Digital Economy and Society Index (DESI) 2020

Germany

About the DESI

The European Commission has been monitoring Member States' digital progress through the Digital Economy and Society Index (DESI) reports since 2014. The DESI reports include both country profiles and thematic chapters. In addition, an in-depth telecoms chapter is annexed to the reports for each Member State.

The DESI country reports combine quantitative evidence from the DESI indicators across the five dimensions of the index with country-specific policy insights and best practices.

The current COVID-19 pandemic has shown how important digital assets have become to our economies and how networks and connectivity, data, AI and supercomputing as well as basic and advanced digital skills sustain our economies and societies by allowing work to continue, tracking the spread of the virus and accelerating the search for medications and vaccines.

Member States have put in place specific measures to mitigate the impact of the pandemic. A dedicated section in each country details them. Digital will also play a key role in the economic recovery as the European Council and the Commission have undertaken to frame the support to the recovery along the twin transition to a climate neutral and resilient digital transformation. In this framework, the deployment of 5G and very high capacity networks (VHCNs), digital skills, the digitisation of companies and the public administration are crucial for a robust recovery. The DESI monitors their progress in each Member State.

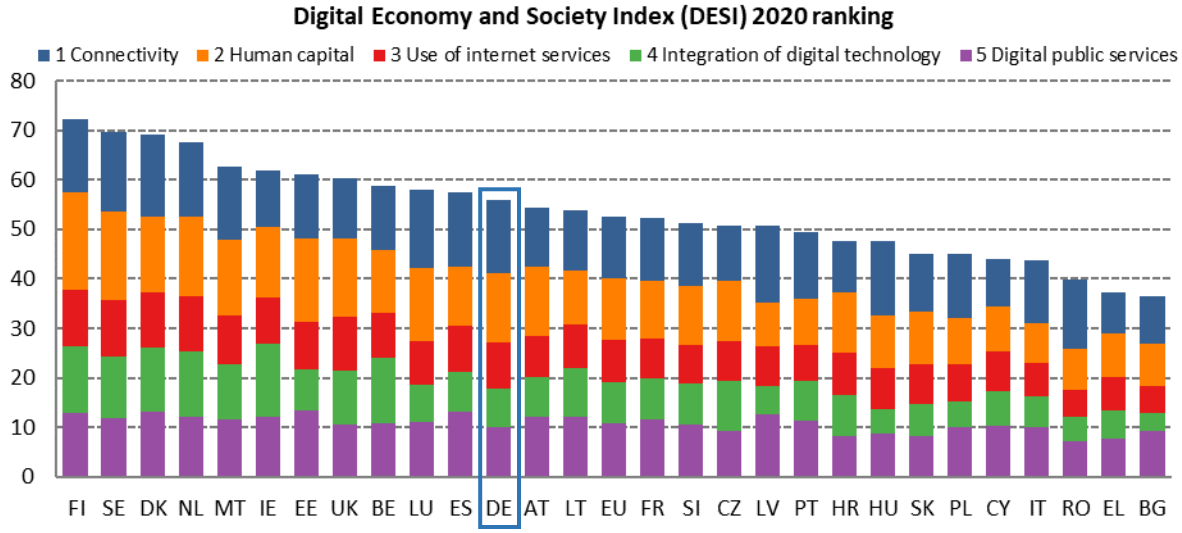
As regards the thematic chapters, the DESI 2020 report includes a European-level analysis of broadband connectivity, digital skills, use of the internet, digitisation of businesses, digital public services, emerging technologies, cyber security, the ICT sector and its R&D spending and Member States' use of Horizon 2020 funds.

To improve the methodology of the index and take account of the latest technological developments, a number of changes were made to the 2020 edition of DESI, which now includes Fixed very high capacity network (VHCN) coverage. The DESI was re-calculated for all countries for previous years to reflect the changes in the choice of indicators and corrections made to the underlying data. Country scores and rankings may thus have changed compared with previous publications. As the figures refer to 2019, the United Kingdom is still included in the 2020 DESI, and EU averages are calculated for 28 Member States. For further information, please consult the DESI website: https://ec.europa.eu/digital-single-market/en/desi.

It is noted that statements regarding planned or potential State aid measures record intentions declared by Member States and do not pre-judge or pre-empt the assessment of such measures by the Commission under the relevant state aid rules. The DESI report is not meant to provide any assessment of the compliance of such measures with state aid rules and procedures.

Overview

	Germany		EU
	Rank	score	score
DESI 2020	**12**	**56.1**	**52.6**
DESI 2019	13	51.2	49.4
DESI 2018	14	47.9	46.5



Germany ranks 12th out of 28 EU Member States in the 2020 edition of the Digital Economy and Society Index (DESI).

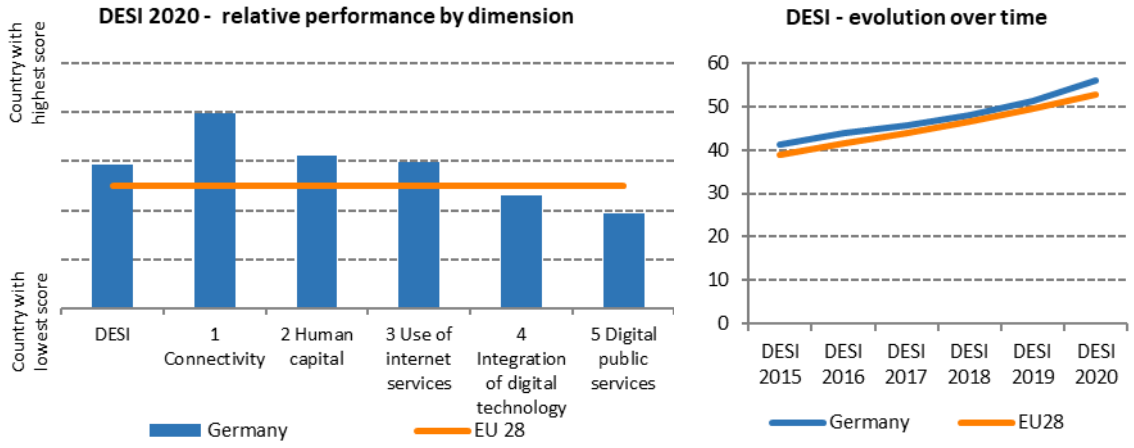
Based on data prior to the pandemic, Germany performs well in most DESI dimensions, except in digital public services, where it ranks 21st. On the Connectivity dimension, Germany leads the EU on 5G readiness and has a high take-up of overall fixed broadband. However, performance in fixed very high capacity network coverage is below the EU average, where it ranks 21st. The country performs well on the Human capital dimension, ranking fifth both for at least basic digital skills and for at least basic software skills. German companies have increased their use of social media but have not made progress in the level of Integration of digital technologies. Germany ranks ninth in the Use of internet services, as Germans are keen to use online services. Only 5% of Germans have never used the internet and 84% shop online. However, Germany ranks 26th in the use of e-government services, with only 49% of internet users going online to access such services. This is the country's greatest digital challenge. The federal government and the federal states have taken several measures to implement the Online Access Act in a bid to improve the situation.

In March 2016, the Federal Ministry for Economic Affairs and Energy presented the Digital Strategy for 2025[(1)]. In March 2018, a new state minister for digitisation was appointed, reporting directly to the Chancellor's Office.

In November 2018, the federal government published its implementation strategy 'Shaping Digitalisation'[(2)]. The objective is to continue improving the quality of life for everyone in Germany,

(1) https://www.de.digital/DIGITAL/Redaktion/EN/Publikation/digital-strategy-2025.html
(2) https://www.bundesregierung.de/breg-en/service/information-material-issued-by-the-federal-government/shaping-digitalization-1605330

while also leveraging economic and ecological opportunities and securing social cohesion. The strategy comprises five specific pillars: (i) Digital competence; (ii) Infrastructure and equipment; (iii) Innovation and digital transformation; (iv) Societal shift towards digitalisation and (v) the Modern state.



The role of digital to manage the coronavirus pandemic and to support the economic recovery

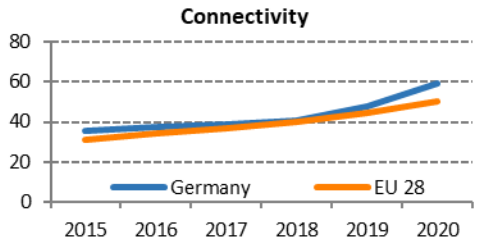
The current COVID-19 crisis is having an important impact on key societal indicators, relating to the use of internet services by citizens. This does not show in the latest 2019 official statistics as reported in DESI. Consequently, the DESI 2020 findings need to be read in conjunction with the strained demand that has been put on digital infrastructure and services during the pandemic and the immediate actions taken by the Member States. Similarly, as Europe progressively exits from the pandemic, the recovery must be planned taking into account the lessons learnt from this crisis. This means a particular attention to the indicators relevant for a stronger and more resilient digital transformation and economic recovery, notably very high capacity networks (VHCNs) and 5G, digital skills, advanced digital technologies for businesses and digital public services.

Germany has taken a large number of targeted measures in digital to deal with the COVID-19 crisis. Initiatives to minimise contagion and to support the health system include the development of a contact tracking application, a symptom checker chat bot and an electronic intensive register to monitor and manage intensive station resources. Guidelines for network security measures have been defined so that telecoms operators can take appropriate action in case of network overload. Digitalisation of the public administration is also being accelerated: priority will be given to digitising applications for benefit claims, which are important and vital for people and businesses in this crisis. For the economy, digital platforms have been set up in order to digitise the application process for funds, the networking between traders and to provide advice for SMEs affected by the crisis. As for education, 100 million euros funding is provided from the Digital Pact School for the rapid development of infrastructure and the expansion of digital education in the crisis.

Looking forward, as regards the DESI indicators that are especially relevant for the economic recovery after the COVID-19 crisis, Germany is very advanced on 5G and is above EU average in the digital skills indicators. On the other hand, it lags behind in the deployment of VHCN, and has a relatively weak performance in the digitisation of businesses and in digital public services.

1 Connectivity

1 Connectivity	Germany		EU
	rank	score	score
DESI 2020	**8**	**59.4**	**50.1**
DESI 2019	14	47.7	44.7
DESI 2018	16	40.6	39.9



	Germany			EU
	DESI 2018 value	DESI 2019 value	DESI 2020 value	DESI 2020 value
1a1 Overall fixed broadband take-up % households	**88%** 2017	**87%** 2018	**88%** 2019	**78%** 2019
1a2 At least 100 Mbps fixed broadband take-up % households	**11%** 2017	**15%** 2018	**21%** 2019	**26%** 2019
1b1 Fast broadband (NGA) coverage % households	**84%** 2017	**88%** 2018	**92%** 2019	**86%** 2019
1b2 Fixed Very High Capacity Network (VHCN) coverage % households	**7%** 2017	**9%** 2018	**33%** 2019	**44%** 2019
1c1 4G coverage % households (average of operators)	**88%** 2017	**90%** 2018	**94%** 2019	**96%** 2019
1c2 Mobile broadband take-up Subscriptions per 100 people	**79** 2017	**81** 2018	**85** 2019	**100** 2019
1c3 5G readiness Assigned spectrum as a % of total harmonised 5G spectrum	**NA**	**33%** 2019	**67%** 2020	**21%** 2020
1d1 Broadband price index Score (0 to 100)	**NA**	**NA**	**75** 2019	**64** 2019

In 2019, Germany made progress on most connectivity indicators. On the overall connectivity indicator, it made a jump from rank 14 in 2019 to rank eight in 2020. It has 92% coverage of fast broadband. Although rural coverage has significantly improved since 2019, from 66% to 75%, and is above the EU average, Germany still has a clear digital divide between urban and rural areas. Germany performs particularly well on 5G readiness, overall fixed broadband take-up and broadband prices. Fixed VHCN coverage is at 33%, below the EU average of 44%, but it has increased substantially last year, mainly due to the upgrade of cable networks. In the broadband pricing index (based on several fixed broadband offers and on income), Germany ranked eighth in the EU. For mobile broadband prices, it ranked seventh.

Germany currently has approximately 1 million fibre (FTTH/B) subscriptions up and running. Cable operators are investing in DOCSIS 3.1, the incumbent, Telekom Deutschland GmbH (TDG) in a technology mix that still includes super-vectoring. About 80% of the commercial fibre roll-out is based on GPON[3] topology.

The German government set the political objective of providing nationwide full gigabit network coverage by 2025. Commercial fibre roll-out has continued. Vodafone took over the cable operator

[3] Gigabit passive optical network: It has a point-to-multipoint architecture where passive splitters in the fibre distribution network enable one single feeding fibre to serve multiple subscribers.

Unitymedia in July 2019 and committed to grant Telefonica access to its merged cable network for providing broadband subscriptions to end-users.

In Germany, 52% of the total 2090 MHz spectrum harmonised at EU level for wireless broadband has been assigned. Germany ranks first in the 5G readiness indicator[(4)]. It auctioned spectrum in the 700 MHz band in 2015, which is available for 5G use. A second auction took place between March and June 2019 where the frequencies in the 2 GHz[(5)] and 3.6 GHz bands were assigned. The three incumbents and one future new mobile network operator (MNO), currently operating among others as service provider on incumbent mobile networks, all successfully acquired spectrum. In the 3.7-3.8 GHz sub-band, property users can apply since November 2019 for frequencies to create their own local 5G networks on factory grounds or other types of property for several use cases. These include factory automation and campus networks, but exclude provision of public communication networks. The 24.25 GHz to 27.5 GHz band should be awarded by the end of 2020. This includes the option of assigning directly to industrial users with the possibility of spectrum sharing with other users (such as MNOs) outside industrial sites. All four MNOs have signed an agreement with the government for extended coverage obligations, in exchange for a pay-as-you-use plan for the 2019 auction payments. The three incumbent MNOs have agreed to share new-to-be-built sites in white spots. The government considers several measures to improve mobile infrastructure supply in poorly served areas. These measures may include among others a subsidy programme for areas with no coverage, a strategy on how to streamline permit procedures and how to facilitate access to state-owned real property for extending and for densification of mobile networks. At the regional level, in Bavaria, a state aid scheme funding passive mobile infrastructure had been approved by the Commission in November 2018.

In August 2019, the government launched a 5G competition to promote implementation of the 5G standard. During the concept phase, winning projects will receive €100,000 each and up to €4 million in the implementation phase. 5G is being trialled by MNOs and verticals. TDG and Vodafone have launched commercial offers at their first 5G sites. Various research projects for automated driving (including in urban test fields and on motorways) and for integrating 5G into industrial communications networks are currently ongoing.

Germany continues to face challenges on the fixed and mobile markets. There is still a significant urban-rural digital divide in terms of fixed NGA coverage and the proportion of fibre connections is increasing, but still very low. Although new funding approvals under the federal broadband scheme were granted exclusively to fibre, incumbents rely on a technology mix where the role of fibre could be extended and better defined.

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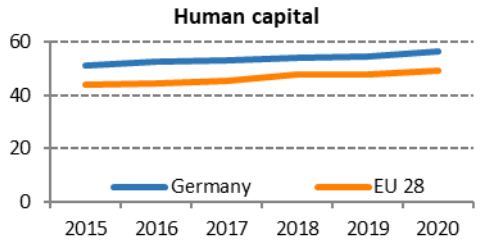
(4) The 5G spectrum readiness indicator is based on the amount of spectrum already assigned and available for 5G use by 2020 within the 5G pioneer bands in each EU Member State. For the 3.4-3.8 GHz band, this means that only licences aligned with the technical conditions in the Annex to Commission Decision (EU)2019/235, are considered 5G-ready. For the 26 GHz band, only assignments aligned with the technical conditions in the Annex to Commission Implementing Decision (EU) 2019/784 are taken into account. By contrast, the percentage of harmonised spectrum takes into account all assignments in all harmonised bands for electronic communications services (including 5G pioneer bands), even if this does not meet the conditions of the 5G readiness indicator.

(5) Not taken into account in the 5G readiness indicator, see footnote above.

2 Human capital

2 Human capital	Germany		EU
	rank	Score	score
DESI 2020	**10**	**56.4**	**49.3**
DESI 2019	10	54.4	47.9
DESI 2018	10	54.2	47.6



	Germany			EU
	DESI 2018 value	DESI 2019 value	DESI 2020 value	DESI 2020 Value
2a1 At least basic digital skills % individuals	**68%** 2017	**68%** 2017	**70%** 2019	**58%** 2019
2a2 Above basic digital skills % individuals	**37%** 2017	**37%** 2017	**39%** 2019	**33%** 2019
2a3 At least basic software skills % individuals	**70%** 2017	**70%** 2017	**72%** 2019	**61%** 2019
2b1 ICT specialists % total employment	**3.7%** 2016	**3.8%** 2017	**3.9%** 2018	**3.9%** 2018
2b2 Female ICT specialists % female employment	**1.3%** 2016	**1.3%** 2017	**1.4%** 2018	**1.4%** 2018
2b3 ICT graduates % graduates	**4.5%** 2015	**4.5%** 2016	**4.7%** 2017	**3.6%** 2017

Under the Human capital dimension, Germany ranks 10th out of 28 EU countries, thus above the EU average. Germany has maintained this position for the past three years. Both at least basic digital skills and at least basic software skills levels are well above the EU average, and Germany ranks fifth on these two indicators. The proportion of ICT specialists in the workforce is at the EU average (3.9%). Female ICT specialists account for 1.4% of total female employment, in line with the EU average. The share of ICT graduates in Germany is 4.7% of the total, much higher than the EU average of 3.6%.

In some fields of IT, Germany has a clear shortage of skilled workers. For years, it has had difficulties filling vacancies for software developers with at least four years of computer science studies[(6)].

Digital education is the joint responsibility of the federal and state governments. On the federal side, the Federal Ministry of Education and Research (BMBF) is responsible and the Federal Ministry of Labour and Social Affairs (BMAS) is also responsible for further training. The task of building digital competence is understood as a cross-departmental task in Germany, and therefore plays an important role in all relevant strategies: in the federal government's implementation strategy for shaping digital change entitled 'Shaping digitalisation'[(7)], which was adopted in November 2018, in the federal government's Artificial Intelligence strategy[(8)] also adopted in November 2018, in the BMBF's digital

[(6)] https://statistik.arbeitsagentur.de/Statischer-Content/Arbeitsmarktberichte/Berufe/generische-Publikationen/Broschuere-Informatik.pdf

[(7)] https://www.bundesregierung.de/resource/blob/975292/1605342/284988700922725d63a0fb95db824024/digitalsierung-gestalten-englisch-download-bpa-data.pdf?download=1

[(8)] https://www.ki-strategie-deutschland.de/home.html

strategy published in April 2019 'Digital future: Learning. Researchers. Knowledge.'[9] and in the MINT action plan[10] presented in February 2019.

From 2020, the BMBF will implement the National Continuing Education Strategy[11] by taking 10 measures of action, jointly with the BMAS and together with the social and economic partners, the federal states and the Federal Employment Agency. The aim is to formulate answers to the changes in the world of work and to anchor a new culture of further education and lifelong learning in Germany. Digitalisation and digital skills are of great importance.

Germany has also promoted a range of topics under the drive for education for the digital knowledge society as part of the BMBF digital strategy since April 2019. They include in particular the school cloud and the DigitalPact School, and activities related to STEM (*MINT*) education.

On 17 May 2019, the DigitalPact School entered into force for a five-year period with a budget of €5 billion from the federal government and a contribution of €500 million from the federal states' budget. Implementation is carried out by the federal states, which have published their funding guidelines. The DigitalPact School is designed to shape digital change in the school system. The federal government supports states and municipalities by investing in digital municipal educational infrastructure.

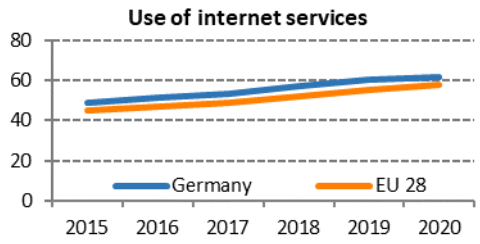
Germany has not set up a national digital skills and jobs coalition. The country played an active part in the 2019 EU Code Week[12], putting on 882 events and attracting an estimated 34,371 participants. The average participation of women in these events was 46%.

Although Germany is focusing on including digital skills in all relevant strategies, the results have not yet translated into changes in the indicators tracking progress on this dimension, which have been stable over the last three years. Specific attention is required on advanced digital skills training where there are clear shortages in the workforce.

[9] https://www.bildung-forschung.digital/de/die-digitalstrategie-des-bmbf-2479.html
[10] https://www.bmbf.de/de/mint-aktionsplan-10115.html
[11] https://www.bmbf.de/de/nationale-weiterbildungsstrategie-8853.html
[12] https://codeweek.eu/scoreboard?edition=2019.

3 Use of internet services

3 Use of internet services	Germany		EU
	rank	score	score
DESI 2020	**9**	**61.6**	**58.0**
DESI 2019	8	60.3	55.0
DESI 2018	9	57.0	51.8

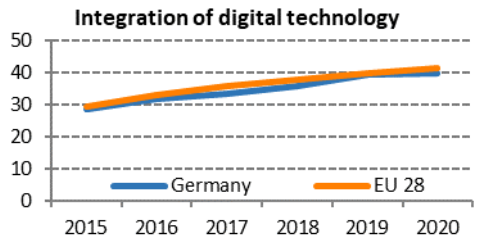


	Germany			EU
	DESI 2018 value	DESI 2019 value	DESI 2020 value	DESI 2020 Value
3a1 People who have never used the internet % individuals	**7%** 2017	**5%** 2018	**5%** 2019	**9%** 2019
3a2 Internet users % individuals	**87%** 2017	**90%** 2018	**91%** 2019	**85%** 2019
3b1 News % internet users	**74%** 2017	**74%** 2017	**76%** 2019	**72%** 2019
3b2 Music, videos and games % internet users	**78%** 2016	**82%** 2018	**82%** 2018	**81%** 2018
3b3 Video on demand % internet users	**23%** 2016	**31%** 2018	**31%** 2018	**31%** 2018
3b4 Video calls % internet users	**54%** 2017	**57%** 2018	**59%** 2019	**60%** 2019
3b5 Social networks % internet users	**56%** 2017	**57%** 2018	**56%** 2019	**65%** 2019
3b6 Doing an online course % internet users	**6%** 2017	**6%** 2017	**9%** 2019	**11%** 2019
3c1 Banking % internet users	**62%** 2017	**64%** 2018	**66%** 2019	**66%** 2019
3c2 Shopping % internet users	**82%** 2017	**82%** 2018	**84%** 2019	**71%** 2019
3c3 Selling online % internet users	**34%** 2017	**35%** 2018	**32%** 2019	**23%** 2019

Overall, the Use of internet services in Germany is slightly higher than the EU average. People in Germany are keen to go online for a range of services, in line with the rest of the EU. Only 5% of Germans have never used the internet. Compared to the EU, the most frequent activities carried out online in Germany are reading news, consuming music, videos and games, shopping and selling online. 76% of German internet users read news online (against the EU average of 72%). Only 56% of Germans use social networks, well below the EU average of 65%, but at 84%, the share of online shopping is much higher than the EU average of 71%. Online sales, at 32%, is significantly above the EU average of 23%. The take-up of online music, videos and games is also more widespread in Germany than in other EU countries, at 82% of internet users.

4 Integration of digital technology

4 Integration of digital technology	Germany		EU
	rank	score	score
DESI 2020	**18**	**39.5**	**41.4**
DESI 2019	15	39.2	39.8
DESI 2018	17	35.8	37.8



	Germany			EU
	DESI 2018 value	DESI 2019 value	DESI 2020 value	DESI 2020 Value
4a1 Electronic information sharing % enterprises	**NA** 2017	**NA** 2017	**29%** 2019	**34%** 2019
4a2 Social media % enterprises	**16%** 2017	**16%** 2017	**23%** 2019	**25%** 2019
4a3 Big data % enterprises	**6%** 2016	**15%** 2018	**15%** 2018	**12%** 2018
4a4 Cloud % enterprises	**NA** 2017	**12%** 2018	**12%** 2018	**18%** 2018
4b1 SMEs selling online % SMEs	**23%** 2017	**19%** 2018	**17%** 2019	**18%** 2019
4b2 e-Commerce turnover % SME turnover	**11%** 2017	**9%** 2018	**10%** 2019	**11%** 2019
4b3 Selling online cross-border % SMEs	**11%** 2017	**11%** 2017	**10%** 2019	**8%** 2019

Germany ranks 18th in the EU on Integration of digital technology in business activities. Under a third of enterprises (29%) share information electronically. German SMEs do, however, take advantage of the opportunities presented by online commerce: 17% of SMEs sell online (slightly below the EU average of 18%); 10% of all SMEs sell cross-border and 10% of turnover is generated online. 23% of enterprises use social media (up from 16% in 2017) and 12% use cloud services (below the EU average of 18%). 15% of German enterprises use big data analysis, above the EU average of 12%.

The Federal Ministry for Economic Affairs and Energy has launched several measures with the aim of advancing digitalisation: a digital innovation competition for business start-ups, the Digital Hub Initiative, GINSEP, Mittelstand 4.0 Centres of Excellence, 'go digital', the Town-Country-Digital Initiative, IT Security in the Business Sector and Industrie 4.0.

At the Digital Summit in Dortmund on 29 October 2019, the Federal Ministry for Economic Affairs and Energy and the Federal Ministry of Education and Research presented Project GAIA-X, an initiative by representatives of the German Federal Government, business and sciences communities to set up a high-performance, competitive, secure and trustworthy data infrastructure for Europe.

In 2019, Germany took part in the newly established European Joint Undertaking 'EuroHPC'. Germany continues its long-standing commitment to the national supercomputing infrastructure, the Gauss Centre for Supercomputing. For the funding phase 2017-2025, the federal government and participating federal state governments will provide around €850 million. The HPC activities are part of the 'Hightech-Strategy 2025' of the federal government and part of the 'Digital Strategy' of the Federal Ministry for Education and Research. The Federal Ministry for Education and Research

provides German funding for EuroHPC. Germany has earmarked a budget of about €14 million for research and innovation tenders in 2019.

In September 2019, the federal government adopted a national Blockchain Strategy[13]. The strategy sets out 44 measures in five fields of action (blockchain in the finance sector; advancing projects and regulatory sandboxes; clear and reliable framework conditions; digitised public-administration services and knowledge, networks and cooperation). The expected outcome of the strategy is to deepen the understanding of its potential use and of the limitations of blockchain technology and its possible applications.

On 15 November 2018, the federal government adopted its Artificial Intelligence (AI) Strategy, in which it sets out a framework for a holistic policy on the future development and application of AI in Germany. In 2019, it launched several funding initiatives to cover work on IT security, autonomous driving and to look into the explainability and accountability of AI systems. Up to and including 2025, the federal government intends to provide around €3 billion to implement the strategy.

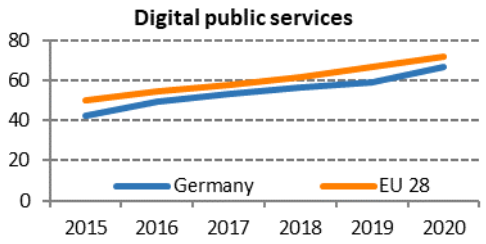
The research framework programme on IT security entitled 'Self-determined and secure in the digital world 2015-2020' for the first time bundles IT security research activities across departments. The framework programme has a budget of over €210 million and is set to run until 2020. Funding is provided for a broad range of activities such as quantum communication, post-quantum cryptography, artificial intelligence for IT security, IT security for critical infrastructure and hardware security. The QuNET research initiative to develop a highly secure network for the federal government on the basis of quantum communication is particularly worthy of note here.

Multiple initiatives taken by the federal government also support the digitisation of SMEs, which is necessary to boost the digital transformation of the German economy.

[13] https://www.bmwi.de/Redaktion/EN/Publikationen/Digitale-Welt/blockchain-strategy.html

5 Digital public services

5 Digital public services	Germany rank	Germany score	EU score
DESI 2020	**21**	**66.4**	**72.0**
DESI 2019	22	58.8	67.0
DESI 2018	19	56.4	61.8



	Germany DESI 2018 value	Germany DESI 2019 value	Germany DESI 2020 value	EU DESI 2020 value
5a1 e-Government users % internet users needing to submit forms	**39%** 2017	**43%** 2018	**49%** 2019	**67%** 2019
5a2 Pre-filled forms Score (0 to 100)	**38** 2017	**41** 2018	**41** 2019	**59** 2019
5a3 Online service completion Score (0 to 100)	**88** 2017	**88** 2018	**90** 2019	**90** 2019
5a4 Digital public services for businesses Score (0 to 100) - including domestic and cross-border	**84** 2017	**80** 2018	**92** 2019	**88** 2019
5a5 Open data % of maximum score	**NA**	**NA**	**68%** 2019	**66%** 2019

Germany ranks 21st in the EU on Digital public services. Despite an improvement in digital public services for businesses (up from 80 to 92), Germany still underperforms in this dimension. It performs above the EU average on open data, ranking 13th. On online service completion, Germany performs at the EU average with a score of 90. However, the level of online interaction between public authorities and the general public is very low. Only 49% of German online users engage actively with e-government services, compared with an EU average of 67%, with Germany ranked 26th for this indicator. On the indicator for pre-filled forms, Germany's score remained the same at 41, well below the EU average of 59.

Germany's Online Access Act (*Onlinezugangsgesetz*, OZG), enacted in August 2017, obliges all federal and state governments to provide online services for citizens and companies by the end of 2022. Two programmes have been set up to reach this goal: a programme for the digitisation of federal services (*Digitalisierungsprogramm Bund*) and a programme for the digitisation of services provided by federal states and municipalities (*Digitalisierungsprogramm Föderal*[(14)]). The two programmes cover 575 services under the Online Access Act, grouped in 14 subject areas, addressed jointly by the federal government, the states and the municipalities. For priority services, digitisation labs are set up to develop user-friendly online solutions.

In 2019, the federal cabinet reorganised the project to modernise the IT infrastructure of the federal public authorities since the project faced considerable delays and cost increases. Implementation is proceeding slowly and it will be a challenge to meet the goal of digitalising all 575 services by the end of 2022.

The budget for the project is allocated by the Ministry of Finance, with every ministry involved. Funds from several EU programmes are being used in different projects. An additional central budget of €500

(14) https://www.onlinezugangsgesetz.de/Webs/OZG/DE/digitalisierungsprogramme/foederal/foederal-node.html

million is managed by the Federal Ministry of the Interior to fund implementation of the Online Access Act. In addition, the Federal IT Cooperation body (FITKO), which coordinates the digitalisation programmes between the federal level, the federal states and municipalities, is equipped with a dedicated annual budget of approx. €60 million.

Full implementation of the Online Access Act by all public bodies involved – federal, state and local authorities - could generate more significant improvements in digital public administration.

Highlight 2020: Digitisation labs for public services

In 2018, the first 'digitisation lab' for the housing benefits service started as a pilot project to test a new method of digital transformation of public services in Germany. The results of the lab – including a clickable prototype, data fields and a process model – formed the basis for the technical implementation of a user-friendly online service. By the end of 2019, the first municipalities could offer an online application system for citizens to apply for housing benefits.

In 2019, the same method was applied to over 30 high priority public services (applications for driving licences, parental benefits etc.). The key advantages are in developing user-friendly services in a short period of time. Core features of the method are agility, user centricity and the use of an interdisciplinary team. After an analysis of the current process, employees from federal and state ministries and agencies came together with user experience designers and real users in design thinking workshops. After the first workshop, a draft version of a user-friendly click prototype of a digital public service is developed and subsequently tested in iterative versions with users, the agencies and ministries.

By the end of 2019, over 20 labs had developed a user-friendly click prototype, with technical implementation already started or due to start soon. Germany plans to set up more labs to work on other important services in 2020.