when those board-level business outcomes can tangibly and directly be solved by the new software solutions in a way that either wasn't possible or wasn't cost-effective before.

C-suite executives do not want to be sold to on the wonders of leading-edge technologies.

- Jonathan Rose

With that in mind, we can come to this topic from a new perspective. Instead of taking a punt on what will be the shiniest new toy to emerge in the technological toolkit of tomorrow, it may be more useful to ask "what are the strategic business challenges we see down the line and how will we solve for them?". With that focus on business problems first, we find ourselves having great innovation discussions such as:

- *How can we keep pace with the explosive growth of data in our industry?* If we fail to meet this challenge we risk being buried by future staffing costs or failing to meet our regulatory requirements for maintaining adequate oversight and controls of the business of the future. With this mandate as we move deeper into the organisation we can start to talk about the problems solved via quantum computing or intelligent automation.
- *How will the revolutionary flexible working outbreak post-pandemic change our sales process, client service capabilities, and company culture in a future which may involve far less opportunities to build relationships or maintain adequate face-to-face oversight?* Here a door opens for ways of working discussions and the new productivity tools required for the more distributed organisations of tomorrow.

So innovation in this case is not about focusing on blockchain, or AI, or quantum computing. In most cases the C-Suite don't need to know

What are the technologies that will drive innovation in the next few years?

about or understand any of these tools 'under the hood', they only need to see that the business objectives can be met by whatever innovative and cost-effective means the CTO has found necessary.

Jonathan Rose supports clients in financial services to leverage ::projective's digital innovation solutions to deliver value from front-line teams to the C suite. He focuses on creating and developing new revenue streams with banks and fintech companies and unlocking the business case within digitisation strategies.

FABRIZIO FERRANDINA

CEO
ZÜHLKE GROUP

In the coming years, innovation will not only be driven by economic pressure, but also by the rapidly increasing ecological challenges and the societal need to save our planet. Growth paradigms alone are not the answer to these big questions. We will also see technologies that thrive by offering a lever in both dimensions: *economy and ecology*.

Technologies will thrive by offering a lever in both dimensions: economy and ecology.

- Fabrizio Ferrandina

On the one hand, continuous incremental improvements will drive down production costs and optimize process costs – as we see with Artificial Intelligence. On the other hand, consumers and citizens will expect true disruptive innovation that has a significant impact with respect to the Sustainable Development Goals[1].

New technologies might come in different flavors, but they will play together in unprecedented ways. The convergence of new tech with the goal of having a deep and positive impact upon society and the environment will bring true disruption. We will certainly see the rise of virtual services to reduce unsustainable travel habits. This drives down business

[1] Sustainable Development Goals - Wikipedia

costs and reduces CO2 at the same time – as we have all learned during the ongoing pandemic. All kinds of extended reality will emerge in our lives – enabling instant worldwide collaboration and co-creation, including new kinds of business events.

Blockchain technologies and token ecosystems will be used in novel forms to govern communities of different kinds and sizes. We are already seeing the rise of social tokens and decentralized autonomous organizations to align virtual communities. But this is just one aspect. Blockchain and tokenization will enable an Internet of Value[2] – starting in finance. Decentralized finance will reinvent the backend of finance much like fintech start-ups revolutionized its frontend. But tokens won't stop there – they will represent our digital identities, stocks, real estate, and digital art – to name just a few. Smart contracts will automate token-based processes and make them cheap. The ecological pressure will bring green blockchain technology to life – avoiding the crazy energy consumption of 'proof of work' algorithms as we see in bitcoin[3].

'Connecting everything' will continue and propel the IoT to the next level – thus enabling new business models and merging the physical and digital worlds into seamless experiences. Again, the pandemic has shown us how to save time, money, and emissions: remote sessions with our doctor will be the norm, schools will run in hybrid modes, government processes will be further digitalized and virtualized.

Fabrizio Ferrandina is Group CEO of Zühlke, a global innovation service provider. His career has been dedicated to driving software and system projects for clients all over the world. Until 2018 Fabrizio Ferrandina was CEO of the German subsidiary and member of the Zühlke Group Executive Board.

[2] Frontiers | Internet of Value: A Risky Necessity | Blockchain (frontiersin.org)
[3] Proof of work - Wikipedia

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HOW DOES INNOVATION HELP TO SOLVE THE MOST PRESSING GLOBAL PROBLEMS?

Innovative technologies have already transformed the ways we communicate, work, learn, and get entertained. But how about the global pressing problems such as climate change? How could innovation help in mitigating the ongoing damage and eventually help us handle the problem? What are the notable efforts in this direction?

Dragana Vukasinovic, Anthony Mills, Daniel Burrus, David Blake, Michael Stephen Crickmore, and Christos Dimas share their interesting perspectives.

How does innovation help to solve the most pressing global problems?

Dr. DRAGANA VUKASINOVIC

Founder and CEO
FAUNA SMART TECHNOLOGIES

"It was the best of times, it was the worst of times…" is a line Charles Dickens is using when he begins 'A Tale of Two Cities'[1] to prepare us for a story about London and Paris during the time of the French Revolution. But, what he is also doing is illustrating how different groups and people might experience the same world. Depending on where we are in our own life, educational background, and life experiences we will have different views on the same reality. Taking into account scientific facts, we should all agree that we do live in unprecedented times where we need a quantum leap, and not incrementalism when it comes to innovation.

The Revolution of our lifetime is happening right now. Now is the time when all of us must be smart and direct this revolution towards creating a better, healthier planet. We need to address questions like "How do we want our world to look like?", "How can we become environmentally friendly & infinitely sustainable?"

We need a quantum leap, not incrementalism.

- Dr. Dragana Vukasinovic

We need to start bridging the gap between traditional industries and cutting-edge academic research to build long-lasting impactful products. We do have both London and Paris of our age and now we need to be smart in how we match the components to create the next level of humanity. Here we need to think about "how do we want to evolve as a society" and start structuring our approach towards that goal.

Even today, we still have traditional industries fighting the notion of change. For example, climate change is seen by traditional industries as an enemy! A product of academia. Luckily, we are seeing improvements to the awareness of society and a willingness to change.

[1] A Tale of Two Cities - Wikipedia

How does innovation help to solve the most pressing global problems?

In 2015 the Stockholm Resilience Center published a new framework to understand Planetary Boundaries[2] (Steffen et al., 2015). The results showed that the biosphere integrity and biochemical flows are much more out of balance than climate change is. Things like genetic diversity, nitrogen, and phosphorous are much further beyond the zone of uncertainty (high risk) than climate change seems to be. To bring back the integrity to the biosphere we need complex system innovation – and this is where bioscientists need to step in - since they are the ones acquiring knowledge on how the world works on such a fundamental level as DNA is. To bring complex system innovation to life, we need knowledge on how diverse ecosystems work and the mechanisms we should restore in nature – the ones that were there before we, humans, started interfering.

To foster this change, educational aspects are of paramount importance. Basic science is important. Life sciences especially are going to make or break some of the biggest problems we face right now over the long term. Academic research, being an old and established industry, has evolved some structural problems that are hard to fully grasp, let alone solve. However, it is under these exact constraints that the biggest opportunities exist. Now, imagine if we would train scientists, just like we train engineers to build products? Imagine scientists building products based on long-term academic research! By seeing climate change as an opportunity to introduce change and new markets we can push the boundaries of state of the art, rewrite the rules of the game, and unveil new worlds of opportunities. Within these opportunities, it is the Ecosystem Restoration[3] that must come first.

Now back to Dickens. It is up to us to view this ongoing revolution as “the spring of hope” or the “winter of despair.” Although Dickens was writing his novel in 1859, the experience of living multiple simultaneous realities depending on who you are and where you sit in the world is as common today as it has ever been.

I think, we find ourselves in these best of times and worst of times: where we are more connected, educated, and healthier than we have ever been before, but we have also become lonelier, more combative, less resourceful as a society, and more imperiled than we ever have been.

Dr. Dragana Vukasinovic is a bio-scientist with entrepreneurial mindset. She is the Founder and CEO of Fauna Smart Technologies, a company dedicated to building products and services to create farming practices in line with nature. After being in academia all her life, Dragana is using startup as a mechanism to bring cutting-edge academic research to the real world leveraged by environmentally friendly technologies, together with her passionate team of multidisciplinary scientists.

[2] Planetary boundaries: Guiding human development on a changing planet | sciencemag.org
[3] UN Decade on Ecosystem Restoration

How does innovation help to solve the most pressing global problems?

ANTHONY MILLS

Founder & CEO, Executive Director
LEGACY INNOVATION GROUP & GLOBAL INNOVATION INSTITUTE

Our world at large is in the throes of many shifts – global digitization, global climate change, global societal changes, and so on. Organizations must likewise get onboard with these shifts and pursue not only digital transformation (which they should), but also a far more holistic mindset about who they are, what their purpose is, what value they deliver, and how they should deliver that value.

Organizations must pursue a holistic mindset about who they are and what their purpose is.

- Anthony Mills

In other words, the answer lies in not just some organizations, but every organization – starting to do what B-Corps[4] have been doing since 2006, and what Business Roundtable[5] finally recognized in 2019, which is to step back and ask themselves some very challenging and difficult questions about who they are, why they exist, what value they deliver across the spectrum of stakeholders, and how they go about delivering that value. The challenge for companies is to come up with answers suitable for the Twenty-First Century – answers that help the world to achieve the UN's Sustainable Development Goals[6], not detract from them. The implication is that organizational leaders – in every organization – must ask, and answer, questions such as the following:

- Should our organization even exist? If so, toward what end in the world?
- How can we as an organization ensure we are doing everything possible to deliver net positive value to each and every stakeholder we impact – investors, regulators, customers, workers, society, and the earth (from which we ultimately take natural resources).

[4] B Corporation (certification) - Wikipedia
[5] Business Roundtable | businessroundtable.org
[6] Sustainable Development Goals - Wikipedia

How does innovation help to solve the most pressing global problems?

- How can we conceive, plan, develop, and deliver new innovations that likewise deliver net positive value to each and every stakeholder impacted?
- How can innovation play a bigger role here, by being far more *holistic* in its thinking and considering all possible impacts prior to delivering new products and services to the world.
- How can we envision the futures of the new innovations we deliver, so as to ensure they continue to be used in the manner intended – for good, and not misappropriated for bad?

If leaders in organizations all over the world find the courage to ask – and answer – these questions, and to thereafter take the necessary actions toward these ends – ensuring that both they as an organization and the new innovations they deliver indefinitely produce a net positive outcome for all stakeholders – then, and only then, will we collectively begin to be able to address and answer many of the world's greatest woes – including *global climate change*, *poverty*, *disease*, *malnutrition*, and the growing failure of the established *educational system*. Many of the insights, perspectives, and tools for doing this – including the new Social Model Canvas – can be found in the book The Other Side of Growth[7].

Anthony Mills is a globally sought-after thought leader on emerging markets, proactive growth strategies, corporate innovation, workplace experience, entrepreneurship, product design, and Design Thinking. His work has had a profound and lasting impact on businesses all over the world.

DANIEL BURRUS

CEO
BURRUS RESEARCH

We will not solve the most pressing global problems with *change*; we will have to use *transformational systems*. Secondly, one of the things that I've been teaching for years, is what I call *problem skipping*. The key element of problem skipping is that whatever problem you've got, that's not it; there's another one, and that other one, the real problem, is solvable. If you really want to solve a global issue, e.g., the world is warming up too rapidly, there is a way to get down to the real problem that is the *underlying cause* which is solvable. Finding the real problem and then coming up with an innovative transformational solution is part of how we're going to solve those problems.

[7] The Other Side of Growth: An Innovator's Responsibilities in an Emerging World

How does innovation help to solve the most pressing global problems?

For example, one of the problems with the rapid melting on the poles is the color of the snow - most people don't realize that. Northern latitude snow as you get closer to the pole has a lot of black soot on it and black absorbs heat. If you look at the snow on the poles, you'd see there's black all over the place - it is soot coming down from the high atmosphere from China, the US and India that gets deposited on the snow. So, you actually have carbon black which absorbs heat and light on the snow. Well, where's that black coming from? Now I'm going to be innovative here - you could actually do some testing of that soot, and determine its exact source. Because if we can track back to its source – a coal fire plant for example – we could find ways to prevent the problem from getting worse. Countries could work together to create a fund to clean up coal-fired power plants instead of relying on the power plants or their individual country having to do all the investment. What's the global motivation to invest? It's not just hurting one person or country - It's hurting all of us.

We need to anticipate problems and pre-solve them.

- Daniel Burrus

As another example, we've had a lot of fires in California - and if you look at the data and the science of the increase in fires, it's definitely a climate change issue. And a growing related problem is when you have all these hills that have been burned, and then you have some heavy rains come in, you can get mudslides and they can move fast, causing damage and killing people. So, what could you do? Thinking as an entrepreneur, we could put some sonic acoustic sensors placed around areas that have had fires, that could have potential mudflows, 'listening' for a certain frequency of noise that large amounts of moving mud make. And we could add those wireless sensors using inexpensive 3G wireless chips. This way we would know when we have soil starting to move and hence notify all the people in the area via a mobile app so they would have an immediate warning that there's a mudslide happening and even have an exact picture of mudslide via the app – so they can see where it is and a prediction of where it's sliding to.

If we look at electric vehicles as another example - it takes energy to make a Tesla. It turns out though that Elon Musk owns one of the largest solar generating facilities in the world, it's in the desert in California. So, the energy that is powering the manufacturing plant that builds Tesla's

electric vehicles could be coming from the sun, instead of from coal or some other source. So, the sun powers, the robots and the plants that build the electric vehicles. If we follow this approach in other places, for other makers of electric vehicles, we get the conversion going faster. But then, what are the laws that we could put into place? For example, some countries in Europe said no internal combustion engines by 2025 thus creating incentives to move forward. But they have to be coupled with business realities - there are things that we can do at the technical level to get the cost down and get the impact up.

Laws can reward behaviors that will have a positive impact on climate change.

- Daniel Burrus

Regarding climate change, we need to be much more anticipatory. We need to anticipate problems before they happen and pre-solve them because if we don't, the pace of change and a growing number of problems will predictably get way too big to handle. Data shows that the earth is heating up at a faster pace each year. We could do something about that, or we could let it play out.

Thinking as an anticipatory entrepreneur, we should ask what are the biggest causes of it? Are there tools that we could put into place or laws that we could pass that would provide incentives for people to make those changes? For example, here in California, anyone can get solar panels put on their house for free and that's why there are so many going up in California. Laws can reward behaviors that will have a positive impact on climate change. In other words, technology is not the only place to look for positive solutions to our problems.

I've devoted my professional efforts to getting people to become anticipatory versus just reactionary. Because most of us, including the government, tend to wait until the problem gets big and then it erupts before we do anything.

In my book, Flash Foresight, I introduced the concept of being anticipatory regarding electric car production, as well as most of our mobile technology and its future impact in regard to lithium sources, and how there's not an unlimited amount of lithium. In addition, I discussed the predictable problem generated by all those batteries when they are no

longer fit for a car -- and by the way, I had answers for that. You could create a business around repurposing a battery that is no longer fit for a car – because there are many other new uses for it. In addition, there are some new innovations on battery tech that use less of the current materials and allow better recycling. Most unintended consequences happen because we're focused too much on the present, rather than actually looking at what are the predictable problems that we can clearly see and preventing them from happening.

Most of our problems are predictable and pre-solvable.

- Daniel Burrus

I'm just finishing a global survey of 1000 CEOs across industries and the question is, what's your biggest current problem? And then, the second key question is, could you have seen it coming and prevented it from happening, or was it completely impossible to have seen ahead of time? 93% responded we could have seen it coming and prevented it! This means that problems that most of us are going to be facing 12 months from now, could be totally avoided, they could be pre-solved. But most of us are too busy managing today's crisis.

But in a world of exponential technology change, if we don't become anticipatory in identifying disruptions before they disrupt, in identifying and pre-solving predictable problems before they happen, you and I are not going to be happy campers on planet earth. That's why I am so focused on getting as many people as possible on the planet to be anticipatory and to start embracing some of these principles - because if we don't, we are going to be in deep trouble. Most of our problems are predictable and pre-solvable.

Daniel Burrus is one of the world's leading global futurists and disruptive innovation experts. He is the author of seven bestselling books including The Anticipatory Organization and a strategic advisor to leading C-Suite executives worldwide.

How does innovation help to solve the most pressing global problems?

DAVID BLAKE

Co-author, The Expertise Economy
DEGREED, LEARN IN

Throughout history, great care has been given to crafting organizations that have pushed humanity forward. Armies to fight wars, laborers to build the pyramids, employees to build companies. And in every case, each person was a unit of productivity...and cost. For every laborer, there is another mouth to be fed, to be equipped, to be managed. As you add more people, you might be able to accomplish more, except that the logistics and costs of managing an ever-larger workforce grow as well. In many cases, you have diminishing returns...if you have to give every worker who helped to build the pyramid a tent to sleep in, the first laborers will sleep close, but then as you add more, you will have to continue to widen the circle of tents, until finally, tents get so far away that laborers are spending a majority of their time walking from their tent to the pyramids.

The way companies optimized its workforce was the best strategy available ... 50 years ago.

- David Blake

Managing such organizations then is a tricky balance. Like the mountain climber climbing Everest who must make the very careful calculation of how much food to add to their pack: the more food, the less risk of starvation, but for every lb of food added, the pack gets heavier and makes the task of reaching the top of Everest less likely. As such, modern organizations have gone through great lengths to find that Pareto optimal workforce -- that meets their needs of productivity, without adding a single extraneous headcount, that makes the burden and costs of managing that workforce any greater than it needs to be. This has left us with a workforce where every person's time and productivity are carefully measured and needed. We have crafted tools for measuring that productivity and examine it carefully through layers of management and

performance reviews. We use OKRs[8] and dashboards to monitor output and outcomes week over week.

Maintaining that Pareto optimal workforce has maximized efficiency, productivity against costs. Companies that are best at it have the best P/E ratios[9] on the market and are richly rewarded for their maximization of that equation. That quest has brought convergence to almost every modern organization, each straining to be the best at that game. But now, it's a fool's game. Let me explain.

In math there is a difference between local maximums and global maximums. This historic optimization strategy that everyone has converged upon, is not truly the global maximum. It was a local maximum. It was the best strategy, given the options and inputs available to the market, responding to the forces of the market at the time. The game everyone is trying to win now was started before the workforce had gone virtual; before technology acceleration had outpaced humanity's ability to learn; before student debt had outpaced the returns from a college education.

The way every company optimized its workforce was the best strategy available...50 years ago. But the rules have changed, and there is a better model, a new global maximum that is further along the chart than the local maximum you and your organization are operating at today. The new maximum: companies that staff beyond their current levels, and use the added capacity for skill development, will operate at a far greater 'global maximum' than companies that staff simply to optimize headcount to their current productivity needs. This strategy will take the organizations that embrace it to a place where the advantages compound on themselves. Where the increased levels of development lead to more innovative opportunities, more fulfilling work, the joys of blue ocean opportunity, and unrivalled leadership.

David Blake is the creator of The Future of Work Studios and the CEO of Learn In. He is a Sr. Advisor to McKinsey. David is also the Executive Chairman and Co-founder of Degreed. Prior, he helped launch a competency-based, accredited university and was a founding team member of university admissions startup Zinch (acquired by NASDQ: CHGG).

[8] OKR - Wikipedia
[9] Price–earnings ratio - Wikipedia

How does innovation help to solve the most pressing global problems?

MICHAEL STEPHEN CRICKMORE

Chief Fvtvrist, Corporate Venture Builder
FVTVRE

Technology innovation has provided countless opportunities to help solve issues that consumers and organizations are facing today. The list of hot topics includes *customer-centric design*, *automation* (RPA, AI, ML), and *process optimization through IoT* - all with the ultimate goal of increasing financial performance. However, the same technological innovations can help remedy broader challenges facing our society, ranging from sustainability, access to healthcare, and economic inclusion. Innovators can play a role in driving this change through innovative collaboration and thinking of how technology can be used for good (and also financial performance). Innovation can help solve some of the most pressing global problems, including:

- *Climate Change*. By this time, *global warming* has undergone a rebrand to *climate change*, and I am sure we have all seen the Netflix documentaries informing us of the very real impact we are already experiencing, as well as the problems we are due to encounter in the coming future. This is where innovation comes in, to help mitigate the ongoing damage and hopefully reverse the problem. The Internet of Things (IoT) and Smart City technologies can help create more sturdy buildings and streets. This has already started taking shape in Barcelona, where they have sensors installed to monitor the city's rain, noise, and air quality. They also have a smart irrigation system that helps improve their water conservation and address drought conditions. Currently, 23% of the worldwide energy-related CO2 emissions come from transport. The adoption of electric cars is bringing a remedy to this problem. Battery-charging technology and efficient batteries are becoming readily available.
- *Education*. COVID has catalyzed the way we utilize technology in the education sector. Smart classroom technology has taken over the traditional classroom, bringing up new opportunities for learners and teachers. Students from all over, including remote areas, can enjoy learning through the cloud, wireless technology, and video classes, evolving both the delivery environment and *method of learning* for the better. Gamification as an educational tool, enabled by technology, is making education fun, practical and modern.
- *Healthcare*. Healthcare is the industry that is undergoing the most significant impact from Artificial Intelligence. Healthcare professionals use new technologies to save lives, improve people's wellbeing, and cut costs. AI enables improvements in vital care aspects and powers

analytical tools able to prevent and diagnose diseases. Doctors use wearable technology and electronic health records that track their patients' vital data to get a broader picture of their health state.

However, technology isn't the silver bullet and innovation is much more than just a good idea. When we consider innovation for solving the most pressing global problems, we have to leverage it to move the *mass market* not just the fringes. Climate change, education reform, and circular economy are important topics on today's agenda - but to get the traction needed to make a difference and drive change, we cannot simply rely on just having the technology used by just the early adopters.

In our capitalist world, *behavior* and *consumption* are the biggest determinants of change, and therefore, to create critical change, we need to start using technology to help in training and rewarding consumers for positive and good behavior. This can be done in many ways, whether you are Tesla creating a premium brand name to try and move the market to electric, or a supermarket chain that is introducing 'non-perfect fruit and vegetables at a lower price to encourage shoppers to reduce wastage from farms.

In our capitalist world, behavior and consumption are the biggest determinants of change.

- Michael Stephen Crickmore

These tactics (and many others that innovators are using) share a common thread: they are aimed directly at using *normal consumption behaviors* and introducing secondary product benefits as a means to 'saving' the world. For example, smart meters (energy and water) provide an important way of reducing consumption, but the problem is that the mass market doesn't care about global warming or water scarcity. So, what the smart meter does is that it brings this into a realm that the mass market *does care about*: *price*. For instance, if I can see how much money I am spending in real-time, I might take preventive measures to reduce my spending by turning off appliances or taking shorter showers.

Global issues are rarely a strong enough pull for consumers to change their behavior. Hence, innovators need to think about how technology combined with *customer journey design* can create new ways for

How does innovation help to solve the most pressing global problems?

the mass market to *consume less*, *pollute less,* and ultimately change people's *behavior* - even if they don't realize it.

Michael Stephen Crickmore is the Co-Founder of FoundersLane London and UK Head of Sustainable Business Design.

CHRISTOS DIMAS

Deputy Minister of Development and Investments
GOVERNMENT OF THE HELLENIC REPUBLIC

Although innovation is a term that has been widely used in the public discourse in the last decade, it is not a recent concept - as many may believe. The invention and use of the wheel, electricity, penicillin, and aviation are all good examples of innovative solutions to pressing problems that humanity has faced in the past. In short, innovation involves a new method, a process, or product that solves problems in a more effective and/or less complicated way.

SARS-CoV-2 made more people understand how important scientific research is.

- Christos Dimas

The year 2020 will undeniably be remembered for the SARS-CoV-2. The pandemic crisis largely changed how we work and interact as social distancing guidelines have led to a more virtual existence, both personally and professionally. At the same time, SARS-CoV-2 made more people understand how important scientific research is, not only for the well-being of humanity but even for our everyday life.

Scientists and researchers across the world combined forces and managed, within just a few months, to develop and test, safe and effective vaccines against SARS-CoV-2. It is characteristic that scientists, companies, and governments worked together under collaborative arrangements of knowledge, innovation, data, and clinical methods in order to reach these impressive results.

How does innovation help to solve the most pressing global problems?

In Greece, the Ministry of Development and Investments enacted in April 2020 the Flagship Research Action *"Epidemiological study in Greece through extensive testing for virus and antibody detection, viral genome sequencing and genetic analysis of patients, in response to the SARS-CoV-2 crisis."* The Action is being implemented by four higher education institutions and six research centers, working together with the medical community. As a result, scientists collected important information about the pandemic and even created a rapid virus detection test. In addition, the National Organisation of Public Health (EODY) created the National Network of Sewage Epidemiology, with the aim of monitoring, recording, and giving an early warning of the spread of the SARS-CoV-2 virus in the community. The Network of Sewage Epidemiology conducts laboratory tests in urban wastewater throughout the country which are analyzed by the universities, providing the Greek State with critical data concerning the average viral load.

At the same time, although the pandemic has been monopolizing the interest of the public discourse, dealing effectively and on time with climate change is a priority. The United Nations and the EU coordinate global efforts and negotiations for mitigating climate change, but all countries need to adopt more measures.

Greece is a country that has made little contribution to increasing global levels of air pollution, however, it is called upon to face the negative effects of climate change. Thus, the need for national planning to address climate change is a priority for the country. National Research Centres and Greek Universities also participate in this effort. Indicatively, the establishment of the National Network on Climate Change and its Impacts (CLIMPACT) is an initiative of the Ministry of Development and Investments, that operates as an interdisciplinary consortium and an advisory body to the Greek state and citizens on climate change issues.

Last but not least, the economic benefits of improving climate resilience will be significant for Greece's development. The EU has committed to focus and invest more in research and development programs for innovative environmental solutions in areas such as Green Tech, Agri Tech, and Agri-Food. That is the reason the new Research and Development Horizon is largely directed towards actions tackling climate change.

Christos Dimas is the Deputy Minister of Development and Investments Member of Parliament at Hellenic Parliament for Corinthia. He is a Lawyer and Business Consultant.

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WHAT IS THE FUTURE OF WORK?

The lockdown enforced the adoption of digital technologies and impacted various aspects of modern life; most importantly the ways of working. Based on this massive, ongoing 'experiment', it seems that at least knowledge workers can work from anywhere. It seems that with the right setup the actual work can be done at least as effectively as with the 'on-premise model'.

But important questions are emerging for the post-COVID era: What is the impact of lockdown on the ways companies operate and what will be the 'new' work model? How should the current leadership models evolve in a 'remote' or 'hybrid' work world? How will companies be measuring people's contribution and performance in the future?

Fabrizio Ferrandina, Christos Dimas, and Dragana Vukasinovic share how they envision the future of work.

FABRIZIO FERRANDINA

CEO
ZÜHLKE GROUP

The pandemic has dramatically accelerated the phenomenon called New Work[1] that had already been set in motion a few years earlier. In other words, the much-talked-about 'future of work' is happening here and now. A minority of workers are still hoping for a return to the old world, but they will be bitterly disappointed. In the recent past, we divided the world into the dichotomy of old and new. In the near future, this black and white thinking will disappear rapidly, as hybrid models will become the new default.

We must promote purpose, self-organization, delegating responsibility.

- Fabrizio Ferrandina

Combined with dominant trends such as globalization, the rise of technology, digitalization, and overall generational change, the following traits will characterize the hybrid world of work:

- The talent sector will become an ever more global marketplace. Companies will have access to previously untapped talent pools and recruit their employees all over the globe. Such talent will work remotely on a permanent basis and collaborate with employees of the same company in more traditional employment settings.
- Remote recruitment and remote work will require rapid advances with regard to access and competencies in technologies such as collaboration and video conferencing tools. Digitized processes of all kinds and mobile hardware are another mandatory prerequisite for the successful implementation of hybrid work models. Companies that have not done their homework in the past will come under pressure.

[1] New Work - Wikipedia

- Hybrid work models will tend to lead to a more diversified workforce. Companies that have already found their own diversity identity in recent years and were thus able to positively influence their productivity and innovative strength are clearly at an advantage and will further strengthen their employer brand in this direction.

Overall, the war for talent will continue to intensify and the expectations of employees are rising. Thus, technology and digitalization should not only be used to organize and utilize a mixed, distributed workforce, but also to offer a positive work experience with high flexibility and individualized solutions.

The war for talent will continue to intensify.

- Fabrizio Ferrandina

If we interpret new leadership in a hybrid world as exercising more control and monitoring (supported by software), it will, unfortunately, be the beginning of the end. No one with an alternative will accept this – and rightly so. What we should promote instead is purpose, self-organization, delegating responsibility, promoting strengths, and giving trust to our employees. We should urgently strengthen the team focus now and give teams responsibility and as much self-direction as possible. In order to support productivity and employee engagement, we need to provide the necessary framework and context: we need to be clear about where we want to go, be explicit about our expectations, reflect on what good results are, understand and encourage different approaches, talk about what is important and essential, and give feedback openly. When we assess performance, we should be very clear about the results we expect and when a result is what we expect it to be.

What is more, trust is the main currency, and we should show that we understand this. With true trust and relationship building, we not only win the engagement and commitment of our employees but also their hearts. It is a challenge to provide and ensure the human touch, belonging, and warmth in a hybrid world of work, yet it will make the difference.

Fabrizio Ferrandina is Group CEO of Zühlke, a global innovation service provider. His career has been dedicated to driving software and system projects for clients all over the world. Until 2018 Fabrizio Ferrandina was CEO of the German subsidiary and member of the Zühlke Group Executive Board.

CHRISTOS DIMAS

Deputy Minister of Development and Investments
GOVERNMENT OF THE HELLENIC REPUBLIC

Many of us would really like to work from our computer in a café on a beautiful beach on a Greek island. Most of us do not have this choice yet. However, there is a growing number of companies that are more likely to accept remote work. For example, digital nomads can live in Corinth in the Peloponnese and communicate on a daily basis with their colleagues in London or San Francisco. Digital nomads are professionals of high quality and technical standards who use telecommunications technologies to earn their living.

Digital nomads can live in Corinth and communicate daily with their teams in London.

- Christos Dimas

Many countries around the world have understood how important it is to make remote working more attractive. Providing tax incentives, promising a better everyday routine, and having a strong innovation ecosystem that can accommodate talented people from all parts of the world, are key elements to attract digital nomads. Their experience and specialized knowledge can benefit a constantly evolving innovation environment and help boost national economies.

This has raised discussion if, in the near future, digital nomads can become the norm and abolish the traditional workplace. In fact, predicting the future of work is a difficult task. Winston Churchill once stated “a politician needs the ability to foretell what is going to happen tomorrow, next week, next month, and next year. And to have the ability afterward to explain why it didn't happen.” In the post-Covid-era, any type of prognosis regarding the future of work becomes even more difficult. Nationwide lockdowns have radically changed the working habits - mainly by transforming homes into offices. The challenge over the future of the workplace has begun. Findings show that jobs with higher levels of physical proximity are likely to undergo greater transformation after the pandemic. As we are reaching the end of the SARS-CoV-2 crisis, two main

thoughts could be addressed: firstly, many companies in Greece and across the world proved that they can be productive and effective even if their employees worked from home for such a long period. Innovation, technology, digital platforms, and other teleworking practices helped companies adapt to this pattern of sporadic attendance. At the same time, they managed to maintain confidence among their employees in order to live and perform at their best.

Could digital nomads become the norm and abolish the traditional workplace?

- Christos Dimas

The second thought relates to the traditional way of working and its importance. Teleworking during a pandemic does not mean that companies and other institutions should adopt it forever. Many people associate office work with meeting their colleagues as a pattern of their daily life. This means that after the end of the pandemic crisis, normally, they will be back in the traditional workplace because physical presence can not be replaced easily.

Therefore, the lesson learned from the pandemic is that technological advancements are extremely useful and enable remote working. It is rather logical that teleconferences will increasingly become an everyday tool, as they permit more flexibility for companies and workers. It will also potentially increase the effectiveness of work, as it enables multiple meetings which in another case would not have been feasible within the same time frame. However, we are not close to seeing the end of the workplace. Despite the undeniable opportunities that technology activates, *personal contact remains indispensable*. Hence, the future of work includes the best of two worlds: *remote working* and increased use of technological advancements, but at the same time, the *common workplace* will not stop being at the center of our everyday life. At least for the next couple of years.

Christos Dimas is the Deputy Minister of Development and Investments Member of Parliament at Hellenic Parliament for Corinthia. He is a Lawyer and Business Consultant.

Dr. DRAGANA VUKASINOVIC

Founder and CEO
FAUNA SMART TECHNOLOGIES

Remote work culture has never been present before as it is now. Leaders were previously thinking that this type of work would negatively affect people's performance. However, remote work has turned out to be rather positive – as in many cases, leaders have seen that their teams have maintained their performance. Employees do enjoy more their working days - they appreciate the flexibility and they save the time and energy that was previously spent in commuting. The perspective of working remotely is not a bad thing actually.

In a remote setup, leaders must ensure that there is great company culture.

- Dr. Dragana Vukasinovic

However, working remotely also brings challenges to companies. Now, they need to focus more than before to ensure that there is a great company culture - which is not easy when you're only working remotely. Team leaders need to help employees to take ownership of their activities, and for that, they need to forget about micromanagement - which doesn't really work in a remote setup. I think that this is the toughest part for leaders - to "let go". Managers need to set work activities, milestones, and timelines and let their employees take control and ownership of it. Minimizing micromanagement is the thing of the future - I do see this trend evolving in the post-COVID era.

While tech companies were not significantly impacted by the pandemic - since they were ready to work remotely - a lot of businesses that don't have a digital DNA faced difficulties, for instance, in managing communication with customers, supply chain, etc. Startups, on the other hand, seem to have reacted well - I have asked several investment funds if their startups have been negatively impacted by the pandemic and their typical answer was "no" - since in many cases, it is startups that drive the digital future across verticals.

What is the future of work?

Technologies for remote work were there for so many years already, but it took this pandemic to adopt them for regular, daily use. CEOs who were previously thinking “maybe we should postpone digital transformation for next year” have definitely changed their minds and did it right away. There are so many companies taking advantage of this momentum and going digital and I think that it is now more clear than ever that software is the most vital product of our time.

But then again, the remote model can be hard occasionally with people who do appreciate office space and in-person human interaction. This is why for some employees it was mentally tough to cope with the new circumstances. An interesting question to address in the post-pandemic era is “what happens in a physical office space that doesn’t happen in a digital space”? And if a pandemic happens again, should we consider a more balanced approach - where remote work is combined with some office presence by a limited number of people? The latter was especially the case in biotech companies and laboratory-related work.

The future of work is being shaped now. And we should use our experiences from the pandemic wisely to create inclusive and balanced working environments where we thrive.

Dr. Dragana Vukasinovic is a bio-scientist with entrepreneurial mindset. She is the Founder and CEO of Fauna Smart Technologies, a company dedicated to building products and services to create farming practices in line with nature. After being in academia all her life, Dragana is using startup as a mechanism to bring cutting-edge academic research to the real world leveraged by environmentally friendly technologies, together with her passionate team of multidisciplinary scientists.

60 FINAL THOUGHTS

60 Leaders, 22 questions, 123 responses, 165 highlighted quotes – certainly a lot of content to consume and process. In some cases, different views and divergent opinions set the basis for further thinking and interesting debates.

The purpose of '60 Leaders on Innovation' is not to provide 'exact answers' – if that's even possible in the context of innovation. Instead, our goal is to bring together different perspectives, insights, and views – to set the scene for the formation of a new approach to corporate innovation. In this sense, we hope that this book has inspired the right discussions on innovation and helped you to set a clear direction for your innovation efforts.

We are taking the discussion online. We welcome you and all innovation enthusiasts to our LinkedIn group – where you can discover additional content and take part in the discussion. In our blog, you will find regular posts on technology, innovation methodologies along with active discussions on some of the topics covered in this book. Also, we welcome your feedback, thoughts, and suggestions – you may contact us directly through this form.

We hope you enjoyed this work. Once more, we are extremely grateful to the 60 leaders who made this idea a reality.

George & Robin

FURTHER READING

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4. Collaboration Explained - Jean Tabaka (2006)
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32. The Innovation Mode: How to Transform Your Organization into an Innovation Powerhouse - George Krasadakis (2020)
33. The Other Side of Growth: An Innovator's Responsibilities in an Emerging World - GInI Global Innovation Institute (2020)
34. The Phoenix Project - Gene Kim (2013)
35. The Real Startup Book: Find the Right Product for the Right Customers - Kromatic (n.d.)
36. Truth from the Valley: A Practical Primer on Future IT Management Trends - Mark Settle (2020)
37. What Customers Want: Using Outcome-Driven Innovation to Create Breakthrough Products and Services - Tony Ulwick (2005)
38. Why Information Grows: The Evolution of Order, from Atoms to Economies - Cesar Hidalgo (2015)
39. Zero to One: Notes on Start Ups, or How to Build the Future - Peter Thiel (2014)

ABOUT

GEORGE KRASADAKIS

George is a Technology & Innovation Leader and Corporate Advisor on innovation architecture. He has more than two decades of experience in tech startups, big-tech and consulting firms - including Microsoft and Accenture's Global Center for Innovation.

George is recognized as a thought leader for corporate innovation. He is the author of '**The Innovation Mode**' and more than 100 articles and interviews on the topic of corporate innovation. George has architected various corporate innovation frameworks, set up innovation labs, designed and built ideation systems, established digital prototyping teams, and architected large-scale innovation gamification programs – for various companies across domains and time zones.

His expertise spans digital product development, software engineering, data science, and innovation leadership. He has filed more than 20 patents on Artificial Intelligence, Analytics, and IoT and has led more than 80 data-driven projects from concept to launch, for more than 10 multinational corporations in three countries. George is the founder of 4 technology startups.

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ROBIN NESSENSOHN

Robin Nessensohn is an innovation enthusiast with extensive experience in the fields of Venture Building, Consulting, Business Development & Innovation, Strategy, User Research, and Design Thinking. He holds a Master's in Organizational Innovation and Entrepreneurship from Copenhagen Business School and is the co-founder of reallygoodinnovation.com - the biggest collection of innovation resources on the web.

Robin is driven by his strong belief that innovation is achieved through collaboration and co-creation, and he is passionate about connecting people and building communities. He sees '60 Leaders on Innovation' as a great way to bring together innovation enthusiasts around the globe.

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