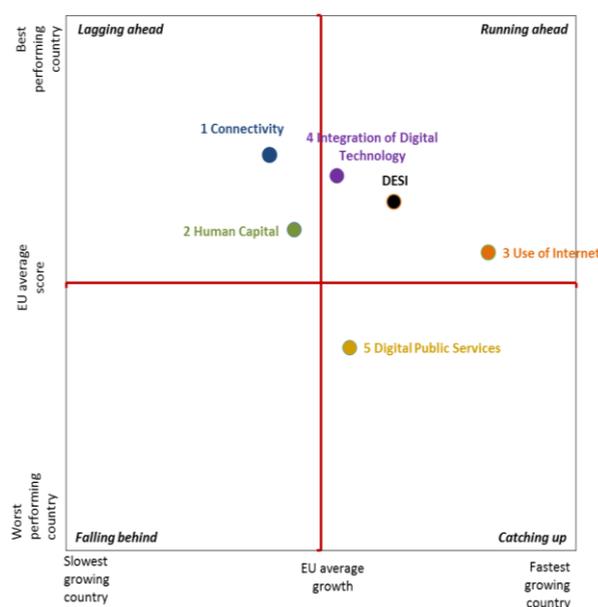


Europe's Digital Progress Report (EDPR) 2016

A report complementing the Digital Economy and Society Index (DESI)¹ country profile

GERMANY

Germany ranks 9th out of the 28 EU Member States in the European Commission Digital Economy and Society Index (DESI) 2016². Germany is part of the **running ahead** cluster of countries³ because its DESI score is above the EU average and the country developed faster than the EU over the last year. In four out of the five DESI dimensions detailed below, Germany outperforms a majority of Member States. The Use of Internet dimension is where Germany made most progress. The only dimension where Germany performs below average is Digital Public Services. In 2014 Germany had adopted its *Digital Agenda 2014-2017*⁴ and in March 2016 the Federal Ministry for Economics presented the *Digital Strategy 2025*⁵.



Germany's performance in the five DESI dimensions relative to other EU countries

1 – Connectivity

Germany is performing well and is making good progress as regards connectivity. Germany is fully covered by basic broadband services (including fixed, mobile and satellite networks) and has wide fixed basic broadband coverage of rural areas, slightly above the EU average (93% of households versus 90.6%). Additionally, the German Government's Digital Agenda sets out the goal to provide at least 50Mbps broadband internet connection nationwide until 2018. This will further contribute to bridge the digital divide and is supported by the 2015 federal state aid programme (*Bundesförderprogramm*) to close the remaining white spots. It is also noteworthy that Germany is the only Member State that has assigned 100% of the overall harmonised spectrum for mobile broadband.

Although fixed-line operators have in recent years upgraded their legacy copper and coaxial cable networks, current market share of fibre-based access networks (FTTH and FTTB) is well below the EU average (1.3% versus 8.7%). Consequently, ultrafast networks will increasingly need to install fibre closer to business and household premises or connecting directly to them.

¹ The Digital Economy and Society Index (DESI) is a composite index developed by the European Commission (DG CNECT) to assess the development of EU countries towards a digital economy and society. It aggregates a set of relevant indicators structured around 5 dimensions: Connectivity, Human Capital, Use of Internet, Integration of Digital Technology and Digital Public Services. It clusters countries in four groups: Running ahead, Lagging ahead, Catching up and Falling behind. For more information about the DESI please refer to <https://ec.europa.eu/digital-single-market/en/desi>

² DESI Country Profile for Germany: <https://ec.europa.eu/digital-single-market/en/scoreboard/germany>

³ Other running ahead countries are Austria, Estonia, Malta, the Netherlands and Portugal.

⁴ <http://www.bmwi.de/EN/Topics/Technology/digital-agenda.html>

⁵ <https://www.bmwi.de/English/Redaktion/Pdf/ict-strategy-digital-germany-2015,property=pdf,bereich=bmwi2012,sprache=en,rwb=true.pdf>

If Germany wants to move towards ultrafast broadband technology, more investments in fibre upgrades will be necessary. Germany still has to transpose the Cost Reduction Directive⁶ which could help to speed up broadband roll-out.

2 – Human Capital

In the Human Capital dimension, Germany is performing well and making progress. The inhabitants of Germany are regular users of the Internet, more than Europeans on average. They also possess, on average, higher skills: 66% of Germans have basic or above basic digital skills, above the European average of 55%. In 2015 3.7% of the workforce were ICT specialists (equal to the EU average of 3.7%) but there were still 40 000 open vacancies.

The potential of the digital economy for growth and jobs is hampered by a shortage of ICT professionals and reluctance or inability to properly exploit the possibilities offered by the Internet and related digital tools. An element of the *Digital Agenda 2014-2017* is the Digital knowledge society. However, no major coordinated strategy exists for the advancement of digital skills and Germany has no national coalition for digital competences. This being said, there is a wide range of activities by different entities on national⁷, regional⁸ and local⁹ level.

A national coalition could facilitate the building of synergies between the different stakeholders for the design and implementation of strategies addressing the shortage of ICT specialists.

3 – Use of Internet

In Use of Internet services, Germany is performing well and is making good progress. In particular users in Germany tend to use Internet for online shopping more than most other Europeans, although because of the size of the national offer, cross-border transactions are less frequent compared to the European average.

4 – Integration of Digital Technology

In Integration of digital technologies by businesses, Germany is performing well and is making good progress. German companies are performing Europe-wide best on integrated electronic information sharing and are performing well regarding the use of eInvoices. However, German businesses (like German citizens) show reluctance to use social media. German enterprises increasingly take advantage of the possibilities offered by on-line commerce: nearly a quarter of SMEs sell online, and those who sell online make 9.6% of the share of their turnover from those sales. 9.2% of SME are selling online cross-border.

In the context of the *Digital Agenda 2014-2017* the Federal Ministry for Economic Affairs and Energy is implementing a number of policies¹⁰ to respond to the challenges of digitisation, such as Big Data

⁶ Directive 2014/61/EU of the European Parliament and of the Council of 15 May 2014 on measures to reduce the cost of deploying high-speed electronic communications networks (OJ L155, 23 May 2014, p. 1)

⁷ See <https://www.bmbf.de/de/digitale-medien-in-der-bildung-1380.html> for digital learning projects

⁸ See for example the "Bayern Digital Strategie", targeting digital skills development from early childhood <https://www.stmwi.bayern.de/digitalisierung-medien/bayern-digital/>.

Or for Berlin <http://be-digital.berlin/agenda/>

⁹ See for example Digitale Bildung Köln <http://www.stadt-koeln.de/leben-in-koeln/bildung-und-schule/digitale-bildung/>

¹⁰ For example Integration of digital technologies: (www.digitale-technologien.de), Autonomics for Industry 4.0 (www.autonomik40.de), Smart Data - Data Innovations (www.smart-data-programm.de) Smart Service Welt (www.digitale-technologien.de/DT/Navigation/DE/Foerderprogramme/Smart_Service_Welt/smart_service_welt.html), ICT for Electric Mobility III (www.ikt-em.de) Central innovation Program for SMEs (www.zim-bmwi.de) Collective Research Program (IGF) (www.aif.de/innovationsfoerderung/industrielle-gemeinschaftsforschung.html), Digitale Technologien für die Wirtschaft

and Smart Data, smart services, mobile internet, cloud computing, social media and Industry 4.0. Looking at the structure of the German Industry, in particular "Industry 4.0" has the potential to radically redesign/ to substantially reform value chains and to significantly influence Germany's key industrial sectors.

The measures in place and the strategy announced are appropriate for encouraging and facilitating the digital transformation. For companies, such as those in the automotive industry, "Business as usual" is not an option and they will have to actively embrace the opportunities and challenges of digitisation - on all levels of society and the economy.

Highlight: Trials on the digital motorway test bed

To reflect, analyse and support the increasing automation and connection of modern vehicles, the "Digital A9 motorway test bed" has been launched, on which state of the art digital technology is installed to enable digital communication between the road and the vehicle as well as vehicle-to-vehicle. The digital motorway test bed is a technology neutral offer to industry and the research community and can be used by all stakeholders from the automotive industry, the digital technology sector and academia interested in testing their innovations. The trial is accompanied by scientific research and there will be an open transfer of knowledge.

5 – Digital Public Services

When it comes to Digital public services, Germany's performance is below the EU average and it is only making slow progress. Germany is one of the EU countries with the lowest online interaction between public authorities and citizens. Only 19% of Germans going online use eGovernment services actively.

An act to promote e-government was adopted in July 2013¹¹, and an e-government strategy was adopted in August 2014 as part of the Digital Agenda 2014-2017 bill, to foster the digital transformation of the public administration. The "Digital Administration 2020" programme aims to ensure that in future public administration is generally electronically accessible for all citizens. It includes measures on electronic filing, the central DE-Mail gateway, the central eID service, an extended payment platform and public procurement.

In November 2015, the National Regulatory Control Council (Nationaler Normenkontrollrat) adopted an opinion on eGovernment in Germany¹². It confirms that there is no coherent and nation-wide eGovernment offer in Germany. Diverse and not necessarily interoperable systems create friction losses. It was found that however effective eGovernment could deliver considerable savings.

Germany's federal structure poses specific challenges in the context of the establishment of a coherent and nationwide eGovernment offer. Furthermore, for citizens to make more use of the

(<http://www.bmwi.de/DE/Themen/Digitale-Welt/Digitale-Technologien/digitale-technologien-fuer-die-wirtschaft,did=748308.html>), Connectivity: Smart Network Strategy (<http://www.bmwi.de/DE/Themen/Digitale-Welt/Initiative-Intelligente-Vernetzung/strategie-der-bundesregierung.html>), SME: (www.mittelstand-digital.de) and Industrie 4.0 (www.plattform-i40.de)

¹¹ http://www.bmi.bund.de/DE/Themen/IT-Netzpolitik/E-Government/E-Government-Gesetz/e-government-gesetz_node.html, see also <http://www.bmi.bund.de/SharedDocs/Downloads/DE/Broschueren/2014/digitale-agenda-im-fokus.html>

¹² https://www.normenkontrollrat.bund.de/Webs/NKR/Content/DE/Pressemitteilungen/2015_11_18_pm_it_gi_pfel_u_gutachten_egov.html?nn=826682

existing digital public services, the offer needs to be better known and easier to use. Also citizens' worries regarding data protection need to be taken into account.

Stronger governance at federal level, as well as between the Federation and the Länder, could contribute to Germany's eGovernment performance. Moreover, the use of already existing solutions for cross-border eGovernment, for example 'eID', 'eDelivery', 'eSignature' und 'eInvoicing', which are provided via the Connecting Europe Facility, and whose development was also co-financed by Germany, could also be used in the federal context.

Finally, linking eGovernment to current challenges, e.g. the refugee crisis, can also support uptake. Moreover a strong German commitment and engagement to implement the new eGovernment Action Plan 2016-2020 would also support eGovernment within Germany.