

# The Netherlands

Facts & Figures

**NL**

The Netherlands

# About the Netherlands

A country with a surface area of more than 41,500 km<sup>2</sup>, a third of which is below sea-level, the Netherlands has vast experience in solving complex social and economic challenges. Partnership is our key to success. With strong cooperation between government, businesses, knowledge institutes and citizens, we strive to build a flourishing and resilient land for our 18 million citizens.

With the UN Sustainable Development Goals as a leading policy framework, the Netherlands is involved in many global partnerships. At home and abroad, we support freedom of speech, gender equality, and fair access to education, work and healthcare.

We are keen to share knowledge and expertise to meet the world's growing demand for food, water, health, energy and security.

Learning from the past to create a better future. We strive to create pioneering sustainable solutions that enable us all to inspire and connect, to create a more liveable world today and in the future.

Official name:

Kingdom of the Netherlands

Capital:

Amsterdam

Seat of government:

The Hague

Form of government:

Parliamentary democracy (cabinet of Prime Minister and Ministers) within a constitutional monarchy

Head of State:

King Willem-Alexander, King of the Netherlands, Prince of Orange-Nassau

Administrative structure:

The kingdom consists of four entities. The Netherlands and three territories in the Caribbean: Aruba and Curaçao and St. Maarten

Special municipalities:

The overseas islands of Bonaire, Saba and St. Eustatius, all three of which are situated in the Caribbean

Surface area:

41,543 km<sup>2</sup>

Number of provinces

12

Location:

Western Europe, bordering Germany, Belgium and the North Sea

Number of inhabitants:

18 mln

Number of inhabitants per km<sup>2</sup>:

517

Monetary unit:

euro

Languages:

Dutch, Frisian and on the overseas islands also English and Papiamentu

# Building a better world together

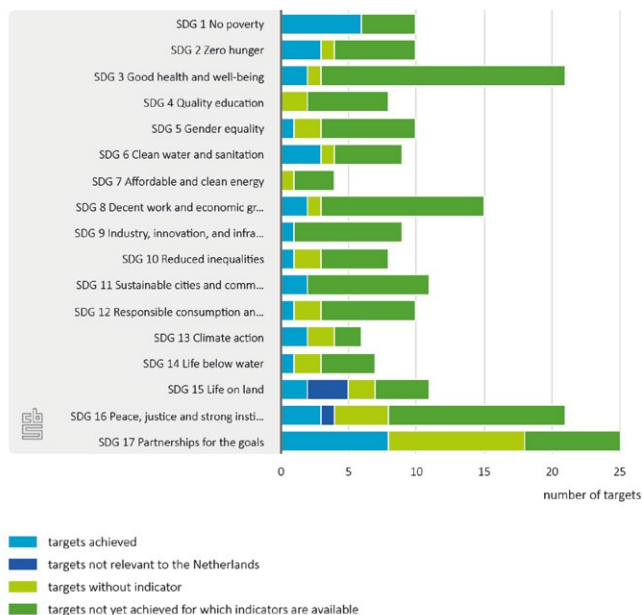
The Netherlands is one of the 193 UN member states, which approved the resolution 'Transforming our World: The 2030 Agenda for Sustainable Development.' It highlights the 17 Sustainable Development Goals (SDGs) and 231 indicators, set to make the world 'a better place in 2030'.

The SDGs are our international guiding principles for the Dutch development policy. We are keen to work together across sectors and borders to promote human rights, to maintain peace, and to create sustainable and inclusive solutions that create economic prosperity for societies around the world.



# Facts and Figures related to SDGs

Figure 3.1 Number of SDG-targets by type, for each SDG



Source: Statistics Netherlands SDG report

# Investing in global prospects



**Investing in sustainable development and prospects elsewhere is a choice based on human dignity. It is also a precondition for security, stability and prosperity around the world.**

## Sustainable Trade

The open and innovative Dutch economy benefits from open markets, clear rules and a level playing field. The Netherlands benefits from trade agreements that support this, such as the Comprehensive Economic and Trade Agreement (CETA) between the European Union and Canada. We continue to work towards fair and equitable trade regulations, a strong multilateral system and open markets where sustainability is key.

We advise and support Dutch entrepreneurs in other countries, focusing mainly on SMEs, startups and women. They have the greatest growth potential on the international market and can benefit directly from our ability to open doors abroad.

The Netherlands is committed to supporting female entrepreneurship worldwide by creating a level playing field for women entrepreneurs and by improving their access to finance, networks and knowledge. In doing so, we contribute to stronger communities, social cohesion and more broadly shared prosperity.

Investing in developing countries works and generates employment. The Netherlands therefore supports entrepreneurs, startups and SMEs seeking to move into foreign markets, by providing advice, contacts and funding. We organise trade missions to encourage Dutch companies to use their innovative expertise to contribute to local development.

We encourage corporate social responsibility abroad, promote fair and equitable international trade, and foster solutions for climate adaptation. We work with companies and knowledge institutions abroad, particularly in our areas of expertise: such as water management, agriculture and logistics.

### Prospects for youth

90% of young people today live in developing countries. The Netherlands invests in their prospects by investing in education and employment.

Young people are at the heart of our development policy because they are the driving force in creating more prosperous and more resilient communities. For the same reason, sustainable climate policies are part of the Netherlands' future-oriented youth policy.

The Netherlands is working on prospects for young people by improving access to education and bridging the skills learned at school with labour-market demand. We work in consultation with young people themselves and with an extra focus on digital skills.

At the Youth at Heart conference in November 2020, we connected with young people to explore what is needed to provide them with the best possible prospects for the future.

### **Rights to education**

All young people are entitled to a good education and decent work. However, opportunities are inequitably distributed, and this can lead young people to abandon hope. Because young people can bring about positive change in a society, the Netherlands invests in them, especially in countries where they have the fewest opportunities to work on their futures. We speak out for the right to education and take action to eradicate child labour and child marriage.

As a founding partner of the Global Partnership for Education (GPE), we support developing countries to improve their educational system. Since its foundation in 2002, GPE has assisted over 60 countries, enabling 72 million children to go to school. GPE has also helped more children complete their primary education. Among girls starting primary education, the completion rate increased from 56 to 74%.

### **Strong and resilient communities**

Social cohesion is a major precondition for a society's resilience. The Netherlands is working towards forming positive types of communities which increase local resilience and contribute to social justice. The coronavirus crisis shows that basic care and economies in many parts of Africa and the Middle East are vulnerable. It is therefore crucial to continue investing in healthcare. This is what the Netherlands is doing through its country programmes.

Conflicts and disasters tear communities apart. It greatly impacts people, both physically and mentally. When major tragedies occur, the international community has a duty to relieve the suffering. The Netherlands shares this responsibility and contributes to emergency and humanitarian aid efforts. Where possible, we work towards providing protection to displaced persons in the region.

It is equally essential to devote adequate attention to mental health and psychosocial support (MHPSS), for both victims and aid workers. For that reason, we ensure that MHPSS is an integral part of the standard aid package.

## Inclusive access to finance

Financial inclusion is a prominent enabler of many Sustainable Development Goals. Worldwide, nearly two billion people do not have access to basic financial services, such as bank accounts, insurance and credit. Having these means will enable them to manage their household expenses better, deal with unexpected costs or events, or even start a business. By improving access to finance, we help people take charge of their own future.

Together with local and international partners, the Netherlands strives to create opportunities for underserved and vulnerable groups, especially women, young people and refugees, so that they can also fulfil their dreams and aspirations. To realise this, we invest in funds, technical assistance and new financial products.

The Inclusive Finance Platform unites Dutch inclusive financiers, such as development organisations, social investors and banks. The Finance for Refugees track, for example, focuses on access to finance for refugees, while Rural Finance focuses on improved finance for smallholder farmers.

Through the Dutch Good Growth Fund, the Netherlands supports emerging countries by increasing small and medium-sized companies' access to finance.

In Jordan, for example, fintech platform Liwwa provides loans to entrepreneurs, who cannot secure funding through traditional banks due to lack of credit history and collateral.

The Netherlands also invests in new financial products for vulnerable groups in developing countries, such as insurance policies against illness or crop failure. The Geodata for Agriculture and Water programme, for instance, offers insurance to small-scale farmers in Africa and Asia using satellite data and mobile networks.

Private sector development and inclusive finance are essential to improving the daily lives of people around the globe. Together with our partners, the Netherlands aims to ensure access to finance for all who need it.

# 72%

of men

# 65%

of women

have a bank account in developing countries

World Bank

# 40%

share of micro, small and medium-sized enterprises in developing countries with unmet financing needs

World Bank

# US\$5.2 trillion

annual unmet financing needs of micro, small and medium-sized enterprises in developing countries

World Bank

## Female entrepreneurship

The world cannot flourish if half of its population is marginalised. Economic empowerment of women and girls is essential for sustainable development, prosperity, and peace.

The Netherlands supports organisations that help women realise their full economic potential. Advocating for better market access, providing support regarding technology and finance, and establishing associations and cooperatives have proven very valuable. In this way, we contribute to stronger communities, social cohesion and more broadly shared prosperity. In Vietnam, these efforts have helped female agricultural entrepreneurs set up asparagus nurseries, for example.

With the campaign, Groei-over-Grenzen (growth beyond borders), the Netherlands stimulates female entrepreneurs to look further than their domestic market and feel confident in about going international. The campaign provides access to international network, information videos on missions and events, vlogs by female role models, and opportunities for subsidies and finance, such as She Credit and Fund Right.

In the past years, the Netherlands has also placed great importance on conducting research on rights and opportunities for women in business. We continue to learn from best practices, as we are convinced that including equal rights and opportunities for women and girls bears fruit in the long run.



showcase

## Public-private partnerships to empower female entrepreneurs:

Over 30,000 women in Mali and Burkina Faso gained market access for their Shea, turning seasonal entrepreneurs into year-round entrepreneurs with increased incomes

# 36%

female entrepreneurs in the Netherlands  
Netherlands Chamber of Commerce

# 42%

increase of young female entrepreneurs  
(< 35 years) in the Dutch trade register between  
2015 and 2020

Netherlands Chamber of Commerce

# 78

female entrepreneurs per 1,000 women in  
the Netherlands

Netherlands Chamber of Commerce

# Solving global challenges together



The Netherlands recognises that global challenges can only be confronted together. Achieving the SDGs is not only good for the world. It also generates trade and investment, fosters innovation and creates new sustainable industries and employment. Nowadays, doing good and doing business go hand-in-hand.

# Circular economy

Current ways of production and consumption need to be much more sustainable. The transition towards an inclusive circular economy could help achieve the Sustainable Development Goals (SDGs) and climate targets.

The Netherlands is committed to contributing to this circular movement. Not only by setting ourselves the goal of becoming 100% circular by 2050, but also by working in partnerships across the globe that enable knowledge exchange.

## **Making the circular shift together**

The Netherlands is one of the most ambitious countries in the global circular movement. Only by inspiring people and institutions to rethink and redesign can we ensure that circular advancements are actually adopted by public and private organisations, institutions and society as a whole.

Accelerating the transition towards a circular economy calls for international collaboration. The Netherlands is proud to host the PACE (Platform for Accelerating the Circular Economy) Action Hub, an international public-private platform with truly committed members. With the platform, Holland Circular Hotspot, we collaborate internationally by sharing best practices from businesses, knowledge institutions and (local) governments on all circular topics.

## **Repair, reuse and remanufacture**

The COVID-19 crisis revealed the fragility of our global supply chains and hastily implemented lockdowns put a major strain on food supply. We need to improve the resilience of our value chains circular principles can provide credible solutions; repairability, reusability and remanufacturing stimulate a resilience in stock availability and competitiveness.

# 27%

Netherlands' recycling rate in the EU

Eurostat

# 53%

Recycling rate of municipal waste in the Netherlands

Eurostat

# €5.2 million

Investment in circular economy sectors

Eurostat

# 24.5%

Circularity metric

Circularity Gap Report

# Building sustainable and liveable cities

Today, 55% of the world's population lives in urban areas. This figure is expected to rise to 68% by 2050, putting huge pressure on resources and services. The Netherlands is one of the most densely populated countries in the world. This has resulted in a high degree of urbanisation with meticulously detailed spatial planning.

Cities are looking to become “smarter” and more flexible in responding to citizens' needs. In 2017, the Netherlands adopted a smart city strategy in line with the EU-funded innovation programme Horizon 2020. The programme brings together research and innovation to create solutions and business models for more liveable and efficient cities. These can be scaled up and replicated to create energy and resource efficiency, new markets and new jobs.

## Tech that improves lives

As millions of people move to urban areas worldwide, how can we accommodate their needs and enhance the liveability, sustainability and inclusivity of our cities?

The Netherlands has defined a strategy to harness technological power to benefit society and the economy. Those technologies will immensely change the way we innovate, live, work, travel and produce, and aid our collective efforts to solve societal challenges.

Digital literacy plays a crucial role in the development of an inclusive smart city. It enables citizens to keep up with the rapidly changing environment and creates opportunities for employment and (low-tech) SMEs.

# 9th

Amsterdam in the  
Smart City Index

In the Netherlands, the five largest cities: Amsterdam, Rotterdam, The Hague, Utrecht and Eindhoven lead the implementation of the National Smart City Strategy together with the G32, which are the Netherlands' medium to large cities.

The strategy creates experimental space for high-end digital infrastructure to scale up in number of areas. These include urban mobility and accessibility, sustainable and low-energy homes and buildings, sustainable waste management, healthier air quality, and smart, healthy urbanisation. This integrated approach focusses on circular systems for a sustainable future.

### **Resilience**

The COVID-19 pandemic has had a profound impact on cities across the world. This demonstrated the importance of building systems, technology, infrastructure, and urban structures that reinforce resilience. The Netherlands seeks to forge international partnerships at national and local level to improve urban living worldwide.

The Netherlands, Amsterdam, IJburg, The Nescio cycle and footbridge.

This award-winning bridge spans the Amsterdam-Rhine Canal, connecting the new residential area of IJburg, built on artificial islands on IJ Lake, with the mainland.



© Frans Lemmens / RVO  
Netherlands Enterprise Agency

# Smart and green mobility

Every day, new technologies emerge, creating solutions to resolve universal mobility, environmental and safety issues. The Netherlands aims to accelerate sustainable smart mobility solutions as a living laboratory for testing and development.

The Netherlands is a signatory to the European Green Deal's Sustainable & Smart Mobility Strategy which supports the implementation of renewable energy in the transport sector, using green biofuels, hydrogen and solar. The deal envisages a 90-percent reduction in transport-induced greenhouse gas emissions by 2050.

## Driving sustainable development

The Netherlands recognises that the rapid increase in mobility requires a well-integrated infrastructure of roads and waterways. A strong collaboration between government, businesses and knowledge institutes are jointly driving the development of sustainable technologies and alternative fuels in our country. We strive to enhance safe and efficient flow of traffic, whilst improving air quality by minimising CO<sup>2</sup> emissions.

## A cleaner and safer world

A key element of our strategy is to reduce emissions across all modes of transport. To do so, it focuses on providing affordable, accessible and cleaner alternatives.

By 2020, the Netherlands tallied around 240,000 registered electric vehicles (EV). This put our country among the top 5 countries whose EVs make up over 1.5 percent of their passenger car fleets. And no other country has the same density of charging stations with over 57,000 plug-in points.

Amsterdam Schiphol Airport is the world's first airport to deploy a fleet of fully electric taxis and buses. Self-driving cars and trucks are paving the way for a new generation of vehicles. Together with intelligent traffic lights and established traffic control centres, they will form a smart mobility system. The Netherlands is keen to use smart mobility technology on the road to make the world cleaner, safer and healthier.

# 240,000

electric vehicles

# 3rd place

Electric mobility  
Statista

# 57,000

charging stations

# 5th place

Most rail passengers  
The Economist

showcase

The Flying-V plane design, which carries the same number of passengers as an Airbus 380 but uses 20% less fuel. The result of collaboration between Delft University of Technology (TU Delft), Royal Dutch Airlines (KLM) and international airplane manufacturer Airbus.



© Tudelft

# Data innovation

In the Netherlands, the high level of connectivity, digital skills, internet services, online transactions, and integrated data systems have put the country in a good position.

Since March 2020, the use of the internet increased as workers logged in from home and consumers turned to online shopping.

Together with the Alliance for Digital Coexistence, the Dutch government supplies digital devices to as many people as possible. And to counter increased cyber-attacks on the healthcare sector, cyber experts have formed the “We support Hospitals” coalition to provide free assistance to healthcare institutions.

The Netherlands has an excellent digital infrastructure with almost nationwide mobile broadband 5G coverage. With 95% of the population using the internet, the Netherlands is a frontrunner in digital skills.

The Netherlands performs among the top 5 EU countries with regards to Integration of digital technology.

# 5th

Global Innovation Index  
World Intellectual  
Property Organization  
(WIPO), INSEAD business  
school  
Cornell University

# 4th

The Digital Economy  
and Society Index



#### showcase

Smallholder farmers and pastoralists in developing countries are often located in remote areas and unable to access timely information on the effective usage of input materials, better farming practices, and financial advice. Access to such information services would ultimately result in enhanced productivity. The G4AW programme provides solutions for smallholder farmers to improve productivity and climate resilience. The G4AW programme has demonstrated that satellite data and simple solutions can have a big impact on the livelihoods of smallholder farmers.

# Cocreating smart and sustainable solutions



For a climate-resistant, water-robust, sustainable, healthy, and safe world we need to look at solutions both small and large. From the latest scientific insights and key technologies to practical and human solutions in design and application. The Dutch top sectors work together to design the appropriate solutions, by linking societal challenges to the business climate and knowledge institutions.

Businesses, scientists and the government have together established ten top sectors in the Netherlands: Agriculture & Food, Horticulture, Chemistry, Creative Industries, Energy, Life Sciences & Health, Logistics, High-Tech Systems and Materials, Water & Maritime, and ICT.

Internationally, the Top Sectors collaborate on numerous ground-breaking initiatives. Trade missions and strategic fairs such as the Hannover Messe and World Expos, but also the Innovative Attaché Network and the Netherlands Foreign Investment Agency (NFIA) strive to broaden and strengthen innovative networks between sectors and countries.

### **Ambitious goals**

The Netherlands has set itself ambitious goals for the future. By 2040, inequalities in health between the lowest and highest socio-economic groups must decrease by at least 30%. By 2050, our country will operate within a totally circular economy, focused on energy transition and sustainability efforts and be climate resistant and water robust.

# 4th

World Competitiveness Ranking  
IMD

# 5th

Global Innovation Index  
WIPO, INSEAD and Cornell University

# 6th

Largest exporter of goods in the world  
CIA World Factbook

# Business climate and foreign investment

Collaboration is in the Dutch DNA. The Dutch take a unique, quadruple-helix approach to collaboration, involving participation from businesses, knowledge institutions, government, and citizens. Our quadruple-helix model understands the essentials for fruitful business environments:

- A competitive business climate
- A skilled and educated workforce
- Accessible programmes to enhance and boost innovation
- State-of-the-art infrastructure
- A stable political and economic landscape

A business should not just survive but thrive in its environment. Businesses must deal with forces they have little to no control over, such as governmental policies, political attitudes, tax regulations, public-private relationships, and local customs, to name but a few. Selecting the right location is therefore key to establishing a successful business.

## **Business friendly**

The Netherlands is business friendly and committed to stimulating innovation, sustainability and digitalisation. We are also known for our creative, collaborative and open environment that fuels business growth.

Through incentive programmes and public-private partnerships, local governments foster a forward-thinking environment for ground-breaking research and cutting-edge projects. Foreign investment is welcomed as international companies make a valuable contribution to Dutch industry ecosystems and the economy at large.

## **Relocating to the Netherlands**

There are many aspects that play into an entrepreneur's decision to relocate to the Netherlands. For Netflix moving to Amsterdam, the lifestyle was important. For Monster Group, it was the combination of English-speaking talent, logistic advantages and maintaining access to European markets in view of Brexit uncertainties. For UPS, the Netherlands' central location was key.

And it's not only large companies that find the Netherlands to be an attractive business location. The Dutch government plays an important role by providing foreign startups with the tools and information they need to open a company in the Netherlands. Initiatives like the Netherlands Point of Entry and Techleap.nl connect international entrepreneurs to capital, markets and talent in the Dutch startup ecosystem.

showcase

## Inspiring women in Tech

Melanie Riebeck was named one of the fifty most inspiring women in tech (Inspiring Fifty Netherlands) in 2016, 2017, and 2019. She was runner up in WomeninIT's 2010 ICT Professional of the Year competition. Viva Magazine listed her among the 400 most successful women in the Netherlands (Viva400) in 2010 and 2017. She also won the title Most Innovative IT Leader by CIO Magazine NL (TIM Award) in 2017, and was one of the 9 Most Innovative Women in the European Union (EU Women Innovators Prize) in 2019. Her company, Radically Open Security was listed the 50th Most Innovative SME by the Dutch Chamber of Commerce (MKB Innovatie Top 100) in 2016.



© Sebastiaan ter Burg

# 1st place

English proficiency  
Education First (EF)

Technology readiness  
in E-commerce  
Economist Intelligence Unit (EIU)

# 4th place

Best country for  
business

Highly skilled work-  
force

# 6th place

Global Talent Competitiveness Index

INSEAD

# 1st

Amsterdam  
Global Green Finance  
Index

Global Green Finance Index  
(GGFI)

3,959  
bln euros

Inward foreign direct  
investment

Statistics Netherlands

4,932  
bln euros

Outward foreign  
direct investment

Statistics Netherlands

4th  
place

Open Market Index

Open Market Index

World Competitiveness  
Ranking

IMD Business School

SDG 8.5 wages and  
salaries of employees

Statistics Netherlands

# Agriculture & horticulture

To ensure ample food supply for an ever-increasing global population, we need to rethink the way our food system is designed. The FAO predicts 840 million people will suffer from hunger by 2030.

Meeting the nutritional needs of the world's population requires us to increase food production without further endangering the environment. Food that meets the highest environmental and animal welfare standards, produced in a way that is economically viable for both producers and consumers.

## Farming the Future

Over the past decades, the Netherlands has established an international reputation as a highly innovative agricultural producer. But the future of farming requires innovation and adopting a new approach: accelerating a global shift towards sustainable agriculture. This goal can only be achieved through strong partnerships between governments, entrepreneurs, knowledge institutions and citizens.

Knowledge is key to promoting the adoption of circular agriculture worldwide. Our farming, horticulture and fisheries are among the most innovative sectors. We are keen to share our extensive knowledge and expertise with potential partners worldwide and develop sustainable and smart solutions together. For example, supplying high-quality seeds and plants, training smallholders, restoring healthy soil conditions, improving agro-logistics, and engaging consumers.

## Investment in emerging markets

The Dutch Good Growth Fund (DGGF) helps Dutch entrepreneurs who wish to do business in 70 developing countries worldwide. By doing business in developing countries and emerging markets, entrepreneurs contribute to economic and social improvements in these countries.



showcase

Through the Dutch Good Growth Fund (DGGF) agricultural company Franzen BV, for instance, supports Senegal in becoming more food self-sufficient by setting up farms and training its 200 farm workers, most of them women, to grow crops. According to the UN Food and Agricultural Organization, if women had the same resources and land rights as men, their yields would increase by almost a third (feeding 150 million more people).

The Dutch government is partnering with the African Management Initiative (AMI) and Village Capital (VilCap) to offer three-month virtual bootcamps on business continuity across Africa. The programme offers practical tools and strategies to help entrepreneurs to face challenges caused by the pandemic. Thirty Entrepreneur Support Organisations (ESOs) and 600 of their clients participated in the programme.

# 1st

University Agriculture  
and Forestry for  
Wageningen University  
& Research

QS World University Rankings

# 90

# bIn euros

Agriculture export  
Statistics Netherlands

# 9th place

Global Food Security Index  
EIU

# 2nd place

SDG 2.3 agricultural production  
Statistics Netherlands

Food Sustainability Index  
Barilla Center for Food & Nutrition  
Foundation (BCFN)

# Horticulture

As a country with a small surface area, the Netherlands relies on inventiveness and efficiency to drive high production in our horticulture sector, across the supply chain. Today, we produce 46% of the global export value of base materials, vegetables, ornamentals, potatoes and grasses. The collaboration between government, entrepreneurs and research institutes boosts the pace of innovation in our country. It allows us to attain the highest efficiency in agricultural technology in the world.

# Water & maritime

Water covers 70% of the planet, it sustains and connects continents and communities. However, the effects of climate are threatening the global water supply. Extreme rainfall in one region, severe drought in the other – these conditions greatly impact the availability and quality of water resources. At the same time, water and the oceans could be the key to finding solutions to these challenges.

## **An integrated approach to water challenges**

The Netherlands' history, culture, society and democracy are all impacted by its sensitive location as a low-lying delta. Over time, we have developed advanced waterborne and water-related industries, integrated water management, water technology, and an innovative maritime industry.

Our country's limited surface area, its flood-prone acreage, high population density and history of flooding have shaped our spatial planning and resilience strategies. The knowledge and expertise we gained over centuries have earned our water & maritime experts a prominent global presence.

## **Water safety and security**

The Netherlands is committed to contributing to water security and water safety worldwide, as stated in our International Water Ambition.

Between October 2018 and September 2019, the Netherlands provided 2.9 million people with safe drinking water and 5.3 million people with improved sanitation. More than 669,000 have benefitted from improved water management.

Our maritime sector also aims to take the lead in transforming the maritime industry and contribute to a sustainable and productive use of our oceans and hinterland connections through its Maritime Future is NOW actions.

campaign

## Valuing water

The Netherlands set up the Valuing Water Initiative (VWI) to stimulate governments and organisations to prioritise water solutions worldwide.



# 4th

Shipping climate  
ambition (industry)

International Maritime  
Organization (IMO)

# 1st

Rotterdam  
Sustainable Cities  
Water Index

# 13th

Container port traffic  
United Nations Conference  
on Trade and Development  
(UNCTAD)

# 2nd

SDG 6.5 degree of integrated  
water resources manage-  
ment implementation  
(Statistics Netherlands)

# Life Sciences and Health

The Netherlands is known for its scientific innovations in the medical field, such as the microscope, developing the first artificial kidney and discovering immune therapy. Our goal is to build on the strength of the Dutch Life Sciences and Health sector to address societal challenges such as chronic conditions due to an ageing population, unhealthy lifestyles and obesity. We continue to innovate to optimise prevention, cure and care and to improve vitality, while reducing the costs of healthcare.

The Netherlands has consistently scored high in international health and happiness surveys. In the Euro Health Consumer Index, the Netherlands comes in second position. This measures the consumer friendliness of healthcare services.

The range and reach of health services combined with a high degree of patient rights have placed the Netherlands in the top three since 2005. Young people in the Netherlands also feature among the happiest and healthiest of European countries, according to a World Health Organization study.

In 2019, the Netherlands Ministry of Health, Welfare and Sport drew up a central mission to ensure by 2040 that all residents of the Netherlands enjoy a healthy life, live 5 years longer, and that health differences between the lowest and highest socio-economic groups are reduced by 30 percent.

Dutch healthcare institutions, governmental authorities and companies have set out agreements for a healthy future in the Green Deal on Sustainable Healthcare. The aim is to ensure that healthcare benefits people, the planet and society in general.

# 5th place

Ranking of happiness  
World Happiness Report

# 1st place

Child wellbeing in  
rich countries  
UNICEF

# 1st place

Work-life balance OECD  
Better Life  
Index

# Logistics

## **The gateway to Europe**

Situated on Europe's west coast, the Netherlands has a crucial position in Europe's Single Market. Our main sea and inland ports facilitate the flow of goods to and from Europe's hinterland.

Rotterdam is Europe's largest port, and Amsterdam Schiphol Airport is the world's 3rd largest in air cargo transport. Together they make up part of the infrastructure which reinforces our country's function as the gateway to Europe.

The Dutch logistics sector is increasingly adopting sustainable technologies to reduce its carbon footprint. This will partly be achieved via an open ICT platform on which companies and government agencies share information. This will make arrival times more reliable, improve grip on modes of transport and transport capacity, and enable cargo to be grouped together.

## **The most connected country**

The Netherlands provides high-quality logistic services through its high-tech automated ports, modern electrified rail network, well-maintained roads and waterways. They serve a multitude of industries from agri-food to medical technology.

Many foreign-owned logistics distributors locate in the Netherlands due to the under-200-km proximity of logistic centres and rapid 24-hour access to 170 million European consumers.

The logistics sector is a strong driver of our economy with 55 billion euros added value per year and 813,000 employees.

According to the DHL Global Connectedness Index, the Netherlands is the world's most connected country. We also rank 6<sup>th</sup> in its Logistics Performance Index.

Our well-established transportation and supply links and efficient customs procedures are key-drivers in a sustainably innovative value chain.

# 1st place

DHL Global Connectedness  
Index

# Energy

To achieve the international climate goals set out in the 2015 Paris Agreement, the world is undergoing a profound energy transition. The Netherlands aims to reduce its emissions of greenhouse gases (GHG) to net zero by 2050. And together with like-minded European countries, we have successfully achieved that the EU raise its interim target to a 55-percent reduction by 2030.

The Netherlands' targets are set out in the 2019 Climate Agreement. It was reached through a collaborative process, in which over 100 stakeholders developed plans to reduce CO<sup>2</sup> emissions in five sectors: electricity, industry, the built environment, mobility, and agriculture and the natural environment.

## **Renewable sources**

Energy-efficiency and electric transport are top priorities for the Dutch government. Dutch railways already have an extensive electrified rail network powered by renewable sources. More and more local municipalities are implementing electric and hydrogen-fuelled bus lines. At the same time, electric vehicles are becoming more commonplace as the infrastructure that runs them expands.

Renewables are expected to turn the Netherlands from a net importer into a net exporter of electricity in the coming years.

Between 2008 and 2018, the share of renewables in the total energy mix increased by half. At present, bioenergy is the primary source of renewable energy. By 2030, wind and solar are expected to become the main sources of renewable energy, making up 70% of electricity generation.

## **Low-carbon economy**

Flexible and interconnected energy systems are key to our ambition to achieve a cost-effective transition to a low-carbon economy.

We work with international partners on new energy technologies and recently agreed to share information on hydrogen production for research and development with the United States. We have also entered an agreement with Portugal to develop green hydrogen in Europe.

9th  
place

Energy Transition  
Index  
WEF

17th  
place

Wind electricity  
generation capacity  
EIA

9th  
place

Renewable Energy  
Country Attractiveness  
Index  
RECAI

# ICT

The Netherlands has a world-class digital infrastructure and a highly educated population, with cooperation between government, businesses, scientists and citizens giving rise to innovative ICT clusters and knowledge centres.

Digitalisation holds the key to resolving today's societal challenges. In the Netherlands, we put people before technology. ICT and Artificial Intelligence (AI) are tools to improve the welfare and prosperity of the public. They should not infringe on personal privacy and fundamental human rights. Affordable digital access and improved ICT infrastructure also contribute to the Sustainable Development Goals.

## **Advanced technologies**

Digitalisation has proven indispensable. The Netherlands' ICT top sector is represented by the Dutch Digital Delta, which stimulates ICT innovations across various sectors.

The Netherlands is renowned for its advanced technology for smart grids, infrastructure security, cyber-attack simulation software, and defence and security system design.

As an established testing ground for new solutions, we focus on areas that offer opportunities to both citizens and businesses, such as Blockchain, AI, Cybersecurity, Big Data, Data Centres and Cloud Computing, Internet of Things, and Future Networks beyond 5G.

Blockchain has the potential to revolutionise society as a source of trust, wellbeing, prosperity and security for all by improving services and reducing fraud and cyber risks. The Netherlands is also a frontrunner in E-health solutions, with the highest adoption rate in hospitals and clinics worldwide.

## Digital era

As a major hub on the digital gateway, we hold high standards in line with European values with regard to responsible data, digital human rights and privacy in a digital era. This has established our country's position as a trusted expert and innovation leader. Our goal is to improve people's quality of life across the world using the latest digital technologies.

# #4

The Netherlands ranks 4 IMD World Digital

Competitiveness Ranking

We also rank 4 on the Global Innovation Index, and 4 on the European Innovation Board.

Amsterdam is 4 best tech city in the world, according to Savills.

# #7

The Netherlands ranks 7 in the UN's ICT Development Index.

# 9th

Government AI Readiness Index  
Oxford Insights

# 95

Data centres  
Digital Gateway

# High-tech systems and materials

The sector High-Tech Systems and Materials (HTSM) unites the innovative power of Dutch tech industry and research communities to solve the most pressing challenges of our time. HTSM consists of a well-functioning ecosystem of specialised companies and knowledge institutions, whose strong links lead to high concentrations in areas with technical universities, such as Eindhoven, Wageningen, Delft and the Twente region.

## **Pioneering new solutions**

The Netherlands has long been recognised for innovative technology, with microscope, Bluetooth and wi-fi among our most popular inventions. Today, HTSM continues to develop key enabling technologies, products and services, which help us to create smart and sustainable solutions that are also economically feasible.

With our international partners, we help solve global challenges, such as climate, health, sustainability, security and mobility issues. The city of The Hague, for example, has become the AI headquarters for the Centre for Artificial Intelligence (AI) and Robotics of the United Nations Interregional Crime and Justice Research Institute. It also hosts the AI HQ of the Confederation of Laboratories for Artificial Intelligence Research in Europe. Meanwhile, Eindhoven University of Technology (TUE) is collaborating with chipmaker NXP and telecom giant KPN to develop 5G technology.

Applications of HTSM can be found in all innovative industries. They offer new chips to manufacturers, allow for the creation of electric cars and enable the use of lasers in agriculture.

### New solutions and innovations

HTSM excels in technologies such as robotics, quantum technology, 3D printing, automotive-tech, high-tech manufacturing, aerospace technology, semiconductor technology, photonics and nanotechnology. HTSM consists of more than 1,700 firms, from large manufacturers to smaller technology start-ups. It combines Dutch pragmatism and collaboration with an elaborate business infrastructure. Major multinationals opt to invest in this climate. Together with a highly skilled workforce and government support, this enables the HTSM sector to grow and foster innovation even further.

# 172

Robot workers

WEF

# 12th

2.3% nano-patents in the world

Patents nano-technology

# Creative industries

In the Netherlands we believe in the power of design and creativity to transform society. Businesses, governments and science alone cannot solve complex global issues. We need open ideas, inventive thoughts, and inclusive strategies.

From Rembrandt and Van Gogh to Iris van Herpen and Roosegaarde, Tiësto and André Rieu to The Voice: Dutch creative minds strive to inspire and connect us all. These icons exemplify the strengths of Dutch design: pragmatic, open-minded, conceptual, and out-of-the-box.

## Creative economies

The combination of innovation and sustainability is at the heart of Dutch Design. It begins with our education system and continues with our art school alumni, many of whom have global impact. The Netherlands is home to more than 140,000 designers. Two-thirds of them export their services abroad.

In the textile dying industry, for instance, Dutch company CleanDye built the world's first waterless and non-chemical textile dying plant in Vietnam, contributing to sustainable fashion. In healthcare, the Amsterdam Skills Center halves the time of practical medical education via interface design and product designers have collaborated with Philips Healthcare to design prostheses and apps.

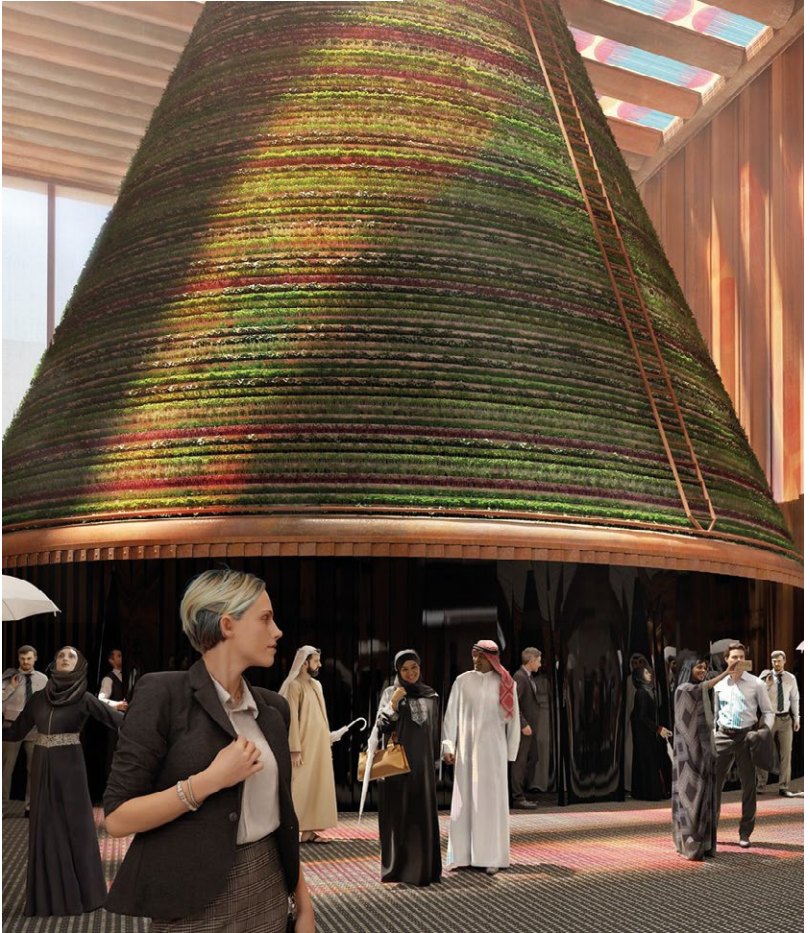
Our digital infrastructure has made us the number one destination for streaming and hosting games across Europe.

## Tomorrow's cities

Dutch architecture companies continue to incorporate circular processes as part of their design. V8 Architects used circular principles to design the fully reusable Dutch Pavilion as a temporary biotope at the Dubai World Expo in 2021-2022. Meanwhile NEXT Architects revived abandoned villages in Dafang, China, countering the impact of rapid urbanisation. Other Dutch born international firms such as MVRDV, OMA and KCAP have similar projects to make tomorrow's cities more inclusive, safe, resilient and sustainable.

showcase

The Dutch pavilion at the Dubai World Expo in 2021-2022 itself is meant to be completely recycled and reused. After the Expo ends in April 2022, everything used to build the pavilion will be returned or reused elsewhere in the United Arab Emirates.



# Chemical industries

The Dutch top sector Chemical Industries (ChemistryNL), have initiated many innovations to address challenges through multi-disciplinary and cross-sector work in the fields of health, energy, industry, plastics and transport.

## Sustainable chemistry

To enable the Netherlands to become a net zero economy, innovations in the chemistry sector facilitate the electrification of industry and use of renewables in heavy-duty transport. As worldwide waste streams and the demand for plastics grow, chemistry also helps to build a circular economy.

The Dutch chemical industries also develop advanced smart materials. These include composites to make electric public transport possible, textiles that require less frequent washing, and solar cells with higher efficiencies and returns.

## Health

Precision medication enables drugs to target exact locations within the human body. For example, minuscule radioactive chemical balls can be injected into a patient's body to fight tumours. Dutch Nobel Prize laureate Prof. Ben Feringa created carrier molecules, called nanocars, which can deliver drugs through the bloodstream. At present, the world is developing vaccines to fight the SARS-CoV-2 virus. Chemistry is at the centre of pharmaceutical research.

## Identification of harmful substances

Depending on their concentrations, harmful substances, such as fine dust, nitrogen, allergens, microplastics, contaminants and viruses cause differentiated degrees of harm. Evidence-based sensing can detect these levels, thus protecting our health and wellbeing.

The chemical industries in the Netherlands is fostered by our world-class universities, an international industry, and a strong logistic position at the heart of Europe's largest chemistry cluster. Together they cooperate with government to support vibrant innovative communities with a can-do mentality.

ChemistryNL seeks partnerships with other leaders in sustainability, emission reduction and responsible care. Our entrepreneurial, inventive spirit and international outlook all contribute to chemistry in the Netherlands being a highly attractive partner in worldwide innovations.

### **Recycling innovation**

Dutch National Icon, Ioniqa Technologies, has closed the recycling loop for plastics. Its award-winning innovation transforms all types and colours of PET waste into valuable resources for 'virgin-quality' new PET. This process makes oil redundant as a raw material for plastics.

# Research and education

The education and academic research systems in the Netherlands reflect the open nature of the Dutch economy and culture. Fairness and equal opportunities for all underpin the national education policies. Our education system always looks beyond its own borders and stimulates international student exchanges at all levels.

## **Social sciences**

In the Netherlands, students from the youngest ages are encouraged to question, debate and discuss in the classroom. This not only promotes learning, skills acquisition and knowledge for everyone, but also stimulates the inquiring minds which go on to become curious and ground-breaking scientific researchers. These scientific researchers excel especially in the field of social sciences, ranking first on the Citation Impact Score 2018 for this creative and social field.

## **The Orange Knowledge Programme**

For almost 70 years, the Netherlands has initiated a wide range of development cooperation programmes in education. The Orange Knowledge Programme (OKP) is a good example of an education-based scholarship programme which aims to contribute to a society's sustainable and inclusive development through strengthening the skills and knowledge of young people, especially women and girls. Currently 54 countries participate in OKP projects on the themes of Food Security, Water, Health, and Security and the Rule of Law.

# 15th

Delft University of  
Technology University  
Engineering and  
Technology  
QS World University Rankings

# 3rd place

Quality of vocational  
training  
World Bank

# 64.1%

Adult participation in  
education and training  
Adult Education Survey (AES)

# 9th place

World Talent  
Ranking