



Ministry of Economic Affairs
and Climate Policy



Digital Economy Strategy

Working towards a resilient
and thriving digital economy

November 2022

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Introduction

The Netherlands is a great place to live, work and do business. This is made possible, in part, by the digital transition our society and economy are undergoing. Digitalisation creates the jobs and services of the future and is indispensable in the climate transition and ageing society. The Netherlands is among the best performing digital economies in Europe and is excellently positioned to capitalise on the opportunities created by digitalisation. Opportunities for a more competitive, productive, resilient business community as new products, services, markets and applications emerge. Opportunities for future earning capacity, prosperity and solutions to a variety of societal issues, through the development and application of digital technologies such as artificial intelligence (AI) and Quantum. And opportunities for our business climate, by having a secure, reliable and high-quality digital infrastructure. However, maintaining and further improving our starting position is not self-evident. Our resilience and prosperity are under strain, partly due to geopolitical tensions and a tight labour market, and because not all citizens and businesses alike have the ability to participate in a more digital world. These are urgent bottlenecks for a successful digital transition and require substantial investments, close collaborations and the creation of the right prerequisites.

In order to continue to reap the benefits of the digital transition and to secure future Dutch welfare, we need to work towards a resilient, entrepreneurial, innovative and sustainable digital economy. An economy in which everyone in the Netherlands can participate, in which we encourage and embrace opportunities, in a way that safeguards our public values. We want to pursue this, together with the business community, knowledge institutions, civil society organisations and other government authorities.

The Dutch government has prominently featured the digital transition in the Coalition Agreement¹ and has informed the House of Representatives (Tweede Kamer) in a letter about the digitalisation policy.² This letter sets out the ambitions and objectives of the government for the digital transition of Dutch society and economy involving four themes: digital foundation, digital government, digital society and digital economy. The Dutch government has further elaborated the ‘digital government’ theme as well as a number of themes from the ‘digital foundation’ in the Work Agenda Value-driven Digitalisation (hereinafter referred to as the ‘work agenda’).³

“The current digital revolution offers tremendous opportunities for our society and economy. We will capitalise on these opportunities with excellent digital skills, a strong European digital market, high-performance digital infrastructure and ambitious cooperation in technological innovation. At the same time, digitalisation is creating a digital divide and growing inequality in our society. Our security, rule of law, democracy, human and fundamental rights, and competitiveness are also under pressure. This demands solid ground rules, supervision and strategic autonomy.”

(Source: Coalition Agreement 2021-2025)

¹ VVD, D66, CDA and ChristenUnie Coalition Agreement ‘Looking out for each other, looking ahead to the future’ (Parliamentary Papers II 2021/22, 35 788, no. 77).

² Letter of the State Secretary of the Interior and Kingdom Relations, the Minister of Economic Affairs and Climate Policy, the Minister of Justice and Security and the Minister of Legal Protection of 8 March 2022 on the key points on the digitalisation policy (Parliamentary Papers II 2021/22 26 643, No. 842).

³ Value-driven Digitalisation Work Agenda | Report | Rijksoverheid.nl

A key component of the digital foundation is cybersecurity, which is further elaborated in the Dutch Cyber Security Strategy.⁴ The agenda for the digital society will follow in the first half of 2023.

The digital economy is one of the priorities and a key responsibility of the Minister of Economic Affairs and Climate Policy (EZK).⁵ A clear vision is essential to facilitate a resilient and thriving digital economy the Netherlands deserves. We detail this vision in this Digital Economy Strategy and elaborate on the ambition, objectives and commitment to the digital economy of the Minister of Economic Affairs and Climate Policy, in collaboration with other colleagues. This strategy contains the elaboration of the digital economy component from the key points letter on digitalisation and a number of themes from the digital foundation: digital autonomy and well-functioning digital markets and services and the digital infrastructure.

The key points of the Digital Economy Strategy

Our ambition is to have a resilient, entrepreneurial, innovative and sustainable digital economy in which everyone in the Netherlands can participate. In line with the Coalition Agreement and the work agenda, this strategy puts a firm commitment to seizing opportunities, strengthening the foundation, safeguarding public values and carefully balancing public interests. We explicitly focus on Europe and the rest of the world and look beyond this term of office. To achieve this ambition, we will focus on the following priorities:

Promoting digital innovation and skills

We aim to capitalise on the opportunities of digital technologies and better digital skills and a future-proof labour market. We do this by means of public-private investments in creating prerequisites for cloud applications and in digital technologies, such as artificial intelligence, quantum, blockchain and 5/6G. Furthermore, by striving for one million digitally skilled people by 2030.

Creating the right conditions for well-functioning digital markets and services

We are helping to create markets in the Netherlands where consumers have freedom of choice and are confident, where companies compete on a level playing field, and where doing business is attractive. We do this by means of effective

implementation, supervision and enforcement of European regulations.

Maintaining and strengthening a secure, reliable and high-quality digital infrastructure

We want the Netherlands to remain in the lead and to empower itself as a digital hub in Europe and the rest of the world. We do this by working together with our partners on an integrated vision on digital infrastructure, and by bridging the digital divide with 19,000 addresses in remote areas in the Netherlands.

Strengthening cybersecurity

We aim for the Netherlands to be digitally secure, allowing businesses and citizens to fully profit from participation in digital society, without any concerns about cyber risks. That means improving the digital resilience of businesses and citizens, having more secure digital products and services, and strengthening capacities in the cybersecurity labour market and education.

⁴ Parliamentary Paper 26 643, no. 925

⁵ Parliamentary Paper 26 643, no. 84264



Our approach

We want to inform, inspire and motivate businesses, citizens, the House of Representatives, stakeholders and partners to join us in pursuing an entrepreneurial and innovative digital economy. We pursue these aims not in isolation but in cooperation with other ministries. Collaboration is indispensable in keeping the digital transition on track, involving a wide range of stakeholders. Our efforts are shared. This strategy has been developed in conjunction with the aforementioned Work Agenda Value-driven Digitalisation and the Dutch Cyber Security Strategy. It also stands next to related policies of the Minister of Economic Affairs and Climate Policy, such as strategic and green industry policy⁶ and policy aimed at the Dutch business climate.⁷ Also involved are preliminary insights from policies to be presented to the House of Representatives at a later stage, such as the International Cyber Strategy and the letter on Open Strategic Autonomy.⁸ Finally, our commitment is related to the Digital Decade policy programme of the European Union⁹ and embedded in a strong international context.

This strategy describes the ambition and policies along which we aim to shape the digital transition of the Dutch economy. Although this transition goes hand in hand with considerable uncertainty and rapid technological advances¹⁰, this strategy offers a framework and a point of reference to jointly develop a digital economy for everyone. This will be further specified for parts of the pillars in the coming period, such as the exploratory investigation on the digital Infrastructure and a further conceptualization of digital autonomy in the digital economy. Its elaboration and implementation will also take place in close collaboration between ministries and other governmental bodies, in dialogue with the business sector and civil society, and always mindful of what contemporary developments and emerging opportunities demand.

⁶ Parliamentary Paper 29 826, no. 145

⁷ Parliamentary Paper 32 637, no. 493

⁸ Parliamentary Paper 2022Z19309

⁹ EU Communication (2021) 2030 Digital Compass: the European way for the digital decade

¹⁰ FreedomLab (2022) Toekomstverkenning Nederlandse Digitale Economie 2030 (Outlook on the Dutch Digital Economy 2030)



Digital Economy Strategy


“Working towards a resilient, entrepreneurial, thriving and sustainable digital economy, wherein everyone in the Netherlands participates”.

Digital Economy

 Accelerating the digitalisation transition in the SME sector

 Promoting digital innovation and skills

 Creating the right conditions for well-functioning digital markets and services

 Maintaining and strengthening a secure, reliable and high-quality digital infrastructure

 Strengthening cybersecurity

SME's frontrunner in the digital transition

- NL in the top 3 in terms of the application of digital technology by SMEs
- 95% of all SMEs have attained at least a basic level of digitalisation
- 75% of all SMEs applies cloud, AI and big data

Technological leadership in Europe

- Public-private partnerships and investing in digital technologies
- Focus on artificial intelligence, data, quantum, 5/6G, cloud

Futureproof labour market

- 1 million digitally qualified professionals in 2030

Well-functioning digital markets

- Effective implementation, supervision and enforcement of European regulations

The Netherlands as the digital hub

- Bridging the digital divide with 19,000 addresses in remote areas
- Vision on a secure, reliable and high-quality digital infrastructure

Strengthening cybersecurity

- Improving digital resilience of businesses
- More secure digital products and services
- Cybersecurity labour market, education and digital resilience of citizens



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Working towards a resilient and thriving digital economy

The digital transition is fundamentally changing Dutch society and economy. Scientific breakthroughs, new applications and ever-increasing computing power are shifting the frontiers of what is possible with digital technology. Take, for example, artificial intelligence (AI) as a tool in research on early detection of diseases, optimisation of farming of crops or better prediction of climate change. The latest digital technologies and applications, data and software affect almost all areas of our daily lives. Take, also for example, the way in which we communicate, learn, make purchases, entertain ourselves, make friends and navigate in the physical and digital world. Developments are unfolding at a high pace with new phenomena such as metaverse and web 3.0 that entail new possibilities and issues.¹¹ Digitalisation provides a substantial contribution to our welfare and earning capacity. This manifests itself in new business models, new research methods, new skills and the application of innovative digital products and services. This is reflected in the emergence of new companies and the introduction of innovations in existing markets. Digitalisation also generates the required productivity and efficiency improvements in existing businesses to remain competitive in highly connected global markets. Alongside sustainability, digitalisation forms one of the major changes of our time.

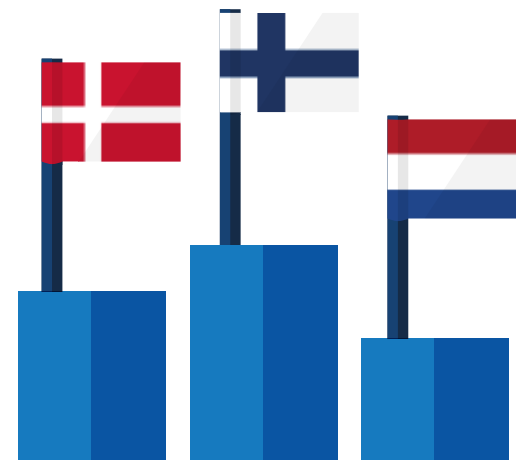
¹¹ FreedomLab (2022) *Toekomstverkenning Nederlandse Digitale Economie 2030*.

The Netherlands has an excellent starting point for capitalising on the opportunities created by digitalisation. Our digital infrastructure is state-of-the-art, the Netherlands has ecosystems with successful start-ups, scale-ups and innovative Dutch tech companies as well as a unique tradition of public-private partnerships. The Netherlands is one of the best performing digital economies in Europe.¹² The previous Dutch Digitalisation Strategy has made a firm commitment to achieve this in recent years.¹³ At the European level, a lot of work went into creating rules and prerequisites to safeguard public interests in the digital economy. For example, to curb the power of tech conglomerates, to better protect our public values and to more strongly embed in legislation the importance of AI and cybersecurity.

¹² According to the Digital Economy and Society Index (DESI), the Netherlands forms part of the top-3 economies in Europe.

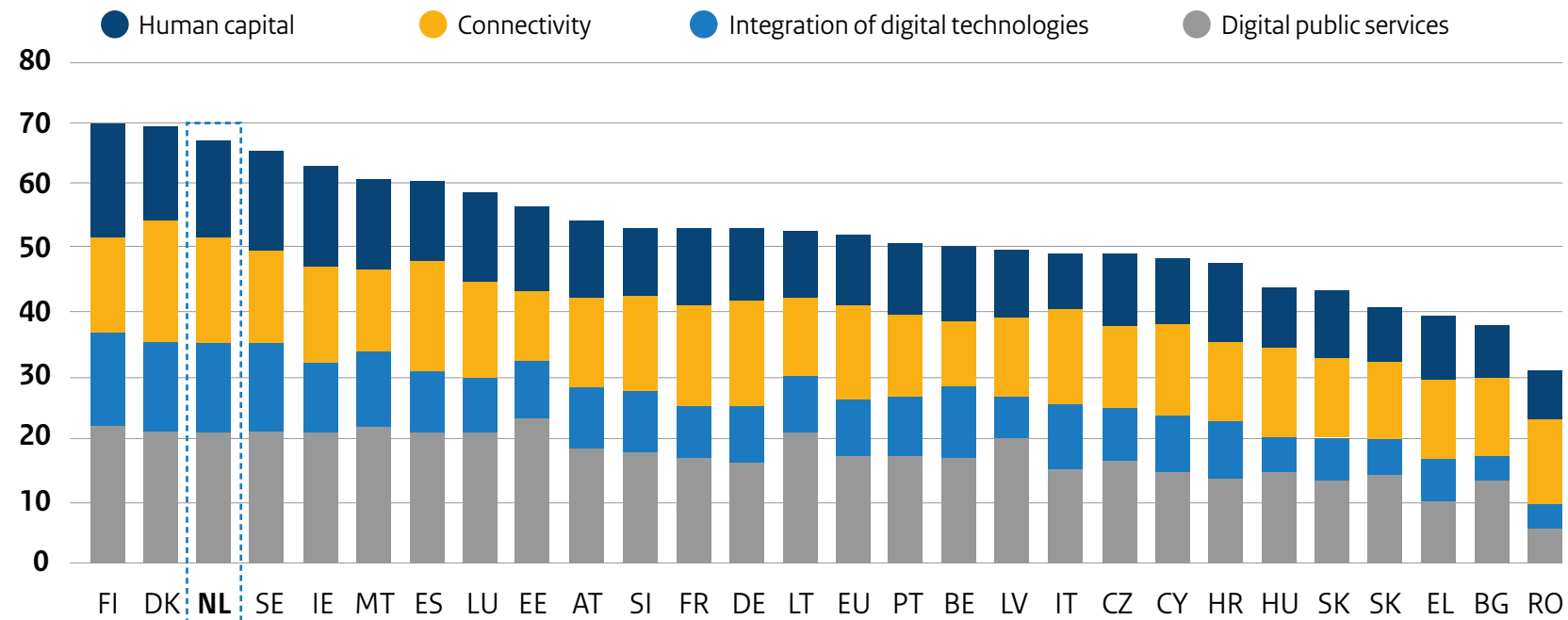
¹³ Dutch Digitalisation Strategy: 2018 (Parliamentary Paper 26 643, nr. 541), 2019 (Parliamentary paper 26 643, nr. 623), 2020 (Parliamentary Paper 26 643, nr. 709) and 2021 (Parliamentary Paper 26 643, nr. 755).

Top 3 digital economies in Europe, according to the Digital Economy and Society Index (DESI) 2022; 1. Finland, 2. Denmark, 3. The Netherlands



The Netherlands leading the way in Europe

According to the Digital Economy and Society Index (DESI), the Netherlands is one of the top-3 digital economies in Europe in 2022. The Netherlands is leading in Europe in terms of human capital, the digital infrastructure and the availability of 5G mobile internet. Dutch companies are also increasingly using digital technologies in recent years. For example, Dutch companies perform well above the European average in terms of the proportion of companies using the cloud, which is 60% versus an EU average of 34%. Still, there remains room for significant improvement of digital performance. For instance, only 13% of Dutch businesses use artificial intelligence (AI). Also, the Netherlands is faced with an urgent problem of a lack of skilled ICT staff. The number of ICT specialists currently available does not yet match market demand. When it comes to the number of ICT-graduates, the Netherlands even scores below average in the EU.



Index of the digital economy and society (DESI), ranking 2022

Challenges in the digital economy

Maintaining our excellent starting position is far from straightforward. Our resilience and welfare are under strain. Recent years have been marked by a sharp shift in the world’s geopolitical panels. A trend reversal is taking place due to a changing global economic playing field with increasing tensions between major economic powers. These dynamics also translate into the digital world. Countries such as China and the United States of America are in a race for global

technological hegemony. They are investing heavily in key enabling technologies and thus strengthening their potential to set global standards and exert their influence on production chains. Europe is lagging behind, which makes us vulnerable and dependent. The number of cyberthreats and high-impact digital incidents is also increasing.¹⁴ In terms of our future welfare and earning capacity, Dutch businesses are confronted with a major challenge. The adoption of digital technology

¹⁴ Cyber Security Assessment Netherlands 2022 (CSAN2022); Parliamentary Paper 26643-891

in businesses needs to rise to remain globally competitive. Tightness on the Dutch labour market and large shortages of technically skilled staff are pressing bottlenecks that hamper shaping the digital transition.

Furthermore, as digitalisation advances, it is becoming increasingly complex to safeguard public values and public interests, such as a level playing field with fair competition, freedom of choice, openness, grip on data, privacy and security in the digital economy. For example, digitalisation affects our distribution of wealth if not all businesses and consumers are capable of keeping up in a more digital world. This is being reinforced as big tech conglomerates increasingly accumulate power in digital markets. There are also ethical questions about the use of AI and skewed access to data. Increasing need for digital connectivity also raises new issues that might put different public interests at odds with each other. For example, the roll-out of new digital infrastructure introduces spatial planning bottlenecks, as witnessed in the incorporation of hyper-scale data centres. Also, the shift from brick-and-mortar to online shops has an impact on the liveability of our society, cities and villages. A major challenge in terms of climate and sustainability is the energy use and carbon footprint of the digital sector. Conversely, the wide application of digital technologies form an indispensable key and opportunity in speeding up the energy transition process, the transition of the agriculture sector and the contribution to a circular

economy.¹⁵ Balancing trade-offs of different interests seem to be inevitable in shaping the digital transition.

Towards a resilient, thriving and sustainable digital economy, for everyone

In order to continue to reap the benefits of the digital transition and to secure future Dutch welfare, we need to pursue a resilient and adaptable digital economy. To achieve this, we invest in a robust Dutch business climate and community, and subsequently, in Europe's technological leadership in exploiting digital technologies, such as AI and quantum technology. Technological leadership contributes to open strategic autonomy of the Netherlands and Europe around the globe. This limits unwanted dependencies on third parties and allows us to better assert our public interests, thus contributing to strengthening our economic resilience. It requires an excellent business climate for tech companies and entrepreneurs, with public-private investments in research and knowledge and a successful application of innovations. In addition, we need to keep the basics in shape, by striving for well-functioning markets, a solid knowledge and research system, by continuing our focus on strengthening and securing our digital infrastructure, making citizens, businesses, knowledge institutions more digitally resilient and by building

Digitalisation offers opportunities for sustainability...

The covid crisis has shown that our digital infrastructure presented opportunities to largely keep our economy running digitally. In this context, the necessitated shift from physical to digital work contributed to a significant reduction in greenhouse gas emissions. Digitalisation offers opportunities for the continued sustainability of our economy. Digitalisation, for instance, offers a considerable contribution to digital innovations supporting the energy transition. For example, by improving the efficiency of production processes and by enabling the integration of solar and wind power in our energy system. As put forward by the recently presented Sustainable Digitalisation Manifesto: "Digitalisation can make a huge contribution to a greener future, but it must also be as sustainable as possible."¹⁶ We are therefore vigorously pursuing opportunities of digitalisation for further sustainability and examining the roles government and business

¹⁶ The National Coalition on Sustainable Digitalisation (NCDD) | Sustainable Digitalisation Manifesto

should play in achieving climate ambitions. This is why, in 2023, we will be conducting further research into the relationship between digitalisation and sustainability.

...and the circular economy

Digitalisation is also indispensable for a circular economy to identify input, loss and condition of materials used throughout the production chain. Digitalisation provides opportunities for circular business models. By committing to digital technologies, such as digital twins, AI and data, companies can optimise their production processes to reduce the use of energy and waste. The circular and digital policy domain come together in the introduction of the digital product passport: a digital document that collects a product's composition and technical data. This should lead to better traceability of substances and more transparency for consumers and businesses. The commitment to the circular economy is further elaborated in our strategy on resources.

¹⁵ 2022 Strategic Foresight Report | European Commission (europa.eu)

the necessary skills and human capital to realise the ambitions for the digital economy.

Our assignment extends beyond economic resilience, growth and earning capacity. Our wellbeing also depends on other fundamental issues, such as quality of life, health, safety and a sustainable environment, as well as the question whether everyone can participate. More income and consumption contributes to quality of life, so long as it does not come at the expense of other aspects. We commit to an inclusive and sustainable digital economy. Such commitment means

not only focusing on what choices mean presently, but also on the consequences of our choices elsewhere in the world and for generations to come. That requires a comprehensive consideration of public interests, consistent and responsible choices, and concrete and measurable objectives.

Finally, European and international collaboration with like-minded countries is crucial to realise our ambitions. First, the European digital agenda is contributory to our commitment. Challenges are often only effectively tackled when actions are taken at European level. In line with the Coalition Agreement,

the Netherlands will take the lead in strengthening European collaboration and promote partnerships with like-minded countries to achieve the ambitions for a digital economy. Examples of this include the strengthening of the collaboration with the United States of America via the EU-US Trade and Technology Council (TTC), agreements on digital trade in trade agreements, and the recently established digital partnership between the EU and Japan, as well as negotiations on digital partnerships with South Korea and Singapore.

Human-centred AI

Artificial intelligence (AI) is a technology that allows, for example, industrial machines, software and devices to solve problems or to assemble products independently. The Netherlands has a good starting position when it comes to research into AI and applications of AI; it aims to be a leader and frontrunner in the development and application of responsible AI. Responsible means that AI must benefit people, that fundamental European human

rights are protected and that we strive to ensure that everyone is included. The Netherlands is following the European approach to responsible human-centred AI, which can be a unique proposition for Europe to profile itself internationally. An ethical approach to AI should strengthen both consumer confidence in digital developments and the competitiveness of European AI companies. The Netherlands and the EU want to excel against other international players. This requires digital and high-quality technological knowledge and

creativity; competences that are broadly available in the Netherlands. By bringing these competences together, we can achieve synergy in many domains and be truly distinctive in applying AI. This is relevant for Dutch earning capacity, trust in technology, jobs of the future, for solving societal issues and for having more autonomy in the deployment of new technology. It will enable us to integrate resilience, welfare and public values within the application of digital technologies.



The Netherlands also continues to actively advocate internationally for an open, free and secure internet and for the preservation of the internet as a global open communication infrastructure. In doing so, the Dutch government supports the multi-stakeholder model for internet governance. That is an open collaboration between interested government authorities, civil society organisations, businesses, academics and the technical internet community in organisations such as ICANN¹⁷, IETF¹⁸, IEEE¹⁹ and RIPE²⁰. They need to be in the lead in terms of adjusting the standards, protocols and procedures for the internet's core functionality, without undue interference from state or private actors. By taking the lead together, we will ensure that we build the necessary confidence among consumers and businesses to enable large-scale adoption of digital technology.

¹⁷ ICANN: Internet Corporation for Assigned Names and Numbers

¹⁸ IETF: Internet Engineering Task Force

¹⁹ IEEE: Institute of Electrical and Electronics Engineers

²⁰ Réseaux IP Européens (RIPE) is a platform that supports the infrastructure of the Internet through technical coordination.

Europe's digital decade

The digital transformation of Europe is a top priority for the European Commission. The European Commission aspires to a broad agenda to shape digitalisation in a European way, focusing on both pursuing the opportunities of digitalisation for the economy and society and the underlying sustainability agenda, as well as protecting fundamental rights and (European) public values. This aspiration has manifested itself in a European vision, strategy and specific roadmap: the Digital Compass. The Digital Compass describes EU's digital ambitions for 2030, aimed at digital skills, digital infrastructure, businesses and government. We endorse and embrace the European objectives and have translated them - sometimes with an increased level of ambition - into national ambitions in this strategy. We use, among others, the European monitoring system, such as DESI, to monitor our digital progress and identify where further efforts are needed.



Score NL
67,4



Average score EU
52,3

Digital Economy and Society
Index (DESI), ranking 2022



Digital Compass: European objectives for 2030

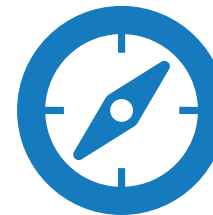
Skills

ICT specialists: 20 million + gender convergence
Basic digital skills:
min 80% of population



Digitalisation of public services

Key public services: 100% online
e-Health: 100% of citizens have access to medical records online
Digital identity: 80% of citizens have access to digital ID



Secure and sustainable digital infrastructures

Connectivity: Gigabit for everyone
Cutting edge semiconductors: double EU share in global production
Data – edge & cloud: 10,000 climate-neutral highly secure edge nodes
Computing: first computer with quantum acceleration



Digital transformation of businesses

Tech up-take: 75% of EU companies using cloud/AI/big data
Innovators: grow scale-ups & finance to double EU unicorns
Late adopters: more than 90% of SMEs reach at least a basic level of digital intensity

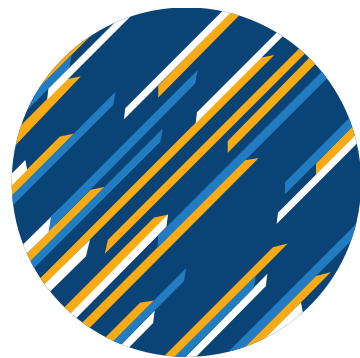


Pillars of the digital economy strategy

This strategy addresses our approach of the opportunities and challenges of the digital economy. We need to focus on the following five pillars to achieve our ambition:

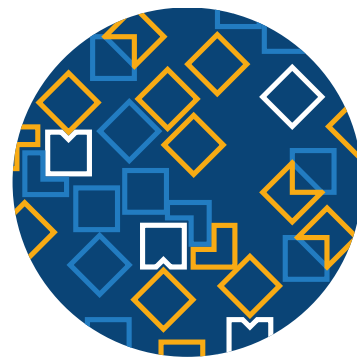
These are not isolated pillars and should be considered in coherence with each other and the more comprehensive Dutch government policy on digitalisation. There is mutual dependency between the pillars. For example, the digitalisation of the businesses depends on the development of digital innovations and well-functioning digital markets. Also, a high-quality digital infrastructure can only exist if there is sufficient human capital and an enhanced cybersecurity. A cohesive effort is a prerequisite for the continuation of a successful digital transition.

Each pillar describes our ambitions and objectives. Depending on the task, this requires different roles and instruments, from creating prerequisites and supervision to investing and encouraging public-private partnerships. In doing so, we always consider at what level and with whom we need to act to achieve our objectives effectively. The policy commitment ranges from regional and national levels to the level of international collaboration within and outside the EU.



Pillar 1

Accelerating the digitalisation transition in the SME sector



Pillar 2

Promoting digital innovation and skills



Pillar 3

Creating the right conditions for wellfunctioning digital markets and services



Pillar 4

Maintaining and strengthening a secure, reliable and high-quality digital infrastructure



Pillar 5

Strengthening cybersecurity





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Pillar 1

Accelerating the digitalisation transition in the SME sector

“Small and medium-sized enterprises are important to this coalition. We will strengthen the growth and innovative capacity of SME entrepreneurs and businesses and encourage entrepreneurship. That also means [...] supporting businesses when it comes to digitalisation.”

(Source: Coalition Agreement 2021 - 2025)



Digitalisation offers many opportunities for the business community, as it creates new products, services, companies, markets and applications. Digitalisation is thus a driving force behind a productive, innovative, sustainable and future-proof Dutch economy and its earning capacity. This is relevant and important for all companies: large companies, our family-owned businesses, innovative start-ups and the wider SME sector. Digitally ‘mature’ companies²¹ are more competitive, more productive, more resilient and have a higher revenue growth. They also invest more in research & development (R&D) and in their staff’s digital skills.²² For instance, the Netherlands has several companies that have grown into successful innovative tech companies in recent years, holding important positions in the digital ecosystem. This strengthens the international position of the Dutch business community and also has a positive impact on the economy and societal challenges.

The challenge we face

Although the Netherlands is a frontrunner in the digital transition in many areas, the Dutch business community is merely among the European sub-top in terms of the

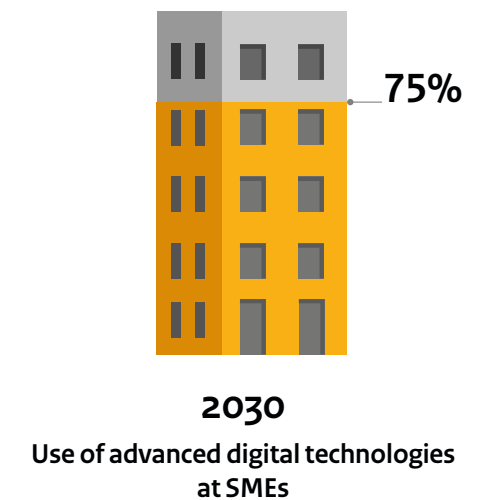
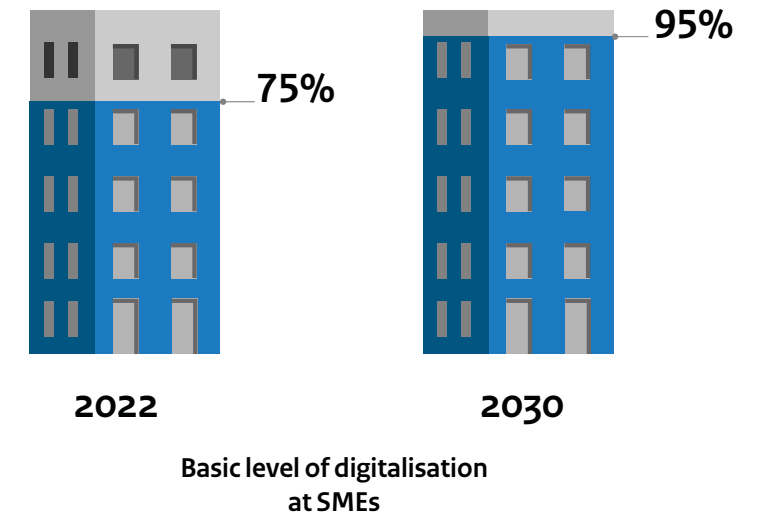
²¹ A digitally mature company uses multiple digital technologies. Using the Digital Intensity Index (DII) score (0-12), the DESI measures the digital technologies applied by companies.

²² SEO (2020) The Dutch innovation landscape in turbulent times.

application of digital technology, such as big data and AI.²³ For instance, data availability and data sharing within the value chain remains a bottleneck for SMEs, while there are huge opportunities. With an increasing tight labour market, increasing labour productivity through the use of digital technology and related (process) innovations has become an important condition for companies to survive and grow, but also, for example, to become more sustainable. For many companies, the challenge therein is to ensure that this is also done secure. These challenges are primarily the responsibility of companies themselves, but the government also has a role to play to help realise that the business community becomes digital across the board.

The digitalisation challenge for companies differs which means that the government’s role also differs. A distinction is made between innovative frontrunners (including start-ups and scale-ups), innovation-minded SMEs and the wider SME sector. The strengthening of innovative frontrunners is further elaborated within the pillar titled ‘Promoting digital innovation & skills’. The pillar ‘Accelerating the digital transition in the SME sector’ focuses on advancing innovation-minded SMEs and wide-ranging SMEs. Given the size of this group, these are the companies that are key to a widespread adoption of digital technologies.

²³ Digital Economy and Society Index (DESI): Only 27% of companies having more than ten employed persons analyse big data and a mere 13% of these companies make use of AI technology.



The challenge for innovation-minded SMEs, those already adopting various digital technologies, is that they continue to adopt more and more promising advanced digital technologies such as AI, cloud and big data. The wider SME sector consists of those companies that want to digitise but lack the time or knowledge to keep up with the digital transition. These are mostly smaller SMEs, but not all of them. These companies are faced with the challenge of quickly and sufficiently upgrading their digital basic level and digital basic skills to profit from the digital transition.

What is our ambition?

We want the Dutch business community to become a frontrunner in terms of the adoption of digital technologies by SMEs. Our ambition is to exceed the European objectives²⁴ and to be part of the European top-3 in 2030. This ambition means that 95% of all SMEs will have at least a basic level of digitalisation. Given our current position at 75% compared to other European countries and the broad foundation laid by our ongoing programmes, this percentage is on the horizon. In addition, we want to increase the use of advanced digital technologies, such as cloud technology, AI and big data, within

²⁴ The EU digital compass: more than 90% of all small and medium-sized enterprises pass the basic level of digital intensity. A digital basic level is met if a company uses at least four technologies of a list of twelve.

the SME sector to at least 75% by 2030. This is in line with the European objective. By increasing the basic digital level and the use of digital technology, companies can develop new products, services, applications and compete on markets in a much more effective manner. Also, digitalisation may save costs and support the energy transition. In this context, it is important that companies can do business in a digitally secure way and develop and offer secure ICT products, services and processes (security by design). This leads to the necessary increase in labour productivity and turnover growth and makes companies and the Dutch economy more competitive, productive, sustainable and resilient. We do this by removing barriers to digital applications and by promoting the business community's present and future competitiveness.

National-regional cooperation

Regions play an important role in the development and adoption of digital technology and innovations and in supporting and engaging SMEs. Effective collaboration between the regions and the central government is, therefore, essential for competitiveness and the earning capacity of the Dutch economy. With regard to this, efforts have been made in recent years as part of the platform for economic collaboration between the government,

the regions and SMEs. It has given an extra boost to digitalisation in terms of the required acceleration and a wider outreach among SMEs. This applies to domains such as connectivity, application of key technologies, data-driven policy, and digital skills for the labour market. Examples of jointly implemented specific actions include the Smart Industry programme, the European Digital Innovation Hubs (EDIHs) and the SME Workshops. We strive to further develop this collaboration and to work

towards a cohesive national-regional ecosystem for digitalisation of the economy. Among others, a start is made by the management committee on digitalisation for the wide-ranging SMEs. In its report titled *Dienstbare dienstverlening* (Service-oriented Service), the Dutch Entrepreneurship Committee advises to improve the wider SMEs' access to the government's service provision, including for digitalisation. The regions will be included in the follow-up to this advice.



We support SMEs because of this target group's importance to society and the economy. The digitally 'smart' manufacturing industry forms an important engine of our future economy. Together we are building this Smart Industry, to strengthen the industrial basis in the Netherlands and Europe.

What are we going to do to achieve this?

We will be taking the following steps to realise the aforementioned ambition:

1. *We will implement three existing programmes that help accelerate the implementation of digital technology by the business community.*
 - The *Versnelling Digitalisering MKB* (Accelerating Digitalisation in the SME Sector) programme focuses on the exploitation of digital applications in the SME sector. The objective is to increase productivity and digital security of companies at risk of falling behind.
 - A nationwide infrastructure consisting of twenty established Digital SME Workshops has been realised in recent years. These are regional partnerships between government authorities, educational institutions and the business community, where students help small SMEs to adopt digital techniques in the area of online marketing & sales, data and

computerisation. The Ministry of Economic Affairs and Climate Policy (EZK) has made funds available for these SME Workshops for the next three years. The aim for this national network is to then be consolidated and expanded by stakeholders, without EZK funding.

- A partnership of the Royal Association MKB-Nederland, the Netherlands Chamber of Commerce (CoC), Inretail and the Ministry of Economic Affairs and Climate Policy (EZK) has developed an action plan titled *My Digital Business*²⁵ to encourage small-sized companies to apply digital technologies. The action plan allows small-scale retail operators to make an online scan to determine which ICT investments might be worthwhile for them to consider and whether they can get a subsidy to invest in them. The pilot for the retail sector is currently ongoing. The ambition is to scale up this approach, if successful. This partly depends on the outcome of this pilot's assessment in the spring of 2023.
- The Smart Industry programme aims to benefit from digitalisation in the wide-ranging manufacturing industry. For example, Smart Industry supports the

continued development of AI applications and the digital, organisational and social inclusion of this technology in the industry. This will allow for increased productivity and further growth. It will also provide opportunities for a more sustainable and circular manufacturing industry, for example by reducing the rising energy consumption and the use and waste of raw materials. The ambition of the Smart Industry scale-up agenda 2022-2026 is for Dutch industry to have the fastest-learning, most flexible and digitally connected and sustainable production network in Europe by 2026.²⁶ Key to this is the goal of 1,000 companies taking a significant step towards digitising their factories. Another ambition is to have employees follow 50,000 learning modules via the Smart Makers Academy, to enable them to apply new digital technologies in the business environment.

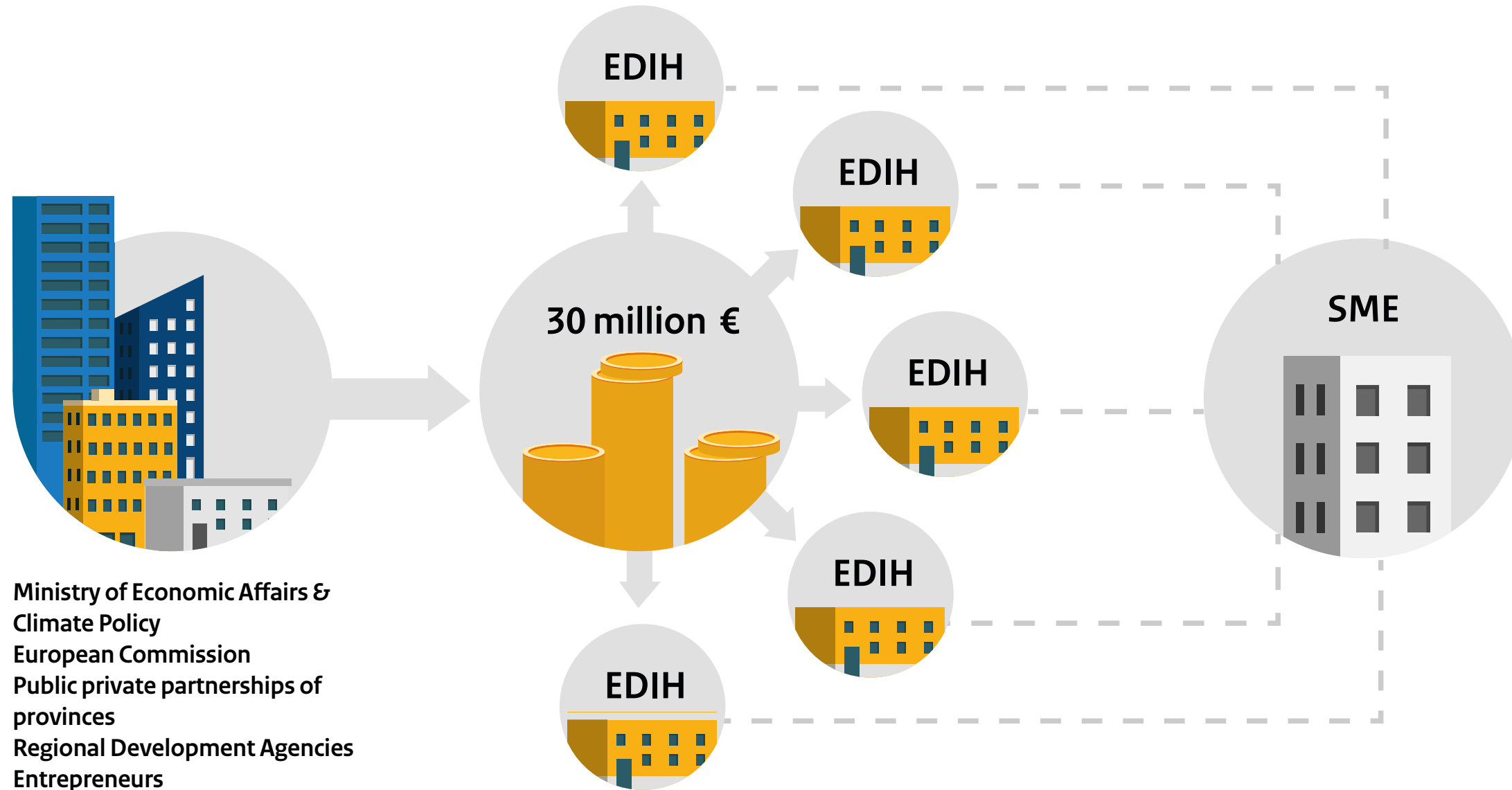
- The European Digital Innovation Hubs (EDIHs) are focused on the application of advanced technology in the SME sector. EDIHs allow SMEs to tap into technical expertise and create various opportunities for funding advice, training and testing through pilot and demonstration projects. Together with public-private collaborations between provinces, regional development agencies and entrepreneurs and business associations,

²⁵ Subsidy scheme *My Digital Business* (Government Gazette, 2022, 16196)

²⁶ Parliamentary Paper 29 826, no. 128



Collaboration in European Digital Innovation Hubs (EDIHs)



the Ministry of Economic Affairs and Climate Policy and the European Commission are investing €30 million in the creation of five EDIHs, in which the existing regionals hubs are continued. The EDIHs will set to work from the fourth quarter of 2022 to support companies in a wide range of economic sectors in the digital transformation of their business operations. The EDIHs will draw on the experience from the Smart Industry programme for an approach for the manufacturing industry, and are directly connected to other European EDIHs.

2. *We are exploring the options of scaling up already successful sectoral approaches to other sectors.*

- The existing programmes are often generic in nature and intended for the SME sector. Each sector has its own dynamics of digitalisation opportunities and obstacles. It therefore requires a customised approach to apply successful initiatives in other sectors. For the coming period, we will be exploring the options of upscaling already successful sectoral approaches to other sectors. In collaboration with the regions, top sectors and other ministries, new initiatives can thus emerge in sectors such as construction, infrastructure, agriculture and healthcare.

- To realise the ambitions, these programmes seek and continue close collaboration with regional governments, employer organisations and sector organisations, the Netherlands Chamber of Commerce and regional development agencies. In doing so, we strive to create more cohesion in regional initiatives that support the SME sector in the acceleration of digitalisation. From 2023, additional work on cyber resilience by the Digital Trust Center (see for more information pillar 5) will also be more focused on the cyber resilience of SMEs as part of the acceleration of digitalisation.

Smart Industry Fieldlabs

The Smart Industry programme is aimed for the Dutch industry to have the most flexible and digitally connected production network in Europe. The Smart Industry Field labs have an important part to play. These are field environments in which companies and knowledge institutions develop, test and implement targeted solutions. In addition, field labs can provide an environment where people learn to apply these solutions. Field labs strengthen connections with research, education and policy on specific themes. Some field labs have a regional focus, while others have a national, European or global focus. Regional field labs mostly work together within the Smart Industry Hubs, such as SMITZH, which stands for ‘Smart Manufacturing: Industriële Toepassing (Industrial Application) in Zuid-Holland’. These fields bring together local supply and demand to promote the practical application of smart technologies. Examples include robots, 3D printing and sensors, in other words: smart manufacturing technologies that allow you to produce faster, cheaper and more efficiently.





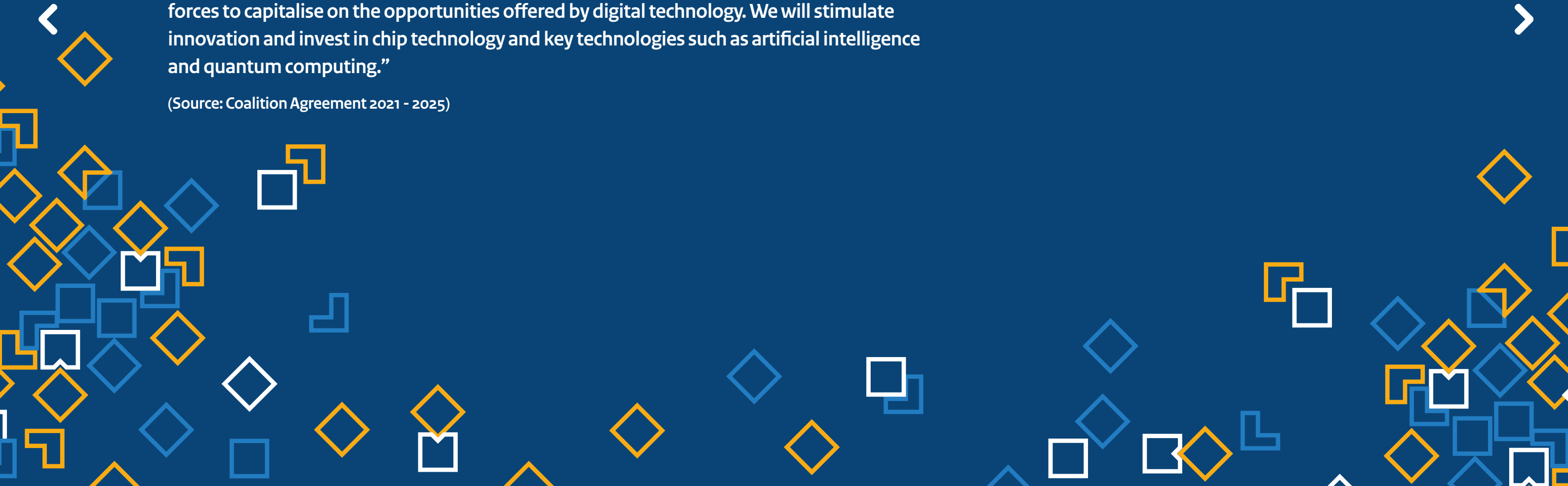
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Pillar 2

Promoting digital innovation and skills

“Science, business, startups, scaleups, knowledge coalitions and government will join forces to capitalise on the opportunities offered by digital technology. We will stimulate innovation and invest in chip technology and key technologies such as artificial intelligence and quantum computing.”

(Source: Coalition Agreement 2021 - 2025)





The development and application of new knowledge about digital technologies, as well as the development of (specialist) digital skills, are essential in the digital transition for our future earning capacity, prosperity and for solving a variety of societal issues. This trend continues with the emergence of cloud and key technologies, such as AI, quantum technology and 5G/6G. In addition, the responsible use of data is an important source of innovation and activity in the future data economy. Start-ups and scale-ups play an instrumental role in driving innovation in our economy and in solving societal issues. A thriving digital business community has emerged with successful start-ups, scale-ups and Dutch innovative tech companies, accompanied by solid tech ecosystems in Amsterdam and Eindhoven, among other places. However, this is no reason for us to rest on our laurels. After all, the digital transition is developing at breathtaking speed and is fundamentally changing economic sectors and activities.

FreedomLab: data economy

The rise of the internet, the commercial mobile web and the sensorisation and datafication of our economy and living environment have led to a tremendous growth of data. The prospect of these growing data streams is that we can use them to gain insight into all kinds of processes (e.g. digital twins), perform predictive analyses and ‘train’ AI systems that can be used for automation processes,. Data is therefore sometimes referred to as the fuel of the digital economy. However, unlike fuel, data is non-competitive, abundant and scalable, and thus has an exponential impact on the economy.

The challenges we face

Global competitiveness and tensions are putting our starting position under strain. To realize a resilient, sustainable, innovative, and future-proof digital economy, we need technological leadership and digital innovation.. By leading on a European scale in the development and application of new knowledge and technology and ensuring the production of secure and essential goods and services in Europe, we can better guide the digital transition ourselves. This will strengthen our strategic autonomy, adaptability and our economy’s flexibility, enabling us to better exploit opportunities and counter any unwanted dependencies and impacts.

For the Netherlands and Europe to lead in the development and adoption of digital technology, we must join forces. It requires an ecosystem approach with solid international, national and regional partnerships that involve all stakeholders to strengthen the knowledge and innovation base. Followers in the market can thus learn more quickly from the frontrunners’ experiences. This will enable us to better seize opportunities, enhance our innovation and competitive powers and better counter any adverse effects.



Addressing labour market shortages is a major challenge in this respect. Shortages in technology and ICT have been an issue for decades and have become a structural problem, particularly due to society's digital transition. The huge demand for technical skills and ICT staff in particular is reflected in the growing number of vacancies in engineering and ICT.²⁷ In 2021, 71% of all companies in the Netherlands struggled to fill specialist ICT job vacancies. At the same time, the population is ageing, which will reinforce labour market tightness in the near future.²⁸ Currently, one in seventeen people in the Dutch labour market are IT professionals, amounting to 580,000 people. This number has nearly doubled in ten years. At the current growth rate of almost 7% a year, one in every ten people in the workforce will be IT professionals by 2030. That means that the Dutch labour market needs to move towards having one million digitally skilled people by 2030.²⁹ The sharply rising shortages of digitally literate and ICT-skilled people compromise our starting position. For example, Europe is faced with a growing shortage of deep tech talents, while deep tech should take a central stage in Europe's green and digital transition.³⁰

²⁷ Techniekpact (2021) Monitor Techniekpact.

²⁸ Research Centre for Education and the Labour Market (ROA) (2021) The labour market by education and profession until 2026.

²⁹ Analysis by HR tech service provider Headfirst and labour market data specialist Intelligence Group; In 2030: 1 in 10 IT professional on the Dutch labour market - HeadFirst.nl.

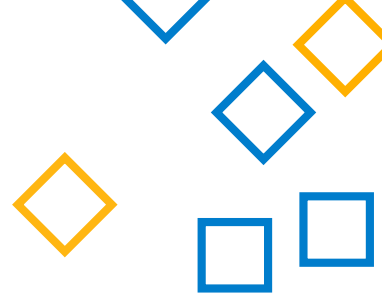
³⁰ EC (2020) Science, Research and Innovation Performance of the EU.

The Netherlands and Europe need more digitally skilled and ICT qualified professionals to continue to operate in a secure, effective and productive manner. Education is struggling to keep up with demand, causing persistent labour market tightness.

FreedomLab: Artificial intelligence (AI)

AI provides digital systems with the ability to perceive, e.g. via sensory environments, analyse and, if necessary, take action, e.g. via robotics, with some degree of 'intelligence' to perceive their context for the purpose of achieving predetermined goals. This ability allows companies to optimise, accelerate and economise on problem-solving within their processes through the use of AI. We can already see this promise being fulfilled by the implementation of 'simpler' AI such as product recommendations and image recognition all the way to 'creative' systems for product design and image generation, e.g.

Generative Pre-trained Transformers. This adoption will further accelerate as a result of AI in the cloud and user-friendly programming environments (such as no-code/low-code) making AI increasingly accessible to a wider group of businesses. In the coming years, we will be experiencing a shift in AI systems limited to simple analyses, predictions and suggestions to systems that can model more complex systems such as protein folding or weather forecasting. This will allow them to make increasingly better independent decisions based on the latest AI techniques.



What is our ambition?

We want Dutch entrepreneurs, the workforce and consumers to benefit more from the opportunities presented by digitalisation. We aim to achieve this by taking the lead in the development and adoption of digital innovations, improving digital skills and creating a future-proof labour market. In addition, we want to make better use of the options offered by data. Achieving this goal requires public-private cooperation within the Netherlands and Europe (EU) and with third countries. We have set the following priorities to achieve this:

1. We want to capitalize on the opportunities offered by digital technologies for the Netherlands in collaboration with researchers, the business community, fellow governments, and the ICT Top Team. The focus is on strengthening the knowledge and innovation basis through public-private partnerships involving data sharing and digital key technologies such as AI, blockchain, 5G/6G and cybersecurity, including post-quantum cryptography. Successful examples of collaborations are the Online Trust Coalition, the Data Sharing Coalition and the Netherlands AI Coalition. In addition, we aim to deepen and continue international collaboration in these areas wherever possible.
2. We are geared towards the labour market of the future in a public-private setting, aimed at boosting digital skills and digital innovation in the educational sector. We want to



collaborate with the business community and educational institutions on a multi-year Human Capital Agenda to reduce the shortages of digitally qualified and ICT professionals. We aim to have one million digitally qualified professionals by 2030 through short-term retraining programmes, support for alternative forms of education and a more diverse and inclusive labour market.

What are we going to do to achieve this?

We will be taking the following steps to realise the aforementioned ambition:

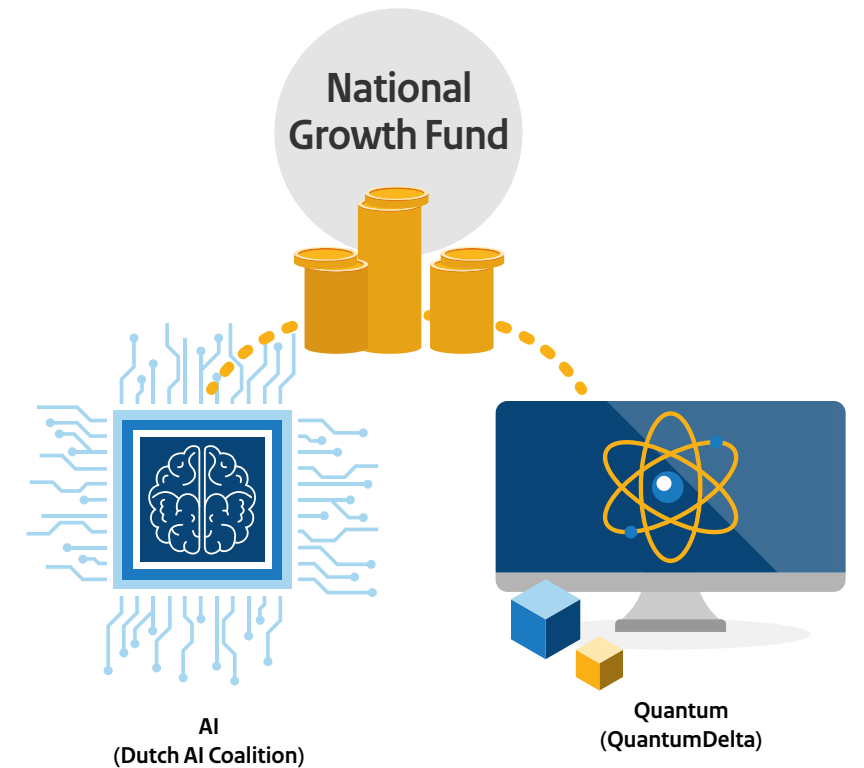
1. Promoting digital knowledge and innovation

- In collaboration with the ICT Top Team, we will reinforce public-private partnerships for research and innovation centred around digital key technologies. Examples include multi-year programmes for AI, 5G/6G, blockchain, post-quantum cryptography and big data and with a focus on scaling up innovations, valorisation and market creation. In doing so, we will look carefully at what we want to develop in-house in the Netherlands and where we seek strategic collaboration with other countries. A key principle in this, is that digital key technologies provide opportunities for all kinds of societal challenges, such as in the area of the energy transition and agricultural transition. This commitment is incorporated in Mission-driven Top Sectors and Innovation Policy (MTIB).³¹ The MTIB for 2024 and subsequent years will be further elaborated in an *Innovation letter* in the coming period. Another development is the *National Technology Strategy*.

³¹ Parliamentary Paper 2022 33009, no. 102

- With a boost from the Research and Science Fund, we are investing €500 million in research facilities and digital research methods for applied research, spread over a period of ten years. This may also include facilities for the development of digital technologies. This investment will initiate a catch-up and acceleration of high-quality, up-to-date and future-proof research facilities.³²

- We will invest in research and innovation through the National Growth Fund, with ongoing programmes and leading coalitions in the area of key technologies such as AI (the Netherlands AI Coalition) and Quantum (QuantumDelta) and programmes for data sharing, such as Health-RI.³³



³² Parliamentary Paper 29826, no. 147

³³ Data Driven Health: Connect, Share and Reuse | Health-RI

The National Growth Fund

The Netherlands is investing in the digital transition through the National Growth Fund. In the coming years, the Netherlands will be making use of this fund to invest €20 billion towards promising areas of growth, such as innovation, research and knowledge development. In April 2021, the government approved the first round

of investments by the National Growth Fund, awarding a maximum of €960 million to three projects focused on digital transition in the area of quantum computing, artificial intelligence (AI) and the use of data in the medical sector. For the April 2022 round, the Committee of the National Growth Fund advised the government to award or reserve additional funds of hundreds

of millions of euros for more projects specifically aimed at digitalisation. These investments from this National Growth Fund will contribute to the Netherlands' ability to maintain its strong position in innovative research, the use of digital technologies and the development of digital skills in the economy.

- We participate in European and international partnerships such as the Important Project of Common European Interest (IPCEI) Cloud Infrastructures and Services, GAIA-X, data rooms such as EOSC³⁴ and EHDS³⁵ and Microelectronics II. These partnerships in strategic value chains help us to enhance the innovation strength of the European industry, among others, and ensure the development of technological competences in the area of data and cloud in Europe.
- We have partnered with the Data Sharing Coalition, an alliance of 57 parties, on a proposal for the National Growth Fund to develop a generic agreement system for easy, secure and responsible data sharing. Through this system, all companies, and SMEs in particular, should be able to share data within and across sectors, while maintaining a grip on data sharing, to better exploit their economic and social value. We are looking for ways to link with similar programmes in other social sectors, such as scientific research and health (Health-RI). We also see opportunities for interdepartmental collaboration in this area.

- We are investing in collaboration by making additional funds available for European programmes such as Horizon Europe and DIGITAL (the Digital Europe programme). These programmes offer great opportunities for Dutch entrepreneurs and scientists to work together with parties from other European countries to explore pioneering innovations in areas such as AI, data, cloud and cybersecurity. By making extra funds available, it becomes much more appealing to Dutch parties to participate in these European programmes.
- We will make use of different tools such as the MIT scheme³⁶ and calls for Applied AI Learning Communities³⁷ to promote innovation in the SME sector. We will join forces in regional AI hubs with companies, educational institutions, knowledge institutes and the Regional Development Agencies, as part of the Dutch AI Coalition.
- The Dutch start-up policy aims at boosting the ecosystem for start-ups and scale-ups and putting the Netherlands on the international map as an appealing location for innovative businesses. We also ensure an improved access of Dutch start-ups and scale-ups to international networks and chances for more companies

advancing to global players. The measures that we are developing relate to the availability of venture capital, training and attracting foreign and national talents, i.e. via start-up visas and the stock option scheme, and better use of the high-quality knowledge we develop in the Netherlands. The House of Representatives will be informed on how the current policy will be continued or adjusted in the first quarter of 2023.

- We invest in a strong and stable business location and business climate, as included in the strategic agenda for the business climate in the Netherlands.³⁸ This is crucial for the sustainability and growth of innovative Dutch tech companies that add significant value to the Dutch economy in terms of high-quality employment, the digital innovation ecosystem and digital infrastructure. Part of this means stable, predictable, simple and enforceable legislation, easing the regulatory burden on entrepreneurs and a stable tax business environment. It also includes the necessary reinforcement of the labour market, as further defined below with the policy commitment to boosting digital skills.

³⁴ European Open Science Cloud

³⁵ European Health Data Space

³⁶ SME Innovation Stimulus for Regional and Top Sectors (MIT) (rvo.nl)

³⁷ Universities of Applied Sciences receive funding for learning communities for AI

³⁸ Parliamentary Paper 32 637, no. 493



- We want to continue and strengthen the agenda for international collaboration on digitalisation. The Netherlands is actively seeking collaboration with European partners in the area of digital innovation. Together with the Top Team ICT, we are currently exploring options to deepen the existing partnerships with Germany, France and Belgium in the area of artificial intelligence, among others. We are also exploring partnerships with the United States and Canada and promoting bilateral knowledge exchanges with Singapore and the United Kingdom. Finally, we are also seeking new collaboration opportunities with other countries. Trade and innovation missions have an important part to play in this regard.

The AiNed investment programme

AI is a rapidly self-developing system technology that has an enormous impact on our economy and that enables many other innovations. The AiNed investment programme of the Netherlands AI Coalition (NL AIC) permanently positions the Netherlands among the leading AI countries. The programme helps companies and public institutions make essential steps in AI that are vital to the economic and social interests. The programme addresses bottlenecks in the areas of innovation, knowledge base, labour market, society and data sharing. The focus is on cross-sectoral issues of great social importance with a large spill-over to different areas of applicability. The AiNed investment programme has been awarded a budget of €204.5 million by the National Growth Fund.

2. *Strengthening digital skills*

- We are actively working to strengthen the digital skills of the workforce through various policy programs that prioritize digital skills acquisition. Examples include the human capital working group and learning communities within the Netherlands AI Coalition, Smart Makers Academy within the Smart Industry programme and the SME workshops that form part of the programme titled Versnelling Digitalisering MKB (Accelerating Digitalisation in the SME Sector) programme. Our commitment is in line with the Work Agenda Value-driven Digitalisation (which focuses on basic digital skills) and the Ministry of Education, Culture and Science's efforts in promoting digital literacy.
- We are thriving to reduce shortages of technicians and ICT professionals:
 - In addition to the generic labour market policy, we are developing an action plan for green and digital jobs needed for the climate transition and digital transition. We are focussing on boosting intake in STEM education, increasing intake from the labour market and counteracting the fragmentation of initiatives.



- We work together with the business community and educational institutions to promote retraining and upskilling staff for ICT jobs and a better alignment between education and the labour market. The Human Capital Agenda ICT serves as an example.
- Through the National Growth Fund, we make a one-off investment in upscaling existing public-private partnerships between educational institutions and the regional SME sectors, aimed at training ample and properly qualified ICT professionals for the SME sector. It concerns a (conditional) grant of €210 million.
- We are exploring the possibilities of doing more with fewer people through technology-driven innovations as a contribution to reducing the tightness on the labour market
- Teachers can improve the quality of their teaching if they have an intelligent and rich mix of digital learning tools that work smoothly in the classroom and where important values such as security and privacy are properly safeguarded. By launching the National Education Lab AI (NOLAI), we are ensuring responsible innovation in the field of digital learning tools using AI. Thanks to an impetus from the National Growth Fund, digital innovations are being developed in public-private

partnerships that contribute to the quality of education. High-quality innovative prototypes that improve teaching are being developed, an impetus is being given to the development and proper use of open educational resources, and an agreement system has been developed that enables teachers to choose, use and gain valuable insights from digital learning resources without any difficulty.

National Education Lab AI (NOLAI)

AI plays an increasingly important role in Dutch economy and society, including in the field of education as well. This was the reason to open the National Education Lab AI (NOLAI) in 2022. Located at Radboud University, NOLAI is to develop intelligent digital educational innovations in co-creation, aimed at improving the quality of primary and secondary education. NOLAI will also examine the educational, social and ethical consequences of intelligent digital educational innovations, making it a place for schools, scientists and the business community to closely collaborate on digital educational innovations involving AI. The National Growth Fund has awarded €80 million in public funding to NOLAI for a period of ten years.





Pillar 3

Creating the right conditions for well-functioning digital markets and services

" At European level we will address the market power and data power of big tech and platform companies to improve the competitiveness of businesses and better protect the privacy of citizens."

(Source: Coalition Agreement 2021 - 2025)



The success of the digital economy depends on well-functioning markets. New, innovative products and services are developed based on digital technologies. Companies can reach a larger global market and consumers can easily compare products and make online purchases all over the world. Along with opportunities, this also brings challenges and risks for businesses and consumers. For instance, companies' and consumers' reliance on a limited number of tech conglomerates (gatekeepers) is ever increasing. Tech conglomerates such as Amazon, Microsoft and Google hold 80% of the cloud market³⁹

³⁹ Netherlands Authority for Consumers and Markets (2022) Market study on cloud services

en is het overgrote deel van het IP and the vast majority of IP traffic in the Netherlands comes from only ten parties.⁴⁰

Rules and agreements are needed for the well-functioning of markets at national and international levels to establish relationships and interplay between consumers, businesses and government. For this reason, the Netherlands has worked hard in recent years to better safeguard important prerequisites and fundamental rights in the digital economy within the European Union. This takes place through European regulations serving to

⁴⁰ Netherlands Authority for Consumers and Markets (2021) Market study on IP interconnection

strengthen and deepen the European digital internal market. We are excited that the European Commission has launched important new legislative proposals. These legislative proposals stem from the European Commission's ambitious digital agenda, A Europe Fit for the Digital Age. This agenda's objective is to create and deepen an innovative digital internal market with unambiguous, uniform rules for companies, including the SME sector. The Netherlands actively contributes to the realisation of this agenda. The Ministry of the Interior and Kingdom Relations, the Ministry of Economic Affairs and Climate Policy and the Ministry of Justice and Security have teamed up to support and protect businesses, consumers and citizens, each from their own specific roles and responsibilities.

New and upcoming European legislation

- The Digital Services Act (DSA) and the Digital Markets Act (DMA) contain rules aimed at transparent responsibilities for the largest online platforms. This will better protect consumers against illegal content and better assure competitiveness on digital markets.
- The Data Governance Act (DGA) provides a clear framework for trusted data sharing, including through the regulation of data mediation services and data altruism organisations. The DGA makes it

easier for consumers and businesses to share and use their data effectively and creates a fairer playing field.

- The Data Act (DA) aims to promote the use of data and ensure that the value from data is distributed more fairly. Furthermore, the Data Act provides that consumers and businesses will have more control over data and users will be able to switch more easily between cloud services, avoiding problems such as 'vendor lock-in'.
- The AI Act (AIA) aims to promote confidence in artificial intelligence by providing a robust legal

framework. This framework sets limits to the use of AI systems and promotes the development and deployment of AI systems in such a way that they contribute to security, health and fundamental rights.

- To update current legislation, it is important to finalise the European e-privacy regulation with sufficient privacy safeguards for users in relation to their content and metacommunication data.



The challenge we face

In the coming years, the surge in European regulations requires a particular focus on coherence, harmonised enforcement and application to strengthen a level playing field and to mitigate the adverse effects of the market and data power of tech conglomerates. Any adverse effects on parties to which the legislation does not pertain, such as research institutions and innovative Dutch tech companies, need to be avoided.

What is our ambition?

We will create a digital economy with well-functioning markets, that is markets where consumers have freedom of choice and consumer confidence, where companies compete on a level playing field, and where doing business in the Netherlands is attractive. Another ambition entails for online platforms that people use en masse and find it difficult to navigate around. We want gatekeeper platforms or extremely large online platforms to assume more responsibility for a fair and open digital economy, as well as for efforts regarding illegal and harmful content. We also commit to a fairer, more transparent market for data and AI in Europe. A data market that allows consumers and companies to have more control of their data and the application of that data. A fairer and more transparent market for AI that offers consumers insight and safety, and provides a level playing field for companies in the Netherlands and the EU.

What are we going to do to achieve this?

We will be taking the following steps to realise the aforementioned ambition:

1. *Setting up effective and dynamic supervision of the functioning of digital markets in the Netherlands*
 - Effective enforcement of new regulations in digital markets is crucial. We are therefore working towards strengthening supervision and supporting its implementation in digital markets. The rules in DMA, DSA, DA, DGA and AIA, for example, must be implemented, applied and enforced in a targeted and uniform manner to ensure their effectiveness. This means sufficient capacity for supervisory authorities, a clear distribution of roles and a coherent and coordinated approach aimed at preventing fragmentation and apparent arbitrariness within the EU. As a result, companies, such as innovative Dutch tech companies, and consumers should get more clarity on their position.
 - The rapid pace of digital developments requires a dynamic and integrated set of tools for supervisory authorities, which we will continue to monitor. For example, we are conducting a study on the effectiveness of the prohibition on abuse of a dominant position in the Competition Act. The government will continue

to closely monitor the developments in the digital sector and adjust the organisation of supervision and interaction with competition policy accordingly.

- We are developing a national DMA Implementing Act containing autonomous investigative powers for the Authority for Consumers and Markets (ACM). We are also developing a DSA Implementing Act, that appoints ACM as Digital Services Coordinator (DSC), responsible as the regulator for the application and enforcement of the DSA.
- Additionally, we are working on the DGA implementation act. In setting up the supervision of this regulation, we are mindful of the need to implement supervision effectively and dynamically.
- In European Union decision-making, we focus on more dialogue and coordination between the European Commission and Member States during all stages of the EU policy cycle. We also strive for better collaboration between competent authorities on existing rules. The Dutch government has intentions to further elaborate the stakes and priorities in this area.⁴¹

⁴¹ Parliamentary Paper 22112, no. 3437



2. *Improving the freedom of choice for both consumers and entrepreneurs and fair competition in digital markets*

- The Data Act provides basic rules for the use of data from Internet of Things devices (IoT). It also imposes requirements on cloud services, allowing users to switch more easily, thus ensuring freedom of choice. Additionally, European Data Spaces will be set up, seeking to establish uniform rules for data exchange within the EU.
- We provide clear communication and information on the content of the new European rules and information points for businesses and consumers.
- The Commission's proposal for a framework for a European Digital Identity, which will be a review of the Electronic Identities And Trust Services regulation, aims to give citizens and organisations more control over the data shared to access commercial and government services and increase trust in digital transactions (e.g. with digital signatures) by means of the European Digital Identity Wallet. This will make it easier, more privacy-friendly and more secure to be identified digitally and to act legally valid digitally. This reduces the transaction costs of digital interactions.

The regulation's aim is to create both a framework for digital identities as well as trust in digital transactions.⁴²

- By 2024, we will develop a vision on a future-proof interpretation of the system of free movement of goods, which will include digitalisation and digital products.⁴³ By imposing requirements on products, the EU provides clarity to entrepreneurs, protects consumers and business customers and conveys its rules and its values to the rest of the world.

3. *Maintaining good legal protection for consumers in a digital environment*

It is important that consumers can also make easy, trusted and safe online purchases based on accessible, transparent and reliable information in the future. The European Commission has initiated a 'fitness check' on consumer law, with the aim of ensuring that consumer law will continue to adapt to the developments in the digital economy. The ensuing legislative proposals are expected under a new Commission as of 2024. We will actively contribute to this process and are preparing a consumer agenda,

⁴² Also see the related BNC-fiche (Parliamentary Paper 22112, no. 3163) and the Parliamentary letter Voortgang Europese digitale identiteit (Progress of European digital identity) (Parliamentary Paper 26643 no. 902).

⁴³ Parliamentary Paper 22112, no. 3437

explaining our commitment in this regard. We are pursuing the most effective general product safety regulation (GPSR)⁴⁴ currently under negotiation in the EU. It is important that consumers in Europe buy safe products and market participants, including online marketplaces, take responsibility to protect against offers of unsafe products.

⁴⁴ General product safety regulation: Council adopts its position - Consilium (europa.eu)





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Pillar 4

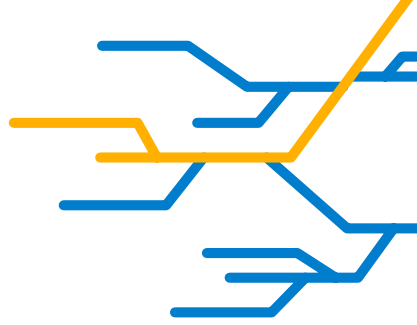
Maintaining and strengthening a secure, reliable and high-quality digital infrastructure



“The Netherlands will be the digital hub of Europe and will have robust, superfast and secure internet in all parts of the country.”

(Source: Coalition Agreement 2021 - 2025)





The Netherlands has a reliable, high-quality digital infrastructure and is among the frontrunners in Europe and worldwide. There is a complex system, tightly nit together, of (international) connections such as submarine cables, data centres, fibre-optic networks and internet exchanges, which are prerequisites for the Netherlands as a major international digital hub. This high-quality digital infrastructure in combination with the possibilities for storage, transport and the processing of data are essential conditions for attracting innovative tech companies and sustaining thriving tech ecosystems, such as in Amsterdam and Eindhoven. The position of the Netherlands as an international digital hub has a powerful attraction on start-ups and more established companies. The digital infrastructure not only greatly contributes to the Netherlands' present and future earning capacity, but in many ways forms the backbone of our digitalising society. A key element in this is that the digital infrastructure needs to be an enabler of the energy transition, and more generally, of a sustainable and circular economy. The Dutch digital infrastructure's capacity to respond and adapt to the future social needs is imperative to maintain and strengthen the Netherlands' position as a digital hub.

The challenges we face

The requirements of the digital infrastructure are subject to constant change and ever increasing. The use of cloud applications has skyrocketed in a relatively short time.

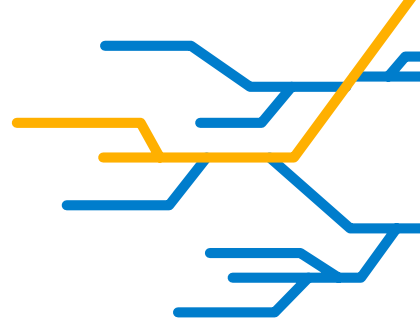
An ever-expanding deployment of technologies such as AI, IoT, quantum technology and immersive applications⁴⁵ will place very high demands on connectivity (anytime, anywhere, high bandwidth and without noticeable latency) and will cause an explosive surge in bandwidth demand. This will demand a lot from all components of the digital infrastructure and monitoring must take place to ensure no weak links are created that could slow everything down. The government needs to establish prerequisites, by creating an excellent business climate in which licensing processes are in set in place and scarce resources such as spectrum are distributed in an effective manner. This requires a comprehensive policy, where the heavy dependencies between the different components of the digital infrastructure are continuously kept under review.

Access to digital infrastructure is a prerequisite for businesses and citizens to participate fully in society and the economy. The coronavirus crisis has shown that the dependence of the digital infrastructure has further increased. We want high-speed internet available anywhere, anytime. Accessibility has different aspects, including geographical availability, affordability and digital skills. Public support for a digital infrastructure is not a given. The digital infrastructure, like any economic activity, puts a strain on necessary scarce

⁴⁵ Immersive technologies, such as virtual reality and augmented reality, immerse users in alternate reality, creating a sense of presence: the idea that virtual reality is 'real'.

resources such as energy, space and water, there may furthermore be temporary inconvenience, e.g. due to excavation work, and there may also be all kinds of concerns about possible harmful effects on the environment. Added to that is the fact that, in addition to the major contribution it provides to sustainability, digital infrastructure also consumes energy. Comprehensive policy on the breadth of digital infrastructure is indispensable to meet the challenges for support and sustainability.

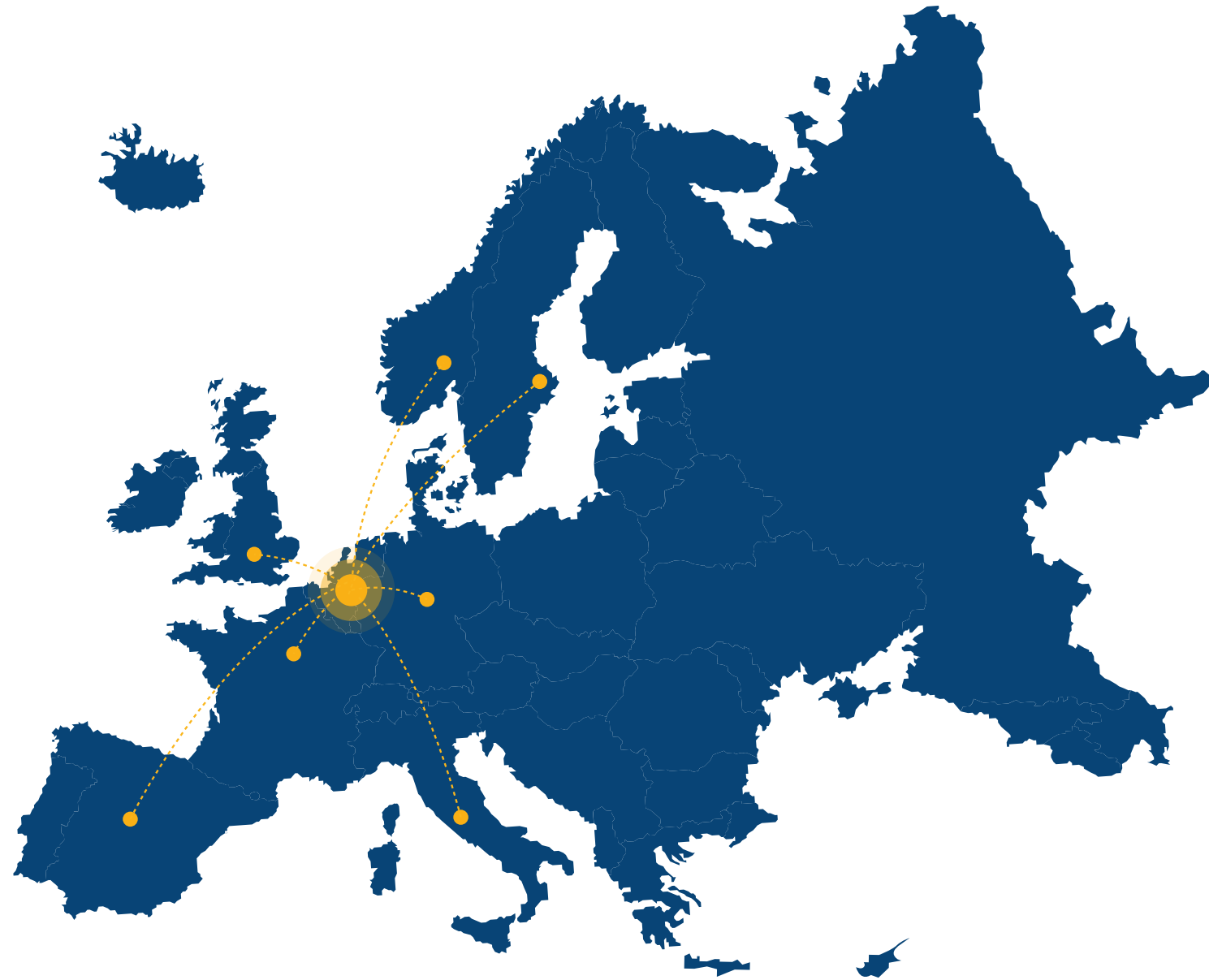
We are becoming more and more aware of our dependence on the digital infrastructure. If networks breakdown on a large scale, social life comes to a standstill. That is why we attach increasing importance to the resilience of our digital infrastructure. Resilience against geopolitical threats, unwanted dependencies, cyberattacks and extreme events, such as (natural) disasters and submarine cable breaks. We want to avoid increasing risks to national security, for example by allowing manufacturers of telecommunication devices unwanted access to 'critical components' of telecommunications networks. The recent Nord Stream pipeline sabotage underlines the fact that safety and resilience of the infrastructure on the seabed, including data cables, is not an abstract matter, but an actual threat. Businesses and citizens need to be able to rely on a secure and trusted digital infrastructure that can guarantee its continuity even under difficult circumstances.



Finally, the public and technical core of the internet forms the foundation for worldwide connectivity and standardisation contributes significantly to interoperability within the digital infrastructure. We want to avoid the worldwide web turning into a ‘splinternet’, with each country or region having its own rules, standards and borders. The extent to which European parties can succeed in maintaining a single open, free and secure internet and can thus be considered successful in respect to international standardisation is a co-determining factor for Europe’s competitiveness and digital autonomy.

What is our ambition?

The Netherlands’ solid position as digital frontrunner in Europe and the rest of the world needs to be maintained and further consolidated. This calls for a resilient digital infrastructure that fully supports the digital transition. We strive for a digital infrastructure that optimises the Dutch earning capacity, to such an extent that it safeguards public interests. Key public interests include accessibility, affordability, security, privacy, reliability, quality and functionality. These interests are safeguarded by a government that sets the frameworks for effective competitiveness and takes responsibility in case of market failures. In line with the European objectives, we aim for all end users, the business community and consumers to have access to the internet with a speed of at least 1 Gigabit per second and that all populated areas are covered by 5G or equivalent technology. The digital divide among the





approximately 19,000 addresses in outer areas at risk of falling behind the vast majority who already have access to Gigabit internet must be bridged. This requires active government intervention by means of state aid or in the ultimate case, universal service obligations.

We strive for a digital infrastructure serving the transition to a sustainable economy. On the one hand, this means that the digital infrastructure itself continues to become increasingly sustainable, making optimal use of resources and energy. On the other hand, as a key enabler, the digital infrastructure needs to facilitate other sectors in making their sustainability steps and making best use of resources to contribute to the immense challenge of making society more sustainable.

What are we going to do to achieve this?

We will be taking the following steps to realise the aforementioned ambition:

- We are working on a comprehensive policy vision on the digital infrastructure. This vision will be completed in the first half of 2023 and will further highlight the societal interests of digital infrastructure. In doing so, we will illustrate the close interconnectedness of the different components within the digital infrastructure ecosystem, and highlight the policy implications this entails. We will elaborate on our current activities around the digital infrastructure, and how they are

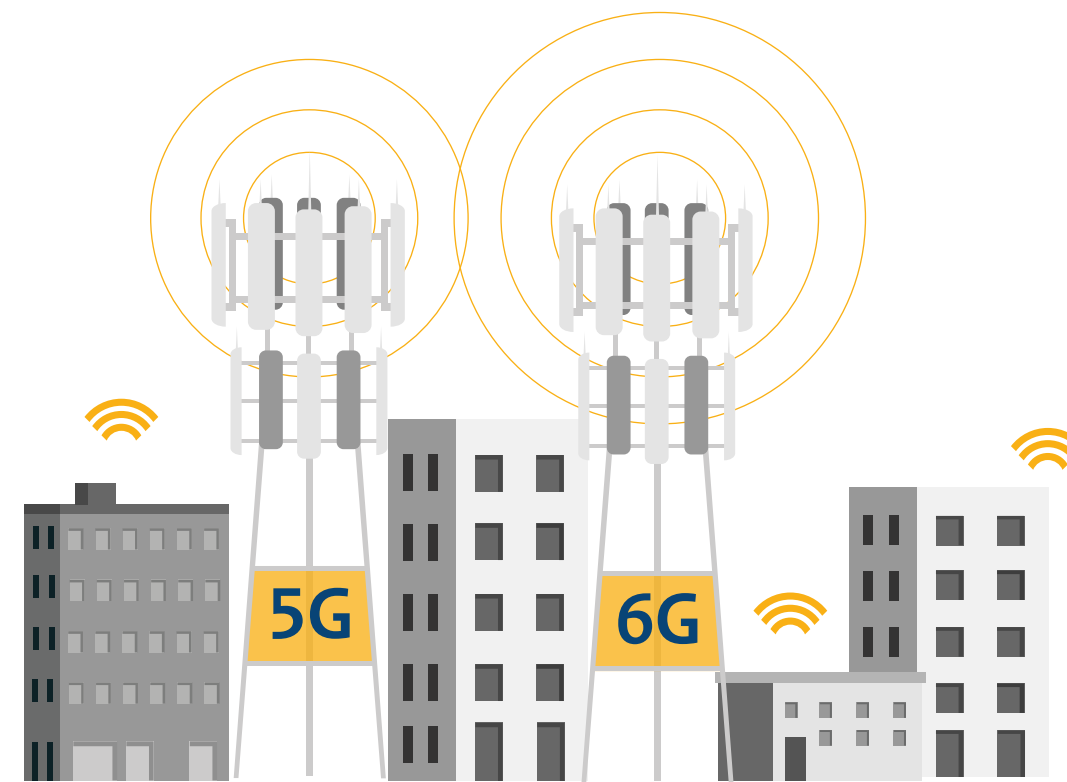
connected, from access networks to cloud and edge⁴⁶, and from well-functioning markets to resilience. This helps us to identify those components that require more policy action to realise our ambitions. We will closely involve the stakeholders in this process.

- We are therefore pursuing opportunities of digitalisation for further sustainability of the digital infrastructure and examining the roles of government and business in achieving climate ambitions.

⁴⁶ Edge nodes can be deployed closer to applications than current centralised cloud solutions, thus reducing latency. This is essential for applications where data is time sensitive.

- We divide the 3.5 GHz and 26 GHz bands to maintain mobile connectivity levels.
- We are reaping the benefits of the new Telecommunications Act, as the implementation of the Electronic Communications Code, which entered into force on 2 March 2022.⁴⁷ This Act promotes the deployment of high-speed networks, strengthens the position of end users, and updates and extends security and continuity to providers. By extension, we are confident that the review of the Broadband Cost Reduction Directive will further

⁴⁷ [wetten.nl - Regeling - Dutch Telecommunications Act - BWBR0009950 \(overheid.nl\)](https://wetten.nl/Regeling-Dutch-Telecommunications-Act-BWBR0009950-overheid.nl) (in Dutch only)



incentivise deployment and investment in high-speed networks. This revision will be included in the European Connectivity Infrastructure Act (CIA).⁴⁸

- The introduction of the Act on unwanted control (*Wet ongewenste zeggenschap telecom, Wozt*)⁴⁹, the revision of the Security of Network and Information Systems Act (*Wet beveiliging netwerk- en informatiesystemen, Wbni*)⁵⁰ and a more effective implementation of the Exchange of Information on Overhead and Underground Networks Act (*Wet informatie-uitwisseling bovengrondse en ondergrondse netten en netwerken, Wibon*)⁵¹ help to bolster the continuity of vital components within the digital infrastructure. Within the context of the Wbni, it is the intention to designate hosting companies providing DNS services to a large number of customers, such as in the SME sector, as provider of essential services. Another intention is to designate multi-tenant datacentres (colocation) above a certain size as vital providers. To secure telecommunication networks, we will introduce a structural process in which the government and telecom providers share technological developments and information about threats, based on which risk assessments can be carried out.

⁴⁸ EUR-Lex - 32014L0061 - EN - EUR-Lex (europa.eu)

⁴⁹ Letter to parliament on the report on the Application of the Telecommunication Sector (Undesirable Control) Act

⁵⁰ Factsheet on the Security of Network and Information Systems Act | Report | Rijksoverheid.nl (in Dutch only)

⁵¹ wetten.nl - Regulation - Exchange of Information on Overhead and Underground Networks Act - BWBR0040728 (overheid.nl) (available in Dutch only)

Dutch Caribbeans

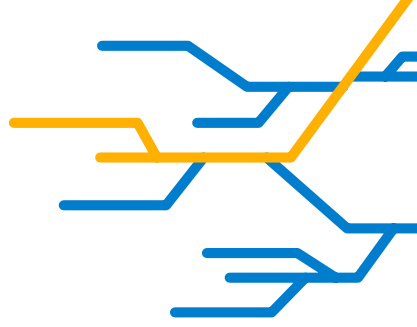
Citizens and businesses in the Dutch Caribbeans must be able to participate in the digital society at an equal level. The Value-driven Digitalisation Work Agenda describes the Dutch government's commitment in this area.

The digital infrastructure requires a specific development for the Caribbean Netherlands. Similar to European Netherlands, the digital infrastructure is also essential in society for Caribbean Netherlands (Bonaire, Saba and Sint Eustatius). However, the remote geographical location, topography of the islands, weather conditions (hurricane zone) and limited number of residents present specific challenges. This therefore requires specific solutions, that optimally respond to the situation on the islands. This includes tailored laws and regulations, which, as in European Netherlands, have to be adapted with some regularity to advancing technology and market developments. Upon the request of the Ministry of Economic Affairs and Climate Policy, ACM carried out research in 2020 into the relatively high costs of fixed internet in Caribbean Netherlands. Having determined that there are

no other means of sufficiently improving the affordability of fixed internet access for residents - and because of its key importance - the Ministry of Economic Affairs and Climate Policy has decided on a monthly allowance of USD35 per month per connection on St Eustatius and Saba, and USD 25 on Bonaire. Over the past years, the Dutch government also invested in improved accessibility through submarine cable infrastructure. In 2023, we plan to carry out research into the digital infrastructure in the Dutch Caribbeans.

The strategy has no new measures specific to Dutch Caribbeans. Based on the comply-or-explain principle, all new policies, legislation and investments resulting from this strategy will be assessed against the possibility of application in Caribbean Netherlands. The special situation and location of the islands will then be taken into account. We will inform the House of Representatives about this in writing after the summer of 2023. Within the context of the Value-driven Digitalisation Work Agenda and the coordinated responsibility for Caribbean Netherlands, we will work closely with the Ministry of the Interior and Kingdom Relations.





- At the beginning of 2022, the European Commission issued a standardisation strategy announcing measures for the purposes of strategic standardisation needs, governance of the European standardisation system and strengthening Europe’s leadership in the area of international norms and standards. Though we endorse those objectives, we will request the European Commission to also take account of solving existing challenges related to the functioning of the system of harmonised norms.⁵²
- We participate in internationally operating private organisations such as ICANN, IETF, IEEE and RIPE that manage the public and technical core of the internet. The Netherlands aims to maintain a single, open, free and secure internet. Trust in digitalisation and thus the digital economy partly depends on this. We counter the “geopoliticisation” of internet governance by advocating at EU level and with other partners to preserve the multi-stakeholder model and strengthen European leadership in these international technical bodies.

⁵² Parliamentary Paper 22 112, 3341.





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Pillar 5

Strengthening cybersecurity

“We will better protect our businesses, critical infrastructure and economic capital through centrally coordinated structural cooperation between, for example, the National Cyber Security Centre (NCSC), the Digital Trust Center (DTC), government authorities, businesses and scientists. They will be able to share information on digital vulnerabilities and hacks faster and more easily.”

(Source: Coalition Agreement 2021 - 2025)





The challenge we face

Misuse of or failure in digital system processes can greatly affect citizens, businesses, civil society organisations and the government. The international digital ecosystem is already so intertwined and complex that it is difficult if not impossible for individual organisations and individuals to make sense of the whole, while it is precisely this ecosystem that makes our modern life, and our economy and society as a whole, possible. Criminals, but also ill-intentioned states, abuse this complexity by acting covertly and attacking our public values through digital vulnerabilities. Despite efforts to boost resilience, there is an imbalance between the increasing threat and the development of resilience. Full resilience against digital threats is impossible, however resilience needs to improve against misuse and failure in order to manage digital risks.

What is our ambition?

The objective is for the Netherlands to be digitally secure, allowing citizens and businesses to fully profit from participation in digital society, without any concerns about cyber risks. The Dutch Cybersecurity Strategy (NLCS)⁵³ describes the integrated approach of the Dutch government for cybersecurity, under the direction of the Ministry of Justice and Security. The Dutch Cybersecurity Strategy sets out to make the Netherlands digitally secure by improving digital resilience

and countering threats. By doing so, it pursues a future in which the imbalance between digital threat and digital resilience is and remains as small as possible. Cybersecurity is a dynamic issue that is constantly evolving. Something which is secure today, may not be tomorrow. This means that for some actions, ambition realisation will take longer or even be an ongoing endeavour.

The Dutch Cybersecurity Strategy has formulated objectives around four pillars to make and keep the Netherlands digitally secure. Three of these pillars focus on improving digital resilience, one pillar aims at countering digital threats. The digital economy strategy focuses on improving digital resilience based on three pillars.

The pillar on digital resilience of the government, businesses and civil society organisations involves the ability of the government, businesses and civil society organisations to reduce relevant risks to an acceptable level. This is done by means of a series of measures that prevent cyber incidents and, if cyber incidents do occur, detect them, limit damage and make recovery simpler. The pillar on secure and innovative digital products and services focuses on providers and manufacturers of digital products and services and on strengthening cybersecurity knowledge development and innovation. Working towards a secure and innovative digital economy contributes to the digital security as well as the Netherlands' earning capacity. The pillar on the cybersecurity

labour market, education and digital resilience of citizens focuses on the people behind technology and the digital resilience of citizens. Society as a whole has an important role to play in developing digital skills, from basic knowledge and skills to high-level knowledge and specialist cybersecurity skills. Consistent with the NLCS, the Work Agenda Value-driven Digitalisation also focuses on expanding knowledge and skills and thus confidence in the digital economy.

What are we going to do to achieve this?

We will be taking the following steps to realise the aforementioned ambition:

1. *Digital resilience of businesses*
 - The Digital Trust Center (DTC), the Cybersecurity Incident Response Team for digital service providers (CSIRT-DSP) and the National Cybersecurity Centre (NCSC) will be merged into one single national cybersecurity authority. Together with public and private partners, this new organisation will provide vital and non-vital companies, government authorities and citizens with adequate security information and action perspective appropriate to their level of maturity. This will ensure the most effective use of available capacity and expertise and minimise fragmentation within the cybersecurity information-sharing system. By merging into one

⁵³ Parliamentary Paper 26 643, no. 925





organisation, we create transparency for businesses and organisations in the Netherlands that need information to improve their resilience.

- The legislative proposal on fostering digital resilience of businesses (Wbdwb) will solidify the statutory basis of the Digital Trust Center and ensures that information about digital threats and risks will be able to reach the businesses.
- In the coming years, the DTC will expand its service provision with new products and services, including an updated basic scan that is even better suited to the needs of self-employed entrepreneurs and SMEs. Additionally, the DTC will continue to boost

collaboration, further increasing the number and quality of the partnerships affiliated to the DTC. This will increase the scope accordingly. The implementation of the revised European Directive on Security of Network and Information Systems (NIS2) will obligate 5,000 companies in the Netherlands to report all cybersecurity incidents and to take specific action to improve their digital resilience. These requirements will be subject to supervision. These requirements currently apply to 200 organisations in the Netherlands. In addition to previous sectors such as the telecom and energy sectors, postal and courier services, aerospace, food and manufacturing, among others, will also be regulated.

Digital Trust Center

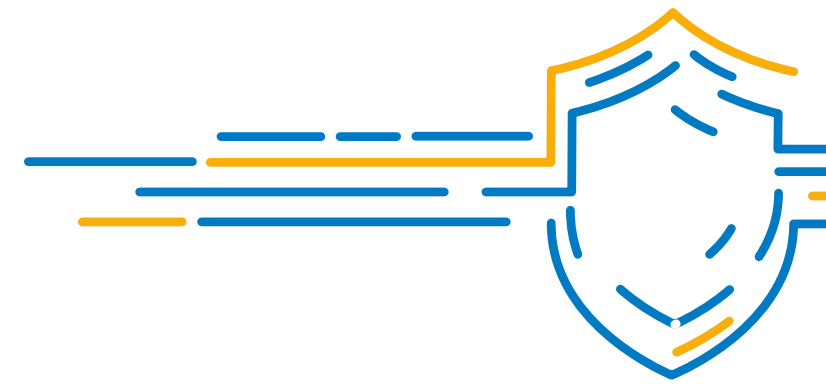
Running a secure digital business is a must for every company. The Ministry of Economic Affairs and Climate Policy set up the Digital Trust Center (DTC) in 2018 to make companies resilient to cyber threats. The DTC helps companies in two ways. First, the DTC provides information and offers advice. This information is provided via the website, social media, a community and tools such as the Cyber Resilience Basic Scan. The DTC also has an information service. This information service provides the non-vital business community with information about and offers it advice on relevant information specific to government-known vulnerabilities and threats, so that they can take action to prevent or minimise damage to the company. Second, the DTC promotes coalitions between regional or sectoral businesses. This allows entrepreneurs to learn from each other, to exchange experiences and work together on products that can help become cyber resilient or boost their cyber resilience.

National Cybersecurity Authority



Digital Trust Center + National Cyber Security Centre + Cyber Security Incident Response Team for Digital Service providers





2. *Secure and innovative products and services*

- From 1 August 2024, European cybersecurity market access requirements take effect under the Radio Equipment Directive for wirelessly connected devices with associated standards, including IoT devices. From then on, the Dutch Authority for Digital Infrastructure can ban and remove unsafe devices from the market. onveilige apparaten van de markt weren en halen.
- In the European negotiations for the Cyber Resilience Act, we advocate a cybersecurity duty of care for manufacturers and suppliers of all ICT products, services and processes, during their entire lifecycle, including associated standards and market surveillance.
- In collaboration with private parties, we contribute to the development and adoption of European cybersecurity certification schemes for ICT products, services and processes under the Cybersecurity Act, such as for cloud services and 5G technology.
- The public-private collaboration platform Dcypher facilitates the link between government, businesses and knowledge institutions. Together, the parties ensure the agenda-setting and programming of cybersecurity

knowledge and innovation projects and work programmes, such as roadmaps on the topics of Crypto Communication and Automated Vulnerability Research (AVR).

- A National Coordination Centre (NCC-NL) will join the European network of cyber competence centres and we will make better use of European funds such as Horizon Europe and the Digital European Programme.

3. *Cybersecurity labour market, education and digital resilience of citizens*

- Developers and manufacturers of ICT products and services must bear the risks of digital vulnerabilities and threats as much as possible. There will nevertheless continue to be a need for citizens or SMEs to take action themselves. Citizen awareness will therefore also continue to be a focus, for instance with target group-specific information campaigns such as Doe je updates (Run your updates). Each year, around one million visitors are able to find information on how to protect themselves by way of structural education on the public-private website veiliginternetten.nl. Every October, awareness activities of public and private partners are brought together in the Netherlands as part of the annual cybersecurity month and the Alert Online campaign period.

- In collaboration with Human Capital Agenda ICT, businesses, educational institutions and the government, qualitative and quantitative shortages on the cybersecurity labour market are identified and joint actions are developed to address these shortages. Also see the initiatives in Pillar 2 ‘Promoting digital innovation and skills’.

Cyber Resilience Act

For the resilience of citizens and businesses it is essential that the digital products and services that we use are secure. Currently, too much responsibility rests on the user. In the Cyber Resilience Act (CRA) negotiations, we are pushing for horizontal European legislation that places primary responsibility on the manufacturers and suppliers of digital products and services by introducing a duty of care to meet essential cybersecurity requirements throughout the lifecycle.



The future

The Digital Economy Strategy describes the ambition and main policy aspects to develop the economy's digital transition. It provides a framework and a point of reference towards a resilient, innovative, entrepreneurial and sustainable digital economy in which everyone in the Netherlands can participate. An economy for our businesses, knowledge institutions and citizens. The Strategy's five pillars present ambitions and objectives we are committed to, and specific actions we are taking to achieve them.

Our policy will be implemented and partly further specified in the coming period. The elaboration and implementation will take place in collaboration between ministries and in interdepartmental cooperation, and in dialogue with the businesses, knowledge institutions and civil society organisations and other interested parties. The next steps consist of three tracks:

1. **Elaboration and implementation of the Digital Economy Strategy**

Substantive elaboration

The strategy describes ambitions, objectives and actions that we are already realising today or starting tomorrow. Certain aspects however require further elaboration. Consider themes such as digital infrastructure and digital autonomy. In the coming period, we will develop this

elaboration and inform the House of Representatives on this accordingly, as agreed.

Feasibility and funds

Monitoring the implementation of actions and (intermediate) results is necessary to keep track of progress in the digital economy and identify any areas that require further action. Further development of the monitoring system is in progress. We use, among others, the European monitoring system, such as the DESI.

The policy commitments referred to in this document will be executed within the budgets already made available.

2. **Interdepartmental collaboration**

Policies for the digital economy are embedded in a broader policy framework set by the Dutch government, such as the Coalition Agreement, the Work Agenda Value-driven Digitalisation and the Dutch Cyber Security Strategy. Several departments are also implementing - mostly sectoral - digitalisation strategies and initiatives, which fit in this strategy. Since all these policy initiatives are interrelated, this requires an integrated joint approach. There are opportunities for expanding and deepening interdepartmental collaboration to successfully realise the ambitions for the digital economy. We will make a concerted effort to realise this in the coming period.

For instance, there can be more synergy in realising the tasks we are working on.

3. **In collaboration and dialogue with each other**

We want to inform, inspire and motivate businesses, citizens, the House of Representatives and partners to join us in achieving a resilient, innovative, entrepreneurial and sustainable digital economy. Collaboration is indispensable in keeping the digital transition on track. Collectively shaping the digital transition and digital economy requires constant and continuous contact with society. We will be putting this into practice by engaging more structurally with our stakeholders, partners and other interested parties such as citizens. The *Toekomstverkenning Nederlandse Digitale Economie 2030* (Outlook on Dutch Digital Economy 2030), an appendix to this strategy, provides a relevant starting point for further discussion.



List of abbreviations

5/6G	5th and 6th generation of mobile networks	EHDS	European Health Data Space	MTIB	Mission-Driven Top Sector and Innovation Policy
ACM	Netherlands Authority for Consumers and Markets	EOSC	European Open Science Cloud	NCC	National Crisis Centre
AI	Artificial Intelligence	EU	European Union	NCSC	National Cyber Security Centre
AIA	AI Act	EZK	Ministry of Economic Affairs and Climate Policy	NIS	Directive on Security of Network and Information Systems
AVR	Automated Vulnerability Research	GHz	Gigahertz	NLCS	Dutch Digitalisation Cyber Security Strategy
BZK	Ministry of the Interior and Kingdom Relations	GPSR	General Product Safety Regulation	NOLAI	National Education Lab AI
CIA	Connectivity Infrastructure Act	ICANN	Internet Corporation for Assigned Names and Numbers	R&D	Research & Development
CRA	Cyber Resilience Act	ICT	Information and Communication Technology	RIPE	Réseaux IP Européens
CSIRT-DSP	Cybersecurity Incident Response Team - Digital Service Providers	IEEE	Institute of Electrical and Electronics Engineers	ROM	Regional Development Agencies
DA	Data Act	IETF	Internet Engineering Task Force	SMITZH	Smart Manufacturing: Industriële Toepassing (Industrial Application) in Zuid-Holland
DESI	Digital Economy and Society Index	IoT	Internet of Things	TTC	Trade and Technology Council
DGA	Data Governance Act	IPCEI	Important Project of Common European Interest	USD	United States dollar
DMA	Digital Markets Act	IT	Information Technology	Wbdwb	Act on promoting digital resilience for businesses
DSA	Digital Services Act	JenV	Ministry of Justice and Security	Wbni	Network and Information Systems Security Act
DSC	Digital Services Coordinator	CoC	Chamber of Commerce	Wozt	Telecommunication Sector (Undesirable Control) Act
DTC	Digital Trust Center	MIT	SME Innovation Stimulus for Regional and Top Sectors		
EDIH	European Digital Innovation Hub	SME	Small and medium-sized enterprises		





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