

# The Netherlands Compared 2020

**NL**

## The Netherlands Compared



## Foreword

### Let's co-create solutions for global challenges

When you live in the Netherlands, it's easy to understand why our country is one of the happiest in the world. We have a vibrant economy that provides a high standard of living. We have wonderful universities and great infrastructure that connects us to the rest of the world. It's true that the weather sometimes lets us down, but even that is helping us to understand the challenges of climate change and nature development.

The Netherlands is currently the most competitive economy in the EU, and the second most innovative economy in the world. Our business community is an indispensable partner in efforts to foster economic, social and ecological sustainable development. Dutch companies, big and small, are helping to achieve the Sustainable Development Goals with investment and innovative solutions.

Our open, inclusive and inventive society wants to live sustainably so that together we can ensure a bright future for our children. We believe that a circular economy, in balance with our natural resources, points the way to our country's future. And the Sustainable Development Goals are our compass on that journey.

We hope we can make that journey with you, as our partner in development. It's very much a two-way partnership: we can offer solutions to your problems, just as you can doubtless offer solutions to ours. Together we can make things happen. So let's co-create solutions.

**Sigrid Kaag**  
Minister of Foreign Trade and Development Cooperation

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# About the Netherlands

With a surface area of more than 41,000 km<sup>2</sup>, and a population of around 17 million people, the Netherlands is one of the world's smallest and most populous countries. Albeit, small in size, but certainly not in impact. The Netherlands has the 17<sup>th</sup> largest economy in the world and the 7<sup>th</sup> largest in the European Union, consistently ranking among the top places in the world to live and work.

Official name:

Kingdom of the Netherlands

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

Capital:

Amsterdam

Seat of government:

The Hague

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:

33,800 km<sup>2</sup>

Number of provinces

12

Location:

Western Europe, bordering Germany, Belgium and the North Sea

Number of inhabitants in 2019:

17,240,000

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

509

Monetary unit:

euro

Languages:

Dutch, Frisian  
On the overseas islands also English and Papiamentu

# Quality of Life

The Netherlands is committed to promoting quality of life, healthy development, and healthy behaviours across all life stages, worldwide. Structural reforms in areas such as the labour market and social security system have created conditions which nurture healthy economic growth. This creates room for investment in knowledge and innovation, which enables the Netherlands to remain a prosperous, enterprising and sustainable country.



## Health & wellbeing

### 10<sup>th</sup> at healthy living and wellbeing

The Netherlands offers a highly pleasant living environment and is currently ranked 10<sup>th</sup> on the Human Development Index (UNDP, 2019). This ranking is determined by considering factors such as the country's GDP and other aspects of human wellbeing, like life expectancy (82.0 years), public health, literacy level and educational standards. OECD reports that over 93% of children between the age of 11 to 15 in the Netherlands report above average life satisfaction. Furthermore, UNICEF (2017) have listed the Netherlands as the best place in the world for children and teenagers to live.

Netherlands  
Norway  
Iceland

# 1st

Happiest children  
and teenagers

UNICEF 2017

Norway  
Switzerland  
Ireland  
Germany  
Hong Kong  
Australia  
Iceland  
Sweden  
Singapore  
Netherlands

# 10th

Human Development Index

United Nations 2019

### Accessible healthcare

The Netherlands also invests in strengthening healthcare systems elsewhere.

Sexual and Reproductive Health and Rights (SRHR) is a mainstay of our international healthcare policy. Around 1.8 million women and girls, worldwide, have gained access to modern contraceptive methods thanks to the Netherlands, working in collaboration with its international partners. The goal is to raise this number to 6 million by 2020.

The Netherlands further contributes to global health research addressing major and neglected infectious diseases and continues to fund the European & Developing Countries Clinical Trials Partnership (ECDTP).

### Healthcare infrastructure

Dutch expertise in healthcare infrastructure is on demand due to the multidisciplinary approach of hospital design and engineering, financing, waste management, medical equipment and energy efficiency. There are numerous medical equipment manufacturers in the Netherlands, with a strong emphasis on robotics. The Dutch company, Philips, is world leader in medical imaging and patient monitoring technology.

### Healthy aging

With a healthcare system that focuses on community care and 'aging in place' the Netherlands has been able to facilitate quality care for everyone who needs it. We rank 4<sup>th</sup> worldwide on the Hartford Aging Index 2017. Since the eighties, the Netherlands allows its citizens to live at home for as long as possible (self-reliance) rather than nursing homes and encourages participation in society. The Dutch system of care and welfare consists of four acts important for the elderly: the Health Insurance Act, the Social Act, the Long-term Care Act and the Youth Act.

Currently, around 94% of the elderly live at home. In residential homes, 57% of the residents are over 80 years old. New public private partnerships are booming to develop smart services for older people, such as alarm and emergency systems, helping them to live a more active and independent life. Expert teams for palliative care for patients with advanced disease further increase the quality of life.

### Mental health and wellbeing

The Netherlands continues to be one of the happiest places in the world. It is the fifth happiest country, moving up one place in the 2019 World Happiness Report. The report indicates that happiness is increasingly considered as a measure of social progress and the goal of public policy. In determining the score of each country, the researchers took into account factors such as GDP per capita, healthy years of life expectancy, social support, trust in government and businesses, perceived freedom to make life decisions, and generosity (measured by amount of donations). In a world where mental health problems are on the rise, the Netherlands remains one of the OECD nations with the lowest use of antidepressants per capita (World Economic Forum, 2019).

Another secret of happiness is probably work-life balance. The OECD Better Life Index indicates that the Dutch have the best work-life balance of any developed nation.

# \$5,288

## Highest health spending per capita

OECD 2018

# 8th

## Ranking palliative care across the world

Eurostat 2018

Finland  
Denmark  
Norway  
Iceland  
**Netherlands**  
Switzerland  
Sweden  
New Zealand  
Canada  
Austria

# 5th

World happiness  
report

United Nations 2019

# 15th

Healthiest Country  
Index

Bloomberg 2019

<b>Netherlands</b>	9.3
Denmark	9.0
France	8.9
Spain	8.8
Belgium	8.6
Norway	8.5
Sweden	8.3
Germany	8.3
Russia	8.1
Ireland	7.9

# 1st

Work life balance

OECD Better Life Index 2018

Norway  
Sweden  
United States  
**Netherlands**  
Japan

# 4th

Adapting to an aging  
population

Hartford Aging Index 2017



# Education

The Dutch educational system is known as a fair system with equal opportunities for all and it continues to rank well internationally. The Netherlands is at the 13<sup>th</sup> position of the PISA worldwide ranking. Dutch universities are in the top of the Times Higher Education University Rankings, ranking just behind the US, UK and Germany in number. The Netherlands promotes learning, skills acquisition and knowledge through its education policy. There is a wide variety of schools, which work under national examination standards. A successful baccalaureate examination gives access to university level education.

Education in the Netherlands is compulsory (leerplicht) from the ages of five to 16, however, most children start to attend primary school at age four. Education is divided into primary (basisschool), secondary (voortgezet onderwijs), and tertiary (hoger onderwijs). For secondary education, the Netherlands ranks 5<sup>th</sup> globally when it comes to number of students enrolled as a percentage of the relevant age group.

The Dutch have a high proficiency of English, ranking 1<sup>st</sup> in the world according to EF English Proficiency Index. 90-93% of the Dutch population speaks English—the primary business language in the Netherlands—and a high percentage speaks German and French.

## Lifelong learning

According to the OECD Skills Outlook, Dutch employees rank well above European average as proficient in computer literacy, numeracy and ICT.

An increasing number of Dutch are committed to lifelong learning. According to the Adult Education Survey (AES) by Eurostat, which measures adult participation (age 25-64) in learning, the Dutch participation was 64.1% in 2016. To encourage this further, the Netherlands recently introduced life-long learning credit, enabling people up to the age 55 to borrow money under favourable conditions to pay for a course in secondary vocational or higher education.

# 46

Number of international schools in the Netherlands

Expatica 2019

# 3rd

Quality of vocational training

WorldBank 2018

# 64.1%

Adult participation in learning

Adult Education Survey (AES) by Eurostat 2016

# 136%

Secondary school enrollment, percent of all eligible children

The Global Economy 2017

# Cities & mobility

Being one of the most densely populated countries in the world, the Netherlands have always found ways to make use of all its land-including urban areas. Thanks to multi-functional design, the use of advanced technology and smart transportation, Dutch cities are well on their way to becoming future-proof and resilient.

The Dutch Smart Cities ecosystem is working on achieving zero waste, sustainable constructions, energy-neutral homes and buildings, and electrical transport in combination with smart grids. Integrated and circular designs can only be implemented correctly in a multi-stakeholder approach. In the Netherlands, you will find a tech-minded government, innovative and early adapting citizens, collaborative industry partners, living labs and pilot opportunities that offer companies and organisations room to experiment.

## Access to knowledge and innovation

Dutch Smart city initiatives are more often than not a result of cocreation between the 4-helix, meaning public sector, private sector, academic institutions and citizens. The Netherlands is exploiting 4<sup>th</sup> generation IT providing embedded solution to city challenges; however, technology alone is not the solution.

Smart City is a Value added city that goes beyond Tech and is based on the real needs of society. The Netherlands takes an integrated approach focusing on circular systems that bring sustainable possibilities for a sustainable future.

By taking a step towards the future, the Netherlands strives to improve not only how we interact with our general environment but how cities interact with us, ensuring that we receive the best quality options and waste fewer resources.



*“I am convinced that the integration of green belts in metropolitan areas will solve many environmental problems with a rewarding perspective of a better quality of life.”*

Meiny Prins – Sustainable Urban Delta



Charging station for electric vehicles powered by the sun and wind

### Safety

Over a four-year period, the Netherlands plunged from 4<sup>th</sup> to 11<sup>th</sup> place when it comes to road safety according to figures from the European Road Safety Organisation (ETSC). The Netherlands is one of the 3 countries in which traffic deaths have increased since 2010. A new traffic safety plan focusing on cyclist and the elderly, will hopefully stop this trend.

### Cycling

Cycling is a way of life in the Netherlands. The Dutch own more bicycles per capita than any other country in the world (22.5 ml). An average Dutch person cycles 1,000 kilometres a year. They cycle more often and longer distances. Distances under five kilometres are usually covered on foot (35 percent) and by conventional bicycle (nearly 33 percent).

### Smart mobility

The Netherlands is looking at new technologies to solve challenges in the area of transport, the environment and safety. We are working together with the private sector to develop self-driving vehicles, and to improve in-car traffic information systems for drivers. This will reduce congestion and CO<sup>2</sup> emissions, and improve road safety.

Switzerland  
Japan  
Russia  
Austria  
France  
**Netherlands**  
Denmark  
Kazakhstan  
Germany  
United Kingdom

# 6th

Most rail passengers

Economist Intelligence Unit 2019

# Inclusive & diverse society

As is stated in our constitution, all persons in the Netherlands are treated equally in equal circumstances. Discrimination on the grounds of religion, belief, political opinion, race, or sex, or on any other grounds whatsoever is not permitted.

## Low income inequality

The Netherlands is committed to combining a solid social security system with progressive taxation. The leading principle of the system is that everyone should be able to play an active role in society. The Dutch pension system is considered one of the best in the world.

## Empowering the participation of disadvantaged groups

The Netherlands has a broad set of policies aimed at contributing to the empowerment and participation of disadvantaged groups, for instance encouraging participation in the labour market of elderly or disabled people, ethnic minorities and LGBTQ groups. The Netherlands is convinced of the need to address inequality within countries in order to achieve the UN Sustainable Development Goals (SDG). We take an active stance internationally through investments in UN economic and other social programmes.

In line with its trade and aid approach, the Netherlands also encourages private investment in the least developed countries. Inequality is one of the main causes of migration. Together with other EU countries the Netherlands therefore takes measures to provide refugees with adequate and sustainable shelter in their region of origin by investing in infrastructure, job creation and basic services.

## Trade and responsible business

Within The World Trade Organization (WTO) and World Bank, the Netherlands actively supports the trade and responsible business agenda. The OECD guidelines for multinational enterprises and the UN guiding principles on business and human rights have been underwritten by many Dutch companies. The Dutch approach to development cooperation is one of trade, aid and innovation. The Netherlands is the seventh-largest donor country, spending USD 5.6 billion on official development assistance (ODA) in 2018.

Norway  
Iceland  
Luxembourg  
Switzerland  
Denmark  
Sweden  
Netherlands  
Ireland  
Australia  
Austria  
Finland  
Germany  
New Zealand  
Belgium  
Czech Republic

# 7th

Inclusive development

WEF 2018



Indonesia  
Australia  
New Zealand  
United States  
Ireland  
United Kingdom  
Singapore  
Kenya  
Myanmar  
Bahrein  
**Netherlands**  
United Arab Emirates  
Norway  
Haiti  
Canada  
Nigeria  
Iceland  
Malta  
Liberia  
Sierra Leone

# 11th

World giving index

Charities Aid Foundation 2018

# 13th

Inclusiveness  
ranking

Social Progress Index 2019

# 3rd

Acceptance  
of gays + lesbians

Social Progress Index 2019

# 18th

Equality of  
political power  
by gender

Social Progress Index 2019

# 3rd

Equality of political  
power by socioeconomic  
position

Social Progress Index 2019

# Sports

The Netherlands is well known for its love of sports. Football is the most popular, with field hockey and volleyball as the 2<sup>nd</sup> and 3<sup>rd</sup> most popular team sports. Cycling, ice-skating, tennis, gymnastics are the four most widely played individual sports.

Football is a national sport in the Netherlands. The Dutch have been a major influence on the game of football with star players, such as Marco van Basten and the legendary Johan Cruyff, and impressive achievements of the national team not least to mention an enthusiastic orange legion of fans. Womens football has gained in popularity over the past few years, which was highlighted by the Dutch team becoming European champions in 2017, and then second at the Women's World Cup 2019.

Sport and physical activity have become prominent tools in governmental health policy in the Netherlands. The sports mission of the Ministry of Health, Welfare and Sport is to make it possible for everyone to play sports. Sport promotes health, provides social contacts and contributes to self-development. In addition, the Ministry focuses on, and funds top level sports, so that the Netherlands can perform well at international tournaments.



# Olympic medals Summer Olympics  
Rio de Janeiro 2016



# Olympic medals Winter Olympics  
PyeongChang 2018



# Olympic medals Summer Paralympics  
Rio de Janeiro 2016



# Olympic medals Winter Paralympics  
PyeongChang 2018

# Healthy Environment

The Netherlands is a signatory to the 2015 Paris Climate Agreement that global warming should be limited to less than two degrees Celsius above pre-industrial levels. The aim is to limit global warming to 1.5 degrees Celsius. The transition we face as a nation will primarily be a social transition. Both citizens and businesses will face a series of decisions that affect how we live, our mobility, our food and diet, what products we buy and how we earn a living. These will not always be easy choices, and citizens and businesses will also have to rely on each other and on the Dutch government. A combination of decisiveness, investments, knowledge and expertise is required.



## Circular economy

The government of the Netherlands along with non-governmental organisations and businesses have signed a deal to realise a one hundred percent circular economy by 2050.

In the Netherlands new business models are being introduced that involve paying for use, rather than owning. This triggers industry to enhance life span and reuse of products. An example is Schiphol Airport in Amsterdam, where Philips provides “light as a service” – unlike selling lamps, as before.

The Dutch waste separation systems are amongst the most effective, worldwide. As a result valuable raw materials are no longer lost in landfill sites. At the same time, innovations focus on improving recycling. This transition will foster sustainable economic growth and generate new jobs, while reducing waste, costs and emissions of greenhouse gasses.

# 53%

Municipal recycling rate

Eurostat 2018

# 1st

541<sub>kg</sub>

Food waste  
(per year  
per person)

Eurostat 2018

169

Patents related to  
circular economy  
(since 2000)

Eurostat 2018

€5.2<sub>mln</sub>

Investment in  
circular economy  
sector

Eurostat 2018

0.17%

Share of goods  
traded are recyclable  
raw materials

Eurostat 2018

Worldwide in material reuse rate (with 27%)

Eurostat 2018

# Climate & energy transition

## Ambitious goals

The government of the Netherlands is committed to ensuring that 14% of all energy used in the Netherlands is sustainable by 2020 and 16% by 2023. The European Union is committed to achieving 14% renewable energy by 2020.

Just as with the other sustainable development goals, the Netherlands seeks an integral approach when it comes to climate change. Due to its economic dependence on its oil industry and natural gas reserves, the Netherlands was not at the forefront of alternative energies until the Paris Climate Agreement. The Netherlands has now become a climate leader, taking bold steps to becoming climate neutral by 2050 – committed not only to keeping global warming well below 2C°, but to bring net greenhouse gas emissions down to zero.

Already there have been many innovative and cutting edge alternative energy sources and technologies developed in the Netherlands: wind parks on the North Sea, combined with algae farms; city heating derived from servers and greenhouses; hydrogen powder and salt water batteries. Dutch cities lead the way in advancements in green mobility by introducing electric busses and driverless trucks in an effort to lower urban traffic congestion and CO<sup>2</sup> levels.

The Netherlands will soon be home to the Global Centre of Excellence on Climate Adaptation. InvestNL is there to support investments in the field of climate, water and energy.

The platform HollandCircularHotspot.nl shares knowledge on the circular economy and creates opportunities for investments in this field. Nationaal Klimaatfonds is a public-private organisation that lowers risks for investment in climate action in developing countries.



4.26<sub>mn</sub>

Kilowatts in 2016

U.S. Energy Information  
Administration 2016

4<sup>th</sup>

Shipping climate  
ambition (industry)

Transport & Environment 2018

77

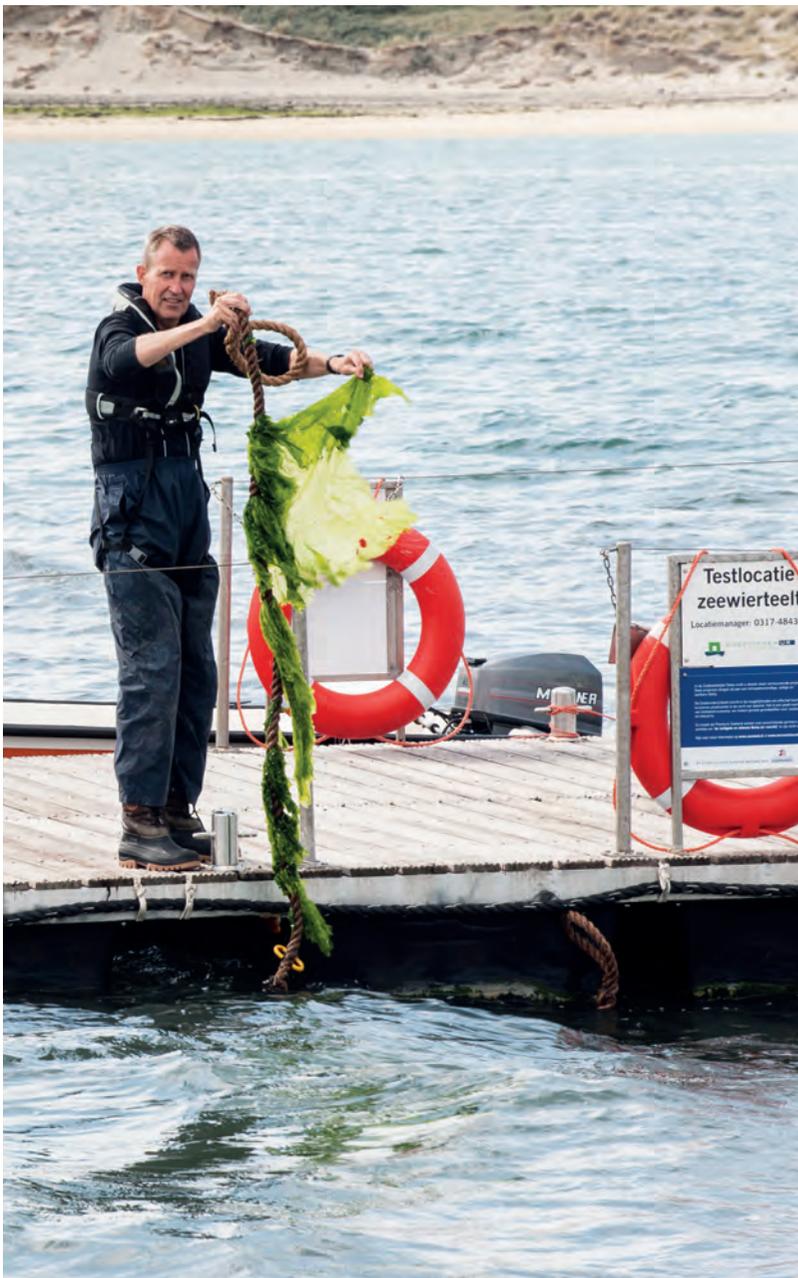
Points out of 90 that  
ranks on food system  
sustainability

Food Sustainability Index 2018

142,736

Number of electric vehicles registered

Dutch Road Authority (RDW) 2018



## Ecosystem & biodiversity

Nature policy aims to preserve and strengthen the Netherlands' natural environment. It also encompasses the national and international preservation and sustainable exploitation of biodiversity. Although the proportion of nature areas is stable in the Netherlands, and woodland areas are in fact expanding, natural habitats are still under pressure. The national government therefore announced extra measures, especially to protect meadow birds, bees and promote environmentally friendly agriculture.

### Protection of the North Sea

The Netherlands promotes ocean governance at an international level to ensure the sustainable use of ocean resources and that coastal communities and the fishing sector have a prosperous future.

With its North Sea coastline punctuated by old seafaring towns and villages, fishing has been a part of Holland's lifeblood for centuries. Due to over fishing in the sixties and seventies, the North Sea became almost deplete of fish. With the intervention of sustainable governance, together with our neighbour countries, today, the nation continues to sustainably harvest the rich fisheries of the North Sea. Catch limits and other measures established by the EU, commercial fish stocks in the North Sea have managed to recover in recent years.

### Preservation of world forests and wildlife

An important goal of the Netherlands is to halt deforestation and forest degradation. Dutch enterprises take care to buy wood only from certified sustainable forestry. The World Wildlife Fund, based in the Netherlands, is an important agent in the preservation of animal species.

# Water management

The Netherlands is a global pioneer in water management with a long history of containing flood risks and reclaiming land from the sea. Bordering the North Sea, there is a delicate balance between land and sea in the Netherlands, with a little more than a 3<sup>rd</sup> of the country lying below sea level. To protect from flooding, there is a large network of dikes and dams.

Yet, the Netherlands will need to adapt its water governance policies to meet the looming challenges of shifting demographics, regional development and climate change.

Over the decades, the Dutch have mastered the art of flood protection and water supply and treatment. It is hardly surprising that water management is one of the priorities of its trade and aid agenda. Too much, too little or polluted water presents a major threat to many people around the world. In the broader context of the SDG 2030 agenda, the NIWA's (Dutch international water ambition) main objective is "to increase water security and water safety In the world of humans, plants and animals, and to optimize the Dutch contribution to this and the Dutch earning capacity."



*“We worry about food, energy, migration, climate change, urbanisation and the economy, and water is at the heart of all of these issues. Without water there is neither energy nor food.”*

Henk Ovink – Special Envoy International Water Affairs

Equatorial Guinea  
Switzerland  
Singapore  
France  
**Netherlands**

**5th**  
Air quality

Malta  
Singapore  
**Netherlands**  
United Kingdom  
Luxembourg

**3rd**  
Effective wastewater  
management



The Dutch are experts in hydraulic engineering: sustainable dredging, land reclamation, flood protection (port, dyke, and dam construction) and management of flood risks through maintenance of soft sandy coasts, coast, and riverine construction.

# Economic prosperity

The Netherlands recognises international trade as an engine for inclusive economic growth. As a leading global trader, the Netherlands supports the reduction of trade barriers to expand global economic opportunity, raising standards of living, and reduction of poverty, worldwide. The Netherlands ranks 4<sup>th</sup> on the 2019 Global Innovation Index (GII). It leads other indexes such as the European Innovation Scoreboard and has innovation hubs across the country, including the European Space Agency, TNO, Brainport Eindhoven, and universities, plus renowned technical schools.

# Most competitive economy in Europe

## Most competitive economy in Europe

The Netherlands has been crowned the most competitive economy in Europe by the World Economic Forum's 2019 Global Competitiveness Index (GCI).

The GCI Report ranked 141 economies, accounting for 99 percent of the world's GDP, according to 103 individual factors: institutions, infrastructure, ICT adoption, macroeconomic stability, health, skills, product market, labour market, financial system, market size, business dynamism and innovation capability.

## Fourth most competitive in the world

On the World Economic Forum rankings the Netherlands passed Germany and Switzerland ranking 4<sup>th</sup> behind the new leader Singapore, the United States and Hong Kong. Interestingly, the score remains the same as in 2018, when the Netherlands was 6<sup>th</sup>. The country therefore actually owes its place to the declining performance of Germany and Switzerland.

The World Economic Forum report gives praise to the Netherlands for its well-developed innovation ecosystem and institutional framework, calling it one of the best in the world. The state of the innovation ecosystem is due to the highly skilled workforce, vibrant business dynamism and advanced innovation capability.

As the 6<sup>th</sup> largest exporter of goods in the world, according to the 2018 CIA World Factbook, the Netherlands holds a prominent position in international trade, exceeding bigger economies such as Italy and the United Kingdom.

As the 'gateway to Europe,' the Netherlands plays a key role as a connective hub for Chinese imports. The Netherlands also import a large amount of mineral fuel from Russia and Norway, placing these countries in the top 10 of the Dutch trading partners.

## Foreign direct investment

Dutch businesses are truly international in their orientation. The Dutch Central Bank (DNB) reports that in 2017 the Netherlands international investment position – the balance of Dutch claims abroad and foreign claims on the Netherlands – increased by EUR 35 bln.

In the past year, Netherlands-based multinationals, have made substantial foreign investments: EUR 1.256 bln, making the Netherlands the seventh largest foreign investor in the world followed by Germany and France. A total of 372 foreign companies such as Giant, Timberland and DAZN generated 9,847 additional jobs in the Netherlands in 2018. Collectively, these companies contributed 2.85 billion euros to our economy.

# 1st

## Most competitive economy in Europe

WEF 2019 GCI

# 6th

## Largest exporter of goods in the world

CIA World Factbook 2018



Finland  
Netherlands  
Ireland  
Sweden  
Germany

# 2nd

Country worldwide that  
contributes to the common  
good of humanity

Anholt 2019

Denmark  
New Zealand  
Finland  
Singapore  
Sweden  
Switzerland  
Norway  
**Netherlands**  
Canada  
Luxembourg

# 8th

On the Corruption  
Perceptions Index

Corruption Perception Index 2018

Sweden  
Finland  
Switzerland  
Norway  
New Zealand  
Australia  
Canada  
Japan  
Denmark  
**Netherlands**

# 10th

World's Most  
Reputable Countries

Forbes 2018



*“Startups are a drive force behind the technological revolution and the transition to a new, greener economy. We should capitalise on the innovation potential of startups for solving our toughest climate challenges.”*

Prins Constantijn van Oranje – Special Envoy for startups

## Innovation & business climate

The Netherlands has one of the most open economies in the world and ranks among the best countries for technology and innovation. It offers an outstanding infrastructure – including Europe’s largest port – a competitive business climate and a strong treaty network. The Dutch tax system features several tax incentives to stimulate innovation and business activities. As an internationally oriented country, the Netherlands is home to many highly educated foreign workers. A variety of factors form the basis for the favourable business climate in the Netherlands: open and international outlook, strategic location in Europe, a well-educated, multilingual and flexible workforce, and the high level of labour productivity.

A competitive fiscal climate, top-level physical and technological infrastructure and quality of life are other key contributors to the country’s success.

### Investing in startups and talent

The Dutch startup sector is adding more jobs to the Dutch economy than any other individual sector in the Netherlands, creating 20,000 new jobs in the past 2 years. A well connected ecosystem has made it possible for various unicorns to thrive both in the Netherlands and internationally. Companies such as WeTransfer, Adyen, Booking.com and Mendix and Takeaway.com are products of a conducive digital climate and entrepreneurial mindset. The Netherlands ranks 4<sup>th</sup> on the 2019 Global Innovation Index and leads in other rankings such as the European Innovation Scoreboard. Innovation hubs are spread across the country and across sectors, including the European Space Agency, TNO, Brainport Eindhoven and the universities of Wageningen, Utrecht, Leiden, Delft, Amsterdam, Groningen, Maastricht, Tilburg, Nijmegen and Rotterdam, plus a number of renowned technical schools.

# 4th 4th

Global  
Innovation

Global Innovation Index 2019

Best Country  
for Business

Forbes 2018

# 4th 8th

Technology  
readiness

Economist Intelligence Unit 2018 - 2022

Global Talent  
Competitiveness

INSEAD 2018

Switzerland  
Denmark  
Norway  
Austria  
Netherlands

# 5th

World talent ranking

IMD 2018

United States  
Hong Kong SAR  
Singapore  
Netherlands  
Switzerland  
Denmark  
United Arab Emirates  
Norway  
Sweden  
Canada

# 4th

World  
Competitiveness  
Ranking

IMD 2018

# Agriculture & horticulture



The Netherlands has become an agricultural giant. Its food exports, as measured by value, is second only to the United States. Along with Denmark, the Netherlands leads in agricultural production efficiency 'precision farming'. Thanks to a wealth of agricultural knowledge, fertile soil, intensive farming, and trading expertise, the Netherlands is able to grow high quality produces (€90 bln 2018), which are exported worldwide. This includes plant-based produce and animal products such as livestock, poultry (meat) and eggs. The Netherlands wants to reduce the use of antibiotics in food production in order to combat antimicrobial resistance in humans and animals.

## Farming the Future

The international campaign Farming the Future highlights the Netherlands' contribution to the global efforts in achieving food security and improved nutrition. The international campaign showcases the knowledge and expertise of the Dutch Agri-food and Horticultural sectors in promoting a sustainable food system and creating social and economic opportunities worldwide. The campaign's objectives are aligned with the UN Sustainable Development Goals.

Sustainable food production is a priority. From animal welfare and food safety to state-of-the-art greenhouse technology and new breeds of plants. Government, knowledge institutes, farming and business are working together toward a circular economy by reducing greenhouse gas emissions, using sources of excess heat to heat households and establishing healthy chains. The sector has developed smart storage and packaging technologies that keep food fresh longer. Dutch scientists and entrepreneurs also look towards new food sources for sustainable food production such as seaweed, algae and insect proteins.

The Netherlands shares its expertise in food production with developing countries. It is committed to a free market with safe, sustainably produced food.

### Agri-food research

The Netherlands is a hotbed of agri-food research and development thanks to the excellent knowledge base at several universities, research institutes and industrial R&D centres. Some twelve out of the forty largest Food & Beverage companies worldwide have R&D facilities in the Netherlands.

### Horticulture

The Netherlands' horticulture sector ranks number three, worldwide, in nutritional horticultural products according to 2018 LNV and CBS statistics. About 40% of vegetable seeds come from the Netherlands. It also is the largest exporter of fresh vegetables in the world and number three exporter of nutritional horticulture products. The Dutch horticulture sector has an extensive logistics network. Vegetables harvested in the Netherlands can be sold in New York the very same day.

# 4th

## Global Food Security Index

Economist Intelligence Unit 2018

# 3rd

## Exporter of nutritional horticulture products

Economist Intelligence Unit 2018

# 2nd

## Highest private R&D investment rate in Europe in agrifood

Holland Trade 2015



Tomatoes in LED-lit greenhouse. Photo credits: Luca Locatelli

# Logistics

The major cargo ports Schiphol Airport in Amsterdam, Port of Rotterdam and Port of Amsterdam are less than one hour distance from one another. The excellent rail, road and water connections makes the Netherlands a logistics hub for through transportation of goods throughout Europe. For international commerce, the Netherlands with 244 million consumers at its doorstep makes it the number one gateway into Europe. Over 1,000 Asian and American companies have based their pan-European Distribution Centres in the Netherlands in order to provide their clients access to high-quality service, and very fast deliveries.

In the 2018 World Bank Logistics Performance Index the Netherlands is ranked 6<sup>th</sup> on total. It ranks at the top when it comes to efficiency of its customs procedures, the quality of its transport and IT infrastructure, the affordability of its shipping and the level of professionalism of the logistics industry. According to DHL Global Connectedness Index 2018, the Netherlands is World number one most connected.



11<sup>th</sup>

In the world

3<sup>rd</sup>

In Europe

Schiphol, largest Airport

With a value added 55 billion euros per year and 813,000 employees, the logistics sector is a strong driver of the Dutch economy. As the transportation of goods around the world continues to increase, logistics promises greater efficiency and sustainability. The Netherlands works to continuously innovate the sector through ICT supply chain solutions and sustainable logistic developments.

#### Fourth largest airport in Europe

The Netherlands has a rich aviation and aerospace heritage going back to KLM's foundation 100 years ago, and continues to this day as a strong, independent aerospace industry.

Schiphol Airport in Amsterdam is one of the two European home bases of Air France-KLM and the SkyTeam alliance. In addition, Schiphol is an important contributor to the regional economy, providing direct employment for around 65,000 people at the airport. Schiphol is also renowned for its inspiring facilities for passengers and innovative technical solutions such as the extensive baggage handling system. The contribution to the national economy amounts to about 26 billion euros, and a total of 290,000 jobs nationwide.

Recent years Schiphol airport has taken a circular thinking approach with the ambition to be the world's most sustainable airport. In cooperation with numerous partners the airport has adapted many pioneering, innovative ways of doing business to grow sustainably at and around the airport.

#### Largest port in Europe

The Port of Rotterdam is the world's 3<sup>rd</sup> and Europe's largest port. It would rank 1<sup>st</sup> in the world if you exclude the Asian giants, Shanghai and Singapore. The Rotterdam port has been a pivotal marine infrastructural point in Europe from the 13th century onward.

Businesses choose to locate in-and-around the Port of Rotterdam because of its strategic location in north-west Europe, depth of its harbours, excellent port and energy facilities, and its transport links with the hinterland. Many large European distribution centres are located close to the container terminals, and these ensure that products can be dispatched efficiently to anywhere on the continent or to

overseas destinations. The combined activities of the port account for about 3.1% of Dutch GDP. The Port of Rotterdam is a global leader in the field of sustainability, and a showcase.

Netherlands  
Singapore  
Switzerland  
Belgium  
United Arab  
Emirates  
Ireland  
Luxembourg  
Denmark  
United Kingdom  
Germany

1st  
Connectedness Index

DHL Connectedness Index 2018

10th

In the world

1st

In Europe

Harbours

Port of Rotterdam, 2018

Netherlands  
Singapore  
Norway  
United States  
Sweden

# 1st

Autonomous Vehicles  
Readiness

KPMG 2019

Singapore  
Hong Kong  
United Arab Emirates  
Netherlands  
Finland

# 4th

Air transport  
infrastructure quality

WEF 2017

Switzerland  
Denmark  
Norway  
Austria  
Netherlands

# 5th

Best infrastructure

WEF 2018

Switzerland  
Denmark  
Norway  
Austria  
Germany  
Sweden  
Netherlands

# 6th

Logistic Performance

World Bank 2018



# Energy

## Energy innovation

The Dutch government offers a variety of competitive incentives to stimulate energy innovation and promote corporate use of renewable energy sources. As a result, the Netherlands has strengthened its top position in renewable energy R&D. Wind energy – particularly offshore wind farms – is gaining ground fast in the Netherlands and worldwide. The Netherlands is also experimenting with energy from waves, algae and biomass. It has developed innovative solutions in decentralised energy production in greenhouses, CO<sup>2</sup> ‘recycling’ and waste heat utilisation for its energy intensive horticulture industry.

## Electric driving and shipping

The Dutch government hopes to reduce CO<sup>2</sup> emissions by investing in energy-efficiency and electric driving. Electric driving also reduces noise pollution from traffic while opening up new opportunities for the commercial sector. The Netherlands had 142,686 electric vehicles on its roads in 2018. There are only more electric passenger cars in Norway, the US, Japan and China. The Netherlands has the most dense network of charging stations for electric vehicles.

Dutch businesses, social institutions, knowledge institutes and government agencies have joined forces in the Formula E-team to accelerate the adoption of electric transport, intending to capitalise on the economic opportunities associated with it. The company Port-Liner developed the ship of the future for inland navigation: an electric ship that can carry 280 seven-meter containers and can be easily recharged.

## Smart grid

The Netherlands is home to the first ‘live’ smart grid community in Europe (PowerMatching City in Groningen) and has the second largest fleet of plug-in electric vehicles in the world, after Norway. The country is a living lab for e-mobility with a dense infrastructure of charging stations.

*“I strongly believe that the Netherlands - as we have always done - has the ability to sensibly translate social challenges into innovations, and in turn translate these innovation into sustainable economic opportunities. We are not just a country of high-level education, just look at our considerable market share of all the wind-innovation labs in our backyard.”*

Erik Wiebes – Ministry of Economic Affairs and Climate Policy

# High tech

Home to major multinationals like Philips, Bosch, Boeing and ASML, the Netherlands' high tech industry is among the most innovative in the world. Fuelled by world-class, open innovation R&D, the sector consists of more than 1,700 firms involved in materials-related research and development in the Netherlands.

Due to the large concentration of data centres, the Netherlands has become a magnet for tech companies making it the 'the digital gateway to Europe'. This digital hub now has higher growth rates and a greater economic impact than Schiphol Airport or the port of Rotterdam. Interxion is one of the key suppliers in carrier and cloud neutral data centres in Europe. The data center and cloud industry is the fastest growing sector in the Netherlands; with a growth rate of 18% in the last 7 years of the Amsterdam data hub, (according to Dutch Data Centre Association).

In the past decades Dutch companies invented Wi-Fi, the CD, the DVD and Bluetooth. Now, photonics and the quantum computer are being developed here, and the Dutch are at the forefront of digital manufacturing and 3D-printing. The gaming industry is foremost, especially in 'serious' gaming and simulation. International accountancy firms use the Netherlands as testing ground for robotics. Dutch banks are ahead of others in digitalisation. Some people refer to the Netherlands as a 'living lab'. And it's true, the population is open to new, win-win solutions – providing a good result for everyone involved.

High tech is concentrated in the Eindhoven area, as well as in Twente, and Yes! Delft. Brainport Eindhoven has a worldwide leading position when it comes to integrated photonics. But also in the field of cellular network technology. In 2019, Eindhoven University of Technology (TUE) is linking with chipmaker NXP and telecom giant KPN to usher in new innovations for the successful rollout of the next-generation 5G.

South Korea  
Singapore  
Germany  
Japan  
Denmark  
United States  
Italy  
Netherlands  
Canada  
Spain  
Finland  
France  
Switzerland  
China

# 8th

Number of robot workers

WEF 2019

Amsterdam is number four on the ranking list of the best tech cities in the world. The tech sector has experienced enormous growth in the last four years and in this stage cities are working on block chain ecosystems. Artificial intelligence is new key area to become future-proof. There are many initiatives and to train people for ICT jobs, such as Codam, a free programming college with a unique peer learning curriculum as part of community programmes, for adults with all backgrounds.

# 115

Patents in nanotechnology (ranking us 12th globally)

USPTO 2018

# 14th

Government AI Readiness Index

Oxford insights 2019

Prague, Czech Republic  
Buenos Aires, Argentina  
San Francisco, US  
Madrid, Spain  
New York City, US  
Amsterdam, Netherlands  
Bogotá, Colombia  
Vancouver, Canada  
London, UK  
Paris, France

# 6th

Blockchain city

Forbes 2019

# Water & maritime

The Netherlands and water are inextricably linked. If the Netherlands didn't protect itself against the water, more than a third of it would be submerged. The large water engineering works of the past centuries, culminating in the Delta Works, are examples of our victories over the sea.

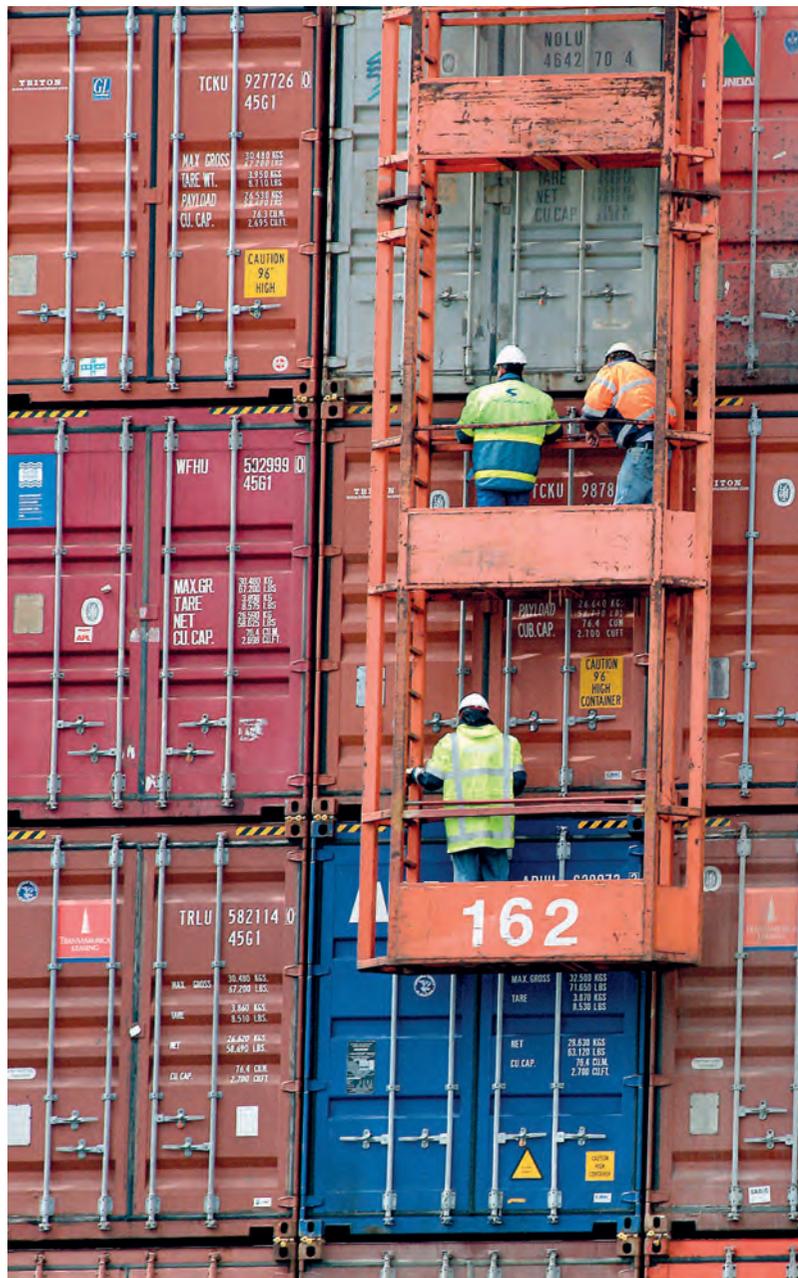
## A leading maritime nation

A powerful maritime nation from days of old, with strong trading links around the world, the Netherlands also has the largest inland fleet in Europe and one of the strongest maritime clusters in the world.

Overall, the Dutch maritime cluster focuses on high-end, added-value markets that require high levels of expertise, exceptional craftsmanship and research-based innovation.

In recent decades, water-related issues have affected increasing numbers of people, animals and businesses worldwide. A keystone of the Dutch water policy is providing high quality, sustainable and resilient infrastructure around the world. After the flooding in New Orleans the response was 'call in the Dutch' Dutch firms like Boskalis, Fugro and Van Oord do major dredging work all over the world. For Singapore they currently reclaim land from the sea as they did at home for centuries. In Dubai they constructed the palm shaped islands in front of the coast. A port is planned for Panama that can serve as a hub for the region, while in India there is a project that aims to clean the upper part of the Ganges providing the region with sustainable industry for the future. These are but a few of the many international activities.

Thanks to these joint efforts and investments, between 2013 and 2016 some 9 million people obtained access to clean drinking water, and 15.5 million people obtained better sanitation systems and facilities as well as receiving education on hygiene. The Netherlands' goal is to increase these numbers by eight and 12 million respectively by 2020. The aim for urban deltas is to reduce flooding and water shortages and to improve water quality in at least eight deltas by 2021.



# Chemical industry

The Netherlands is the 4th largest chemical producer in Europe and 10<sup>th</sup> worldwide, according to the Royal Association of the Dutch Chemical Industry (VNCI). For several decades, the Dutch chemical sector has found a good base in the Netherlands and is in the forefront of European innovation.

The sector provides work for 44,000 people, distributed among more than 400 companies, and accounts for 17% of export. Leading chemical companies based in the Netherlands include Dow Chemical, BASF, DSM, AkzoNobel, LyondellBasell and Royal Dutch Shell. World class institutes for fundamental and applied research include TNO, NWO, ECN and the universities of Utrecht, Delft, Twente and Wageningen. Metabolic is a think tank that functions as an international living lab for circular change (VNCI).

## Green chemistry

In Chemport Europe, in the north, close to Groningen seaport, companies and universities take the green chemistry mandate a step further and creates a new reality for chemistry and engineering by asking chemists and engineers to design chemicals, chemical processes and commercial products in a way that, at the very least, avoids the creation of toxics and waste. Ben Feringa, Dutch 2016 Nobel prize winner for the discovery of the molecular motor, also comes from this area.

The sector has come up with highly efficient solutions, such as 100% biodegradable plastics, generating biomethanol (greengas) from sugar beet pulp, bio-based plastics, and major bio-refinery produced raw materials for food.

## Sustainable application

The Northern Netherlands is a hotbed for innovative plastic recycling. Avantium hopes to conquer the global market for plastic bottles by introducing PEF, a biobased plastic, and new technologies to convert biomass into pure glucose. Morssinkhof turns some 1.5 billion PET bottles per year into new granulate which is mainly used to make new bottles. Senbis, BioBTX and Cumapol specialize in 100% biodegradable plastics.

Cumapol, DSM-Niaga, and Morssinkhof have launched CuRe technology, a new technology in low energy polyester recycling for high demanding applications like carpets, textile and food packaging.

Cosun is a major bio-refinery producing raw materials for both food and chemical industry. But even small companies can make a huge difference, like Green Sand that developed a sand that absorbs CO<sup>2</sup>. Or Beki that developed a fire extinguishing foam that is far more efficient than current ones and wholly biodegradable.

# Creative industry

The Netherlands has a reputation as a go-to destination for international creative talent. Professionals in the field rank among the world's top when it comes to trade, jobs and brands. With a rich history of philosophers and painters – including Erasmus, Vermeer, Rembrandt, Mondrian and Escher, the Dutch creative industry is built upon innovators set on doing things 'their own way'.

Nowadays Dutch architectural firms such as Mecanoo, OMA and MVRDV, V8 and ZUS are in global demand. Dutch industrial design is visible in everyday life and work by designers like, Daan Roosegaarde, Claudy Jongstra, Hell Jongerius, Jurgen Bey, Marcel Wanders or Piet Boon can be found on all continents. Often, environmental social sustainability is an important theme as with Roosegaarde's Smog Free Tower in Beijing, China. So too are fashion designers like Iris van Herpen, JanTaminiau, Viktor & Rolf. Creating a more sustainable fashion industry is an important issue, in which Dutch fashion brands like MUD Jeans, O My Bag, Studio Jux, are leading the way. During the Dutch Design Week in Eindhoven, the Netherlands transforms into the largest design hub in Europe.

The Netherlands Dance Theatre, Toneelgroep Amsterdam, the Royal Concertgebouw Orchestra are popular abroad and so are many performing artists. Four Dutch DJs are in the world top 10: Martin Garrix, Tiësto, Armin van Buuren, and Hardwell.

The Ministry of Education, Culture and Science works to create a smart, skilled and creative environment in the Netherlands. The Ministry also wants people to enjoy the arts, and aims to create the right conditions for teachers, artists and researchers to do their work.

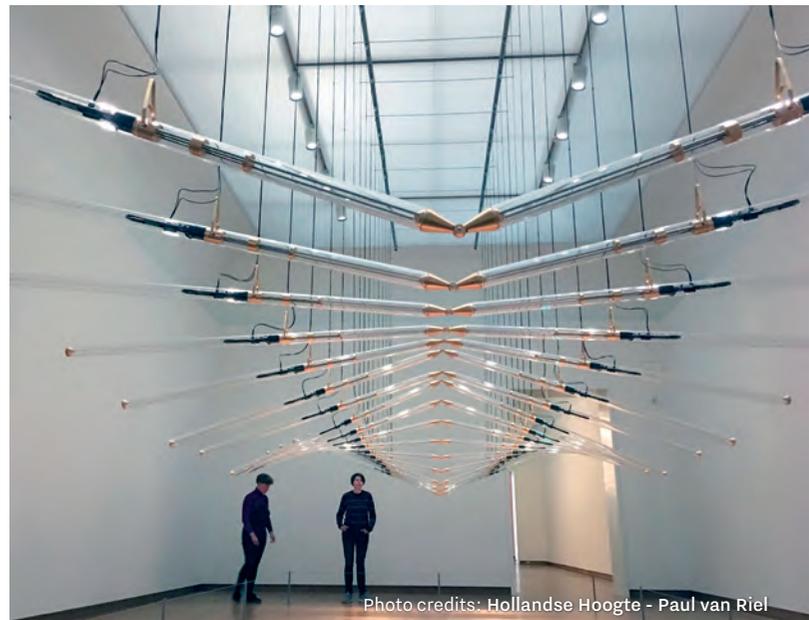


Photo credits: Hollandse Hoogte - Paul van Riel

*“The fascination of how the world works, that’s what makes me happy everyday.”*

Ralph Nauta, STUDIO DRIFT – Ambassador for Dutch Design Week 2019



### Digitalisation

The Netherlands is in an excellent position to capitalise on the economic and social opportunities created by digitalisation. We have a world-class digital infrastructure. Wi-Fi and Bluetooth were invented in the Netherlands. The AMS-IX, one of the most important internet exchange points in the world, is located in our country. The Netherlands has a highly educated workforce at an international level and Dutch consumers often lead the way in embracing new digital applications. We also have leading companies in the Netherlands such as Booking.com, TomTom, Adyen, NXP, Coolblue and WeTransfer. Moreover, we have a long tradition of cooperation between companies, scientists and government. This has contributed to the emergence of innovative clusters all over the Netherlands.

The Netherlands has a sizable games industry, especially in 'serious' gaming and simulation. If you ask the average gamer, they'll probably mention Guerrilla Games, the studio behind first-person shooter franchise Killzone. At the same time, there are the surgeons at UMCG Hospital in Groningen who use Grendel Games to train their surgical skills through playing Underground, an applied game developed especially for them. International accountancy firms use the Netherlands as testing ground for robotics. Dutch banks are ahead of others in digitalisation. Some people refer to the Netherlands as a 'living lab'. And it's true, the population is generally open to new ideas and win-win solutions for all involved.

# Colophon

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## Explanatory notes

This publication is intended to provide a picture of the Netherlands' economy, based on statistical comparison. To this end, indicators from nationally and internationally renowned and reliable sources have been selected. However, no rights may be derived from the contents of this publication.

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