



Federal Ministry
for Economic Affairs
and Energy



DE.DIGITAL

WHITE PAPER

DIGITAL PLATFORMS

Digital regulatory policy for growth, innovation,
competition and participation



WHITE PAPER

DIGITAL PLATFORMS

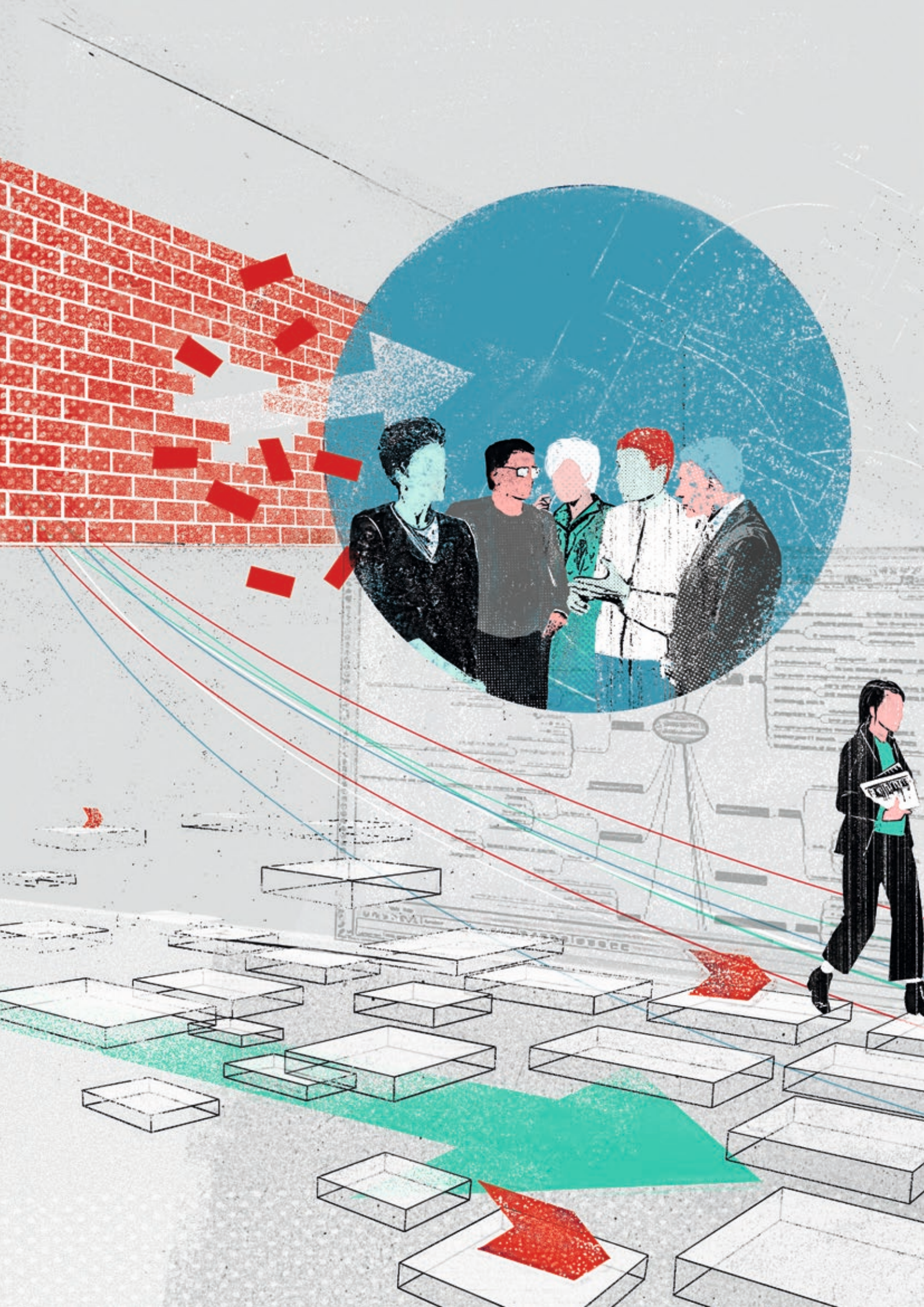
Digital regulatory policy for growth, innovation,
competition and participation



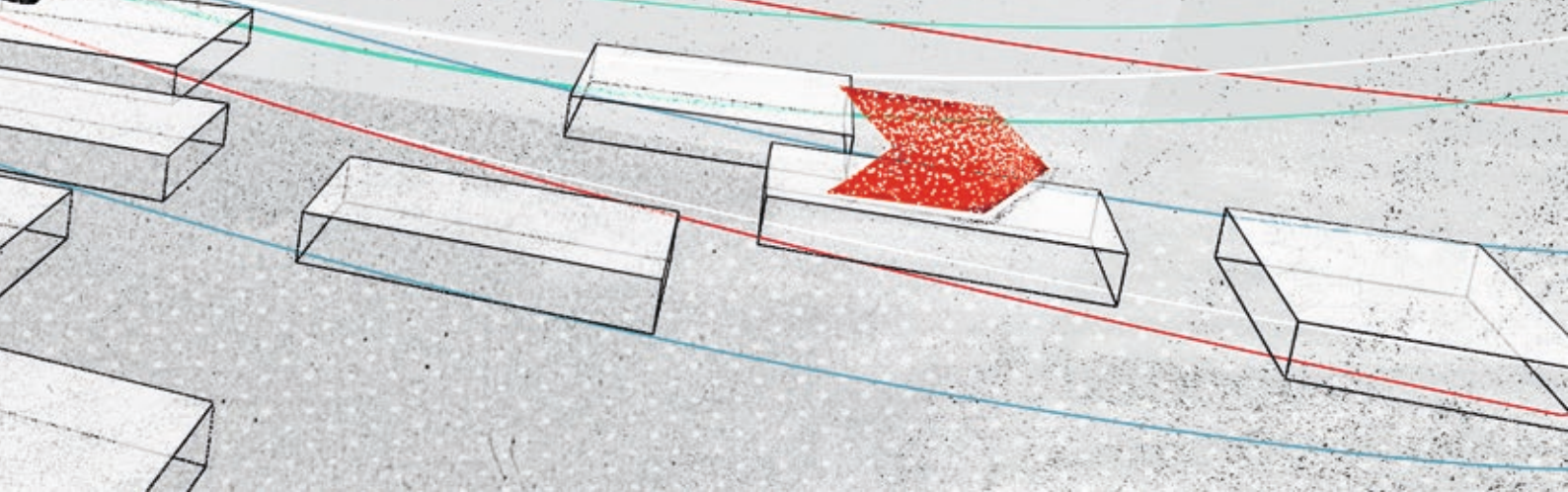
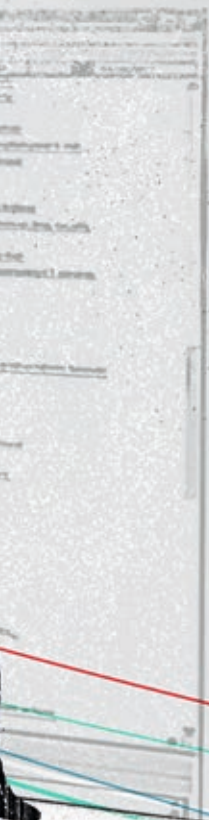
Contents

Preface	6
1. Where we are: Far reaching changes for economy and society	12
1.1 Digital remapping of the world	14
1.2 Digital infrastructures pave the way for digitalisation	17
1.3 Platforms as driver of development	21
1.4 The digitalisation status quo in Germany and Europe	24
1.5 New opportunities in digitalisation	26
1.6 From Green Paper to White Paper	31
2. Where we want to get to: The European path in the digital age	38
2.1 Transformation instead of disruption	41
2.2 Growth dynamism and participation	44
2.3 Security and clear rules for democratic discourse	49
2.4 European sovereignty	51
3. What we will do: Our digital policy agenda	54
3.1 Promoting and shaping competition fairly	57
3.1.1 General competition law	58
3.1.2 Level playing field for OTTs	61
3.1.3 Dual, proactive competition law	63
3.1.4 International tax competition	66

3.2	Creating a modern data economy	66
3.2.1	Free flow of data and rights to use data	67
3.2.2	General Data Protection Regulation	70
3.2.3	Seals and certificates	71
3.2.4	Trust Services Act	72
3.2.5	Transparency rules	74
3.2.6	Self-learning algorithms	76
3.2.7	Data portability	76
3.2.8	Law on general terms and conditions of business	78
3.2.9	Experimentation rooms	79
3.3	Setting up gigabit-capable digital infrastructures across the nation	80
3.3.1	Support and promotion of the expansion of gigabit networks	85
3.3.2	Investment-oriented telecommunication regulation	87
3.3.3	WiFi hotspots	89
3.4	Securing a democratic digital culture	91
3.4.1	Strengthening of basic rights in the internet	93
3.4.2	European complaints system	96
3.5	Digital state competence and institutional structure	97
3.5.1	Closing the competence gap	98
3.5.2	Model variants of a digital agency	101
4.	Summary and outlook: Digitalisation “made in Europe”	102



Preface



Preface



The ongoing development of the German and European economy towards a digital production and platform economy promises to become a driver of growth, innovation, productivity and employment. We need to prepare for this. Industry, society, and politics – all must pull together here.

How can we achieve inclusive growth for a democratic society in an affluent Europe? In my view, we can do this through a digitally transformed economy with a strong industrial base, through digitally proficient companies and citizens, and through a politically, economically and socially strong Europe. Our agenda is not only focused on Germany. We wish to realise the Digital Single Market in a social European Union.

The process of digitalisation has great growth and efficiency potential. According to information from the European Commission, a Digital Single Market could contribute 415 billion euros per year to the economic performance of the European Union and create hundreds of thousands of new jobs. For example, the market volume of the Internet of Things is estimated to be some 1.9 billion euros in 2020.¹

The Digital Strategy 2025, in which baselines, measures and objectives were presented by the Federal Ministry of Economic Affairs and Energy (BMWi) at the beginning of March 2016, identified central principles and areas of action designed to make best possible use of digitalisation as an important stimulus for the shaping of our economy and society.

All in all, we come to the conclusion that the digital revolution can represent a qualitative leap forward for Germany if we set the right course.

Our success model for growth, innovation and employment is the Social Market Economy. The Social Market Economy means competition, freedom to contract, free pricing, private ownership and liability for economic decisions. Digital business models are challenging these attributes.

¹ Boston Consulting Group: Digitizing Europe. Why Northern European Frontrunners Must Drive Digitization of the EU Economy, 2016 a.


How can competition be ensured where network effects can lead to markets being closed off due to concentration trends? How can the freedom to contract be maintained if the data control by platform operators leads to information imbalances? Which function is performed by the pricing mechanism where services are provided on one side of the platform free of charge because they are funded by payments on the other side? What is the role of ownership when data become a common good which, however, can be randomly multiplied? And how can liability gaps be avoided where freedoms unfold without the assumption of responsibility?

The Social Market Economy also has answers to these questions. Its fundamental principles have not lost significance or applicability although its influence must be adjusted to the altered economic and social reality. The order of the digital markets must be determined and the regulatory policy of digitalisation formulated. Our intention with this White Paper is to move a decisive step closer to this objective and to provide answers.

As we see it, two objectives are paramount:

- Facilitating inclusive growth by investments and innovations on the basis of fair competition.
- Guaranteeing individual basic rights and data sovereignty.

The digital economy is challenging society as a whole to adjust. Any such adjustment can only succeed if based on wide-spread dialogue. It was therefore important to incorporate all stakeholders in a broad and detailed process and to give them space for ideas and suggestions and of course also for opposing arguments and positions.



A period of four months was deliberately set for the consultation phase in order to give business representatives, associations and interested parties from all areas of society time to contribute their input. They were able to actively contribute to the debate through different communication channels. We provided the initial impetus with twelve propositions and 52 questions to trigger an animated discussion process

The participation numbers confirmed that there was a need to address the topic in depth. Almost 65,000 visits to the online participation portal [de.digital](#), 263 contributions and 10,464 assessments were received. In addition, 70 extensive written opinions were submitted by businesses, industrial associations, trade unions, non-profit organisations, the scientific community and the interested general public. Finally, we held five workshops on the future shaping of a regulatory framework for digital platforms together with experts from industry, science, the civil society and politics, flanked by many discussions. The White Paper is the result of this consultation process.

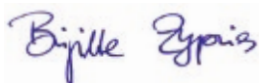
We want the same rules for all providers on a market. Where messenger services and other over-the-top services compete with traditional telecommunication services, the same rules must apply for consumer protection, data protection and security throughout Europe.

We want to shorten the time official procedures take to avoid any entrenchment of restrictions on competition. We therefore want to create an environment in which long-lasting procedures involving authorities and courts are avoided. New technologies need to be introduced quickly, and the necessary investment undertaken rapidly and on a basis of legal certainty. This is of great importance particularly in dynamic digital markets.

And we want to set the framework for a modern data economy, efficient gigabit networks and a democratic digital culture.

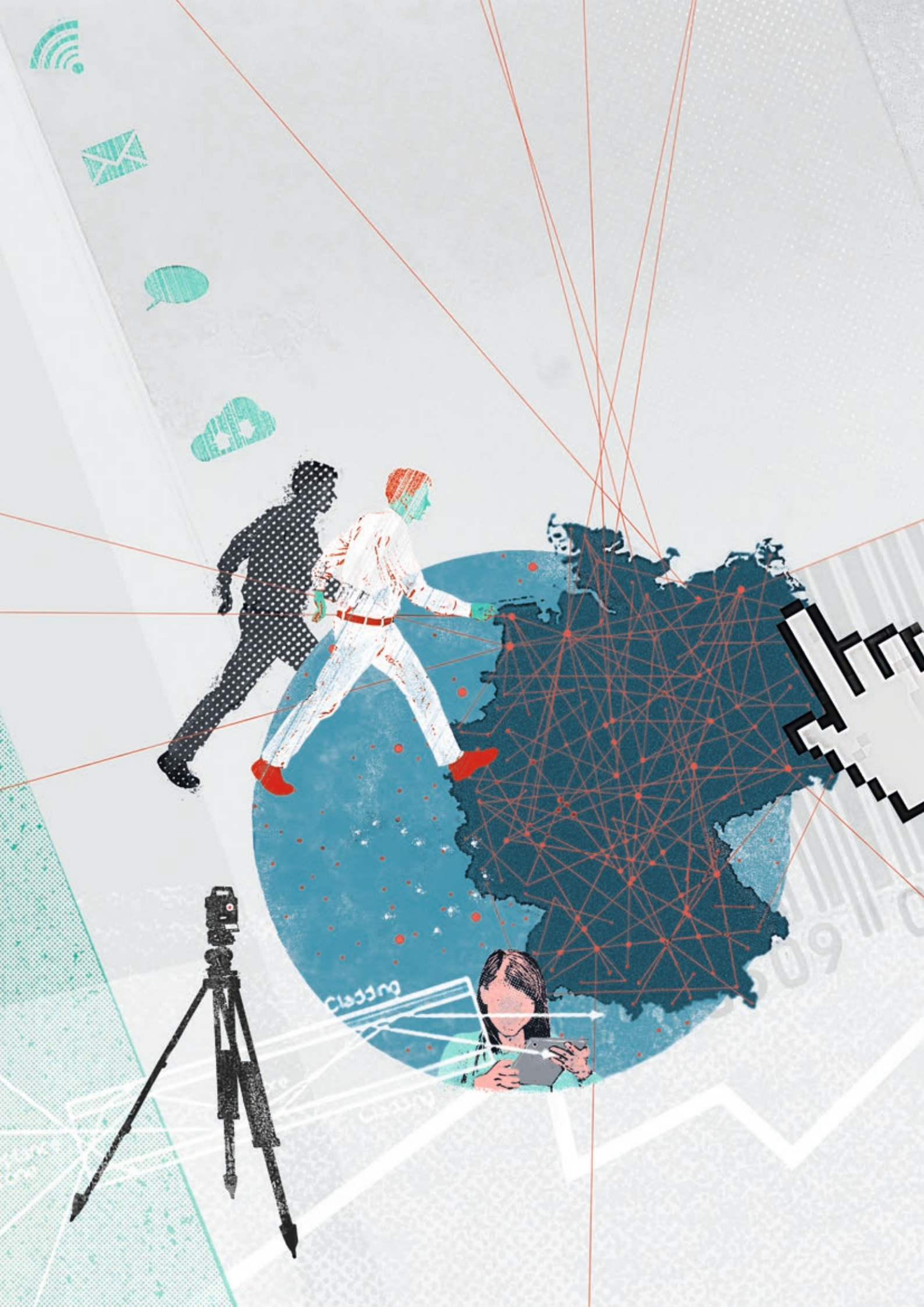
However, the White Paper can only be an important stepping stone. The process must and will continue. Our proposals for a digital regulatory policy have also been deliberately formulated for the European debate and extend beyond the current legislative period. We will implement that which we can implement alone, and where we are dependent on cooperation we will contribute our proposals and positions in dialogue with our partners. And we will continue to start debates, conduct dialogue and be open for discussion.

We would like to thank all those who have participated in the consultation process and who have contributed their ideas for their commitment and their support. We see that there is a common interest in the decisive advancement of a digital Germany. We would like to thank Professor Dr Thomas Fetzter and Professor Dr Heike Schweitzer and Professor Dr Martin Peitz, the Wissenschaftliches Institut für Infrastruktur und Kommunikationsdienste (WIK) for valuable scientific input, as well as Professor Dr Torsten Oltmanns and Mr Dirk Horstkötter of Roland Berger GmbH for valuable scientific input and support of the process.



Brigitte Zypries

For the Federal Ministry of Economic Affairs and Energy



The background features a light grey, textured surface. A diagonal red line runs from the top right towards the bottom left. On the left side, there is a partial view of a barcode with the number '40147' visible below it. A white arrow points upwards and to the right, starting from the bottom left. A black dashed line is also visible on the left side.

1.

Where we are:
Far reaching changes for
economy and society

1.

Where we are: Far reaching changes for economy and society

We seek to make Germany and Europe, with their core competences in industrial value added and production, into a leading location for digital industrial production and to make extensive use of the potential presented by digitalisation for the DNA of our economy. Digital platforms can make a contribution to improving our lives and economy. It is essential to ensure fair competition here. We wish to create a legal framework which supports innovation without creating a legal vacuum.

The strength of our industrial value added should also to provide the foundation for the new strength in the digital age. If we are to succeed in this transformation, we must embed digital platforms and platform strategies in our own economies.

Platforms as central nodes, interest levellers, data processors, innovation drivers and market makers have a decisive influence on the development of the digital economy and increasingly define growth potential and the framework conditions for competition within a country.

A digitalisation offensive must provide a clever regulatory framework for the development of platform business models. Platforms are compelling existing companies to think about the future viability of their business models.

1.1 Digital remapping of the world

Digitalisation places much in question and hardly anything stays the same. The world is being remapped. Digitalisation alters society, economy and

politics. It means the comprehensive penetration, networking and change of almost all areas of life and work by information and communication technologies. It stands for the ability to collect and analyse information and turn it into action: into communication, transaction, interaction. As never before, processing steps are now increasingly taking place parallel to each other – in real time. This permits enormous leaps in productivity but also increases the speed of change.

Products and services increasingly contain digital value added and are getting “smart” by incorporation into intelligent and networked systems. New business models are arising in the digital environment. Completely new ecosystems with value added chains are being created in which data are an important resource. The use of digital (data) technologies gives rise to new areas of knowledge and industry: we are now seeing data-supported health services (e-health), using data-driven financial services (Fin-Techs) and have the first applications of intelligently networked energy production and supply (smart home).

The production world is also experiencing a rapid increase in digitalisation. The revolution is going far beyond the point of merely facilitating the further automatisation of processes using information and communication technologies. The entire system of goods and product manufacture is being revolutionised. Completely new ways of serving customers more efficiently and more individually are being developed in intelligent factories. One objective is the “Lot size 1”, the automated production of individual units. To realise this, man and machine are being networked ever more closely and machines are then extensively communicating with each other.

New data, networking, the use of artificial intelligence and the digital customer interface are altering existing value added chains. Value is no longer added sequentially and with a time delay but in a mesh of constantly communicating and flexibly reacting units which essentially organise themselves.

The development of digital businesses demonstrates the force of change of these dynamic value added networks most impressively.

Cloud service providers

Cloud service providers offer cloud computing services. Cloud computing is one of the most important technologies in the ICT field, and offers companies the opportunity to obtain customised software, storage capacity and computing online. Storage capacity in particular is also available to consumers.

One example of this is the former online bookshop Amazon which first turned into an internet department store, then became the provider of complex logistics services, later a **cloud service provider** and producer of tablets and smartphones, and finally a video platform. The enterprise has since also entered the online groceries business.

Central political changes which have long become main stream include a digital diversity of opinion which has never before existed in this way. The internet has become the exchange hub. A (mobile) terminal device and a stable data connection are all that is required to broadcast one's own opinion or to spread it rapidly via other users. The participation of the general public in every conceivable respect has become possible in the digital age. Democracy can also benefit from new elements of direct participation if the general public is able to contribute to local decisions online, for example.

The indisputable advantages and progress of digitalisation are also contrasted by possible risks and negative developments. We all sense this ambivalence.

New technologies are helping people to organise their lives, making them more independent, enabling them to live more healthily and to share products such as cars with each other. Every individual can communicate whenever and with whoever he wishes, obtain information quickly and in depth and actively participate in society. As a consumer, the individual has broad choices, tailor-made products and services as well as individual prices. As so-called "prosumer" he can assume a role as consumer and producer of services and products at one and the same time.

At the same time, however, digitalisation brings new insecurities: people are worried about the loss of sovereignty over their private data, see the lack of transparency about the truth of news and information as well as the correctness of prices and are increasingly experiencing polarising and extreme public discussions in digital channels. Probably the greatest fear of many people is that digitalisation will make their jobs superfluous because computers or robots will take over. Which qualifications will at all be adequate in future to safely navigate the world of work?

Industry is also faced with a broad field of new possibilities, with companies having infinite opportunities to try out new things and to penetrate new growth areas. However, the danger of failing also intensifies as competitors become more flexible, faster and better: digitalisation is not only translated into the challenge of achieving greater efficiency in established markets. It is also becoming increasingly important for established businesses to become even faster in developing new digitalised products and business models and to keep ahead of the competition. Many established providers feel that they are not fighting new competitors on a level playing field because in the new digital economy data wealth and direct access to customers will be more important than a perfect product in future.

It is therefore clear that Germany and Europe must take their own path towards digitalisation. This is the third path between a digital **laissez-faire** and a state-organised modernisation programme. It is digitalisation “Made in Europe”, which makes maximum use of the economic opportunities and potential and overcomes the risks. It follows the strategy that competition requires order: as much digital competition as possible but at the same time (state) support, where necessary, and a regulatory framework to ensure fairness, legal certainty and participation possibilities for all. This is our compass. Digitalisation “Made in Europe” is a shaping process.

1.2 Digital infrastructures pave the way for digitalisation

Data networks are the motorways of the digital world. As in road traffic, the nature and width of the roads and traffic rules decide how safe and how fast we may drive on the highway. Infrastructure is therefore one factor. The other is the vehicle itself. The larger and more powerful the vehicle, the more will be demanded of the transport network. The situation is no different in the digital world.

The vehicles of the digital world are innovative applications which depend on increasingly more efficient networks. Even now applications are emerging which require distinctly higher transmission rates than today’s infrastructure can provide everywhere. For conventional television (4k/ Ultra-HD)² roughly 90 megabits per second (Mbit/s) are necessary in downstream and for progressive television (8k, holograms etc.)³ 300 Mbit/s and therefore more than three times the data transmission rate.

² Television sets with 3840×2160 pixels (4K/Ultra-HD).

³ Televisions with 7680×4320 pixels (8K), i.e. double the resolution of the 4K/Ultra-HD and four times as much as full HD with 1920×1080 pixels.

Laissez-faire

An expression borrowed from the French, which in the 19th century in particular stood for an extremely liberal economic policy of “let it happen”. The idea was that private initiative should be able to develop as freely as possible, with the state restricting its role to what is absolutely necessary. In contrast, an ordoliberal policy is reliant on the existence of a strong state which guarantees the functioning of free markets by maintaining a “privilege-free” economic system.

A similar situation is to be found in other application categories, as the table shows.

Transmission rates required for current and future applications

(sample selection)

Type of application	Required transmission rate*
Basic internet	≈ 20
Home office	≈ 250
Cloud computing	≈ 250
Conventional TV	≈ 90
Progressive TV	≈ 300
Video communication (HD)	≈ 25
Gaming	≈ 300
E-Health	≈ 50

* The required transmission rate refers to downstream in Mbit/s
Source: Final WIK report on the BMWi-funded project "Gigabit Networks for Germany"

It is evident that traffic in the fixed and mobile data networks will continue to increase. The following information demonstrates the traffic volume to be expected:

The data volume in the worldwide internet doubles every 40 months and even every 18 months in the mobile radio networks.⁴ Updating today's internet access speeds on the basis of previous growth in data volume transferred (corresponding with internet use) results in a requisite access speed of around one gigabit per second (1 Gbit/s) in downstream for high-end private customer products in 2025.

The Association of Telecommunications and Value-Added Service Providers (VATM) presented new market figures on the broadband infrastructure situation in Germany in October 2016.⁵ For 2016, the association estimates the number of directly switched broadband connections in Germany at 31.2 million.⁶ This means that the penetration per 100 inhabitants in Germany continues to be distinctly greater than that in the U.S. or Japan.⁷ However, this pleasing news should not detract from the fact that the efficiency of the German networks is by no means excellent. Only 2.2 per cent (0.7 million) of the broadband connections used are fibre optic connections into the building (Fibre to the Building, FttB) or home (Fibre to the Home, FttH).

4 Otherwise this agrees with the so-called Nielsen law of the internet bandwidth according to which the speed of the internet access for high-end users grows by 50 per cent a year.

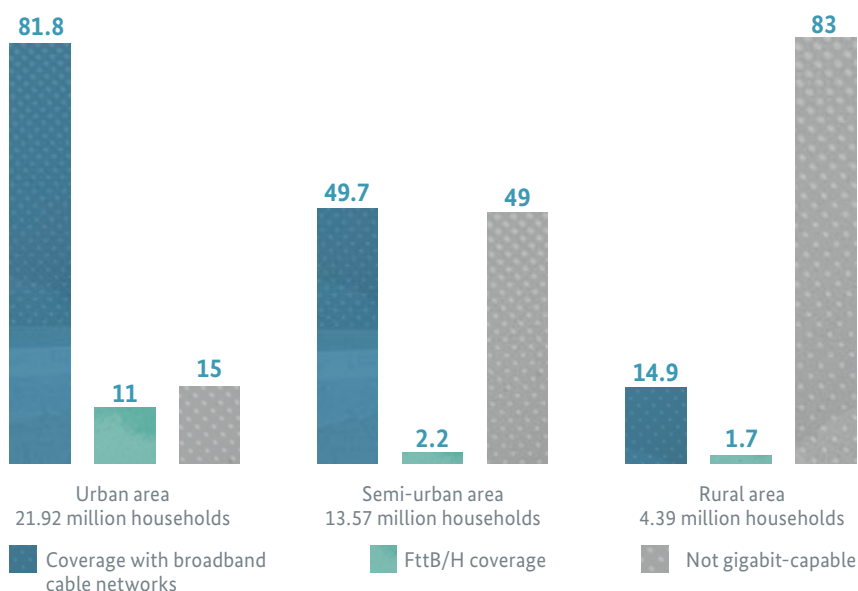
5 Dialog Consult/VATM (2016), 18. TK-Marktanalyse Deutschland 2016. Results of a survey of the member companies in the Association of Telecommunications and Value-Added Service Providers (VATM) in the third quarter 2016. Berlin; <http://bit.ly/2ISQONK> (downloaded on 15 March 2017).

6 This figure is composed of: 7.1 million (22.8 per cent) broadband cable network operators, 0.7 million (2.2 per cent) FttB/H, 6.6 million (21.2 per cent) DSL from alternative network operators (operate their own networks, usually on the basis of Telekom subscription lines), 3.8 million (12.2 per cent) DSL Telekom Resale (DSL connections operated by Telekom Deutschland which are marketed and supported by competitors) and 13 million (41.6 per cent) DSL Telekom Direkt.

7 OECD Broadband Portal, sub-section 1.2 <http://bit.ly/1cP4RGV> (downloaded on 15 March 2017).

The FttB/H coverage in Germany is therefore 7.1 per cent of households in total. If the rural and semi-urban areas are considered individually, the difference in the degree of coverage becomes particularly clear because in these areas only 1.7 per cent and 2.2 per cent respectively of the households are directly connected with fibre optic networks. In urban areas the figure is 11 per cent. Some 84 per cent of the connections in the rural area are not future viable because they have not been prepared for the gigabit range.⁸ The figure shows the household coverage with gigabit-capable networks for the **urban, semi-urban and rural areas**.

Household coverage with gigabit-capable networks* in Germany for the urban, semi-urban and rural areas (in per cent, status mid-2016)



* Aggregate figure is not 100% since coverage with broadband cable and coverage with FttB/H overlaps; no overlapping in rural area
 Source: Final WIK report on the BMWi-funded project "Gigabit Networks for Germany"

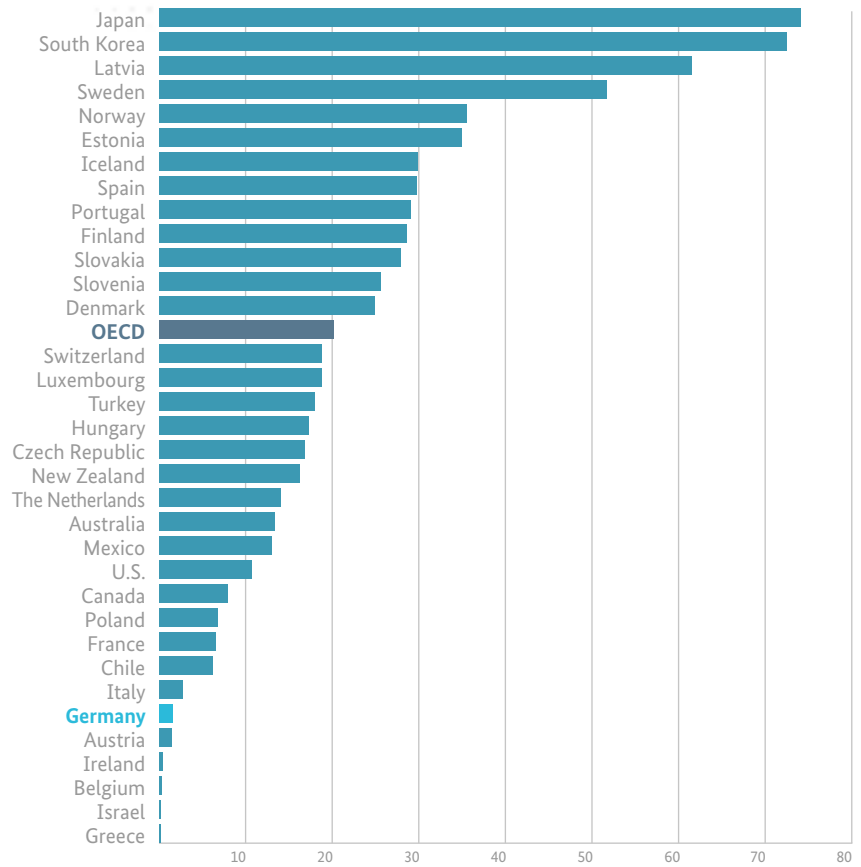
Urban, semi-urban and rural areas

This is a settlement-based structural categorisation of Germany's municipalities based on population density. Urban areas have more than 500, semi-urban between 100 and 500, and rural areas fewer than 100 inhabitants per square kilometre. This categorisation is used by institutions like the Federal Statistical Office and in the Federation's Broadband Atlas.

The need for action becomes even clearer with respect to our digital competitiveness if a country comparison is made on the use of future viable fibre optic networks. The following figure shows the percentage share of fibre optic connections (FttB/H)⁹ in the total broadband connections used for the countries of the Organisation for Economic Cooperation and Development (OECD).¹⁰

⁸ See Final WIK Report on the BMWi-funded project "Gigabit Networks for Germany"; the figures are based on data from the BMVI, Current Broadband Availability in Germany (Status mid 2016). Survey conducted by TÜV Rheinland on behalf of the BMVI, Berlin; online at <http://bit.ly/2nnok32> (downloaded on 15 March 2017).
⁹ Excluding the United Kingdom.
¹⁰ OECD Broadband Portal, sub-section 1.10 <http://bit.ly/1cP4RGV> (downloaded on 15 March).

Percentage share of fibre connections in total broadband (June 2016)



Source: OECD Broadband Portal

The necessity to expand the network is also demonstrated by the connection speeds. With an average speed of 13.7 Mbit/s, Germany takes 26th place by international comparison. The average figure is 6.3 Mbit/s world-wide. When it comes to the peak transmission rates, we rank only 43rd with 55.5 Mbit/s with a global average rate of 37.2 Mbit/s).¹¹

¹¹ Akamai: State of the Internet Report Q3 2016, <http://akamai.me/2h6d> (downloaded on 15 March 2017).

1.3 Platforms as driver of development

The digital transformation is currently the most noticeable on **B2C markets** as shown for example in online trading, in search, music and video services, social media and travel and mobility services. These are almost always platforms which set standards here, determine the speed and therefore dominate the headlines. These new, expansive **intermediaries** between providers and consumers are accelerating growth with innovative and highly scalable business models: they are upending traditional processes, encroaching on exchange processes and service chains, and winning exclusive access to those customers which up to only recently established providers had counted their own.

Digital platforms are internet-based forums for digital interaction and transaction. The world of digital platforms is characterised by great diversity and dynamism. The platforms include search engines, comparison and review portals, market places/trading platforms, media and content services, online gaming, social networks and communication services.

This definition approach is intended to outline the subject matter of debate and is not sufficient for a legal delineation.

Platforms are the new drivers of digitalisation and instrumental in its growth, creating new rules for economic activity:

- Growth and size are more important than short-term profitability;
- The direct interface to customers and manufacturers provides the new players with considerable market clout and an information lead.

The markets are dominated by American (and to a certain extent also Asian) internet services. They are currently conquering one formerly analogue industry after another or inventing completely new ones and growing into new giants. European platforms do not figure in the global Top Ten.¹²

B2C markets

B2C stands for “business to customer” and refers to the relationship between companies and consumers.

Intermediary

Derives from the Latin word “intermedius”, which means “situated between something”. So an intermediary comes between two sides and arranges their relationship.

12 Roland Berger/Internet Economy Foundation: Fair Play in der digitalen Welt, 2016.

B2B

B2B stands for “business to business” and refers to the relationship between companies.

Big Data applications

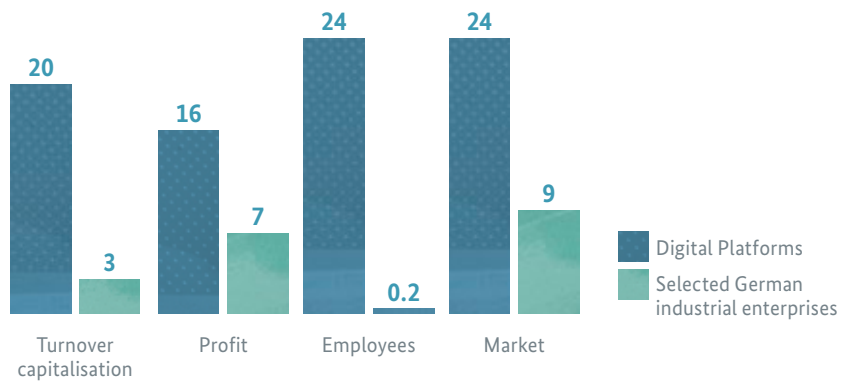
“Big Data” means enormous quantities of data. The amount of data is too large and diverse for conventional computers and databases. “Big Data application” covers new ICT methods and approaches to storing, analysing and interpreting the volumes of data. It permits better diagnoses in medicine, or more precise control and influencing of traffic.

Platforms have now completed the revolution in the business to business sector (B2B) and in the world of industry but in this second wave of digitalisation it still remains to be seen whether they will be just as successful here as on consumer and service markets.

This new industry-based contest is currently very visible in the automotive industry where digital groups outside the industry are attempting to establish a new ecosystem of battery-operated, autonomous vehicles and Big Data applications. The German and European car makers are called upon to present better and higher quality solutions. If they cannot do so, they run the risk of being ousted into second position as pure car suppliers in a growing market of networked mobility.

One thing is certain: the established companies are now confronted with powerful and economically potent digital competitors, as shown by a comparison of five leading global platform providers and five global German industrial groups from core industries such as electricals, automotive, chemicals and consumer goods which are also DAX listed (see table). Much may be read from this view.

Digital platforms* and German industrial companies** in a five-year comparison (2012 – 2016 in per cent)***



* Alphabet (Google), Amazon, Apple, Facebook, Tencent
** DAX-listed companies: BASF, Bayer, Daimler, Henkel, Siemens
*** The average annual change in the 2012-2016 period is measured in per cent (CAGR)
Source: Roland Berger, in-house calculation based on Bloomberg, 2017

In the relevant economic ratios such as sales, profit, employees and market capitalisation, the originally digital businesses have grown faster within five years than the analogue businesses established at the same time. Not only in terms of profit growth do the leading platforms head the field: they are also in front of the large German industrial companies in terms of sales growth. It is also striking that sales and profit growth of the new internet giants have simultaneously led to a marked rise in the number of employees.

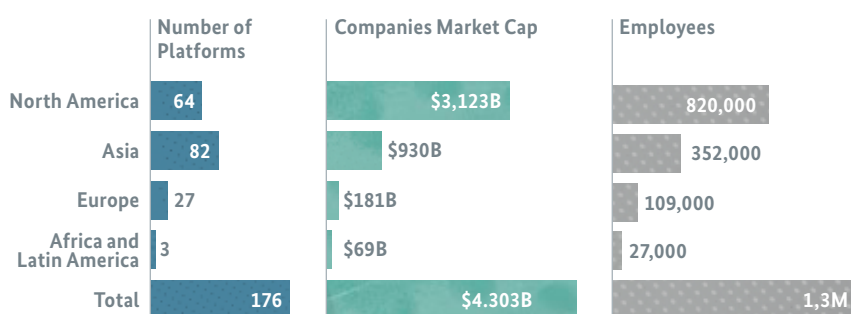
Leading platforms now record higher sales than important German DAX groups. The growth rates of the platforms are similarly distinctly above those of the industrial enterprises.

The leading platforms have left the large German industrial enterprises behind them in terms of profits too and their profit margins are growing rapidly.

The German industrial groups continue to be major and important employers, although the platforms have also created many new jobs in recent years.

The market value of leading platforms is far higher than that of DAX industrial enterprises. The possible potential of the digital providers is “priced in” on the stock exchanges.

Platform companies by region*



* Platforms with company value ≥ \$1B
 Source: Center for Global Enterprise: “The Rise of the Platform Enterprise”, 2015

1.4 The digitalisation status quo in Germany and Europe

The different digitalisation speeds of businesses so far are also reflected in the global macro-economic statistics. “Platform states” lead the table. Whilst some countries are getting ready for the next digitalisation stage thanks to their nimble digital actors, sometimes supported by excellent network infrastructures, a large number of European countries are distinctly trailing behind. Germany is one of them.

Even today, the U.S. is already exploiting 18 per cent of its digitalisation potential and leads the global field (see table). 21 indicators were incorporated in this assessment, from corporate investment in the hardware and software area through online purchases and social media use to expenditure on the digital qualification of employees. Europe achieves a degree of exploitation of twelve per cent here whilst Germany has only ten per cent. And so far only every fourth manufacturing company in Germany believes itself to be well prepared for digitalisation.¹³

The “digital gap” in Germany is also reflected in the figures on the digital share in the macro-economy. Whilst one third of the total economic output in America is based on digital investments, Germany only manages 24 per cent here, taking a mid-field position alongside France (26 per cent) and the Netherlands (23 per cent).

Our position is even worse for access to mobile broadband technology. Per 100 inhabitants, Germany has only 67 accesses to high performance mobile radio technologies such as UMTS, HSPA and LTE, and is therefore brings up the rear in the ranking of six leading industrial nations.

¹³ Roland Berger: 8th Operations Efficiency Radar, survey of more than 240 goods-producing companies in Germany, 2017.

Clear disparities in the country comparison in three digital categories

Exploited digitalisation potential



Digital share in gross domestic product



Mobile broadband technologies (accesses per 100 inhabitants)



* United Kingdom

Source: McKinsey Global Institute: Digital Europe – pushing the frontier, capturing the benefits, 2016; Accenture Strategy: Digital disruption: The growth multiplier, 2016; OECD Broadband Portal, 2015



Even in a purely European comparison, Germany can in no way be considered as a digital paragon. According to the European Commission's report on "The Digital Economy and Society Index" from last year, Germany ranked only eleventh amongst all 28 member states behind the United Kingdom (position seven) and far away from the top three: Denmark, Finland and Sweden.¹⁴ Detailed ratios from the areas of connectivity, human resources, internet use, integration of digital technology and digital public services are incorporated in this broad-based study.

Basically, Germany is not making the most of its digital potential. However, as a leading industrial nation we must also aspire to becoming one of the leading players in the constantly advancing digital economy with innovative, customer-centred and fully digitalised businesses and with a state that guarantees a regulatory framework and promotes digitalisation in those areas in which entrepreneurial activities and individual initiative are not sufficient to exploit potential to the full. The perspectives exist and are more tangible than many would believe.

1.5 New opportunities in digitalisation

The comparison of country ratios takes a look in the rear-view mirror. It outlines the first round of digitalisation with nimble, usually American platforms which have more or less steamrolled the consumer and many service markets.

The second round which has just started offers huge opportunities, particularly for Germany and its businesses, to make good on lost ground and even climb to the top of the digitalisation tree with an internet which has so far been used by people now also being used by machines.

Our highly developed skills in production and near-to-industry services will become a decisive advantage when web-based offers with products merge to produce the **Internet of Things**.

Internet of Things

The Internet of Things is understood to be the networking of objects via the internet such as sensors in weather stations, appliances such as refrigerators and machines in factories. The terminal devices do not serve to connect people but rather objects which automatically exchange information.

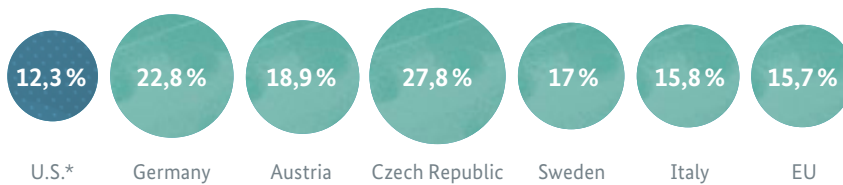
¹⁴ European Commission: The Digital Economy and Society Index (DESI), 2017.

Germany's industrial core is an asset which can be exploited also in the digital age. We stand for a culture of engineering and skilled crafts which aims to create something lasting, permanent and sustainable with perfection, precision, creativity and sophistication. Many European neighbours also have high industrial competence and a suitable entrepreneurial base.

An industrial advantage exists. From a quantitative point of view, Germany and Europe lead the field. With almost 16 per cent of total economic output globally, the European industrial sector is larger than the American one with an only twelve per cent share (see table). Germany, Austria, Czech Republic, Sweden and Italy are even further ahead.

Benefit of production competence

(Proportion of total economic output produced by industry)



* Value for 2014; source: World Bank, World Bank Open Data: Manufacturing, value added (% of GDP), <http://bit.ly/1GZZpjF> (downloaded on 15 March 2017)

Automotive, electrical, mechanical engineering, medical technology, logistics and high quality technical services are European domains in many respects. Across the entire industrial board Germany and Europe have strong global players and are world market leaders in many cases. Added to this are hundreds of small and medium size champions in attractive and strong-growth niches.

It is not of course certain that this trend will extend into the digital future. The battle for supremacy in the automotive sector shows that platform providers outside the industry, such as Alphabet (Google) and digital high flyers such as Tesla, are extending their expertise at an incredible speed and are fast catching up in the innovation race.



The decisive questions for digital transformation are how we can satisfy the conditions to bridge the gap between production “Made in Europe” and the world of purely digital business models. How can we achieve a new dynamism in businesses in a digitalised European market economy without relinquishing our basic principles of fair competition, safety and participation for the people?

Germany is well equipped to make this transformation. From our good starting position as an established innovation and production location, we have already made our mark on the development. “Industrie 4.0” has long become an internationally accepted term to describe the current challenge: the networking of people, machines, plant and processes to form an intelligent whole.

Digitalising industry will open up potential additional cumulative added value of €425 billion until 2025 in Germany alone. Projections put productivity gains at up to 30%, annual efficiency gains at 3.3% and cost reductions at 2.6% annually.¹⁵

But in the medium term it is emerging that it is not sufficient to be digital efficiency champion. Not only is more investment in digitalisation required but rather a change in corporate culture is necessary: openness and courage to use digital technologies and qualified employees so as to develop new business models. Experience with the first digitalisation wave outlined above shows how value added is increasingly moving away from products to data platforms and how completely new value added potential is arising by networking customers and cooperation partners.

The aim of traditional companies in Germany and Europe must be to exploit their high industrial competence also in the new digital economy. They need platform expertise if they are to do so. They must combine existing product portfolios and customer contacts with the **network effects** of a platform. This creates an ecosystem for additional value added – with new technologies, new customer interfaces, new partners and above all new services. Platform strategies must be growth strategies.

Network effects

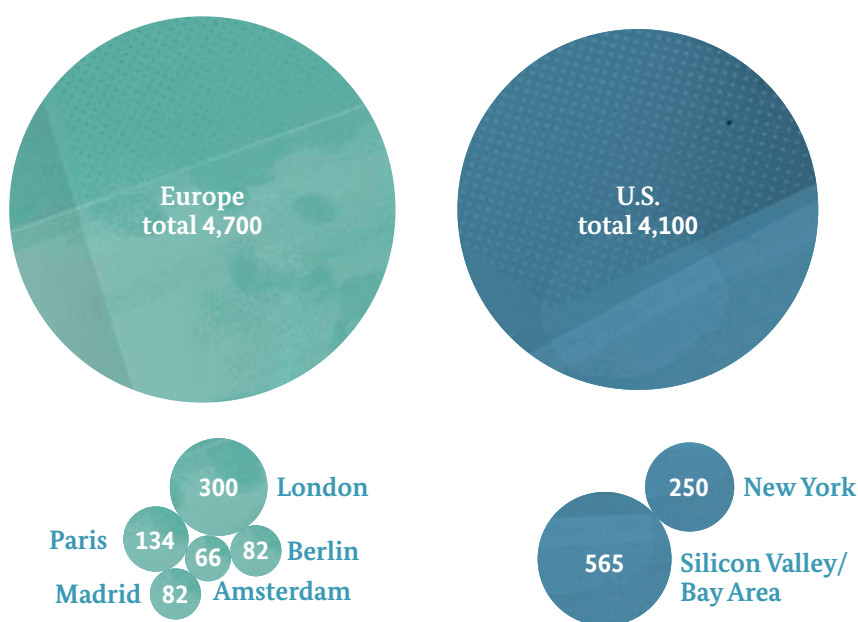
Basically, it is in the nature of internet platforms to bring people together. Generally, their popularity and success correlates with the number of participants. The more suppliers and potential buyers reached by an online auctioneering platform, the better the chances of finding something one needs or to sell one's product.

15 Roland Berger/Federation of German Industries: Die digitale Transformation der Industrie, 2015.

German and European enterprises can take the lead. They have engineering expertise, knowledge and (leadership) experience to make this quality leap to a platform economy which would then be characterised by the so-called Old Economy. And they can draw on a huge pool of digital talent. Europe has some 4.7 million programmers and software developers – U.S. has only 4.1 million (see table). And in the five European leading tech hubs of London, Paris, Berlin, Madrid and Amsterdam there are around 664,000 software experts – more than in the Silicon Valley region (565,000).

Europe as a technological centre

Number of software developers and programmers (in thousands)




Source: Atomico/Slush: The State of European Tech, 2016

The clever combination of digital and industrial competence will be decisive in the competition opportunities of the future. Those businesses will advance to become market leaders who are able to develop new digital products and services on the basis of data analysis and the next technological breakthroughs. Growth fields are quite certainly to be seen in the areas of artificial intelligence, robotics, virtual and **augmented reality** as well as 3D printing. A central distinguishing feature will be in the combination of engineering and programming expertise.

Augmented reality

“Augmented reality” is a technology in which the surrounding visual environment is enhanced with digital elements. In contrast to “virtual reality”, in which users enter a non-real world, augmented reality is primarily about presenting additional information. Examples include the addition of the distance of a free kick in a live transmission of a football match, or interesting facts about sights which pop up as soon as the smartphone recognises them on a walk through a town.



The German economy has now most definitely heard the digital alarm call, as shown by current studies and surveys. Attitudes are changing: the challenges have been recognised. Not only are the big players starting to wake up.

As demonstrated by a current SME survey of 4000 businesses with annual turnover of more than 2.5 million euros each, almost two thirds of companies are already using the possibilities offered by digitalisation to optimise their offers. Important areas of business activities of just under one fifth – across all industries – are already characterised by digitalisation.¹⁶

A survey of 600 managers in Germany and in the U.S. shows that compared with the U.S. Germany is now performing better in the digitalisation of its existing companies despite the insufficient number of digital start-ups and internationally significant platforms.¹⁷

All in all, 80 per cent of German managers believe that they are well prepared for digital transformation. In the U.S. only 60 per cent of those surveyed showed equal optimism. Our core competences must now be translated into market successes, growing stronger than before and creating new good work.

Digitalisation places companies before strategic challenges. They must show courage and prove their innovative strength. There are diverse strategies to further develop away from a traditional industrialiser to a digitaliser with platform competence. A promising aspect here will be to intensively pursue the network concept. Improved cooperation between established companies and existing start-ups in Germany could open up growth potential totalling 100 billion euros up to 2020, as a study has shown.¹⁸

But politicians also need to step up: anyone wishing to strengthen the competitiveness of his own location must create the best conditions for further digital development. A competitive framework for digital transformation must be created, which provides room for innovations also at the level of business models whilst at the same time securing equal opportunities. This certainly includes the creation of a digital infrastructure.

16 Commerzbank-Studie: Unternehmen Zukunft: Transformation trifft Tradition, 2016.

17 Boston Consulting Group: Time to Accelerate in the Race Toward Industry 4.0, 2016.

18 Accenture: Harnessing the Power of Entrepreneurs to Open Innovation, 2015.

It will not be possible to establish data-intensive applications and offers without faster, gigabit-capable networks.

It is similarly important to motivate people to engage in digital change. Trust and confidence must be created and the teaching of digital skills must reach everyone. Only in this way can acceptance be created and only in this way can opportunities be used. Digital qualifications are a decisive foundation for ensuring the success of digitalisation economically, technologically and socially. These three corner stones are indispensable.

A regulatory policy 4.0 is also necessary that guarantees fair competitive conditions for all market players and opens up the potential of digitalisation to a macro-economy with high industrial competence. Success factors of the data-based economy and the production oriented industry must be considered and innovative entrepreneurship advanced. By matching the regulatory framework with the requirements of the time, we can create both the requisite leeway and the necessary guide planks for a European and German path into digitalisation. We can secure the core competences of “Made in Europe” in the digital future and further develop them.

1.6 From Green Paper to White Paper

The “Green Paper Digital Platforms” set into motion a broad process of discussion in May 2016 as part of the Digital Strategy 2025 on how we can ensure the smart, competent and long-term shaping of our digital future with respect to platforms. The development in past years has shown that internet-based services and offers quite considerably drive the digitalisation of the economy and society.



Digital Strategy 2025

This document contains measures extending beyond this legislative term and beyond individual ministerial portfolios, and the Economic Affairs Ministry's intention is to actively shape the process of digitalisation in commerce and society. These measures include support for investment and innovation, expansion of infrastructure and smart networking. The aim of the 10-step plan is to make Germany the world's most modern industrial centre and to build up the digital society of the future. The ten steps to a digital Germany are:

1. Creating a gigabit network for Germany by 2025

By 2025, we aim to have globally competitive telecommunications networks in Germany which offer gigabit/s transmission speeds both upstream and downstream, and which guarantee adequate capacity at all network levels, reliable real-time capability and the highest service quality. In addition to ongoing broadband policy activities being undertaken by the Federal Ministry of Transport and Digital Infrastructure, it is necessary to ensure in the short term that trade and industry in particular (Industrie 4.0, smart networking, smart services) have nationwide access to first-class networks and that rapid progress is made on rolling out gigabit networks.

2. Ushering in a new age of entrepreneurship

Entrepreneurs deliver fresh ideas and rethink commerce. The networking of their innovative skills with established companies offers the key opportunity for industry in Germany. We therefore wish to support start-ups, improve funding conditions, and promote cooperation between new and established companies.

3. Creating a regulatory framework for more investment and innovation

We will evaluate our legal framework with a view to digitalisation. At the same time, we want to see a modernisation of the European legal framework which provides a stimulus for a strong, growing Digital Single Market. Cartel law needs to take account of special features of online markets, and merger control needs to be adapted both in the national and in the European context. Also, in view of rapid developments and disruptive innovations, we should think about setting up regulatory "experimental spaces" for new technologies and business models.

4. Pushing forward with smart networking in the core areas within our economy

Our aim is the comprehensive and systematic use of the digitalisation potential in the fields of energy, transport, health, education and public administration; we expect this to generate considerable efficiency gains and to stimulate macroeconomic growth. The Smart Networking Strategy was adopted by the cabinet in September. Since then, a lot of information policies have been rolled out. For example, a “Smart Networking Initiative” centre of excellence has been set up, and roadshows set in motion.

5. Strengthening data security and data protection

Data security and data protection safeguard basic rights, promote public acceptance, and also stimulate growth, because they require the development of new technologies and business models. We need to be in a position whereby we can create our own security ecosystems (for hardware and software).

6. Enabling new business models for SMEs, the skilled craft sector and services

The aim is to help SMEs to succeed and grow in the rapidly changing conditions of a global data economy. In some sectors, such as the services sector, this initially involves measures to raise awareness of scope for digital development and resulting new value chains.

7. Utilising Industrie 4.0 to modernise Germany as a manufacturing base

Industrie 4.0 offers enormous potential for more efficient, customer-oriented and resource-conserving production and for the creation of additional value added by means of new business models. It is our goal to make Germany the leading supplier and user of Industry 4.0 – and as a result, it will be the most modern industrial location in the world. To achieve this, we particularly need to enable SMEs to come to terms with Industrie 4.0.



8. Bringing research, development and innovation in digital technology to a competitive level

We need to significantly boost funding for research and development in the area of digitisation of the economy. In most areas of trade and industry, this funding is only one-tenth the amount of that provided for energy or aerospace. We will therefore do more to promote research and development projects at the precompetitive stage, address forward-looking topics in ICT early on, and expedite the transfer of scientific results, including market-oriented cutting-edge technologies with substantial application potential.

9. Offering digital training to people at every stage of life

Digital education and training must be provided at all levels of the education system in the interest of innovative commerce, decent work and better participation in working life through better digital evaluation skills and in the interest of people's capacity to take responsibility for their own data. We have therefore set ourselves ambitious goals for 2025.


10. Creating a digital agency as the central unit for implementing the Digital Strategy 2025

We need to overcome the fragmentation of tasks at federal level regarding digital economy issues, and to effectively support the implementation of our Digital Strategy. The new "Federal Digital Agency" of the Economic Affairs Ministry is to bring together the responsibilities along the entire digital value chain, to provide institutional backing for the implementation of the Digital Strategy, and to strengthen the digitalisation expertise for the provision of neutral policy advice (in the short term, the capacities in the Bundesnetzagentur (Federal Network Agency) which focus on issues like Industrie 4.0, smart networking, standardisation, etc. will be increased; market monitoring will be substantially expanded, so that we can better understand digitalisation processes and if necessary integrate them into the regulatory system).

The Green Paper essentially dealt with the question of how legal certainty can be created by adjusting the regulatory framework for digital platforms, permitting companies to make use of the economic potential of Big Data whilst assuring an appropriate level of protection for the confidential data of consumers, facilitating fair competition, ensuring a democratic digital culture and determining which infrastructural and institutional foundations are necessary for this.

Great use was made of the dialogue and exchange offers we launched:

- Using our online participation platform “de.digital” alone, several thousand participants entered into the debate, engaged in animated discussion with us over weeks and provided valuable input. There were almost 65 visits to the website and 263 contributions were entered (as well as 10 assessments of the propositions) and incorporated in our consultation process.
- During the consultation we engaged in intensive dialogue with experts from industry, the scientific community, society and politics over a period of months. Amongst other things, we held five workshops on the future shaping of a regulatory framework for digital platforms. The main question was always which adjustments are necessary in order to achieve fair competition, an innovation friendly climate, an appropriate level of consumer protection and progress for society as a whole. The subject areas were: “Level playing field and perspectives for network expansion”, “Informational power – personalised pricing in the digital economy”, “Individual data sovereignty in the digital economy”, “Data sovereignty and digitalisation – legal framework conditions and perspectives”, “Transparency in the digital world”.
- We also received 70 detailed written opinions from businesses, industrial federations, trade unions, non-profit organisations, scientists and interested citizens. They analysed in depth the situation and the challenges presented by their living environment, their area of work, their industry or business environment, and in some cases made specific suggestions on the regulatory framework. The extensive dossiers helped us to identify the demands resulting from the digitalisation of the individual areas of life, industries and business fields and where and how we can manage overarching challenges.




The following trends and outcomes emerged from all consultation channels:

- Operators of platforms are unanimously seen as the most powerful players in the digital economy. They drive change and affect almost every industry and every area of our economy and society with their dynamism.
- The positive benefit of platforms for businesses and consumers (including opening up new markets, facilitated market entry for small and medium sized enterprises, tailor-made products, and better use of resources) is generally recognised. At the same time, the discussion on risks, target conflicts and problems is assuming considerable proportions.
- It is unanimously agreed that the digitalisation process by platforms must be supported by politics. Almost all interest groups take the view that adjustments are necessary to lead Germany's economy and society into the digital future. Germany and Europe must find answers to the challenges presented by the platform economy.
- All solutions found must be placed in a European perspective because digital markets and their protagonists do not stop at country borders. The development of the European Digital Single Market should be promoted, particularly by Germany.
- Many suggest basic adjustments to the regulatory framework for Germany. The extent and direction of new regulations are being discussed quite controversially.

- The future organisation of the competition framework is viewed to be all important. There are different answers to the question as to which strategy is to be used and which paths are to be taken to achieve the accepted goal of fair play in the digital world.
- The development of an innovative data economy with the concomitant questions concerning data protection and “data ownership” were discussed intensively. Some participants call for legal adjustments to achieve individual data sovereignty. Others support more consumer education and a strengthening of existing supervisory authorities and mechanisms.
- The expansion of the data network is viewed to be indispensable if Germany’s digital future viability is to be ensured. The measures so far taken are not sufficient to guarantee the networking of the digital and objectified world – “Industrie 4.0” – on the level of ultra-modern technology, in the requisite transmission speed and in every region of Germany.

This White Paper picks up on the ideas and suggestions gained from the consultation process. The numerous participants have given us valuable and directional information and have also developed specific proposals for regulatory measures in some cases. At the same time, we have also learned where regulatory requirements are not currently called for.

A hand-drawn map on a textured, light-colored surface. The map features several colored arrows pointing in different directions: a green arrow pointing up and to the right, a blue arrow pointing up and to the left, a red arrow pointing down and to the left, and a teal arrow pointing down and to the left. A small globe is visible in the top left corner. The background is a light, textured surface with faint, illegible text and a small circular stamp.

2.

Where we want to get to:
The European path in the
digital age

2.

Where we want to get to: The European path in the digital age

The shift of the German and European economy towards a digital production and platform economy can become a driver of growth, innovation, productivity and employment. In particular, use must be made of the potential for our efficient industry with its many SMEs with its excellent products and production-near services. If we succeed in merging and expanding our high industrial competence with digitalisation, the European industrial locations will remain competitive and successful. Workers will then also benefit from attractive jobs, good working conditions, a secure standard of living and a high degree of autonomy. And thanks to a modern digital infrastructure, which is available equally to businesses and citizens alike and connects them with each other, more and more people in Germany will also be able to connect up with the digital world.

Some believe a digital laissez-faire to be the best possible regulatory framework for a digital economy. We do not share this view. The rapid rise of primarily American platforms in Germany and Europe has shown up many problems and potential losers. It is now no longer certain that companies actively engaging in a common market also enjoy the same competitive conditions and opportunities. The existing legal definitions frequently no longer fit the new digital solutions. We will not accept legal grey zones when it comes to digital platforms and will not tolerate regulatory gaps.

The “ordoliberal” policy (see “laissez-faire” explanation on p. 17) we aspire to creates a foundation for a new digital industrial economy. It ensures high regulatory reliability which we continue to view as an important influential factor for high investment and the implementation of business models with long-term capital formation. It protects individual freedoms and ensures that all market players have the same access opportunities. We are guided by four central principles.

2.1 Transformation instead of disruption

Advancing digitalisation brings with it target conflicts and decisions on direction. We must provide a political answer to this fundamental question first of all: do we understand and promote digitalisation as a disruption, i. e. as a destruction of the status quo? Or do we want a process of transformation through which the existing economy is modulated and modernised with the creative force of digital means and business models? In view of the economic success and the specific strengths of Germany as an industrial location and of other European macro-economies, the answer can only be as follows: we seek a process of transformation and not disruption. This means that the transformation must be accompanied by policy.

The quality and reliability of German businesses is recognised and held in high esteem throughout the world. This is based on many strengths: entrepreneurship and innovative capability, an excellent infrastructure and a close network of large companies and small and medium sized enterprises, on the combination of industrial expertise and production-near services, on the cooperation between scientific research and application orientation, on an established and constructive social partnership and a system of rules, which promotes competition and provides for a social balance.

This system is efficient because it has grown organically. And it has been shown that it can be adjusted time and again quickly and flexibly to new challenges. We can and must therefore use this system successfully in the transformation to the digital industrial society.



Platforms as bastions of the digital economy have now gained considerable market shares. Thanks to Big Data, they organise and orchestrate central customer access and are currently pushing established analogue businesses into the role of suppliers in their newly created ecosystems.

A creative transformation of the platform economy also means that undesirable trends of digitalisation are corrected. Some business models and practices of platform providers undermine the tried and tested principles of our Social Market Economy. Competition is understood in terms of “the winner takes it all” and (at least temporary) monopoly positions are accepted as proof of a particularly successful business idea.

Our economy and our competitive advantages are being put under pressure primarily by the thrust of a few platforms for absolute market dominance, their rapid growth forced by network effects and the willingness in some cases to sound out the scope of national legal frameworks, with respect to data protection for example, or even to question them, making political action and regulation necessary.

The main risks of unregulated digitalisation include a danger to the private sphere and informational self-determination as well as the monitoring of access to business-relevant information in the hands of only a few players.

We want to shape and accompany the transition to the digital age without disruption. Germany and Europe can assume a model role here in linking industrial expertise with digital opportunities, stimulating innovation and investment and steering an excessive platform economy within reasonable bounds without compromising on economic dynamics.

Germany and Europe do not need digital laissez-faire but rather a politically flanked process of digital transformation. It is the task of the state to set into motion a positive economic dynamism on a “level playing field” by setting and asserting clear rules and by defining appropriate framework conditions.

Level playing field

A “level playing field” means fairness between companies active on the same market. Competition will only be neutral between companies on same “playing field” if uniform rules or conditions for competition exist.

Digitalisation may not lead to monopolisation and the sealing off of markets. Consequently, the regulatory framework must be adjusted to altered value added chains and business models. Trends must be sensibly fenced without throttling economic dynamism.

From the necessity to reach a critical size as a platform, it is frequently a small step to a market dominant position. The danger then exists that barriers to access will be created and a change in platform made difficult by deliberate incompatibilities. Furthermore, market dominant businesses can penetrate upstream and downstream value added stages and create a closed ecosystem of hardware, software, services and content. The law is called upon here to restore fair market opportunities also in the area of the digital economy.

The aim must be to prevent the abuse of market power. A further instrument here is **merger control**, which has so far been tied to the achievement of specific minimum sales. The inspection of abuse and the control of mergers as the two most important instruments of the competition authorities threaten to be undermined by the special characteristics of the digital economy, notably fuzzy edged markets that are free of charge. We have therefore taken the initiative in the form of the ninth amendment to the Act against Restraints of Competition (GWB) and will make competition law fit for digitalisation.

Finally, effective cartel law requires fast and systematic application. The market shifts caused by new digital players are taking place at such a high speed that at the end of a multi-year cartel procedure irreversible facts have usually been created. In brief: the market dominant enterprise has pushed its competitors to the edge of, or ousted them completely from, the market.

As we see it, the state does not only set the rules but is at the same time motivator and driver. This includes strengthening the willingness to take risks and creating trust in Germany's own digitalisation path. At the business level, the apparent dichotomy of a digital and manufacturing industry must be overcome primarily. Germany's opportunity is to concentrate digital and industrial expertise and merge them together.

Merger control

A merger means the joining together of companies. Merger control only aims to prohibit mergers of companies which result in a worsening of the market structure and entail a risk that dominant companies will abuse their position on the market.



We are convinced that only when society affirms digitalisation whilst at the same time specifying the rules it desires and needs will we be able to move forward. We need a digital awakening that combines opportunities with security, current expertise with new knowledge, an awakening to the advantages of digitalisation and a digitalisation for many people and not just a few. Our regulatory framework is based on this guiding principle. It will lift the platform economy to a new quality level and shape it to the benefit of all.

2.2 Growth dynamism and participation

If industry goes about it in the right way, digitalisation will be a growth programme for Germany and Europe. If businesses are able to convincingly combine production and platform competence in future, they will achieve breakthroughs and therefore celebrate market successes. New digital growth is good and correct; it helps Germany to financially secure its Social Market Economy and welfare systems in a shrinking society.

The growth stimuli must primarily come from industry. The state can and should additionally influence the dynamism in a positive manner. Digitalisation must be flanked by a smart and foresighted policy so that all stakeholders are able to use the potential as best possible. The development of highly efficient broadband networks across the country most definitely belongs on the growth agenda – the competitiveness of the location depends on it.

All parts of the country must be connected since ultimately many successful and internationally oriented SMEs are based from the centres of conurbation. Without fast data highways, Germany will be unable to hold its own with the international leaders in the second phase of digitalisation. Our excellent transport infrastructure has promoted and secured the success of the economy over the decades. We must now step up the digital networks and make the move to the gigabit society.

The most innovative business models of the digital economy are data-driven. The potential in the use of Big Data is demonstrated by the success stories of the most inventive platforms in the global economy. Businesses can increasingly adapt to consumer needs through ever more refined new data analysis technologies. This is attractive for both sides.

Avoiding or greatly restricting data capture and processing cannot therefore be a reasonable goal of economic policy. Any such minimalistic approach ignores the reality of a modern digital economy. The business with data could reach a volume of up to 650 billion euros in Europe by 2020 according to estimates of the European Commission. This would be more than three per cent of the gross domestic product of the European Union.¹⁹

The German and European economy must be able to count on Big Data applications. And there must be room to experiment with new data models and solutions.

In all cases, however, secure communication and the secure handling of data must essentially remain. The state is called upon to create a high degree of legal certainty in all areas of data use. The reliability in data commercialisation may possibly prove to be a European advantage in global competition if companies try to break down all barriers elsewhere in their hunger for data – Big Data “Made in Europe” could become a new quality seal.

Despite all increases in growth, the state must at the same time ensure that a the rise in the level of prosperity reaches all parts of the population and opens up the opportunity of personal advancement for as many people as possible. The idea that growth in a macro-economy automatically entails prosperity gains for all citizens has never been so realistic.

New investigations such as the “Inclusive Growth and Development Report” of the World Economic Forum (WEF)²⁰ of January 2017 are now showing in a very detailed manner that growth by no means entails progress for every individual in society. Phases of upswing can most definitely also be accompanied by an increase in inequality and this can ultimately be the greatest impediment to permanent and good economic development.

¹⁹ International Data Corporation (IDC)/Open Evidence: European Data Market, D8 – Second Interim Report, 2016.

²⁰ World Economic Forum: The Inclusive Growth and Development Report 2017.



The state must accompany digitalisation in particular with as broad as possible participation by all groups in society in economic upswing. The division into losers and winners of a digital age must be prevented.

Without doubt, many millions of people in Germany and Europe look to the future with concern and fear: Can I keep pace with the digital requirements? Will my own job soon disappear as a result of digitalisation? How and in which fields will I need to obtain qualification in future? The state cannot duck its responsibility here: it must find solutions and ways of keeping society together.

The political answer to people's fears must be to establish a Digital Social Market Economy and therefore to combine digital growth dynamism with (economic) security and participation. This is what our goal of inclusive digitalisation stands for.

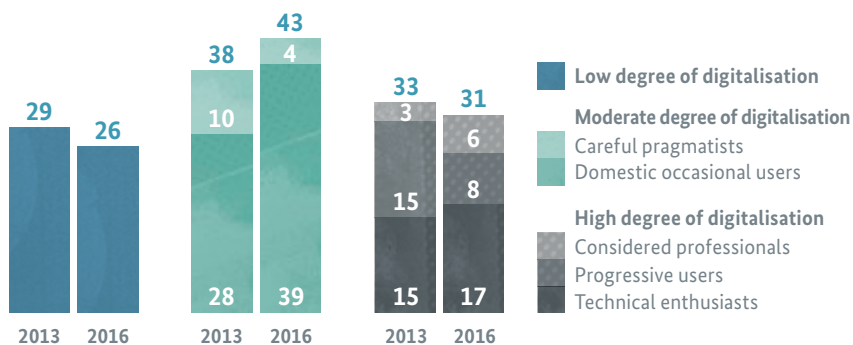
D21 Digital Index

The D21 Digital Index is the successor to the (N)Onliner Atlas, and is managed by Kantar TNS (formerly TNS Infratest) on behalf of the Initiative D21. Since 2013, the study has provided a comprehensive picture each year of the level of digitalisation of society in Germany. The survey covers more than 30,000 German citizens aged 14 and over, including "offliners", i. e. people with no internet access. This means that the D21 Digital Index reflects the entire German population.

According to the latest survey by the **D21 Digital Index** in 2016, there are still some 18 million people in Germany, or around one quarter of the population, who are in digital offside (see table). They have little or even no digital competence, are excluded from using digital opportunities and have no interest in digital trends. The share has remained almost the same over the past three years – Germany continues to have a distinct digital divide. Added to this is the fact that the share of people viewed to be digitally experienced has even dropped slightly on a three-year comparison.

The segmented digital society in Germany

(Percentage of total population)



Source: D21 Digital Index 2016

Educational policy must therefore become a part of a growth-oriented digital policy. Better teaching of digital competence should start at school, including the incorporation of digital topics and media into lessons, suitably trained teachers and an adequate information technology infrastructure. Teaching of digital competence may not be restricted to schools and universities, however, but must also be part of the working and professional world. Nine out of ten jobs will in future require a minimum level of digital competence. Life-long learning and therefore an enhancement of work-related training will be necessary to keep pace with the speed of digitalisation.



White Paper “Work 4.0”

The Federal Ministry of Labour and Social Affairs (BMAS) presented its White Paper “Work 4.0” in November 2016.²¹ It weighs up a roughly 18-month dialogue on the future of the world of work, conducted from April 2015 and involving experts, social partners, associations, companies, academics and the public. The White Paper describes the main issues which are arising for the world of work as a result of the digital transformation, identifies the need for action, and proposes initial solutions for a successful shaping of this change.

The White Paper underlines the need for social negotiation processes, and in particular for flexible compromises between social partners. The more it proves possible to combine technical progress with social innovations and to create advantages for companies and employees, the more the digital transformation will enjoy public acceptance and success.

One priority is to offer better support for life-long learning. Overall, the Federal Ministry of Labour and Social Affairs does not see a risk of extensive unemployment due to new technologies, but there are signs of faster change in occupations which will require greater efforts in terms of vocational training and particularly in terms of regular further training. The Ministry therefore proposes, for example, the provision of greater coverage in unemployment insurance against employment risks in the course of people’s working lives, as a preventative measure. Other key issues of the White Paper refer for example to the field of working hours and protection for employees’ data, or questions relating to the adaptation of welfare state instruments to the changing world of work.

With regard to digital platforms, the White Paper particularly considers the rapid and in some cases comprehensive changes which these trigger on markets and in sectors, and their repercussions on employment and labour relations. Once again, there are two sides to the development: the great benefits for the customer and the employment potential deriving from much improved possibilities to offer one’s work on the market contrast with the risk that platforms will displace regular jobs with insecure employment.

21 PDF download at: <http://bit.ly/2gaOxuB> (downloaded on 15 March 2017).


It is necessary to keep monitoring developments and to obtain better data in order to assess whether there is a need for a response in labour and welfare law. The Labour Ministry also wants greater transparency for users. In order to provide an appropriate cost-benefit comparison, platforms should supply information about the working and welfare conditions of the workers employed by or offered via them.

The Federal Ministry of Labour and Social Affairs has developed new solutions for qualification and further training in the digital economy in its White Paper “Work 4.0”. Specific proposals have also been developed to strengthen co-determination.

2.3 Security and clear rules for democratic discourse

Germany and Europe need a digital civil society that shares common moral attitudes and values. A secure space must exist away from supply and demand, economic performance and technology-driven business models in which citizens and businesses may act on a basis of trust. Common values are adhered to from conviction, decency and conscience. The more people accept that fairness, truth and human dignity continue to count, the more will digitalisation be understood as progress and as a – continuing – positive force.

The digital transformation of economy and society will only succeed if people are convinced that new business models and new offers are confined in a responsible environment free from discrimination. The state must guarantee and secure the protection of core values so that democratic standards are maintained. All social groups will only accept digitalisation in general and the activities of platforms as key players in the development if they have trust in the digital future.



In the first phase of digitalisation, the system of values became a little jumbled with the rapid rise of platforms. Some players have ignored responsibility and integrity in the operation of their businesses. In some cases, people as customers and users are confronted with illegality, manipulation and opinion making.

Progressive digitalisation and networking also generate quite new enemies: professional hackers attack companies, break into their information technology systems and steal allegedly secure data and therefore ultimately undermine the trust of people in digital security.

So as to ensure that cyber criminality cannot lead to a huge damage to the economy, businesses must first have access to secure and trustworthy information technology.

What is more, our good digital communication culture is at risk in the booming platform economy. Platforms now organise important exchange and dialogue relationships for a broad variety of social groups.

We welcome this new opinion culture but will not tolerate legal vacuums. We must secure a strident and watchful democracy in the digital world too. The constitutional state needs support in this endeavour – from civil society, users, providers and international institutions alike. Immediate action must be taken against any violation of law and human dignity.

Consumers must be certain that they can express their opinions in digital media without becoming the target of criminal acts or violations of their personal rights. This is the field of conflict in which we find ourselves and specifically the difficult assessment “below” the criminality threshold as to whether an expression of opinion violates a general personal right or is (still) within the very broad freedom to express opinion protected by the constitution.

The dissemination of “hate speech” and “fake news” particularly on social media platforms shows two things: firstly, which dangers there are when the rules of play for public debates and political creation of opinion are not clearly defined and secondly, how necessary it is to equip the authorities and institutions responsible for taking action against criminal hate speech (public prosecutor and police) with the necessary analytical, assessment and prosecution expertise.

The state is called upon here to ensure that criminal acts perpetrated in the new digital spaces are pursued, their perpetrators identified and sentenced. We wish to promote this new discussion culture but without its dark sides.

The requirement for the state to be well equipped becomes all the more urgent when developments get out of hand. Illegal business practices and the dissemination of illegal content, for example, will increase the reservations towards a platform economy which Germany and Europe should absolutely support as growth drivers.

The state is called upon to guarantee this security. It must develop authorised and qualified institutions to monitor the new digital spaces, register infringements and above all sanction them.

2.4 European sovereignty

Germany will profit most if Europe can pull together to make joint use of the opportunities presented by digitalisation. An additional gain of 415 billion euros in annual growth for Europe as a whole is possible solely by realising the Digital Single Market – that is, if existing barriers are eliminated and the national digital markets brought together into a single market.²² The digital step forward would provide 3.8 million more jobs for Europe and could reduce public administration costs by up to 20 per cent.

²² Communication from the European Commission: A Digital Single Market Strategy for Europe, 2015.



This positive forecast for Europe was made before the Brexit vote in the United Kingdom and considering the new realities it is possible that the figures will be slightly lower. At all events, the United Kingdom's planned exit from the EU is also a signal to the remaining member states to increase the speed of the digitalisation programme so that a gigabit economy can be created throughout Europe by 2025.

Europe needs a uniform legal framework for the Digital Single Market. It is high time to depart from the patchwork of legal provisions that still exists and to develop a cohesive set of rules and regulations. The European response to the global digital markets can only be to think big and act big or put in another way: to act as a digital unit. The aim must be to provide the domestic economy with the best framework conditions for digitalisation. This is because no European start-up with big growth ambitions, no matter how agile it is, will be able to compete with the established American rivals and their strong set of resources if it is required to consider 28 sets of rules and regulations and bureaucracies for expansion in Europe. The reform agenda is still long. It contains harmonisation in copyright and tax law, uniform standards and common standardisation, more security for Cloud services, and simpler cross-border online trading.

The European Union needs a common digital action framework which is conducive to investments, flexible, unbureaucratic and legally certain in terms of competition. Time is pressing to develop Europe into a homogenous digital continent. It will then be highly attractive even for courageous founders in Europe and other regions to establish their new companies somewhere between Sweden and Cyprus and to expand from here.

The competitiveness of Europe also means that its institutions must be digitally up-to-date. The states with their authorities and organisations must also go through a certain digital transformation, setting digital examples, adjusting their own processes to the new digital requirements, acquiring the requisite digital expertise as well as developing reasonable and practicable control mechanisms and routines, for data protection for example. The state structures must be adjusted to the new worlds of businesses and general public.

The bottom line is that the central challenge for the transformation of the economy and society in Germany is to provide all businesses and the general public with equal opportunities of participation, to create fair conditions in competition, to make private and state stakeholders sovereign players in the digital world and to create a broad acceptance for digital platforms.

The path towards a modern regulatory framework for digital platforms in Germany and Europe will not be without dispute because the social groups formulate contrary interests. Opportunities must be weighed against risks, contradictions overcome and opposites convincingly reconciled. At the end of the process we will also need to make value-based decisions.



3.

What we will do:
Our digital policy agenda



3.

What we will do: Our digital policy agenda

We can achieve inclusive growth and a prosperous Europe by a digitally transformed economy with a strong industrial base and a digitally sovereign democratic society. Our agenda is not only focused on Germany. We must realise the European Digital Single Market in a social European Union.

A modern regulatory framework must promote fair competition at all levels. It must provide incentives for a trend-setting data economy and widespread gigabit-capable digital infrastructures. Everyone must be able to participate in growth and be empowered to democratically handle the innovative technologies. And finally, state institutions must be able to competently go about their work in a digital and networked world.

The European Commission presented its Digital Single Market Strategy in May 2015. European and national measures and concepts must go hand in hand. We support our partners in the European Union in the endeavour to complete the European Digital Single Market. We wish to continue this debate in the White Paper.

With this in mind, we propose specific measures and instruments which can advance Germany and Europe. Where debates are still in progress, we contribute our position. On this foundation we will take the initiative and advocate a sincere implementation in Germany and Europe.

With a regulatory patchwork, European businesses will remain far behind their possibilities in global competition. Precisely in the networked, digitalised world we need a harmonised legal framework for a single market of 500 million people. This legal framework should be implemented on the ground as far as possible by the or in the member states of the European Union (subsidiarity). Only decisions that have an effect on the entire single market should be made at the European Union level.

3.1 Promoting and shaping competition fairly

Contemporary competition and regulatory law is the foundation for a dynamic development of the markets in the digitalisation age. It monitors mergers effectively and actively protects against the abuse of market power. At the same time, we must maintain the incentives for innovation and the openness of the internet markets so that the economy and consumers alike may benefit from the opportunities offered by the growing internet economy.

We are guided by three principles in the shaping of a modern regulatory framework for digital platforms:

- **Ensure competition on a level playing field.** Fair rules must apply to all businesses operating on the same market – be this analogue or digital. They should be in an open competition which is conducive to innovation with their respective business models. Establishing fair competition also means stopping incompatible insular solutions, discrimination against consumers and competitors and “lock-in” practices which are damaging to competition. New rules are required in all areas in which the law has failed and the restriction or even shutting out of competition by market-dominant stakeholders is to be feared. Our guiding principle of competition on a level playing field is the core of a new digital competition order.
- **Create a future viable competitive framework.** The network effects of platforms mean that only one or two dominant players remain on many markets. In addition to banning abuse under cartel law, the possibility should also exist to take action against behaviour which is contrary to competition without market dominance necessarily having to be established. This should be regulated at a European level where at all possible. The aim is to provide an appropriate degree of transparency, non-discrimination, particularly for access (also to data) and inter-operability.

“Lock-in” practices

A “lock-in” effect occurs when it is no longer worthwhile for the customer to switch to a different provider or platform. Reasons for the lack of willingness to switch might be the cost of switching, penalties for the early termination of contracts, or the loss which arises because other providers no longer have as many social contacts or services available.

- **Achieve a fair and efficient taxation of digital players.** Many large non-European digital groups generating high income in Europe and using third party infrastructure shift their profits to low tax countries in an effort to reduce their overall tax burden. They therefore create an unfair competitive advantage over domestic businesses which pay their taxes and participate in funding public life.

3.1.1 General competition law

The special features of the data- and internet-based digital economy means that the statutory instruments in the Act against Restraints of Competition (GWB) are adjusted.

We will update the regulatory framework of competition policy through the ninth amendment of the Act against Restraints of Competition (GWB).

The ninth GWB amendment will adjust general competition law to the increasing digitalisation of the markets. This will mean that in future the cartel authorities can also take into consideration factors which have special importance in the digital environment, such as in the so-called multilateral markets, and digital platforms such as many search engines and comparison portals financed by advertising. The reform is primarily intended to take greater account of network effects and **economies of scale**, which may lead to market concentration as well as the access to data of relevance to competition and the behaviour of user groups. In this way, the cartel authorities will be able to better assess the market position of businesses as part of their abuse monitoring and merger monitoring tasks. Competition law therefore counteracts possible market dominance or market abuse.

It is also clarified that a market of relevance to cartel law can exist even if no money flows between the parties directly involved, as is the case with many internet-based offers for private users: in the case of search engines, comparison portals, information services or entertainment media.

Economies of scale

(Rising) economies of scale in production generate relative cost advantages for large companies compared with small ones. This fosters market concentration and the formation of monopolies.

The amendment extends the scope of merger monitoring by the Federal Cartel Agency so that in future the market potential and the economic significance of target companies will also be considered. According to the draft, mergers are also to be subject to merger supervision in cases in which the acquired business records sales of less than five million euros in Germany but where the value of the counter performance (usually the purchase price) is over 400 million euros. On the basis of this regulation the Federal Cartel Agency can then investigate those mergers in which large established businesses wish to establish or extend their market dominance by taking over young and innovative businesses of high financial value.

The new GWB amendment contains important changes in areas of merger and abuse monitoring of market-dominant companies.

The opinions received in the consultation on the Green Paper and the scientific discussion confirm that protection against abusive behaviour by market-dominant platform operators or networks and a functioning merger control for the structural securing of markets open to innovation are guaranteed by the changes in the ninth GWB amendment. We have therefore created the foundation for competition conditions which ensure an equal starting point and fair opportunities to participate in economic life and in the value added process.

Our aim is to implement competition law as quickly as possible. Despite the complexity of the internet-based digital economy and precisely because of the dynamic changes, fast intervention of the cartel authorities and courts must be guaranteed to avoid disadvantages for market players and consumers alike. On the other hand, accelerating procedures may not undermine the principles of a democratic constitutional state.

We want to palpably accelerate procedures without restricting constitutional guarantees. To this end, we examine the elimination of competition restrictions, for example by statutory simplifications for the ordering of injunction measures.

“Telefónica Deutschland welcomes the ideas set out in the Green Paper on modernising competition law.” Telefónica

“A legal framework is needed which quickly safeguards fair competition for all of the companies active on this [P2P platform] market.”

German Hotel Association

Using injunction measures, authorities can (provisionally) eliminate the effect of competition restrictions before the investigation proceedings have been completed. They serve to avoid impending detrimental damage from competition such as the widespread ousting of competitors by businesses dominating the market or the sealing of markets against competition from market access. Injunction measures would appear to be particularly practicable in those cases in which competition restrictions can be eliminated using simple means, for example by suspending specific contractual clauses or by ordering access to business installations or information. The statutory requirements placed on the ordering of injunction measures are currently high. In many procedures under cartel law, they are not used because they are associated with considerable extra work and high evidential requirements. They therefore make only a negligible contribution to accelerating procedures.

Statutory simplifications for the ordering of injunction measures by the authorities can therefore contribute to the faster elimination of competition violations. We also consider liability issues here as well as damage claims of concerned parties if any decisions made on the basis of a summary examination later prove to be incorrect.

A further instrument of eliminating competition restrictions whilst at the same time considering the dynamism of many digital markets is to restrict commitments. Businesses can offer commitments in cartel procedures so as to eliminate infringements and bring a procedure to a faster close. Precisely in dynamic markets, commitments may prove to be no longer necessary after a few years. At the same time, commitments in dynamic markets should be designed with enough flexibility to be adjusted to altering market situations by, for example, not only referring to a specific product but also to successor versions of the product if the market conditions have not altered decisively. The GWB already permits the restriction of the binding effect and an adequately flexible shaping of commitments even today. This provides an incentive to businesses to make commitments and facilitates a flexible use of this instrument also in dynamic markets.

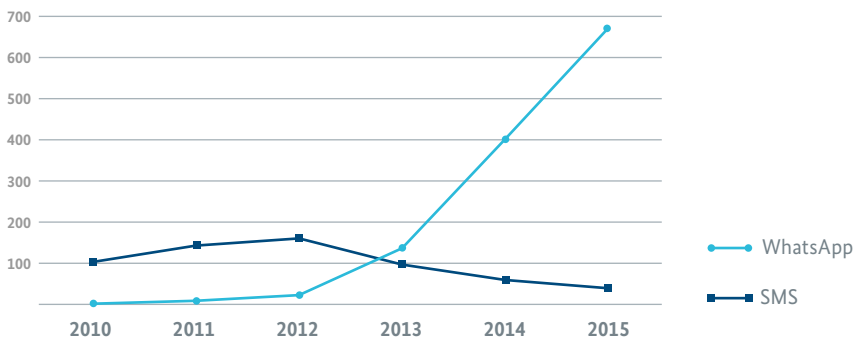
3.1.2 Level playing field for OTTs

Innovative services such as the so-called **OTT services** are ousting or substituting existing products and services in some cases. The Bundesnetzagentur, for example, established that as a result of the spread of smartphones SMS texts are increasingly being replaced by messaging apps.²³ The figures underline this trend: WhatsApp has almost one billion users and every day almost 700 million messages per day are sent in Germany; at the same time the traditional SMS texts are on the decline. In 2015 only around 40 million SMS texts were sent in Germany (compared with around 148 million in 2011).

OTT services

Unlike traditional telephone companies, internet platforms can offer their services and content without having a connection of their own to the customer. Nor are they reliant on specific access. Voice-over-IP telephony and videostreaming are available via every internet connection which is fast enough to cope. The technical term used for this is “over the top”, or OTT.

SMS and WhatsApp usage in mobile communications networks in Germany from 2010 to 2015 (million messages/day)



Source: Dialog Consult/VATM: 17. TK-Marktanalyse Deutschland 2015

This raises new questions on the legal framework. In principle, legal regulations may not lead to distortions in competition between market players if there is no objective reason for this.

²³ Bundesnetzagentur: 2015 annual report.

Horizontal competition

Horizontal competition exists if companies are direct competitors at the same market level, i.e. if they are active on the same product and geographical markets. The products and services are the same or very similar, and the user regards them as substitutes for each other.

“A general application of all other regulations to substitute OTT services (...) does not seem useful.”

Bundeskartellamt (Federal Cartel Office)

The question of a level playing field is raised particularly when traditional telecommunication services are in a **horizontal competitive** relationship to OTT services.

We want to ensure that messenger services and other OTT services are subject to the same rules of customer protection, data protection and security as the traditional telecommunication services with which they compete on the market. We therefore advocate a future-proof legal framework at a European level.

The separation between numbers-based and non-numbers-based services proposed by the European Commission in the current revision of the regulatory legal framework for electronic communications is not sufficient here, however. It is correct that a distinction must be made between the markets for telecommunication connections (network connections) on the one hand and telecommunication services which are provided in this network, on the other but the proposed rigid definitions would not appear to be suitable to meet the possible challenges presented by a far stronger shift towards non numbers-based services.

We advocate flexible regulations which facilitate adjustments to developments moving in the wrong direction and examination of individual cases. We therefore propose a system that provides for a binding supervisory procedure and, where necessary, also permits the consideration of future services which are unknown today.

This could also mean, for example, that new standards tailored to the specific aspects of OTT telecommunication services, such as transparency requirements to protect end-users, should be included in the legal framework. For the area of data protection in electronic communications, the proposal made by the European Commission for a European E-Privacy Regulation already pursues an approach that permits the incorporation of OTT communication services.

We support the EU Commission’s proposal to subject OTT communication services, such as messenger services, to the regimen of European data protection by way of the E-Privacy Regulation.

Messenger services located outside the European Union do not necessarily observe European regulations at the current time. The WhatsApp service, which leads the German market for messenger apps with a share of 63 per cent,²⁴ explicitly even rules this out in its terms and conditions of business. Anyone using WhatsApp today subjects himself to the terms of use according to which he approves the transfer of all of his data to the U.S. and its subjection to Californian law. This practice will no longer be possible in future if the E-Privacy Regulation is implemented. Anyone offering his services to end users in the European Union will then be governed by the Regulation and must also have a representative in the European Union. Forced consent will then no longer come into consideration. Infringements can be very expensive for businesses. According to the European Commission's proposal, they are to be punishable by fines of up to two per cent of the total annual sales achieved by a company in the previous business year.


3.1.3 Dual, proactive competition law

The markets must be monitored systematically to ensure that new trends on the dynamic markets which may be problematical to competition are recognised quickly and that the competition rules are observed in full.

Firstly, a regulatory authority must have an overview of the market players. Secondly, the regulatory authorities must receive information from businesses with a reporting obligation so as to be able to assess market developments based on the regulatory objectives. For example, it must be possible for the authorities to request information from OTT providers which is necessary for the compliance with statutory obligations. In this way, the first robust figures regarding these OTT communication service providers can be obtained and consideration can be given to the impact of their services on the markets in the market analysis procedure.

We will place regulatory authorities in a position to fully observe and assess the market developments. For this purpose, we will equip the regulatory authorities with the requisite powers and staffing resources.

²⁴ Bitkom, <http://bit.ly/2mZKQyl> (downloaded on 15 March 2017).



The special economic characteristics of bilateral or multilateral platform markets present the competition authorities with new challenges. Greater risks both to functioning competition and also to consumer protection arise from indirect network effects and the demand-side economies of scale which may be the cause of temporary monopolies on markets with network effects. Therefore, we will pursue new regulatory approaches alongside the tried and tested competition law.

We advocate dual, pro-active competition law for digital platforms. Alongside the reactive general competition law, this includes a more competent and more active systematic monitoring of the markets.

“Market surveillance must (...) safeguard non-discriminatory access to and use of online platforms for SMEs in the field of OTT-2 services.”

Händlerbund (e-commerce association)

This dual, pro-active regulatory approach combines known elements of competition law with systematic market monitoring and robust official intervention powers in cases of recurrent behaviour of significant market players which may jeopardise competition. The aim is to institutionalise an “early warning system” and therefore to counter the special risks presented by digital platforms under competition and consumer law. Against the background of rapid digitalisation, an optimised system of market observation is required which includes the entire digital value added chain at the content, services and application level.

On the basis of comprehensive market data, we create official structures (see Chapter 3.5) which facilitate the proactive support of the further development of the market both in terms of competition and consumer law and, where necessary, intervention and adjustment.

At the proposal of consumers, competitors or ex-officio abusive behaviour of relevant platforms must be investigated as part of market studies at stipulated intervals. Proof of a market-dominant position is not a requirement for intervention.

Supervisory authorities can only keep up with the dynamism of the internet markets if fast intervention is ensured. Evident shortcomings in the enforcement of civil law instruments must be eliminated.

The tried and tested system of the individual enforcement of civil law rights in the area of unfair competition and therefore at the same time for provisions in the Civil Code via the shaping of obligations by general terms and conditions of business is to be continued. It must be remembered, however, that shortcomings in enforcement are worsening in the digital world. Innovative and fast-paced business models offered to millions of consumers via the internet or platforms are characteristic of the digital service market. Shortcomings are shown particularly in those cases in which the damage caused to individual consumers is small but is substantial in terms of the injured parties overall. The protection gaps permit dubious and unlawful companies to obtain advantages on the market not only to the detriment of consumers but also to the detriment of their competitors. An improved enforcement of consumer protection laws therefore also enhances the competitiveness of honest businesses.

In those cases in which there is a public interest (“more than an individual case”), we will therefore equip an authority with market supervisory powers and the requisite competence to directly sanction infringements of the Act against Unfair Competition (UWG) and the law on terms and conditions of business.

3.1.4 International tax competition

Fair competition between digital platforms in global digital markets includes not least fairness with respect to the fiscal treatment of digital business models.

International tax dumping competition must be prevented.

The OECD Action Plan on fair international tax competition is a good start. We firmly support the strict application of national state-aids rules against special tax deals, as e.g. in the case of Apple, and against selective preferential treatment for specific companies. In addition, and precisely with the view to digital companies, we advocate minimum harmonisation in Europe in corporate taxation, in particular a Europe-wide uniform determination of profit for corporations which also provides for an ongoing profit and loss offset across all European member states. This is why we also explicitly support the CCCTB Project (Common Consolidated Corporate Tax Base) of the European Commission (following the original legislative proposal of 16 March 2011, the European Commission has now made a new start with a revised proposal).

3.2 Creating a modern data economy

An innovative, data-centred economy with a strong industrial base is the European model to secure prosperity. We realise this not only by an amended competition law and adjustment of the telecommunication regulation. A modern data economy also needs a clear regulatory framework for handling data.

We are guided by the following principles in the creation and securing of a modern data economy:

- **Increase legal certainty in the use of data.** Data-based value added is dependent on the existence of legal certainty. This applies in particular to data which will soon be generated mechanically to an increasing extent such as in the mobility sector or in Industrie-4.0 applications.
- **Establish data sovereignty as a guiding concept in data protection.** The principle of data sovereignty places the informational self-determination of the individual above the use of “his” data and at the same time facilitates the social benefit of stronger data analysis. This is because only educated users and a high degree of trust in the protection of personal data will create the foundation for a sustainably successful digital economy.

3.2.1 Free flow of data and rights to use data

We do not wish to reject digital platforms. Innovative digital platforms must also be able to grow quickly in Europe.

We want to facilitate a free flow of data in Europe.

We therefore support the European Commission initiative on the free flow of data.

A modern data economy requires a “data room” in the Digital Single Market which is as uniform as possible and guarantees data protection and data security. Users should have a choice which is as free as possible between available digital services. The providers of digital services should be able to offer their services without unnecessary impediments also in other Member States of the European Union and open up new markets. Digital platforms in particular are dependent on fast growth due to the network effects.



We want a clear legal framework for the use of data.

“A clarification of the rules is urgently needed as to who has the main rights to use the collected data.”

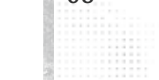
German Confederation of Skilled Crafts

More legal certainty in the use of data facilitates the development of digital platforms and data-based business models. The question as to whom the data “belong” and who may use them to which extent is one of the key issues in the digital economy. Data and algorithms are increasingly used in the economy as a foundation for value added. Access to and use of data are then essential questions. The protection of personal data is an important element here. But in view of the growing importance of networked “smart” machines, data without personal reference are also becoming increasingly important. Three ideas are currently paramount in the discussion: the creation or strengthening of statutory exclusivity rights to data (“ownership of data”), clarification of rights to data through contracts and strengthening of access rights to data.

The European Commission addresses these issues in its communication entitled “Building a European Data Economy” of 10 January 2017. We will be contributing our positions to the consultation process which has been launched and will advocate that there should be legal security through contracts which clarify the right to use data between concerned parties and that at the same time no restrictions to the access to data arise which inhibit competition.

At a national level, a working group has been set up as part of Platform Industrie 4.0 to clarify legal framework conditions for Industrie 4.0. During the National IT Summit 2016, the working group presented a paper entitled “Industrie 4.0 – Wie das Recht Schritt hält” (Industrie 4.0 – how the law is keeping pace) with specific recommended action from the point of view of industry. The working group acts as an interface to industrial practice and will be continuing this important work.

During the consultations on the Green Paper, it became clear that many wish to have legal uncertainties eliminated, particularly regarding the protection of very sensitive data, and above all to strengthen access to data. The applicable legal framework is, however, essentially future-proof.



Above all in the B2B area a clarification of the rights of use based on contractual law has basically proven successful in the opinion of many people. Contractual agreements provide the requisite flexibility and openness to innovation in the face of rapid technological development. However, a regulatory framework is required which effectively prevents the abuse of market power also on the digital markets. The 9th amendment to the GWB is predominantly seen as a step in the right direction by the majority of those questioned.

We want to prevent “data monopolies” by rules on the fair access to data.

Access to data must be focussed on more than greater exclusivity in the use of data. Big Data applications, for example, which have potentially high benefit can be blocked by individual rights to data. It may become necessary here to remove the blockade. To this end, the barriers to rights to data and therefore the access to data should be strengthened without diluting the protection of personal data. In addition to cartel law, sector-specific regulations may be a solution, as is the case in the access to vehicle data (for example, repair and servicing information).

Digital platforms are inconceivable without creative content. Conversely, they play an important role in the spread of creative content. The interests between the providers of digital platforms and the culturally and creatively minded must therefore be balanced out.

The creatively minded must be able to live from their work in an increasingly digitalised world whilst the assertion of their rights must be strengthened.

A further concretisation of the “notice and action” procedure will help the culturally and creatively minded to assert their rights quickly and effectively in the digital world. At the same time, rules must be found at a European level which secure fair pay for the culturally and creatively minded without endangering existing digital business models.

“It should be ensured that potential operators of innovative business models have equal access rights to the requisite data.”

German Federation for
Motor Trades and Repairs



3.2.2 General Data Protection Regulation

“Third-party access to personal data should be prohibited entirely in certain contexts.”

German Association for Information Technology, Telecommunications and New Media

The European General Data Protection Regulation came into force on 25 May 2016 and will be directly applied as from May 2018. It is the centre of the regulatory framework for a modern data economy, creating and specifying a number of instruments to strengthen the data sovereignty of the individual with respect to personal data. As already described in the Green Paper, this includes the right to data portability, the right to be forgotten and incentives to anonymise and pseudonymise data.

These instruments stand alongside the consent under data protection law which continues to assume an important role in using digital services. The more informed and the more transparent the foundation for granting the consent is, the better this will be for data protection. New forms of simplified and more transparent information, such as symbols, should be supported.

We want the rapid and uniform implementation of the General Data Protection Regulation throughout Europe.

“The data protection authorities need more staff and funding”. German Trade Union Federation

The consultation and the discussions in the workshop “Individual data sovereignty in the digital economy” have shown, however, that even with the best possible information and transparency there continues to be a risk of overwhelming the individual. Developments must therefore continue to be observed attentively and practical solutions developed which enable the individual to maintain sovereignty over his data.



3.2.3 Seals and certificates

A part of the solution could be seals and certificates which create legal certainty and guidance. Great progress has therefore been made in that the General Data Protection Regulation provides for a legal framework for uniform certification procedures throughout Europe in the area of data protection.

Precisely in the Big Data area the procedures of pseudonymisation and anonymisation mentioned above are also suitable to match the interests of the economy in the use of data with the right of users to privacy. The General Data Protection Regulation also recognises this: for example, further commercial processing of data can be admissible particularly if the data are anonymised or pseudonymised.

Further innovative instruments are “privacy by design and by default”. During the consultation a number of stakeholders also advocated full guidelines and standards to create clarity and legal certainty.

We support the development and dissemination of seals to create transparency using the Trusted Cloud label and the Trusted Cloud competence network.

For this purpose, the Trusted Cloud data protection profile for Cloud services, for example, has been developed as the test standard for data protection certification under the Federal Data Protection Act (BDSG). It reflects the statutory requirements placed on contract data processing in a test standard, and therefore supplements existing data protection quality seals.

“The possibility of creating transparency via audits/seals would be a practical way forward.”

German Chemical Industry Association



All these instruments of the General Data Protection Regulation are designed to create an appropriate balance between the justified interest of industry and the data sovereignty of the individual. From the time the Regulation comes into force in May 2018 it will be important to put this balance of interests intended by the Regulation legislator into practice. A uniform interpretation of the law throughout Europe will play a central role here. The coherence procedure provided for in the General Data Protection Regulation which provides for cooperation of independent data protection authorities in cross-border case constellations is an important element in this context. It will contribute to keeping legal uncertainties small and countering a renewed splintering of the law as a result of different interpretations in the member states.

3.2.4 Trust Services Act

The eIDAS Regulation (Regulation no. 910/2014/EU) is aimed at making business transactions and E-government simpler and securer for the general public, businesses and authorities throughout the EU. It regulates uniform requirements to be placed on so-called electronic trust services (electronic signatures, seals, time stamps, delivery services and website authentication).

“The German legislature needs to support these efforts and to review the relevant pieces of legislation to see if the electronic seal can be used.”

Association of German Chambers
of Commerce and Industry

On the basis of this Regulation we have developed a draft for a Trust Services Act (VDG), which is intended to supplement or further detail the Regulation where necessary so as to make the application of the general eIDAS Regulation easier for trust services providers and users and therefore to create legal certainty.

What is more, administrative law, civil and procedural law must be open to the new electronic trust services. We are therefore advocating a broader anchorage of the electronic seal and effective electronic delivery services. The legislator must stipulate application cases and legal effects of these electronic trust services. This is because they can relieve business processes in companies and authorities of financial and administrative burdens.

To further the Digital Single Market we need more uniform standards for trust services at the level of the European Union. Only in this way will a real level playing field arise also on the market for electronic trust services.

We will implement a Trust Services Act and push ahead with the application of the electronic seal.

Numerous transactions and administrative services can already be conducted online today. Where, however, an identification of the persons involved is required, media breaks due to the need to submit an identification document, for example, cannot be avoided in many cases. The eIDAS Regulation also provides instruments here and has given a distinct impetus to the ever larger market of identity services.

We want user friendly and at the same secure methods for online identification. We therefore want to promote the development of safer and more trustworthy “digital identities”.

This also means that numerous laws which provide for the identification of people must be further developed. Consumers are to be able to use innovative and media-break-free methods and trust in the security of identification.



“Dominant search engines must not give systematic preference to their own services.”

Federation of German
Consumer Organisations

3.2.5. Transparency rules

Algorithm-based platforms form not only the basis of successful digital business models but are also influencing our society to an increasing extent. For the acceptance of digital platforms and also for enlightened consumers it is important that the fundamental business model of a platform is transparent.

We advocate fundamental transparency obligations for digital platforms, for example for search engines, review and comparison portals, at a European level and reject member states going it alone.

“Tougher transparency requirements are neither appropriate nor useful.”

Scout 24

Users should be able to understand how the algorithm works. We therefore advocate basic transparency and information requirements for digital platforms under consideration of company and business secrets. At the same time before introducing any obligations, we will very carefully check any associated burdens which could prove to be a disadvantage to competition or a barrier to market access, precisely for young and innovative companies.

There is a need for greater transparency in the business field of digital platforms in many respects, for example the criteria according to which rankings come about, how a decision is made with respect to access to and remaining on the platform, whether own content or content of third parties with which the providers of the platform have a business relationship is given preference, whether a sponsored search and recommended results must be marked, whether content of an ideological, religious or political motivation is preferred, subordinated or presented at all.

We want users to be informed comprehensively, clearly and understandably about the circumstances and in a manner which is “smartly” adjusted to the digital world.

We want to enable consumers to make an informed decision on the use of digital services. We promote and call for the use of “one-pagers” precisely for digital platforms.



The “one-pager” is a compact digital information sheet, the aim of which is to provide information on the relevant performance and contractual content in a nutshell. Information on data processing in the case of digital offers is prepared such that consumers are presented quickly, simply and fully with all key information on data processing by way of supplement to the formal data protection declaration.

One necessary area of use for the one-pager concerns the topic of “data by way of counter performance”, for example. It is doubtful whether users are aware that alleged “free” services “monetarise” their personal data. Even if platform providers do not request any money for their services, they do not provide their services free of charge. Through the commercial use of the personal data of the consumers, the data are a functional equivalent to a charge. Here, therefore, a cross subsidisation of one platform site by another is typical for digital platforms. Users should be informed about this commercial character and should in principle enjoy a level of protection comparable to that for commercial services which make a charge. In this case, the one-pager used as part of a self- and co-regulatory system is a sensible alternative to purely state regulation.

The European Commission has also recognised that there is a greater need for transparency in digital platforms. We therefore welcome further transparency measures of the Commission and expect specific proposals by the summer of 2017. However, the best rules are worthless if they cannot be enforced. It is therefore important here too for this dynamic market to be permanently monitored by a competent authority and to react to any possible shortcomings at an early date by way of systematic and successful enforcement of the law.

“The overriding principle should be that (...) the price components which result in price formation must be disclosed, in transactions both with consumers and with companies.”

The German Business Travel Association

“Voluntary and co-regulatory systems can represent an alternative to state regulation, particularly in the highly dynamic field of the digital economy.”

Bundeskartellamt

3.2.6 Self-learning algorithms

Self-learning algorithms and automated decisions will play an important role in a modern data economy. Their use represents great potential for innovation and efficiency and should be supported. At the same time the transparency of decisions may drop and new risks arise, for example in the case of ethically relevant decisions. The new General Data Protection Regulation has already provided a framework for the use of automated decisions in the processing of personal data (Article 22). The proposal for a Charter of Basic Digital Rights of the European Union at the end of 2016 also correctly emphasised the importance of the applicability and assertion of basic rights with respect to automated procedures in decision-making processes.

We want to ensure that the compliance with the provisions of applicable law – including basic rights, data protection law, consumer protection law and anti-discrimination law, is a matter of course in the deployment of self-learning algorithms and automated decisions.

With this in mind, we advocate a disclosure of their use and in relevant cases self-commitments to observe ethical standards by the companies concerned in order to increase the transparency and verifiability when automated decision-making procedures are used.

3.2.7 Data portability

“If (...) lock-in effects occur due to a lack of interoperability (...), it is necessary to review any need for regulation on a case-by-case basis.” Telefónica

The portability of data is a decisive factor for users to enable them to actually make use of the services they want in the competition between the providers of the services. Article 20 of the General Data Protection Regulation which will come into force in May 2018 therefore prescribes the portability of personal data. The actual efficacy of these provisions must be tested in practice. If the desired effects are not achieved, i.e. if not many users take advantage of their right to data portability, thought must be given to an adjustment at a statutory level.

We want the data portability of personal data to be effectively asserted.

We call upon the European Union to check the efficacy and submit a report two years after the Regulation on data portability comes into force.

If the General Data Protection Regulation does not prove to be effective in practice, we will submit proposals for further measures.

Some industrial federations are calling for a general portability obligation, also for non-personal data. Some of the examples given are the reviews, the purchase history and photos stored in the Cloud. However, it is doubtful whether these examples can easily be assigned to the definition of non-personal data. The degree of personalisation of the data will be important in every individual case. For example, it makes a difference whether seller reviews submitted online disclose an author directly or indirectly via a user name and therefore permit assignment of individual purchases to a natural person or whether the same merely anonymised seller reviews are used to analyse complaints and an improvement in service.

Whether and the extent to which portability obligations are to be legislated for non-personal data must be further examined in view of the applicability of issues of competition law or copyright. Portability obligations can serve to promote competition. On the other hand, data are frequently the main asset for start-ups and young companies of the digital economy. At all events, it must be ensured that the legal framework is uniform throughout Europe. We therefore welcome the fact that the European Commission has picked up on and wishes to examine this aspect in its “Building a European Data Economy” Communication of January 2017.

3.2.8 Law on general terms and conditions of business

“We need (...) more flexibility in what is allowed in contracts. Here, the German legislation on general terms and conditions is particularly negative (...) in the international context.”

German Electrical and Electronic
Manufacturers' Association

Many people take a critical view of the rigid legal framework of German civil law in the use of general terms and conditions of business. Firstly, by European comparison, the German law in this area is too strict with respect to contracts between businesses. In the B2B area German law is frequently circumvented by choosing a foreign legal system to interpret a contract. This is because the German law on terms and conditions of business is frequently viewed to be uncertain by users because the efficacy of the data use provisions ultimately depends on the uncertain clarification by the courts. New digital business models also create new types of contracts. In cases such as these, the traditional types of contract will no longer serve as an adequate model for general terms and conditions of business in the B2B area. Above all, the consideration of innovative business models when examining clauses for inappropriateness would make the monitoring of the general terms and conditions of business in the B2B area “less strict”. Conversely, the monitoring of clauses which permit only one party to use data should be regulated more specifically in order to prevent the abuse of power imbalances in particular.

We want the law on the general terms and conditions of business to be modernised with a view to data economy. For this purpose, innovative business models must be given greater consideration when examining whether the clauses in general terms and conditions of business between companies are appropriate. The rules must also be further specified with respect to data use clauses.

At the same time we want to strengthen consumer rights and shape the monitoring of the general terms and conditions of business by way of supplement to data protection.

In contracts between businesses and consumers (B2C) data protection for consumers may not be undermined by the use of clauses on general terms and conditions of business which would reduce consumer standards.

It is sensible here to shape the monitoring of the general terms and conditions of business parallel to data protection.

3.2.9 Experimentation rooms

The Digital Strategy 2025 also contains proposals for regulatory experimentation rooms, or real laboratories, permitting innovations to be tested in interaction with regulatory instruments and under real market conditions within a time limited and possibly spatially restricted, altered legal framework (“experimentation clauses”). A current example is a test field for automated and networked driving near Karlsruhe.

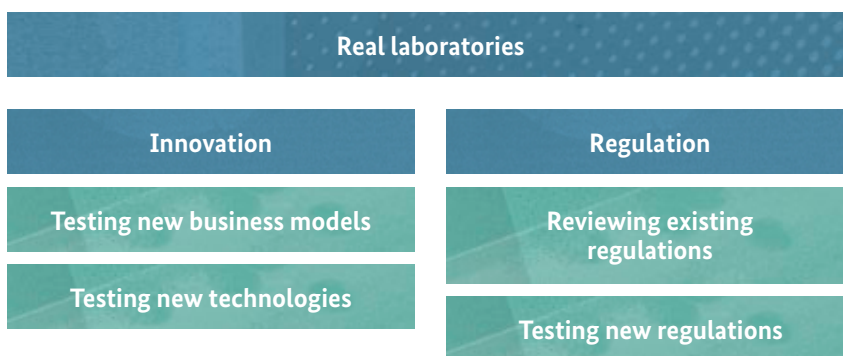
Real laboratories are relevant particularly in the context of digital platforms because precisely such non-technical innovations can frequently only be tested in the “market”.

We want to set up experimentation rooms for innovative digital networked business models.

“Consideration should be given to the use of ‘experimental clauses’ for limited periods and areas.”

Federation of German Industries

Real laboratories at the interface of innovation and regulation




Source: BMWi, in-house design

The health industry is particularly suitable here in view of even higher digitalisation potential. The E-Health Act is already a first step in the direction towards successful digitalisation of the industry. However, many new technologies and creative innovations continue to founder on existing regulations. Young enterprises and start-ups in particular have a hard job of obtaining access to the so-called **First Health Market** and therefore an assumption of costs by the statutory health insurance funds. We are therefore talking to different representatives from the industry and are currently sounding out the possibilities for real laboratories in the health sector.

First Health Market

This is the area of healthcare covered by statutory health insurance fund, private health insurance, and long-term care insurance.



In the area of intercompany job training for the trades (ÜLU) we initiated a real laboratory in which courses on “digital topics” (e.g. “smart home”) are developed, taught digitally in part and tested at different locations as a pilot for the electrical trade.

We want to further the idea of real laboratories as part of a more strongly adaptive regulation.

The possibilities and shaping of real laboratories greatly depend on the respective technologies and business models. Only real laboratories offer the requisite flexibility. We wish to take this into greater consideration. During a workshop in December 2016 we discussed the complex issues of economic, legal and administrative leeway with real laboratories with experts from the scientific community and practical life. The BMWi will now be delving deeper into these aspects in dialogue with the scientific community, businesses and social stakeholders.

In particular, we will be analysing the pertinent specialised acts as part of the dialogue on the regulatory framework for the digital economy in the first half of 2017 and will be elaborating proposed actions for statutory experimentation and opening clauses.

3.3 **Setting up gigabit-capable digital infrastructures across the nation**

In accordance with our decentralised economic structure, efficient internet infrastructures are required everywhere in Germany because our reputable world market leaders and the “hidden champions”, i. e. from the SME sector, usually owner-managed top companies in the global economy as well as the innovative start-ups, also operate beyond the well networked centres of conurbation. This uniqueness must also be strengthened in the digital age. Consumers will ultimately also benefit from the development of high speed networks across the nation because they will be able to make use of data-intensive digital offers such as streaming services in good quality and with a high level of reliability.

Experts have submitted a forecast for the future development: according to the “E-Intensity Ranking”²⁵ Germany is expected to fall further behind the Asian countries who will lead the global digitalisation process (China, South Korea, Singapore and Taiwan) by 2025.²⁶ The following table provides an overview of the countries ranking one to ten and the position of Germany and China in the year of comparison of 2016 and the expected rankings in 2025. Whilst Germany currently leads China at position 18, we are threatened with a worsening of the ranking in only a few years to position 24.

E-intensity ranking


Rank	2016	2025
1	South Korea	China
2	UK	South Korea
3	Norway	UK
4	Denmark	Singapore
5	The Netherlands	U.S.
6	Finland	Taiwan
7	Japan	Finland
8	U.S.	United Arab Emirates
9	Sweden	Estonia
10	Iceland	The Netherlands
...
18	Germany	...
...
20	China	...
...
24	...	Germany

Source: Boston Consulting Group 2016 a

For all of us – businesses and private individuals alike – this would be fatal because the prospering economy and the prosperity of people will increasingly depend on the efficiency of the data networks in particular.

²⁵ This ranking of the Boston Consulting Group makes a global country ranking according to the degree of economic, social and state networking with the internet. Three indicators are decisive here: 1. Facilitation (mobile and hardwired internet, overall band width), 2. Expenditure (E and M commerce, online advertising) and 3. Commitment of industry (B2B, B2C, effect of information and communication technology on new goods and services), consumers (internet use, online media and social networks) and state (E government, E education).

²⁶ Boston Consulting Group 2016 a.



We need an internationally competitive digital infrastructure for Industrie 4.0, real time transmission, smooth E commerce, facilitation of new business models and the maintenance of our economic efficiency also in rural areas in particular. Digitalisation is in full swing and may not be hampered by broadband networks which are oriented to the requirements of today's application scenarios.

We announced in the Digital Strategy 2025 that future-proof broadband networks would be developed nationally within ten years. To ensure that this happens, our broadband policy must be re-aligned with the following principles:


- **Provide investment incentives – modernise telecommunication law:** Telecommunication law must be aligned more than ever before with the expansion of gigabit networks. This applies both to the target (gigabit target) and the instrument level (stronger consideration of investment incentives as part of regulation). Competition-oriented approaches continue to play a central role but so do those which make use of cost-cutting potential and support cooperations of market players. Regulation must be adapted to the market development, developed with sufficient differentiation and restricted to the requisite minimum. Finally, it must leave adequate profit margins in the market.

- **Ensure provider diversity and technology mix:** Competition is the most important driver for the broadband expansion. Only through the competition between many providers to satisfy consumer demands will increasingly better infrastructures and innovative services be guaranteed. We therefore advocate provider diversity and a technology mix. Only those gigabit networks will be suitable for the future with transmission rates of ≥ 1 Gbit/s in download/upload and short latency times. These requirements are satisfied by fibre optic connections (FttB/H) and by high performance hybrid broadband cable networks. An important complementary role is attributed to the next generation of mobile radio (5G). Bridge technologies such as vectoring (makes the internet faster using the existing copper network in Mbit/s range) are justified for a certain transitional period, but we believe it to be appropriate to rapidly move towards the world of gigabit-capable technologies.
- **Optimise funding and enter into public private partnerships:** One focus of broadband funding must be placed on gigabit-capable technologies in rural areas so that the several hundred of thousands SMEs and also socio-economically important facilities (schools, doctor's practices, administration etc.) in particular may participate in digitalisation. It will be necessary to make marked increases in funding here. Private investors must be involved because only in this way is it possible to obtain the billions of euros required for the national expansion of gigabit networks. Two years ago, a high ranking group of experts (the so-called "Fratzscher Commission") recommended that the Public Private Partnerships (PPP) be revived for the transport sector. Models such as these are also a good solution to expanding digital infrastructures; such partnerships must be promoted.

"Focus on gigabit infrastructures (FttH/B, coax networks and 5G) rather than interim solutions like FttC." Vodafone

"Fratzscher Commission"

The former Federal Minister for Economic Affairs and Energy, Sigmar Gabriel, convened a high-level commission of experts at the end of August 2014 to boost investment in Germany. The commission's members were business and trade union representatives, heads of associations and representatives of academia. The commission, which was named after its chair, Professor Marcel Fratzscher, Ph. D., presented its specific proposals in a summary report on 21 April 2015.



This fundamental realignment of our broadband policy must be accompanied by specific measures. In our Digital Strategy 2025 we proposed a catalogue of specific measures for the rapid and nationwide expansion of gigabit networks.

Digital Strategy 2025 – Measures for a gigabit network up to 2025

- A future investment fund for gigabit networks in the rural areas with a fund volume of around 10 billion euros.
- Optimisation of the synergy offered by funding programmes, especially by properly linking the federal broadband funding guidelines with the joint task Improving Regional Economic Structures (Verbesserung der regionalen Wirtschaftsstruktur: GRW) relating to broadband connections for manufacturing and business centres.
- A “gigabit round table” with all parties concerned.
- The step-by-step development of the “last mile” with cheap and quickly scalable gigabit networks.
- Facilitating the planning and construction of gigabit networks.
- It is imperative that Europe takes a leading role in the implementation of the next generation of mobile radio networks (5G).
- Investment and innovation must be taken into consideration in legislation and regulatory frameworks.
- Bolstering current investment activity in rural areas, for example by providing better local information regarding the benefits of digitalisation.

3.3.1 Support and promotion of the expansion of gigabit networks

In recent months we have further developed these measures in intensive dialogue with the industry (including the first “gigabit networks round table” on 27 October 2016) and started their implementation.

The expansion of gigabit networks must be promoted and supported by the state.

Huge additional private investment will be necessary for this. Funding of around 10 billion euros will also be necessary for the period between 2018 and 2025. A part of this funding will be covered by the “Zukunftsinvestitionsfond Digitalisierung” (Future investment fund for digitalisation) to be set up for which budget surpluses are to be used which currently result from the combination of interest savings, the higher dynamism of tax income and reserves. The budgetary surpluses should be transferred to a special asset fund and earmarked here for digital investments for a period of up to 2025 at least.

Substantial public and private investments continue to be required in the areas of education and training, transport, broadband expansion and digitalisation of businesses and public administrations in particular. It is precisely in these areas that a real digitalisation leap is possible with great innovative and growth effects. Public and private projects in these areas are to be funded from the “Future investment fund for digitalisation”.

We need innovative demand-side funding instruments.

One viable solution is “gigabit vouchers”. These are vouchers in the form of time-restricted subsidies for gigabit connections in combination with innovative applications. This approach should be aimed at SMEs and socio-economically important facilities (schools, doctor’s practices, administrations etc.) in rural and structurally weak areas in order to support the intelligent networking of their operating and administrative processes. Vouchers of this type also indirectly promote the market-driven expansion of the network, opening up opportunities for potentially unbureaucratic and rapidly available gigabit connections.



We must support interested municipalities in all aspects of digitalisation at the infrastructure level in the form of specialised central advice centres.

“More private-sector investment should be mobilised for rural areas.”

Association of German Chambers of Commerce and Industry

A broadband expansion project is frequently overwhelming for the local political and administrative players because they are required to address the topic for the first time. A future digital agency could take some pressure from the municipalities by, for example, providing advice in the run-up to broadband expansion planning, researching available funding options and framework conditions, ensuring uniform and faster processes in dealings with authorities and conducting market investigation procedures for grant applications on behalf of the municipalities.

We must set up a virtual network of fragmented local gigabit infrastructures.

Broadband expansion is essentially a local civil engineering activity in the subscriber network which also leads to many smaller municipal networks in rural areas. In view of their small size, these networks are unattractive to internationally operating telecommunication companies both as consumers of network access products and as providers of telecommunication services. This also applies in part to content providers. With a virtual linking of these networks (possibly with the involvement of the federal government) homogenous wholesale services can increasingly be offered in Germany from a centralised point. This will improve capacity utilisation and indirectly the funding of local gigabit networks in rural areas, thereby benefitting private and municipal commitment to future-proof infrastructures. Participation in the network is to be obligatory for all publicly funded projects and voluntary in other cases. A company could be established for this purpose to accompany the standardisation of technical interfaces, implement them in a central platform and then operate the virtual network. This will not affect the ownership relationships or other use options of the participating local networks.




3.3.2 Investment-oriented telecommunication regulation

In addition to supporting and funding the expansion of gigabit networks, we need stronger investment incentives in the sector-specific regulation of the telecommunication markets. Regulation may only be imposed if and where necessary. Options for adjustments are to be identified at a European level and explicitly incorporated in our legal framework.

The time is favourable because on 14 September 2016 the European Commission presented its proposal to review the existing European regulatory framework for electronic communications. The Commission's proposals contain a number of good approaches: extension of the target system of regulation to include a gigabit objective, creation of suitable data foundations and an increase in investment incentives by way of a more investment and innovation friendly regulation (including symmetrical access regulation in certain cases, co-investment regulation, regulatory privileging of purely wholesale service providers).

We advocate that the expansion and use of gigabit networks is anchored in the European and national legal framework as a regulatory objective.

Telecommunications policy and therefore also regulation cannot be restricted to sector-specific competition policy. It is just as much infrastructure policy with which the availability and development of a high performance and internationally competitive digital infrastructure must be guaranteed. The regulation must also concentrate on the connectivity of all members of the public and businesses in the single market to a greater extent than has been the case so far. And finally, regulatory procedures need to be accelerated so that investment in new technologies can take place quickly and on legally sound basis. We shall therefore consider the use of statutes of repose.



We want to use the potential of the cooperative approaches to the expansion of gigabit networks.

“It would also be useful to differentiate access rights between network operators undertaking investments and service providers who only undertake marketing. Network operators all have similar investment conditions and a mutual interest in stable, long-term contractual relationships.” Deutsche Telekom

New gigabit networks are to be exempted from all upfront obligations if they are open to co-investments and access by co-investing competitors. If market players collaborate in order to advance the expansion of gigabit networks, then this should be rewarded. This is why we basically support the co-investment regulation proposed by the European Commission in its review. In Germany, co-investments according to the European model could be made particularly in rural areas because they spread the higher investment risk here over several shoulders: the high expansion costs for gigabit networks in rural areas are borne together and the probability of inefficient parallel network developments is reduced. This can enlarge the number of potentially profitable business models in rural areas.

These regulatory approaches will not suffice, however, to advance the expansion of gigabit networks – particularly in rural areas – to any great extent up to 2025. If the primacy of investment is to apply, further changes will be necessary. This is why in addition to the proposals developed by the European Commission we will be advocating that gigabit infrastructures are not subjected to regulation under certain circumstances.

The pioneering spirit in the expansion of gigabit networks should be rewarded from a regulatory perspective without impeding the development of self-supporting competition in the long term.

We advocate regulatory exemptions for gigabit networks beyond the case of co-investments. However, it must be ensured that the different market players have the same opportunities to invest in new gigabit networks. It will be necessary to improve the possibilities of accessing the existing infrastructure in order to create such a level playing field (e. g. access to empty conduits, physical structures).

If a regulation of new markets is unavoidable, adequate profit margins are essential to maintain incentives to invest.

We are opting for the replicability approach here, which on the one hand ensures that competitors receive access to new networks, whilst on the other enabling the regulated company to demand distinctly higher wholesale prices and therefore to achieve a higher return on its investment. This will accelerate the expansion of gigabit networks.

3.3.3 WiFi hotspots

We want more WiFi hotspots because they are an important component in a high performance broadband connection of mobile terminal devices such as smartphones or notebooks for many business models and application scenarios. And the mobile use of data is ever increasing. Our goal is to achieve an uncomplicated access to the internet for everyone where at all possible and everywhere possible. We will therefore relieve pressure on the mobile radio networks which use the scarce frequencies. We will therefore relieve pressure on the mobile radio networks which use the scarce frequencies. Firstly, the issue of liability for legal infringements of users of the WiFi hotspots must be clearly regulated because only if the operators of hotspots, such as shopping centres, hotels, cafés, museums and also authorities, have legal certainty will they provide their access to others. Secondly, it should be ensured that WiFi hotspots can be offered without passwords because our interest is in having as many citizens participate in the opportunities presented by digitalisation as possible. Otherwise, precisely those citizens could be prevented from using the public WiFi hotspots who have so far shown little interest in the digital opportunities. The corresponding provisions are to be found in the Telemedia Act.

*We want to amend the Telemedia Act so that legal certainty predominates for all WiFi providers also following the judgement of the European Court of Justice in the **McFadden case**.*

“In order to ensure that companies wishing to expand the system have the greatest possible incentives in the interest of an undistorted investment decision, an ex-post control in the form of a replicability approach could be used.”

Bundesnetzagentur

The McFadden case

On 15 September 2016, the European Court of Justice (ECJ) announced its ruling in Case C-484/14 *McFadden versus Sony Music*. It is based on a submission from Munich I District Court, which had sent the ECJ a total of nine questions for a preliminary ruling. This not least involved the question of whether WiFi providers could be fined for violations of the law by third parties, and how far the liability privilege of the E-Commerce Directive extends here.

WiFi liability

“WiFi liability”, or “secondary liability” refers to the responsibility for violations of interests such as (intellectual) property. The liability can rest with anyone who has contributed in an attributable way to the violation of the law, even if he is not the actual violator.

The court basically confirmed the **secondary liability** of commercial WiFi providers and clarified that password protection can be admissible with the users being required to register. It remains unclear whether the WiFi provider is obliged to register and encrypt and whether the judgement can be transferred to public institutions and private individuals. The following must be finally clarified with our regulations:


1. Secondary liability is to be abolished by law.
2. Network access providers do not bear any pre-court and out-of-court costs if the holders of rights take action against them in order to prevent users infringing the law (particularly no warning costs).
3. Authorities may not obligate WiFi providers to register users or to request the entry of a password or the closure of their hotspot. Under certain circumstances, courts may order the blocking of use of information if the repetition of infringements of the law can be prevented.

3.4 Securing a democratic digital culture

In platform markets infringements of the law impact many people and do not just refer to individual cases. In the interest of society and economy as a whole, supervisory authorities must be empowered to effectively enforce the law. This requires sound perception and analytical capacities and requires short regulatory reaction times as well as intensified international cooperation.

We believe the following principles to be important to strengthen a democratic digital culture:

- **Freedom and responsibility are interdependent.** We want basic rights to also freely develop in the internet. Digital platforms create forums for global interaction between individuals and therefore the development of fundamental freedoms. The free expression of opinion, the right to information and to informational self-determination are just a few of these freedoms. The operation of a platform is itself also an expression of freedom. However, freedom also goes hand in hand with responsibility. Freedom therefore meets its boundaries where it infringes rights of others. The benchmark is the existing legal order.
- **Differentiated approach for qualified decisions.** There is no room in the internet for hate speech and fake news that abuse our legal order. We do not want a pre-censure of opinions, but neither do we want discrimination of minorities due to their race, gender, age, religion or origin for example to be tolerated.
- **Cross-border approach.** The internet does not stop at country borders and the platform providers also operate in an international sphere. We therefore need solutions that are effective across borders.



It is important to objectivise the debate in which much has been confused so far. We must therefore distinguish between the different phenomena and find suitable solutions. Hate criminality as a form of expression of intolerance and as a means to socially exclude or defame minorities should be the subject of criminal investigations. The criminal investigation authorities must meet this challenge. Hate speech as a strong form of expression of an unpopular opinion must be tolerated but not without criticism. Possible measures against fake news must also be guided by the precious asset of freedom to express opinion. A sensitive approach is therefore required here.

We welcome the positive dynamics of the network community and advocate that these be selectively developed and strengthened by projects.

We also support the instrument of voluntary self-commitment of the platform operators.

Trusted flaggers, fact checks, active opposition and serious journalism are stronger than lies. With the help of resources from the Future Investment Fund for Digitalisation (see Chapter 3.3) we wish to selectively support the participation of the public in network policy discussions and therefore help to establish a democratic digital culture. There is to be a coordinated interaction between providers, users as well as broadcasters and the press not only so that hate speech and fake news can be identified and eliminated quickly, but also in order to achieve greater democratic legitimisation.

So as to promote the cross-border spread of technical measures, open-source offers are to be instigated and given financial support (e. g. from the Future Investment Fund for Digitalisation).

3.4.1 Strengthening of basic rights in the internet

Action must be taken against infringements of the law of all kinds in the internet just as steadfastly as in the analogue world. Criminally relevant behaviour in the internet, such as incitement to hate, defamation of confessions, religious communities and ethnic groups or slander and insult, must also be systematically pursued.


Providers must not become the long arm of the criminal investigations. The state basically has a duty to protect which it cannot transfer to private individuals for reasons of cost.

We reject a privatised enforcement of law in the case of criminal acts.

The separation of individual and state law enforcement is a tried and tested system. We advocate that the criminal prosecution authorities be better equipped and cooperate more.

There may be no legal vacuums in the internet. The increasing dissemination of hate messages in the internet, above all in the social networks such as Facebook, Youtube and Twitter, was reason for the Federal Ministry of Justice and Consumer Protection (BMJV) to establish a working group in 2015 which included operators of the networks and representatives of the civil society. The companies represented in the task force agreed to improve the handling of undesirable content by indicating its unlawfulness on their sites. The companies undertook to set up user-friendly mechanisms to report critical input and to examine the majority of reported input using a linguistically and legally versed team within 24 hours and to delete the input if it is unlawful.

The monitoring of the deletion practice of social networks subsequently conducted by jugendschutz.net showed, however, that the complaints of normal users about hate speech are still not being processed immediately. The complaints led to a deletion in 39 per cent of cases in Facebook and 1 per cent of cases in Twitter. These percentages are not yet satisfactory.



The monitoring by jugendschutz.net gives reason to doubt whether the self-commitment initiatives of the social networks are sufficient to prevent the unhampered dissemination of unlawful content on social platforms.

It is to be ensured by means of statutory compliance structures for social networks that user rights are improved in the internet.

Compliance rules

“Compliance” refers to the adherence to rules. In the case of companies, compliance refers not only to adherence to rules imposed by the state, but also adherence to non-statutory rules to which the company has voluntarily subjected itself.

The Federal Justice Ministry (BMJV) has drafted a “Network Enforcement Act”, introducing **compliance rules** to make the social networks process complaints about punishable criminal content more quickly. The law is intended to set standards for effective complaints management which guarantee that social networks must delete evidently punishable content 24 hours after receipt of a user complaint. By contrast, the social networks are not required to research punishable or unlawful content at their own initiative.

Accordingly, social networks are to be obliged to report every quarter-year on the handling of complaints about punishable content.

The wilful or negligent failure to comply with the reporting duty and the contravention of the duty to provide an effective complaints management system should constitute an administrative offence which is punishable by a fine.

These compliance rules serve not only to effectively suppress hate speech but also fake news if they satisfy the criminal elements of defamation, slander or disturbance to the public peace.

In addition, user-friendly mechanisms to report and eliminate criminal input in the social networks are to be established. They are to ensure that it is possible to help users more quickly whose basic rights have quite evidently been criminally violated by ensuring that criminal input is deleted more quickly.

We also want to eliminate legal loopholes and contradictions in law enforcement so that all violations can be pursued reliably.

*We therefore want to investigate whether new elements constituting crime must be defined so as to be better able to counter internet-based violations of the law (e.g. **cyberbullying**, identity theft in the internet).*

In the case of false assertion of facts or unjustified publications of private images or information (in particular violations of personal rights below the criminal threshold), we advocate that the injured party is given information on the identity of the perpetrator by the platform operator, as is general practice in cases of copyright infringement.

We also want to check whether a clear identification procedure can oblige the operators of public opinion forums to register their users.

Whilst they may then act anonymously on the platform, in the event of proven unlawful opinions, the platform would have to disclose the identity of the user to the authorities. Necessary liability restrictions for platform operators on the one hand and data protection regulations on the other may not hamper the effective prosecution of infringements of the law if it has been proven that the boundary of admissible expression of opinion has been exceeded.

The flying venue, whereby the plaintiff can choose the court before which the action is to be brought, leads to proliferation in cases with an internet reference and highly inconsistent court rulings. Instead, we will advocate specialised courts or specialised divisions at the regional courts in order to achieve faster reaction times and more consistent court rulings.

Cyberbullying

“Cyberbullying” means bullying via the internet or by SMS. The victims of the bullying are harassed verbally, exposed, tricked, or even attacked and intimidated.

3.4.2 European complaints system

Not only must the law enforcement authorities cooperate better on an international basis so as to be able to protect the basic rights of users more effectively. Platform operators creating virtually public spaces must also face up to their responsibility and observe the “rules of procedure”. As soon as they learn that a specific content on their platform is unlawful, they must take immediate action against it. However, it is difficult for many service providers to determine whether the reported content is actually unlawful and within which period it may need to be removed. To make matters worse, the platform operator may be liable for damages if it incorrectly classifies reported content as unlawful and removes it.

We will advocate to the European Commission that internet platforms introduce a uniform complaints system throughout Europe to which users can report unlawful content to the platform operator, so that the content can be examined for unlawfulness and then deleted where applicable.

We believe it to be necessary here for the Commission to further clarify the vague legal definitions and also make clear which voluntary measures may be taken by a platform operator without relinquishing its neutral role as intermediary. This is because this neutral role forms the foundation for the liability privilege set out in the E-Commerce Directive which has made platforms into an innovation driver of the digital society. This will lead to better results in the elimination of hate speech and fake news to the benefit of users and to strengthening the single European market.

In the interest of consumers we advocate that service providers domiciled outside Europe name a contact partner in the Member States at which their offer is directed. They should be in command of the respective national language. The work associated with these measures should not of course be disproportionate, i. e. particularly for start-ups and small and medium size enterprises.

Media competence is to be strengthened in the entire population as an overall social task.

Users should be able to distinguish between what is true and what is not and recognise untrustworthy sources. They should also know that and how they can report unlawful content and have it checked. Schools should not be the only place where the requisite skills are taught and the educational work strengthened. Rather, educational campaigns should reach all strata of society because the learning possibilities are huge, particularly for “digital immigrants”.

3.5 Digital state competence and institutional structure

An all-embracing digitalisation presents a great challenge for the economy, society and politics. In order to enable our institutions to deal with the dynamics and broad scope of digitisation, we need modern concepts for developing and implementing policies. Issues of data economy and the transformation of economic and social processes including specific competition, market and consumer issues must be addressed by competent public institutions which have the requisite resources.

During the consultation on the Green Paper broad support was given to strengthening observation, analysis and action capabilities. However, one controversial issue was whether a digital agency is required for this purpose.

We say that the establishment of a digital agency is a good idea to support the digitalisation process in the individual areas of politics and application, establish systematic and continuous market observation and therefore to facilitate rapid intervention by the competent authority, particularly in cases of competition or regulation infringements.

“In general, the priority should be placed on simplifying (...) the existing rules and not on creating additional (...) institutions.”

Federation of German Industries

3.5.1 Closing the competence gap

The phenomena of digitalisation and networking are penetrating different areas of economic and private life to an ever greater extent. They require a networked and comprehensive approach by a specialised government institution which in particular continuously observes and analyses digitalisation processes. This would enable sustainable support to be given to digitalisation.

Specific challenges have been met in the history of the Federal Republic of Germany by establishing public institutions. This was the case, for example, with the creation of the environmental agency for environmental policy, the federal agency for radiation protection for nuclear security and the agency of the Federal Commissioner for documents of the state security service of the former German Democratic Republic to address great challenges.

We want to establish a digital agency so as to close the digital policy gap at the interface between politics, economy and society through support and advice.

“It would appear useful to establish a digital agency as a think tank, which chiefly collects and processes expertise on internet and platform markets.” United Internet

As a centre of competence and think tank, it would selectively address the political, economic, social and legal discussion on a daily basis, comment on such and also provide expert input also at short notice. At the same time, it would be an effective intervention authority which could react at short notice to infringements of the law.

It closes a competence gap by in particular

- Developing overall concepts beyond departmental and competence borders
- Providing the general public and other stakeholders with a consistent and coherent public image of the digitalisation process
- Helping to advance common initiatives
- Contributing to the development and implementation of a consistent digitalisation policy beyond departmental borders within the federal government

- Preparing neutral and sound information and reports for political decision-making bodies, in particular the Deutsche Bundestag and the Bundesrat (e. g. a periodical digitalisation report), as well as
- Assuming new tasks in effective law enforcement and supporting existing institutions in their work.


More specific issues are to be focussed on here which arise from the frequently very dynamic discussion on topics such as network neutrality, sharing economy, Cloud computing, M2M (machine to machine), open data or platform neutrality and which are of high relevance to politics, society and economy.

“[A] ‘digital agency’ might be a useful way forward.”

Verband Privater Rundfunk und Telemedien (Private Broadcasting and Telemedia Association)

The specific tasks and services of the digital agency might be:

- Comprehensive market observation, for example regarding the further development of individualised prices
- Monitoring and implementation of regulation
- Advisory services, also as part of the legislative procedure
- Studies and ad-hoc expertises
- Dispute resolution in competition and consumer issues
- Supervision of experimentation rooms and support of concomitant research
- Initiation and implementation of stakeholder processes
- Management of specific information and communication projects
- Staging of digitalisation forums, workshops and conferences
- Publicity work
- Information and educational campaigns
- Competitions (e. g. Smart Cities and Smart Regions).



This could be supplemented by representation in international bodies and therefore an optimised representation of federal interests in the international debate.

The requirements profile of the digital agency described above differs from the existing authorities. The dynamism and unpredictability of digitalisation creates additional complementary tasks. A large number of industrial sectors and areas of life are affected by digitalisation from Agriculture 4.0 via E-Health through to Smart Services, from Smart Home via Virtual Reality through to Artificial Intelligence. Infrastructure investors, equippers, and software developers are called upon but also stakeholders in the educational sector. Existing higher federal authorities can assume the think tank tasks to only a restricted extent and cannot therefore close this competence gap.

By way of complement to the tasks of the Bundesnetzagentur or the Bundeskartellamt, the digital agency could also be entrusted with specific sovereign tasks. For example, by way of supplement to the tried and tested system of individual law enforcement in the courts, the digital agency could effectively and quickly follow up on infringements of the Unfair Competition Act (UWG).

3.5.2 Model variants of a digital agency

From our point of view there is a need to establish a digital agency with the tasks and competences described above.

We want a digital agency that develops specialised competence, thereby enforcing rights and duties and resolving disputes.

The coupling of official competence with a think-tank function ensures that scientific observations and knowledge can be incorporated directly and effectively into practice without loss of time alongside specific administrative procedures.

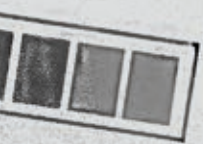
An alternative model of a digital agency is restricted to the sustainable development of digitalisation competence in an economic, legal and technical respect and scientific analysis with the aim of advising politicians and providing support to other state agencies.

A digital ministry is not required. The centralisation of all digital policy competences in a digital ministry of the federal government would not be expedient due to the cross-sectional significance of digitalisation. The technical competence in political fields such as security, health or education could merely be reflected in a digital ministry. However, this would lead to a fragmentation of competence at an analogue and a digital level. It would be better to continue to concentrate the analogue and digital competences and political responsibilities in the departments of the government. The requisite concentration of issues at a lower ranking level by establishing a digital agency permits practical analyses and consistent recommended actions, however, which overarch all political fields.



4.

Summary and outlook:
Digitalisation
“made in Europe”





4.

Summary and outlook: Digitalisation “made in Europe”

Germany and Europe have core competences in industrial value added and production. However, the development of the economy is increasingly determined by digitalisation. Digital platforms in particular are increasingly becoming a main growth driver.

The shift of the German and European economy towards a digital production and platform economy can become a driver of growth, innovation, productivity and employment. If we succeed in merging and expanding our high industrial competence with digitalisation, the European industrial locations will remain competitive and successful.

We are pursuing the third path between a digital laissez-faire and a state-driven organised upgrade and modernisation programme. We are guided in our digital regulatory policy by transformation instead of disruption, growth dynamism and participation, security and clear rules for the democratic discourse and European sovereignty.

Our agenda is not only focused on Germany. We must realise the European Digital Single Market in a social European Union.

A modern regulatory framework must promote fair competition at all levels. It must provide incentives for a trend-setting data economy and widespread gigabit-capable digital infrastructures. Everyone must be able to participate in growth and be able to deal with innovative technologies in a sovereign and democratic manner. And finally, state institutions must be able to competently go about their work in a digital and networked world.

In this White Paper we propose specific measures or instruments which advance Germany and Europe. Where debates are still in progress, we contribute our position. On this foundation we will take the initiative and advocate a sincere implementation in Germany and Europe.




We will implement our digital regulatory policy in five areas of action.

For **fair competition** we provide for the following inter alia:

- **Further acceleration of competition procedures.** With this in mind, we plan to make it easier to order injunction measures so that the authorities can eliminate the effect of restrictions to competition (provisionally) before investigation proceedings have been completed. This acceleration is expedient, particularly in cases in which competition restrictions can be eliminated using simple means, such as by suspending specific contractual clauses.
- **Creation of a “level playing field” in the telecommunication markets.** Messenger services and other services of so-called “over the top players” (OTT), which include WhatsApp and Skype, for example, must be subject to the same rules of consumer protection, data protection and security as the traditional telecommunication companies with which they compete on a market. The regimen of European data protection must also apply without exception to OTT communication services. This therefore means that for example terms and conditions of use according to which consumers accept the application of non-European law will no longer be admissible in future.
- **Establishment of a dual, proactive competition law.** For this purpose, the applicable elements of the general and rather reactive competition law – as defined by the Act against Barriers to Competition (GWB) – will be combined with a distinctly more active and systematic market supervision and robust intervention powers. The aim is to institutionalise an “early warning system”. A well-staffed authority is to be empowered to take a proactive approach in the case of abusive behaviour. Proof of a market-dominant position as so far required by the GWB is no longer a prerequisite for intervention. Above all, the authority should also be able to directly sanction infringements of the general law on fairness (protection of competition from distortion by unfair business practices).

We will politically accompany the **creation of a modern data economy** as follows:

- **Establishment of a clear legal framework for the use of data.** At a European level, we will advocate legal certainty in contracts which regulate the rights to use data between parties because this private law path has generally proven successful. Creating a legal framework also means preventing exclusivity rights to data which hamper competition. At the same time, the access to data is to be strengthened by using cartel law and also by way of sector-specific regulations.
- **Advancement of seal and certification solutions for more transparency.** The directly applicable European General Data Protection Regulation which will be enforced from May 2018 creates a good foundation for more data sovereignty and portability as well as providing the right incentives for the anonymisation and pseudonymisation of data. Further innovative elements such as the data protection label and certificates create additional clarity and guidance.
- **Introduction of basic transparency and information duties for digital platforms.** The user is to understand how search results and offers come about, for example. In future, we will be requesting obligatory digital one-pagers from digital platforms which clearly summarise the relevant service and contractual content. The companies must also provide information about the commercial use of personal data so that users are made more aware that seemingly free services are funded by the sale of data.

- 
- **Making of online business transactions and E-government simpler and more secure.** The EU has developed uniform requirements for these so-called trust services with rules for electronic signatures, seals and registered mail. We will pass a Trust Services Act (VDG) on this foundation that makes it easier for the public, businesses and authorities to ensure identities without media compatibility problems.
 - **Setting up of experimentation rooms for innovative digital networked business models.** Experimentation rooms – or real laboratories – permit innovations to be tested in interaction with regulatory instruments and under real market conditions in a time-restricted and possibly location-restricted, altered legal framework (“experimentation clauses”). In view of the high digitalisation potential which has not yet been exploited, the health sector is particularly suitable here. We are sounding out possibilities of use with representatives from the industry.


We want to assert the following for the **nationwide expansion of gigabit-capable digital infrastructure**:

- **Advancement of network expansion via the demand side.** A viable way is presented by “gigabit voucher”, i. e. vouchers in the form of time-restricted grants for gigabit connections in connection with innovative applications. This approach should be directed at small and medium size enterprises as well as important institutions (schools, doctor’s practices, administration etc.) in rural and structurally underdeveloped areas. Any such vouchers open up the opportunity for potentially non-bureaucratic and rapidly available gigabit connections.
- **Securing of government funding at a high level.** We are earmarking funding of some 10 billion euros for the period between 2018 and 2025 to achieve infrastructures in the gigabit area. Part of this funding will be covered by the “Future Investment Fund for Digitalisation” which is still to be set up.
- **Establishment of municipal centres for infrastructure-relevant digitalisation issues.** Local stakeholders in politics and administration are frequently overwhelmed because they have to address the subject for the first time. A digital agency could take the strain off of the municipalities – provide advice in the run-up to broadband expansion planning, research available funding opportunities and framework conditions, ensure standardised and faster processes in dealings with specialised authorities and assume the conducting of market investigation procedures for funding applications.

- 
- **Advancement of a virtual network of fragmented local gigabit infrastructures.** Municipal networks are frequently unattractive for international telecommunication companies both as consumers of network access products and as providers of telecommunication services due to their small size. With a virtual linking of these networks (possibly with the involvement of the federal government) homogeneous wholesale services can increasingly be offered in Germany from a centralised point. This will improve capacity utilisation and indirectly the funding of local gigabit networks.
 - **Provision of greater investment incentive in sector-specific regulation.** If, for example, several market players join forces in order to advance the expansion of gigabit networks, this should be rewarded by being exempted from all upstream obligations. We support the proposal of the EU Commission. In addition to cooperation models, we will also advocate in other cases that gigabit infrastructures are not subject to regulation under certain conditions.
 - **Creation of legal certainty for the spread of WiFi hotspots.** The uncertainty of the extent to which private and commercial WiFi operators can be made responsible for the infringements of the law of the users has hampered the spread of WiFi in Germany. We wish to clarify in the Telemedia Act that WiFi operators are no longer warned for secondary liability, and ensure a legally certain operation of open WiFi.

We pursue this course to **secure a democratic digital culture**:

- **Strengthening of basic rights in the internet.** Action must be taken against infringements of the law of all kinds in the internet just as steadfastly as in the analogue world. Systematic action must also be taken against criminally relevant behaviour, such as incitement to hate, defamation of confessions, religious communities and ethnic groups or slander and insult in the internet. Providers may not become the long arm of the criminal investigations. The state basically has a protection duty here which it may not pass on to private persons for reasons of cost. We reject a privatised enforcement of law in the case of criminal acts.
- **Elimination of legal vacuums in the internet.** It may be necessary to define new elements constituting crime so as to be better able to counter internet-based violations of the law (e.g. cyberbullying, identity theft in the internet). We also want to close statutory gaps and contradictions in law enforcement so that all violations of the law may be reliably punished. In the case of false assertions of the facts or unjustified publication of private images or information (so-called infringements of personal rights below the criminality threshold), we advocate that the damaged party is given information by the platform operator on the identity of the damaging party as is already the case with infringements of copyright.
- **Introduction of clear identification procedures must be examined.** The operators of public opinion forums would then be obliged to register their users in advance. In the event of proven unlawful statements, the platform would have to disclose the identity of the user to the authorities. Necessary liability restrictions for platform operators on the one hand and data protection regulations on the other may not hamper the effective prosecution of infringements of the law if it has been proven that the boundary of admissible expression of opinion has been exceeded.

- 
- **Requirement that internet platforms must introduce a standard complaints management system throughout Europe.** Users should be able to report unlawful content to these centres. The platform provider would then check for unlawfulness and delete content where applicable. We will advocate an approach of this nature to the European Commission. To implement the plan, we believe it necessary for the Commission to specifically define vague legal terms and also clarify which voluntary measures a platform operator can take without relinquishing its neutral role as intermediary.

In order to **develop digital state competence** and **strengthen the institutional structures**, we believe the following to be necessary amongst other things:

- **Establishment of a digital agency.** It should support the process of digitalisation in the individual areas of policy and application, establish systematic and continuous market observation and therefore facilitate rapid intervention by the competent authority, particularly in the case of infringements of competition or regulation. Existing higher federal authorities can assume think-tank tasks to only a restricted extent and cannot therefore close this competence gap. By way of complement to the task of the Bundesnetzagentur or the Bundeskartellamt, the digital agency can also be entrusted with specific sovereign tasks and effectively and rapidly investigate the infringements of competition law (UWG) amongst others.
- **Prevention of the fragmentation of ministerial competence in analogue and digital areas.** The centralisation of all digital policy competences in a digital ministry of the federal government would not be expedient due to the cross-sectional significance of digitalisation. Competence in the policy fields such as security, health or education can only be reflected in a digital ministry. A digital ministry is not, therefore, required.

The debate on digital platforms has not been completed with this White Paper. We are open for written comments and discussions. Send us your comments by email to whitepaper@de.digital



Publisher's imprint

Publisher

Federal Ministry for
Economic Affairs and Energy (BMWi)
Public Relations
11019 Berlin, Germany

Design and production

Hirschen Group GmbH, Berlin

Printed by

Spree Druck Berlin GmbH

Picture credits

Illustrations by Herr Müller
upperorange.com

Date

March 2017



www.de.digital

