

Innovation, the Future of Society and People

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Previous page: The lobby of the building at the Facebook main campus in Menlo Park, CA, United States

We live in confusing times. Just a few generations ago, people would work in one industry, or even one single company, throughout almost their entire career, and they were able to stay useful and productive with the knowledge set they acquired during their training period, which for the most part took place when they were young. After that, they would be hired by a company and acquire experience in a professional environment which evolved so slowly that they required little else until the time came for their retirement.

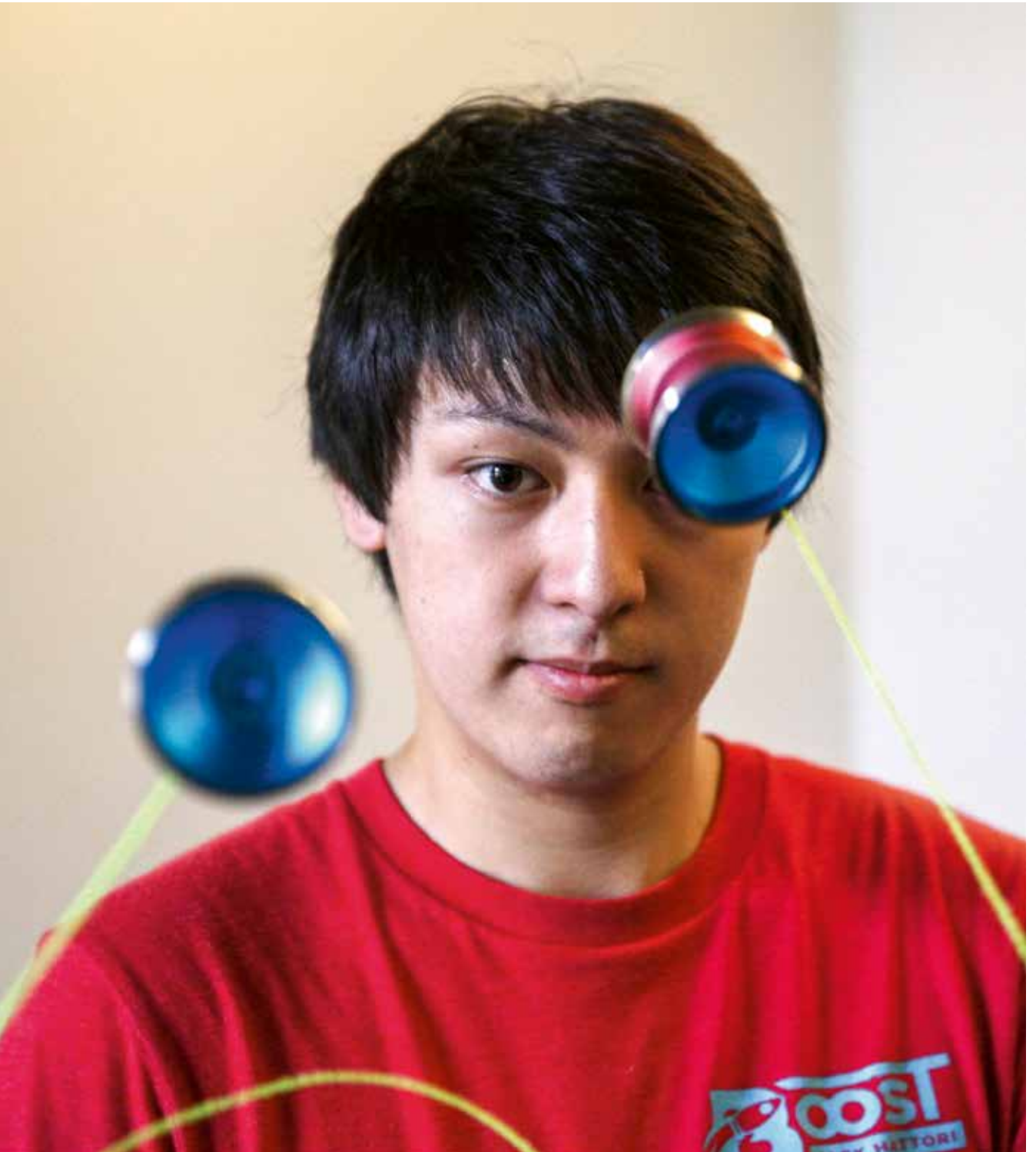
Without a doubt, no matter what industry you work in today, I would not recommend trying to plan your career this way at all. The world we live in is changing at such a fast pace that we nearly all understand there is an overwhelming need not only to pursue training and retraining throughout our entire professional lives, but also to reinvent ourselves and map out different life paths and strategies to last our entire career. People whose working lives are spent at one single company are no longer the norm. The environment is changing to such a great degree and so radically that the problem often lies not so much in attempting to learn new things, but, instead, in being able to unlearn lessons from the past, to understand that we must carry out a total reboot so drastic that possessing too much experience about how things were done before may even be a hurdle to overcome.

These breakneck processes of change greatly condition people during their professional lives and companies when forming their strategies. As an old advertising slogan used to say: "If you don't keep moving, you'll expire." Even hugely successful businesses like Apple are witnessing how a product strategy that created a long period of unstoppable growth, driving them to the top of every list ranking the most valuable and reputable companies in the world, can become difficult to keep following after just a few years because its competitors are increasingly fast at imitating it, almost forcing it to reinvent itself and focus on services instead of products, in a sort of rebooting or pivoting that we get few chances to observe on such a scale.

How can a company approach innovation in a world in which it is no longer possible even to attempt "thinking outside the box," because there is no more box *per se*? What leads some companies to become more successful in the way they approach such innovation? Obviously, there are no magic formulas, but a few common features seem to stand out and must be taken into consideration.

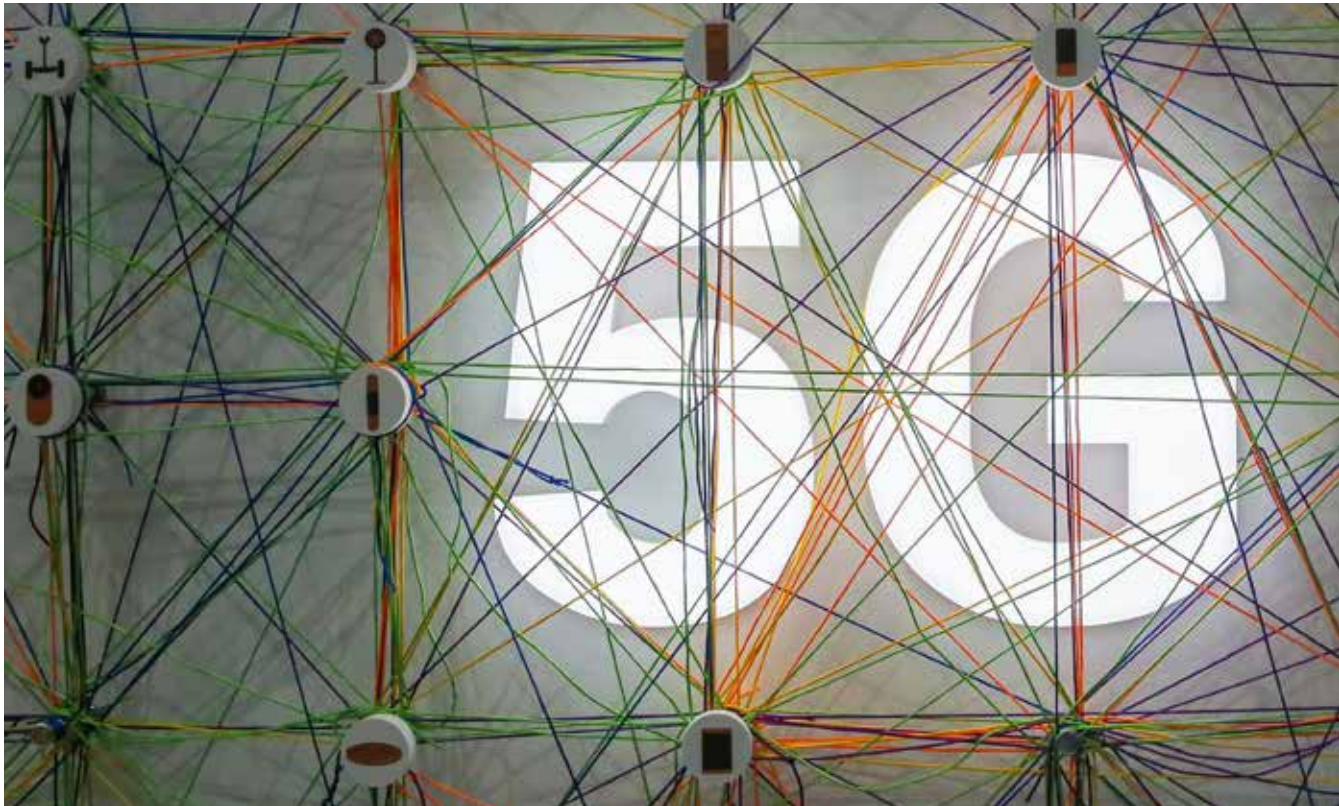
The first undoubtedly involves remaining "open" in every possible way. No industry observer is oblivious to the fact that the times of proprietary technologies, closed procedures, and patents have given way to a different era in which companies are deciding to use open-source technologies whenever possible, providing access to the developments they produce, and creating platforms that other role players can easily join and participate in. Platform-based strategies have given rise to true economic emporiums. They allow their developers to put operating rules in place (whenever they are within reason) and tend to become popular, the more open

Alex Hattori, a final year Robotics student at MIT, is also one of the world's best yo-yo players





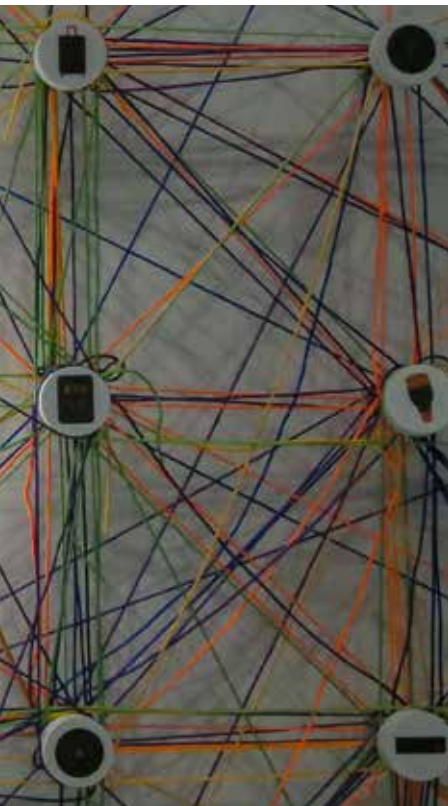




they are made. Of course, patents have not disappeared or fallen into total disuse, but they no longer tend to be employed as a barrier or as a form of legal protection to prevent others from obtaining them first. Those companies that get the most patents for a specific technology do so to be able to extract the value from them once that technology is implemented, but not as a way to block other companies' access to it. In fact, many successful companies, including IBM and Tesla, have chosen to open up access to their patents as a part of their strategy, and some of the companies that possess the most technological patents in cutting-edge fields, like 5G (one example might be Huawei), have committed to licensing them in accordance with a concept known as FRAND: "Fair, reasonable, and non-discriminatory."

There is no doubt that the catchphrase which best defines innovation at most companies is "open is better than closed." Open-source code has become a huge competitive advantage allowing those companies which know how to handle it to obtain exponentially positive effects when working in dynamic environments. Google, as part of one of its innovation principles, gives the name of "default to open" to its preference for open resources, based on such obvious arguments as the fact that the most intelligent people in a world with over seven billion

Previous double page: The Highlight Towers is home to, among others, the global headquarters of IBM's Internet of Things department. Munich, Germany



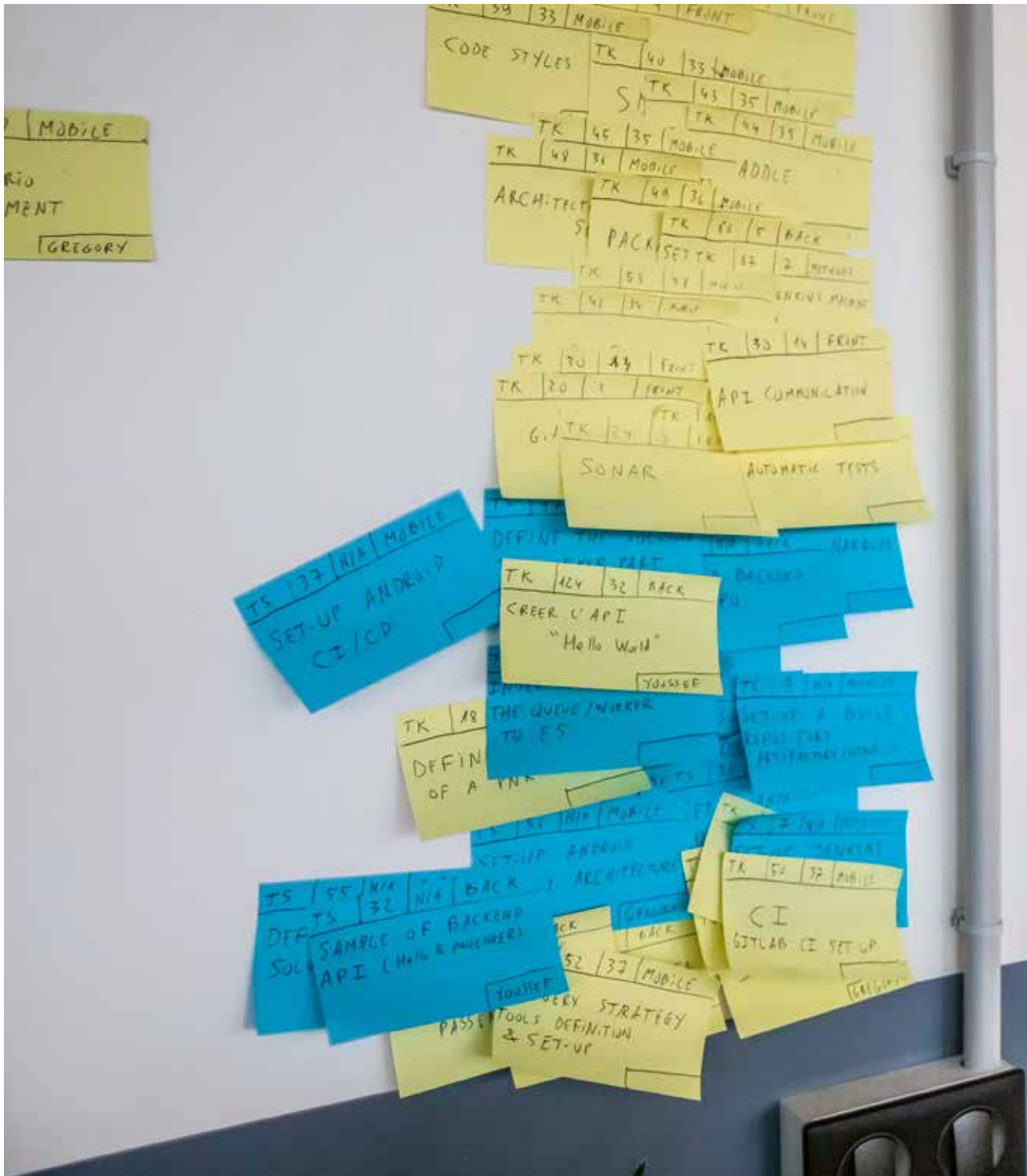
5G logo exhibited at Mobile World Congress 2019. Barcelona, Spain

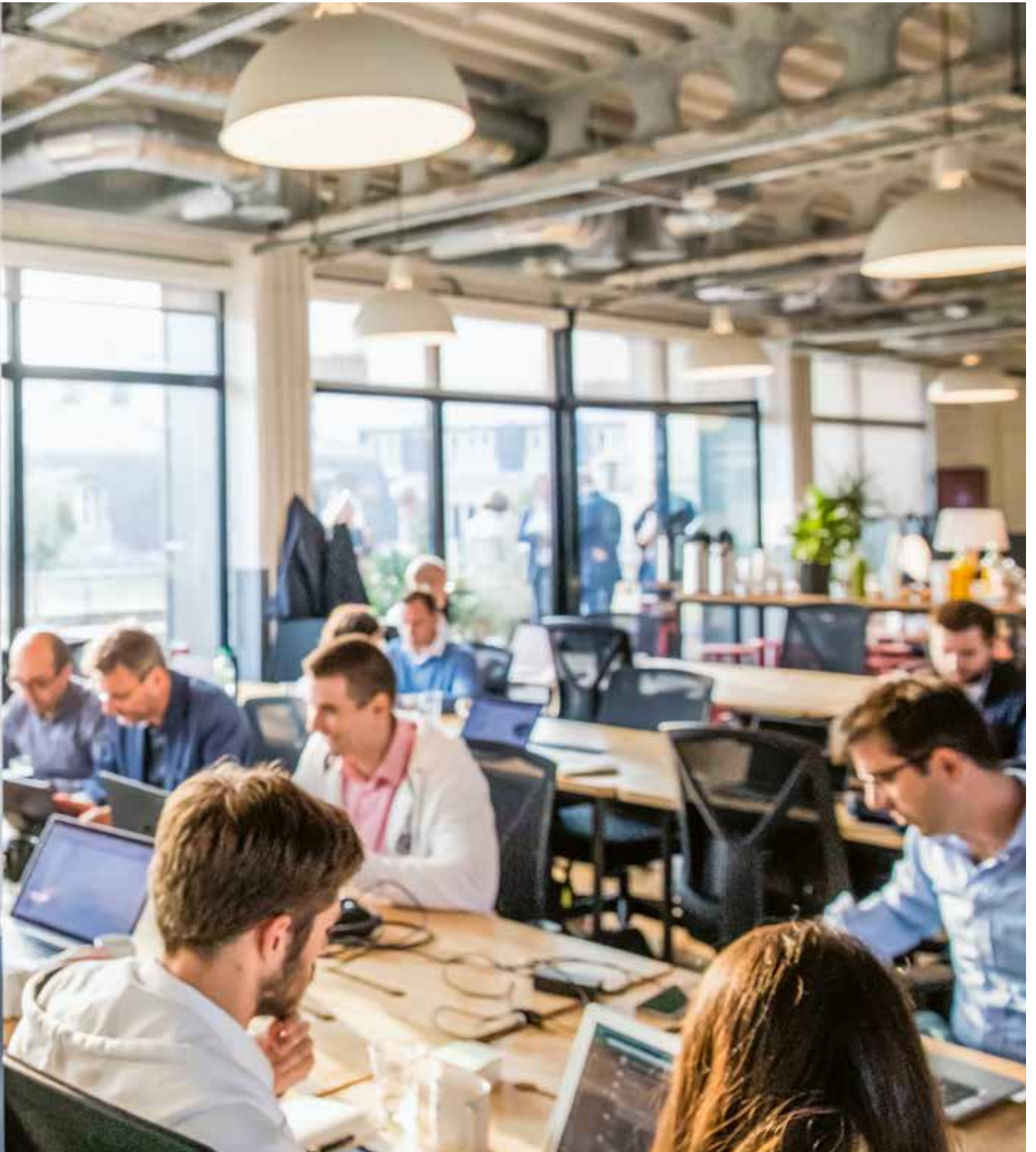
inhabitants are most likely outside of the company. Whenever the Mountain View company needs to develop something new, it places a priority on seeing whether anything open-source is available, and, if it is not, to develop it and then open-source it to the community. Apple, a company known for being closed, like many others, turns to open-source coding constantly and opens up its developments as part of a regular dynamic. So-called “negative innovation,” designed in such a way that others cannot copy what is made, is being replaced by processes of innovation which demonstrate that a company is a step ahead of everyone else, causing all others in the industry to want to copy it.

The second feature in innovation has to do with diversity. More and more, companies are finding they have a need to create diverse innovation environments open to all, preventing a monoculture of ideas or too much homogeneity. Seeking out diversity is not a matter of marketing or corporate social responsibility. It is about logic: a company must be representative of the social environment that surrounds it, and, if that is not the case, it is because there is some sort of problematic discrimination that will be reflected in a lower rate of innovation. People innovate when they are subjected to processes that cause some sort of shift in their lives, from a change in city or country that may expose them to a different environment, to being given high-quality training or interacting with new people. If the environment in their company is very homogeneous, a decrease in their innovation is sure to be seen. Procedures that force people to shake up their routines, or to deal with users, suppliers, and other departments, nurture environments that become breeding grounds for innovation. Internal events in which people are mixed with others from different departments, while offering methodologies to spur creativity and teamwork, or which allow employees to compare their knowledge against, for instance, start-ups being incubated at the company, are a few ways to seek and promote this diversity of ideas and approaches, thereby enriching innovation processes.

Companies have to make sure that nearly all of their workers and contributors, no matter what their functional or hierarchical status, have some procedure available that allows them to offer and develop the ideas they come up with, if they may potentially be of interest. They must be provided with some way to meet their needs in making relevant projects with potential come true. In some cases, this search for diversity will mean making it possible for the development of certain projects to be completed outside of the company, in the form of spin-offs which are not necessarily constrained by the regular corporate environment; or enough management independence must be given to recently acquired companies to prevent any loss of diversity when they are assimilated into the corporate structure. Increasingly, innovation processes no longer depend so much upon structured, closed innovation departments made up of specialists in white lab coats. They are structured in an open, inclusive, and, above all, diverse way.

Work systems and the working environment are also very closely linked to diversity: if people are required to work in an office environment, clocking in at nine





Previous double page: Working atmosphere during the inauguration of the Digital Factory, a new Thales structure that accelerates its digital transformation. Paris, France

in the morning and heading home at five in the evening, this means replicating an antiquated, old-fashioned concept of work lacking in diversity. Today's technology makes it possible for many people to work from wherever they wish, whenever they want: consider whether offering that freedom and creating the climate of trust that makes something like it possible will contribute to an atmosphere and conditions that are more innovation-friendly.

The third ingredient in innovation is the creation of active ecosystems. Any change in the environment surrounding a company—and, without a doubt, technology is one of the factors that most contributes to defining the environment in which we live today—should always lead to some form of action that makes it possible to turn that change into an innovation ecosystem, often by implementing training processes that convert that change into something well known and commonplace. For example, those companies that have seen the future potential held by machine learning and Artificial Intelligence have generally chosen to put ambitious in-house training plans into practice, allowing everyone in the company to learn whatever it takes to consider that technology an integral part of the environment, and that way they will just regard it as something normal. The case of Finland is, in fact, an especially illustrative example: when its government realized how important



artificial intelligence was going to become in the future, it provided a stimulus for the creation of active online learning platforms so that anyone who wanted to access training on the topic could do so easily. If you want innovation in a field, try to normalize it and create an ecosystem around it.

Part of that innovation ecosystem logically includes the information around it. Are the people working at your company knowledgeable about their surrounding environment and circumstances? Where can they find all that information that used to be flawed and hidden away in specialized magazines for industry insiders? Those publications, now made obsolete by the Internet, played an important role in keeping companies informed about things going on among their competitors, and their industry in general. Their modern-day equivalents are newsreaders, recommendation tools, forums, internal blogs, and, in general, any means used to allow the people working at a company to stay fully up-to-date about everything happening in their industry, and more informed than someone who does not work in that industry, as it should be. At many companies, the level of employee knowledge about the technology and innovation environment characterizing their biggest industry competitors is dismal. In some cases, the top managers at a local subsidiary are less informed about their company's strategy than many analysts who do not even work there. If the ecosystem you are working in can be described as lacking information, do not expect it to be capable of producing much innovation.



Corporate culture also plays a basic role in creating innovative ecosystems. Factors such as normalizing failure, to prevent penalizing projects and the people involved in projects that did not end up becoming successful, are of major importance to demonstrate that innovation, an iterative process that does not always end with the expected outcome, of course, is not simply a rhetorical endeavor. Removing mental barriers that keep people from throwing out ideas or starting up projects that may not get fully developed, or others that are still in a “polishing” stage that requires feedback from users, are all essential to making innovative projects possible. The early (alpha) development stage and iteration and gradual improvement (beta) stage both play important roles in the innovation process: the ecosystem must allow them to take place with no impediments whatsoever.

The final factor in innovation is, of course, people. Innovative organizations are necessarily made up of innovative people. There are probably people working at your company with very diverse profiles. However, if you want to promote innovation, try to make sure the innovative individuals are in the majority. If the attitude of most people working at your company is reactive or negative toward technology, and in their private lives they express no curiosity for anything new, or they are complacent and show few signs of being “change addicts,” do not expect innovation to appear magically in a flash of blinding light that blasts them off their cushy seats. Such things do not really happen. If you want innovation, surround yourself with innovative people. Train them constantly so they will feel at ease in the environment surrounding them, and make it so they are practically begging to

Rows of stools inside the
Nio House, Shanghai, China

try everything new that comes out, almost as if they were fans waiting in line all night for a new product at a consumer electronics store. Many seemingly anecdotal phenomena allow us to ascertain people's attitudes about technology and innovation, and a great deal of those factors can be introduced into processes for hiring talent or internal training plans. Innovation arises when people are exposed to contexts of ongoing change, to technologies that require them to envisage new ways of doing things, and to elements that force them to get out of their comfort zones.

These sorts of conditions must occasionally be forced upon people, because not everyone feels at ease with changing the way things get done. Changing work protocols, doing something like ending the use of paper, may sound draconian, but it forces people to think about new ways to do their work, as well as new tools and new processes, which is basic to promoting an innovative mindset. Ultimately, a lot of these measures are quite symbolic, but never underestimate the value of symbols to lodge ideas in people's minds, whether it means moving the corporate headquarters, allowing more laid-back dress codes, or establishing rules that permit greater flexibility in ways of working: people use these symbols to raise awareness about what is being asked of them.

There are no magic formulas for innovation. However, with the huge number of changes that have taken place in the modern-day world, you must never think that innovation will be following the same rules that have been in place for decades. The context we live and work in affects us. It affects the way we work (otherwise, something is not going right), the way we relate with others, the way we dress, and, in general, the way we live. Of course, this context must necessarily affect the way we approach innovation. And if you think our environment has changed a lot lately, just wait and see what we are headed for. Start getting ready to see a great deal of change, much more radical, and much faster. If you or your company are not yet aware of this, you had better start working toward that goal.

Following double page:
The Statoil Hydro office building,
by the architecture firm a-lab.
Oslo, Norway