

## The Internet as a Growth Driver

Opportunities for  
citizens and businesses  
in Germany

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## Foreword

The Internet is increasingly becoming the most important driver of economic growth. Digitalisation affects all economic sectors and will transform every single business process.

The German economy is taking advantage of these opportunities. However, international comparison shows that we are not as good as we can be. To tap into the full potential of the Internet as an economic engine, it must become a top-level issue – for private businesses, but also for government ministries.

The Economic Council has thus compiled the present recommendations to make Germany a winner in the Internet world.

Internet policy is not only of interest to technology enthusiasts. Internet policy must take centre stage in economic action and thought. Internet policy is economic policy.

The Internet is global. So it is even more important to ensure a high level of copyright and patent protection as well as its enforceability. This is critical for the innovative capacity of the economy.

Data protection plays a central part in enabling the Internet to completely fulfil its role as a growth driver. The federal structure of Germany is not helpful in this respect. Data protection must be dealt with in a uniform way across Europe. Here we need European-wide minimum legal requirements whose compliance is rigorously enforced.

We would like to thank the members of the Economic Council's Federal Working Group on Internet and Media Policy for their friendly support and assistance.



Prof. Dr. Kurt J. Lauk  
President  
Economic Council of the CDU



Dorothee Belz  
Chairperson  
Federal Working Group

Berlin, June 2012

## **I. Always online: Why Germany is not as good as it could be – and what must be done now**

Who does not dream of such growth rates: From 2010 to 2016, the Internet economy of the G20 countries will nearly double. The number of users worldwide over these six years will increase by around one billion to three billion people.

However, we will use the Internet in a completely different way than today. Instead of going online via traditional PCs, we will access the Internet on our smartphones. Passive surfing of the Internet will be replaced by active online engagement. The volume of data is going to explode: in 2015 alone it will be 30 times larger than in 2005.

Germany and businesses based here are taking part in this development. However, we are not good as we could be. And we are not utilising the potential of the Internet like we could. Due to the shortage of skilled workers, the German economy loses more than a billion euros in revenue each year.

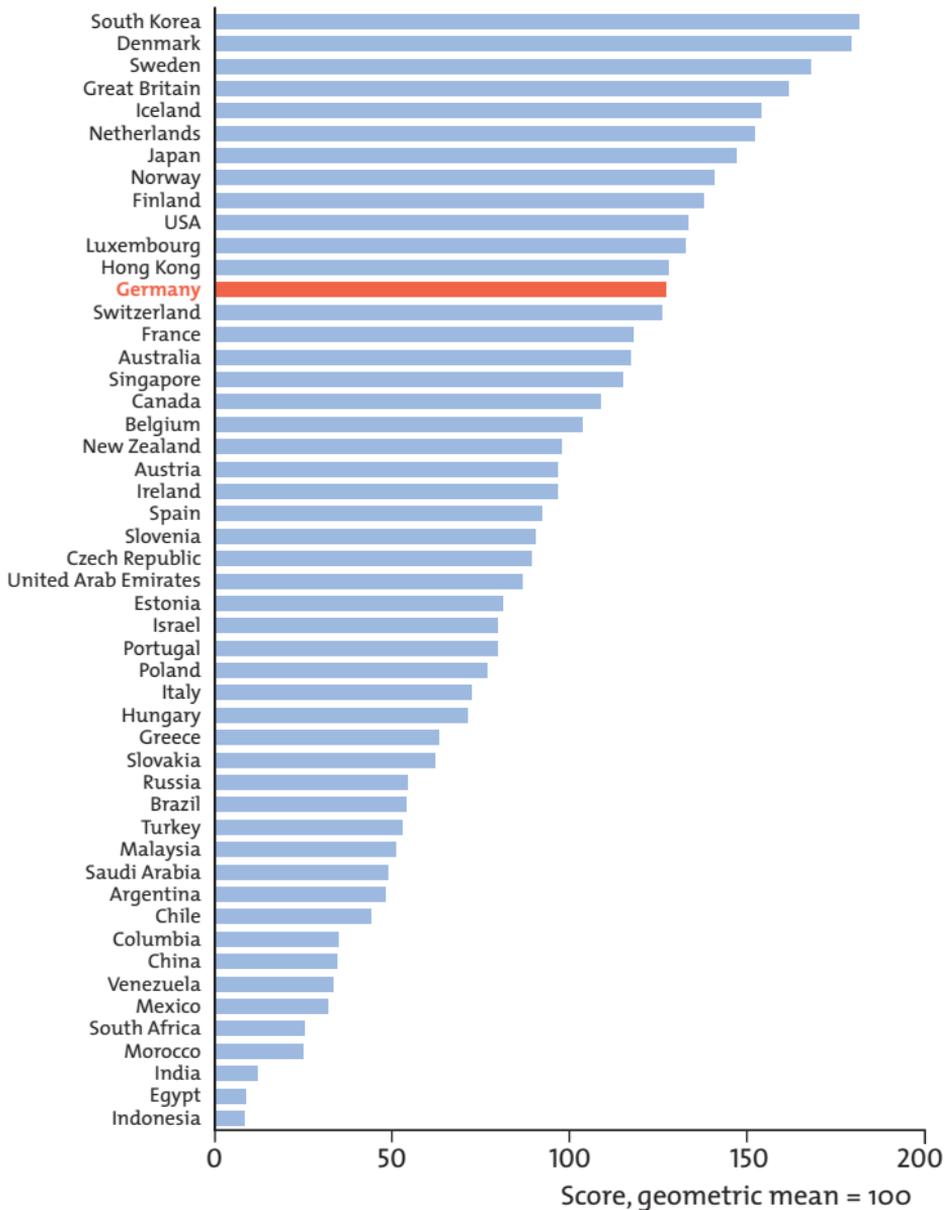
The way companies use their IT infrastructure will fundamentally change. This will help realise significant efficiency gains and cost savings. No sector will be exempted. Interactions with suppliers and customers must be rethought; new business models will emerge. All of this is a tremendous chance for Germany.

Yet, how can countries like South Korea and Great Britain be well ahead of us in terms of Internet penetration? To gauge the development level of a country regarding usage and reach of the Internet, the Boston Consulting Group established the e-Intensity Index™: It measures critical factors like Internet availability and engagement as well as the related private and business spending.<sup>1</sup>

Germany only ranks in the upper-middle tier here. Although we stand in third place among G20 countries for expenditures in and for the Internet, we fall considerably behind when it comes to availability and engagement.

This is not without consequences: The size of Germany's Internet economy is 3 per cent of GDP, which is significantly below the 4.1 per cent average in other G20 countries. The 27 EU countries with an average size of 3.8 per cent are also far ahead of Germany.

### e-Intensity Index™



Source: The Boston Consulting Group

<sup>1</sup> The index includes 31 sub-indicators from the following categories: Availability of the Internet (weighting of 50 per cent); private and business spending for and over the Internet (weighting of 25 per cent); and the degree to which businesses, governments, and consumers actively embrace the Internet (weighting of 25 per cent).

To realise the Internet's full growth capacity, it has to become a top-level issue. The German Federal Government must acknowledge that Internet policy is economic policy. And to be able to compete internationally, we need uniform rules in Europe for dealing with the Internet.

**Did you know that** each day 35 million Germans visit more than three billion Internet pages?

**Did you know that** 38 million Germans shop online – and already spend 24 billion euros a year on Internet purchases?

**Did you know that** over 50 per cent of Germans have already joined a social network?

**Did you know that** the Internet has already surpassed television and newspapers as the primary source of information?

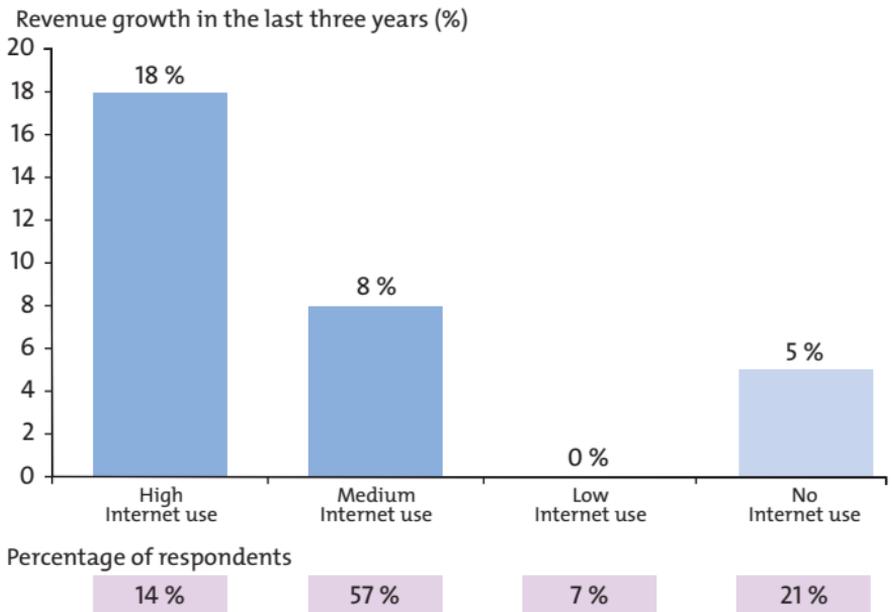
## **II. Allowing new approaches: Businesses that intensively use the Internet grow faster**

The facts speak for themselves: The more Internet-savvy small and medium enterprises are, the faster they grow. As the strategy consulting firm Boston Consulting Group found, businesses with high Internet usage were able to increase their revenues by 18 per cent in the last three years. Businesses that are average Internet users only experienced a sales gain of 8 per cent in the same time period.

The problem is that only 14 per cent of all businesses based in Germany characterise themselves as high-intensity users. At 57 per

cent, the overwhelming majority classify themselves as average users – and thus miss out on clear opportunities for growth.

### Internet usage and revenue growth



Source: The Boston Consulting Group

The manufacturing industry, across all business sizes, only generates 19 per cent of its revenues online, as a study by the Cologne Institute for Economic Research found. Only a quarter of these businesses have already strongly embraced the Internet; for another quarter the Internet plays no role whatsoever. And this, despite the fact that this sector, with 7.2 million employees and overall revenues of 2,134 billion euros, ranks as one of the most important in Germany.

The situation looks somewhat better in banking and insurance, where more than one million employees generate 118 billion euros in revenue. Here, at least, 70 per cent of businesses engage most of their customers over the Internet. Half conduct their procurement activities online.

Real Internet apathy, however, reigns in the construction industry with some 1.5 million employees and overall revenues of 219 billion euros. The Internet only plays a central role in every fifth business.

**Did you know that** small businesses are more likely to conduct their procurement activities online? 32 per cent of small businesses with less than 50 employees procure the majority of their goods over the Internet; only 13 per cent of larger businesses do so. Younger companies (founded within the previous five years) are also more likely to procure goods online.

**Did you know that** Internet-savvy businesses have significantly more higher-qualified employees? This indicates more complex business activities and underscores the Internet's wide range of functions. Internet-based information and communication technologies are integrated in more and more products.

Businesses face major changes in how they use the Internet. Modern IT infrastructures help businesses become more efficient: Cloud computing is transforming the IT landscape and internal business processes. Data is stored on an external server of an Internet provider and thus accessible anywhere in the world.

When computing capacity, disk storage and software are obtained over the Internet, this not only means efficiency gains due to less time and money being spent on maintaining individual PCs. Most important of all, internal processes are optimised: Cloud-computing enables multiple users to edit documents simultaneously and have access to all data from any end device, whether at the office or a home workstation. Costs for large hardware and IT infrastructures will tend to decrease in the proportion to the IT resources that are outsourced. User friendliness and compatibility, as well as the provider's service, will be the most important factors in the purchase decision-making process.

It has also been shown that businesses with particularly Internet-dependent business models generate a significantly higher share of their revenues with new products and services. Knowledge spreads faster through a company if the Internet is specifically used as a research tool. Such Internet-savvy businesses are usually favourably disposed towards services like cloud-computing.

**Did you know that** businesses could save between 20 and 50 per cent of their costs for hard- and software by switching to cloud-computing?

**Did you know that** the management consulting firm Roland Berger estimates that between 2010 and 2015 the economic effect of cloud-computing in the five largest European economies will be as much as 763 billion euros?

**Did you know that** 34 per cent of businesses still believe that the Internet is not a secure place to store company data or sell their products?

In order for these efficiency gains to be realised, the market must become transparent. The quality of the offerings and of the data protection must be instantly recognisable.

**The Economic Council therefore calls for uniform European-wide minimum requirements that provide legal certainty in the cloud across the European single market.** They must be developed in a way that allows every business to work on the Internet safely and securely and that continues to guarantee cost effectiveness.

Some businesses will want to provide their customers with additional security services. To allow them to do this, it would be desirable to establish a certification system for service offerings that goes above and beyond the statutory regulations. This would enable premium offerings to become available to those who desire them. Certification guarantees that they receive exactly the quality and service that the offering promises them.

### III. Sector reshuffle: How Internet-based business models are pushing technological change forward

Are you tired of standing in the rain watching taxi after taxi pass by? Since March 2010 you don't have to: Download the app from MyTaxi, tap the button and stay dry and warm while keeping track of the requested taxi's location on your smartphone.

The app has already been downloaded over 800,000 times; more than 7,000 taxi drivers are taking part in the new method of ordering a taxi. The new system is more economical for taxi drivers and more convenient for taxi passengers.

SECTOR	TECHNOLOGICAL CHANGE DUE TO THE INTERNET
<b>Energy</b> 	<b>Smart grids</b> <ul style="list-style-type: none"><li>Intelligent electricity grids for the integration, production, storage, management and consumption of energy</li><li>Help to manage the demands placed on electricity grids by the energy policy changes</li></ul>
<b>Health Care</b> 	<b>Telemedicine</b> <ul style="list-style-type: none"><li>Utilisation of the Internet to bridge the distances (location and time) between patients and physicians</li><li>Helps to improve quality of life and reduce costs in the health care sector</li></ul>
<b>Automobile</b> 	<b>Telematics</b> <ul style="list-style-type: none"><li>Transmission, collection and analysis of traffic data in order to efficiently control transportation and traffic flows</li><li>Help to prevent traffic jams and increase road safety</li></ul>
<b>Education</b> 	<b>e-Books and e-Learning</b> <ul style="list-style-type: none"><li>Digital textbooks and e-Learning concepts to enable interactive engagement with learning content</li><li>Help to enhance educational quality while at the same time cutting costs</li></ul>
<b>Banking and Insurance</b> 	<b>Mobile payment systems</b> <ul style="list-style-type: none"><li>Utilisation of mobile phones for cashless payments</li><li>"It is easier to pay with a mobile phone in Kenya than in Kansas"</li></ul>

MyTaxi is only one of many examples of how Internet-based business models are breaking into established industries and driving technological change forward.

In the health care sector, the market for Internet-based health care services (eHealth) already totals 6.5 billion euros according to figures from the management consulting firm Deloitte. Telemedicine gives patients in remote areas access to the best specialists worldwide. The field is growing around 20 per cent each year and could generate revenues of up to four billion euros in 2016. Even though the result is significantly better services, these can be provided at lower costs. So everyone wins: patients, service providers and social security institutions.

The education sector will also see radical changes: The best educational programmes worldwide will be available over the Internet. This applies to the entire chain of educational institutions, from primary schools all the way to continuing education for specialised personnel.

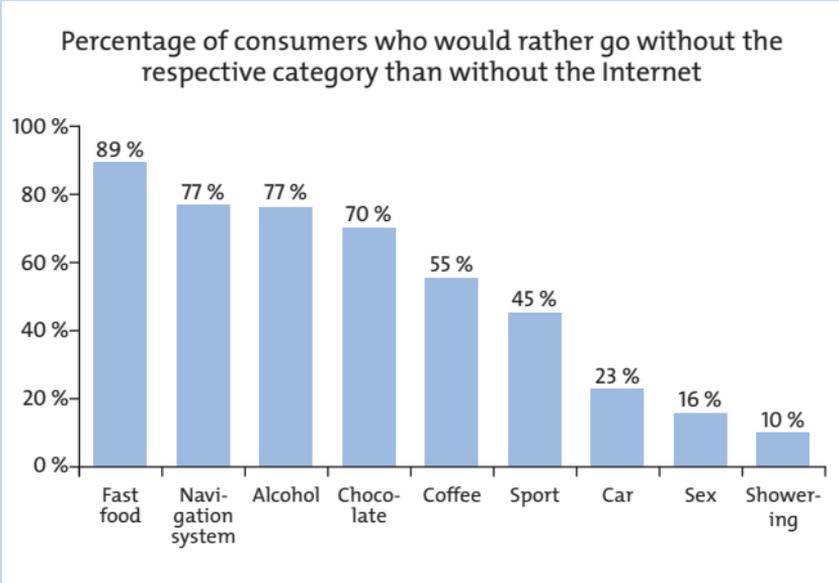
Many of these business models rely on a high-speed Internet connection available not only from any location but, most importantly, on mobile devices. Germany still lags behind in this type of broadband. Only in businesses is data being transferred at such fast speeds that Germany does, after all, take sixth place here among G20 countries.

The picture is even worse for broadband penetration in private households, where Germany holds the seventh spot; in the mobile category it is ranked one place lower.

Despite the “Broadband Strategy of the German Federal Government”, there is still much work to be done to realise the full economic potential of the Internet.

**The Economic Council therefore urges to push the expansion of broadband access forward on a technologically-neutral basis: It is not a matter of laying kilometres of data cables, but rather one of creating the widest and fastest possible network coverage for mobile Internet access – regardless of which technology is used to deliver it.**

**Did you know that 89 per cent of people would rather go without fast food for a year than without the Internet?**



Source: The Boston Consulting Group

**Did you know that we use the Internet an average of 20 hours a week?**

**Did you know that the aggregate utility of the Internet for every one of us already totals around 2,900 euros a year?**

It is foreseeable that better access to an even faster Internet will lead to a further substantial rise in usage in Germany. This is clearly the expectation of the advertising industry: Germany already ranks third among G20 countries when it comes to the online share of overall advertising budgets.

Consumer preferences are changing quickly. 70 per cent would rather go without printed newspapers for a year than the Internet; 63 per cent express the same view regarding feature films. Only television and printed books are (still) more popular than the Internet: Currently, 47 per cent would rather go without television than the Internet and 46 per cent without books.

## IV. Creating winners: What must be done now to ensure everyone benefits

The Internet is still judged too much in terms of the risks it presents, rather than the opportunities it offers. The eagerness with which the German legislature pursues, already in advance, the regulation of matters down to the smallest detail hinders many innovative ideas from moving past the nascent stage. In international comparison, particularly in contrast to the approach of Anglo-American companies, this structural problem is of considerable consequence.

The Internet is not a German medium. The lack of an international perspective often produces a situation in which the global opportunities that could arise through the promotion of good business models go unexplored.

More than 30,000 vacancies cannot be filled in the ICT industries. Due to education that neglects the Internet economy many job requirements cannot be met or are met inadequately. What is missing are educational offerings tailored to the needs of the Internet economy.

The introduction of new services and technologies is met by a substantially more critical reception in Germany than in other European countries or the United States. The lack of acceptance for new media, however, is a general German phenomenon with economic, social and political dimensions!

### **The Economic Council's recommendations:**

- 1. The Internet must become a top-level issue**
- 2. Internet policy is economic policy**
- 3. New educational offerings must be created for the Internet economy**

Despite the “Broadband Strategy of the Federal Government”, the expansion of broadband access has not reached all the “white spots”. The expansion of broadband access is still being pushed forward with too little consideration of technology-neutral aspects.

Germany lacks suitable financing models for helping innovative start-ups continue their growth. Internationally, business ideas were able to become global players in the Internet economy because venture capitalists believed in them and supported them with their know-how and funding.

For innovative areas of business, e.g. the eHealth field, research and development (R&D) provides the basic conditions for successful growth. The lack of tax deductibility by international comparison for R&D expenditures puts a brake on investment in these dynamic segments.

### **The Economic Council's recommendations:**

- 4. Technology-neutral expansion of the broadband network**
- 5. Suitable financing models for start-ups**
- 6. Research and development costs must be tax deductible**

A higher level of copyright and patent protection must also be guaranteed in the Internet world in order to strengthen innovative capacity. It must be constantly modernised in order to meet the demands of an ever-changing environment. This is also necessary for effective enforcement.

A failure to make political decisions on important topics such as data retention leads to planning shortcomings at companies in the Internet economy. By putting off decisions, Germany weakens its position in European and global competition.

The financial and personnel costs for bureaucratic tasks slow down the growth rate of the Internet economy. Companies in the Internet economy wishing to market their products and services throughout Germany and internationally must in Germany alone deal with the regulations and interpretations of 16+1 (16 state and 1 federal) data protection authorities.

The planned EU Data Protection Regulation should not be allowed to place Germany at yet another competitive disadvantage. The "patchwork quilt" of national regulations and the lack of, at least, European harmonisation hinder the implementation of innova-

tive business models, e.g. cloud-computing. We need European-wide minimum legal requirements whose compliance is rigorously enforced.

#### **The Economic Council's recommendations:**

- 7. Major regulatory issues such as data retention and the amendment to copyright law must finally be resolved**
- 8. The federal structure of Germany with 16+1 data protection authorities is a structural disadvantage for the Internet economy in particular. We must therefore seek solutions that simplify decision-making structures in the interests of users without weakening data protection.**
- 9. Data protection must be guaranteed in a uniform way across Europe**

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