

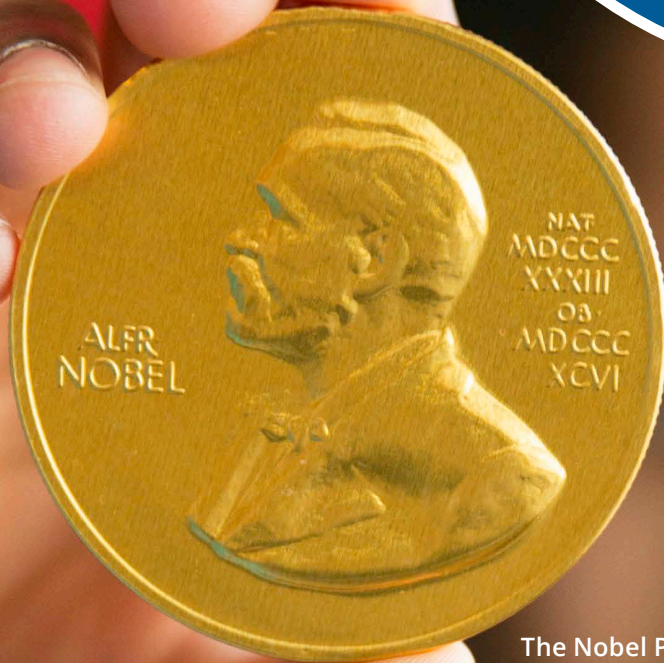
Join us in  
co-creation



Government Offices of Sweden

# #1 Sweden is the world's best country to do business in

Best countries for business  
Forbes 2017



The Nobel Prize was instituted by the inventor of dynamite, Alfred Nobel. The Swede left the majority of his fortune for a series of prizes in Physics, Chemistry, Physiology or Medicine, Literature, Economic Sciences and Peace.

# A high-ranked country with a solid history in innovation

## Some facts:

- Swedes are considered early adopters
- Very good language skills
- Internationally competitive labour costs for highly educated staff

Sweden is innovative, vibrant and globally competitive.

According to the OECD and the World Economic Forum, Sweden ranks at the top end of the scale in many rankings. This includes economic development, subjective wellbeing and social connections, environmental quality, health status and health care, gender equality, personal safety, education and skills.

Sweden, a country that not only belongs to one of the most competitive European economies, but also attains top placings in newer rankings such as the World Happiness Report. A country that has a long history of bringing forward innovations and industry. Sweden is determined to continue this path.

Solvatten – Solar energy as means of cleaning contaminated water.



Photo: Solvatten®

Ball bearings



Photo: SKF

Three-point belt



Photo: Autoliv

Pacemaker

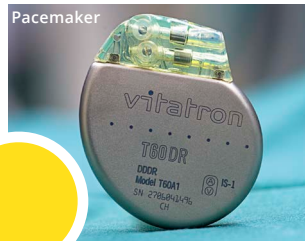


Photo: Lars Lundberg/  
imagebank.sweden.se

IP-telephone

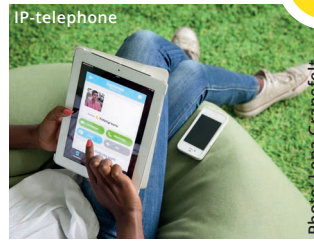


Photo: Leta Grännefelt

Packaging



Photo: Tetra Pak (R)

Dynamite



Photo: Nobel museum, Stockholm

# Sweden stands up to scrutiny

Sweden ranks high in many different international rankings.

## TOP RANK (#1–3)

- European Innovation Scoreboard
- Global Innovation Index
- Best countries for business index
- Most reputable countries index
- EF English Proficiency index
- Bloomberg innovation index
- Engineering index
- Networked readiness index
- European patents per capita
- Shopping center investments rank
- Median Mbps
- Broadband price
- Percentage of fibre connections
- Huawei connectivity index
- Logistics performance index

## RANK (#4–6)

- Global competitiveness index
- IMD world competitiveness ranking
- "Made in" index
- R&D as percentage of GDP
- Corruption Perception Index
- Clean tech innovation index

## RANK (#7–10)

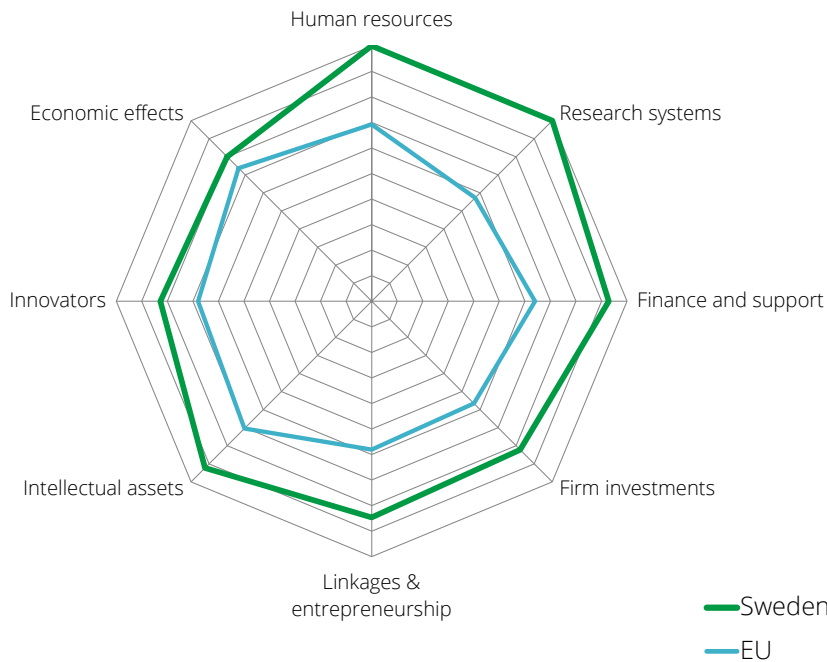
- Ease of doing business index
- European cities ranking
- KOF index of Globalization
- Fragile State Index
- World Press Freedom Index

Source: Indexes and ratings compiled by Business Sweden



# In the forefront of innovation

Sweden is the top-ranked EU member state in the overall European Innovation Scoreboard. Sweden is also one of the highest ranked countries for several innovation dimensions.



Source: European Innovation Scoreboard  
Production: Ministry of Enterprise and Innovation, Sweden

# #1 of 28 countries

European Innovation Scoreboard

## R&D expenditure as % of GDP

3.26% Sweden

2.97% Switzerland

2.87% Germany

1.70% UK

1.00% Poland

Source: UNESCO/Eurostat

Sweden is once more the EU innovation leader  
European Innovation Scoreboard 2016

Today, the world is globalising more rapidly than ever before. High knowledge levels, high research levels and high-level innovation performance are absolutely essential to global competitiveness. As the spiderchart shows, the Swedish innovation system is outstanding in many areas, and these areas also interact.

## FROM START-UP TO SUCCESS

# Looking for a vibrant start-up scene?

The start-up scene in Sweden is growing rapidly. The mix of experienced serial entrepreneurs with strong global connections acting as investors and founders, and a young, well-educated international talent pool helps create a mature, vibrant and fast-growing start-up scene. Spotify, Skype, King, Klarna and Mojang make Stockholm second only to Silicon Valley in the number of unicorns per capita. Other cities such as Malmö/Lund and Gothenburg are also showing steep growth in attracted venture capital and number of start-ups.

The Swedish tradition of innovative engineering generates ideas that solve real problems and challenge existing business models. In a small country, it is important to think global from day one, and foster a system that gives entrepreneurs the economic security to test their ideas. Today, innovative start-ups are a key part of the overall innovation strategy for Swedish competitiveness and growth.

## CONTACT

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Stockholm is second only to Silicon Valley in the number of successful start-ups per capita in the world

Sweden **#2**  
of 128 countries

Global Innovation Index  
2016 (INSEAD)



Two of the world's biggest computer games, Minecraft (Mojang) and Candy Crush (King), were started in Stockholm by teams with expertise in both design and technology.

# Sweden heads the best countries for business for 2017

Forbes.com



Sweden **#1**  
of 55 countries

Global reputation  
Reputation Institute 2016

Successful companies such as Spotify, that themselves began as start-ups, collaborate closely with new and growing start-ups such as Soundtrack Your Brand.

Photo: Maria Nilsson

# Co-creation for innovative innovation

Facing complex challenges in a globalised world and working together to establish innovative and commercially viable solutions is a cornerstone of Swedish industrial practice. The Innovation Partnership Programmes (IPPs) truly embody this collaborative approach to innovation.

## 3 challenges – 5 programmes



	Digitalisation	Life Sciences	Environment and climate
Next generation travel and transport	✓	✓	✓
Smart cities	✓	✓	✓
Circular and bio-based economy	✓	✓	✓
Life science	✓	✓	✓
Connected industry and new materials	✓	✓	✓

Photo: Love Lannér/Folio, Roches, Maria Nilsson

The IPPs are a concerted effort to find innovative solutions to a number of major and global challenges facing society today. In these areas, partnerships between different sectors of society has been established to stimulate new innovative solutions that strengthen competitiveness, contribute to sustainable development and create more jobs.

We need new ways of travelling, residing, doing business, living, communicating, and using and preserving the world's resources and ecosystems. The programmes build on co-creation among key players, including government bodies, businesses and academia. This challenge based approach building on cross-sectoral collaboration is a great way to fuel innova-

## National Innovation Council

Prime Minister Stefan Löfven chairs a National Innovation Council that aims to further improve the Government's innovation policy. The Council, which includes representatives of business, research, and organisations, has identified three areas that are crucial to tackling the great societal challenges of our time, and the IPPs are selected accordingly; digitalisation, life sciences, and environment and climate.

tion and an important building block in Swedish innovation policy. Sustainability is an obvious cornerstone of a modern and competitive business sector. The challenge based approach and the priorities of the IPPs clearly corresponds to global efforts to meet societal challenges e.g. within Agenda 2030.





From 2017, 100 families in Gothenburg will use self-driving cars in regular traffic. The project is a collaboration between Volvo Cars, the City of Gothenburg, government agencies and academia.

Photo: Volvo Cars

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In 2020 there will be 50 billion connected things. A large proportion of them will be vehicles.

Nobina Technology

“Since 2010, technology development in the automotive industry have created some 7 500 new jobs in Sweden.

Thousands of new jobs have also been created outside Sweden.”

Volvo Cars

## NEXT GENERATION TRAVEL AND TRANSPORT

### Take the fast lane to climate-smart travel and transport

New solutions are required if we are to meet the future needs for efficient travel and transport and also meet the challenge of climate change. A more transport-efficient society uses transport in a smarter, more resource-efficient way, with even safer vehicles, renewable fuels and reduced emissions. This IPP takes an overarching perspective where all modes of transport are included and work together to solve women’s and men’s travel needs, and freight transport needs.



Photo: Hövding

Hövding is the world’s first airbag for cyclists. It is a product of more than a decade of intensive research.



The Greenhouse complex in the city of Malmö is one of Sweden's most sustainable building projects. Here the tenants are offered a modern and climate-smart lifestyle.

Photo: M&B Fastighets AB

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Over half the world's population lives in urban areas. By 2050, the proportion is expected to have risen to 70 per cent.

Unites Nations, World Urbanization Prospects 2014

## SMART CITIES

### Smart, green and attractive cities

More and more people are moving to cities – a clear trend throughout the world. This places new and major expectations on our cities in terms of both sustainability and usability. Smart cities use information and communication technologies to improve the quality, performance and interactivity of local government services, reduce costs and resource consumption, and improve relations between citizens and government authorities. In Sweden we are utilising the opportunities offered by digitalisation and developing smart cities focusing on the needs of inhabitants.

Smart City Sweden, situated in Hammarby Sjöstad Stockholm, is the national export and innovation platform for smart and sustainable city solutions. It will showcase reference projects from all over Sweden, company delivery chains linked to the UN Sustainable development goals, and new and innovative solutions.



Photo: Maria Nilsson

## LIFE SCIENCE

# Health – our driver of innovation

Pandemics, increased incidence of life-style related diseases, and antibiotic resistance are all global challenges that demand new solutions. Research and innovation and emerging technologies can enable us to deliver healthcare in new innovative ways. Sweden can offer a thriving life science environment, technology-driven and characterised by close collaboration between academia, healthcare and industry. Sweden's success rests on a continuous commitment to excellence in R&D and drug discovery. Per capita spending on life science is one of the highest in Europe. Swedish universities possess world class expertise in areas ranging from cancer and diabetes research to medical devices and stem cell therapies. This has produced many notable medtech innovations as well as pharmaceuticals.



In Sweden, public healthcare system, with access for all citizens, is a prerequisite for a comprehensive patient registries and functional biobanks. Sweden has a long tradition of involvement by a well-educated population, and patients are generally willing to take part in clinical trials.

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What differentiates good investments from not so good investments is the people. That's why we want to do more here and expand.

John Rice, Vice Chairman GE

Sweden has world class intellectual capital for life science innovation – no amount of water and sunshine in the ecosystem can create life without the seeds, and we have them in abundance right here.

Geoffrey McDonough, CEO Sobi

Sweden **#2**  
of 61 countries

Germanwatch Climate  
Change Performance  
Index 2016



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There is great potential in new, exciting materials from our forests. Some 70 per cent of Sweden's area is forest. Active use of our forests and increased use of biomass are crucial to meeting the climate challenge and creating a growing bioeconomy.

Simris Alg operates one of Europe's most modern algae production plants, extracting omega-3 from marine diatoms as an alternative to fish oils.

## CIRCULAR AND BIO-BASED ECONOMY

### The future is renewable and circular

To preserve the Earth's resources, we need to move from a fossil-dependent society to a circular and bio-based economy. This transition requires us to seek solutions that ensure that products and raw materials can be used in a smart and resource-efficient way. Innovations will see bio-based products replace fossil-based products, and waste will increasingly be regarded as a resource. We are developing business models to share what we own and reuse what we want to dispose of, while products must be repairable and recyclable.



"The EU generates 4.3 million tonnes of textile waste every year. Imagine if we could see this as a resource for new clothes instead of as waste. Sweden has a strong processing industry, and 70 per cent of the country is also forest – what an opportunity for bio-based raw materials for textiles."

Sigrid Barnekov, Mistra Future Fashion



## CONTACT

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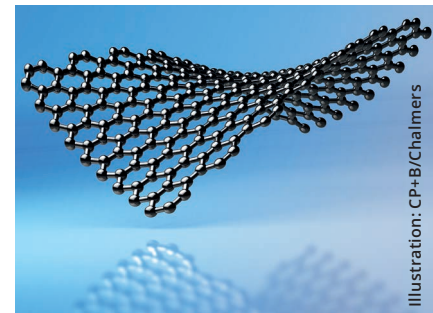
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A new era of industrial robots that can work collaboratively with humans, mainly in various forms of small-component assembly and material handling, is being ushered in with ABB's YuMi, an industrial robot developed for close cooperation with humans.

## CONNECTED INDUSTRY AND NEW MATERIALS

### Taking industry to the next level

Sweden is currently home to world-leading automation companies, strong basic industries, leading IT and telecommunications companies, and innovative start-ups at the forefront of digitalisation and all of these develop and market innovative solutions throughout the world. The pace of development is fast. New sustainable materials, cloud services, robotics and additive manufacturing create opportunities in all industries. The fourth industrial revolution enables digitalised production, new ways of meeting customers, and changing business models. Based on its current strengths, Sweden is taking on the challenge of making business opportunities out of new innovations.



Graphene is a material that is stronger than steel, but just a single carbon atom thick. It is elastic and flexible, and at the same time extremely hard and conductive. The major European initiative Graphene Flagship is coordinated by Sweden's Chalmers University. Its findings will revolutionise many industries.

## TESTBED SWEDEN

# Use Sweden as a test site

Swedes are early adopters of new products and services. This makes Sweden a great place to test new ideas, whether in advanced laboratories simulating real-life situations or in full-scale test environments. The research environment in Sweden is characterised by openness that actively fosters teamwork, cross-disciplinary collaboration and innovation. The Testbed Sweden initiative is a good example of a flexible concept that can drive innovation at several levels. Test the next medical treatments, new materials, renewable technologies and self-driving cars.

Sweden has made major investments in research infrastructure. The MAX IV Laboratory and the European Spallation Source (ESS) will together form a key

hub in Europe's joint research infrastructure. Max IV is the most brilliant synchrotron X-ray facility in the world, serving all natural science areas. The ESS is one of the largest science and technology infrastructure projects currently under construction in the world and is scheduled to open in 2025. The Science for Life laboratory is a Swedish national research centre for molecular biosciences, accessible to all Swedish scientists and open to international collaboration and industry. Come and be innovative with us!

"Sweden ranks high in international comparisons of competitiveness and innovation. Join us in developing the technologies of the future".

Ann Linde  
Minister for EU Affairs and Trade

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All seven Swedish university hospitals have a joint testbed for Innovative Radiotherapy conducting coordinated tests in a clinical environment alongside innovators. This testbed is also generating methods to actively involve patients as new solutions are produced.



Photo: Vinnova



AstaZero is a test environment for future road safety. Its variety of traffic environments makes it possible to test advanced safety systems and their functions for all kinds of traffic and traffic situations.

Photo: AstaZero

"Sweden is a pioneer country for new techniques and ideas. It is one of the most trend sensitive countries in the world and is well known among international companies as an excellent testmarket for new products."

Mikael Damberg  
Minister for Enterprise and Innovation



The Attract testbed develops, tests and evaluates innovative goods and services to enable the construction of sustainable, attractive living environments in a cold climate.

Photo: Tomas Utsi, Naturfoto



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