



**LUXEMBOURG**  
THE SMART CHOICE FOR  
YOUR DIGITAL BUSINESS

**LU**  **EMBOURG**

LET'S MAKE IT HAPPEN

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# WELCOME TO LUXEMBOURG.

WHERE ROADS CROSS, IDEAS MULTIPLY AND INNOVATION ABOUNDS.

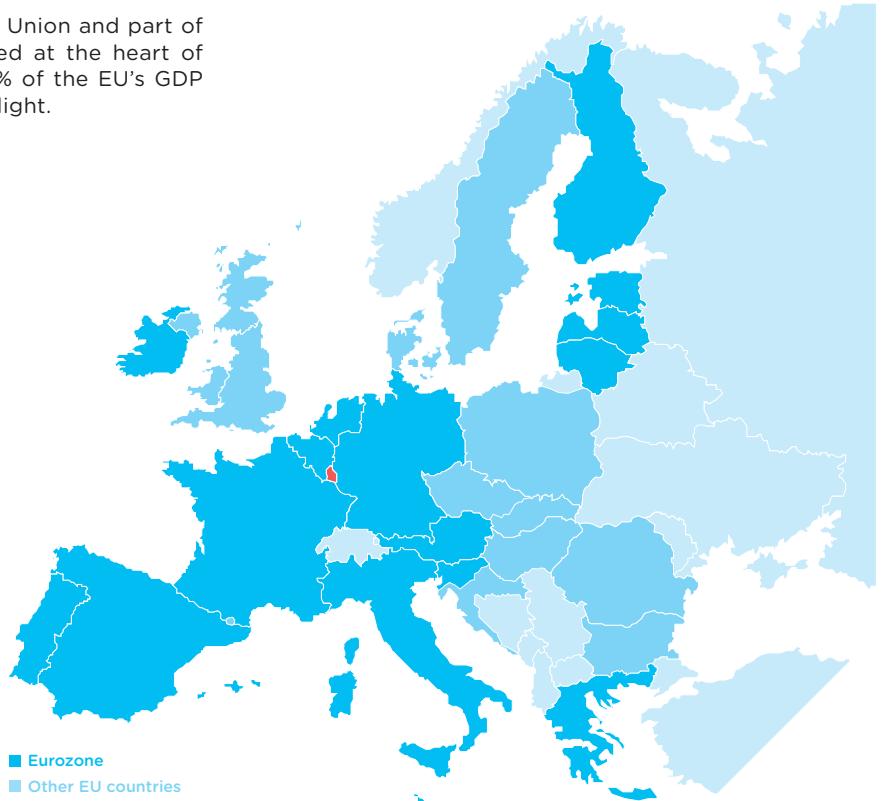
Are you looking for the ideal place in Europe to launch or scale up your digital business? Luxembourg is the answer. We are at the forefront of the digital revolution and integrate the latest technology in every aspect of society. We combine open minds for business with one of the best digital infrastructures in the world. Luxembourg is thus an excellent platform for acquiring and serving clients in Europe and all over the world.

A founding member of the European Union and part of the Eurozone, Luxembourg is situated at the heart of several major European markets. 60% of the EU's GDP can be reached by a mere one-hour flight.

## Distance from Luxembourg City to:

20 km	-----	France (Paris 380 km)
25 km	-----	Germany (Frankfurt 250 km)
20 km	-----	Belgium (Brussels 200 km)

- 1 market - 28 countries  
(GDP €14.6 trillion in 2015)
- 19 countries in the Eurozone  
(one currency - euro)
- Easy access to  
500 million consumers
- Free mobility of capital,  
products, services and labour



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# YOUR GATEWAY TO EUROPE

**Luxembourg is the perfect starting point for launching new products and services in Europe - and beyond. Highly multicultural and diversified, yet relatively small in size, the country can be used as a “living lab” to develop concepts and test new offerings. It offers easy access to European markets, a stable, positive business climate and thus an excellent basis for doing business on the international scale.**

Luxembourg’s economy is strongly export-oriented with a first-rate logistics infrastructure. As a leading financial centre specialised in global and European cross-border activities, the country has a well-developed legal and regulatory framework for international trade and is highly responsive to EU legislation. Many companies also find that Luxembourg’s commercial and political neutrality facilitates their international business relationships.

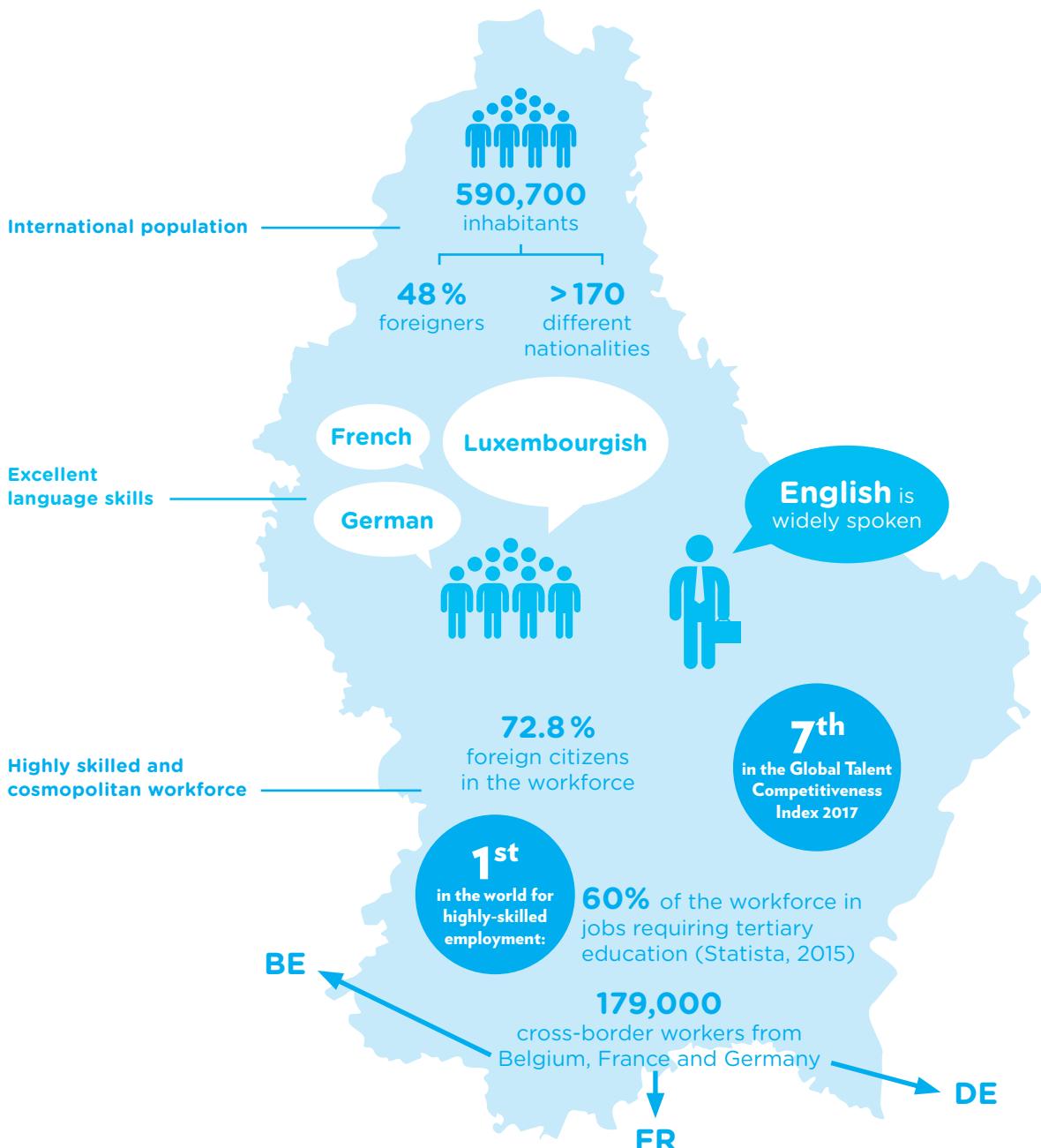


## **Multicultural, multilingual, highly skilled**

Our diverse population makes it easy to find staff who are able to communicate with your clients in their own language and therefore gain an in-depth understanding of their needs. A very high proportion of the workforce in Luxembourg are IT professionals, and measures have been put in place to reduce delays and red tape for non-EU ICT specialists requiring work permits. Further developing e-skills is also one of the priorities of the national digitalisation strategy.

## **Your European home from home**

The extensive expat community has found out that it is easy to feel at home in this multicultural melting pot and use Luxembourg as a basis for building a European career - as well as for travelling, enjoying life and raising a family. To cater for the needs of its population, Luxembourg offers both French and English-speaking private schools in addition to the excellent multilingual national school system. The University of Luxembourg was recently placed second in a world ranking for the most international universities.



THE EUROPEAN HEADQUARTERS

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## FINTECH SERVICES FOR THE EUROPEAN MARKET



## “LUXEMBOURG OFFERS US MANY ADVANTAGES.”

TOSHIHIKO OTSUKA, CEO, RAKUTEN EUROPE BANK

**Rakuten, a leader in internet services and global innovation headquartered in Japan, chose to establish its European headquarters in Luxembourg in 2008 to oversee the operations, finances and human resources of its businesses in the region. After acquiring a banking license issued by the Luxembourg authorities, the company officially launched commercial banking operations in Europe with Rakuten Europe Bank S.A. in early 2017.**

Rakuten started off with the creation of the Japanese internet shopping mall Rakuten Ichiba in 1997. Since then, the company has grown considerably both in its home market and overseas, and ranks today as one of the top internet service firms in the world. The group today comprises a range of businesses, including Viber, Wuaki.tv, Aquafadas and PriceMinister, for instance, and offers extensive banking and insurance services in Japan. With Rakuten Europe Bank, the aim is to provide banking services in Europe that will parallel the success it has already known in Japan.

The reasons for locating the European headquarters in Luxembourg are many. “All the infrastructure in Luxembourg is brilliant and it makes it easy to manage pan-European business here,” says Rakuten Europe Bank CEO Toshihiko Otsuka. “It’s a fantastic place to recruit various professionals. Luxembourg has a very rich fintech community which helps us a lot.” Rakuten will now continue to create and provide new services in Europe from its basis in Luxembourg and further develop its ecosystem in the region.

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# DIGITAL BY DEFAULT

Digital technology is no longer just an economic sector – it is the lifeblood of our economy, an essential element of competitiveness and crucial for society as a whole. Luxembourg has been a communications pioneer for several decades, and ranks today among the top countries for ICT in the world. The reason for this? A strong determination to become a trusted data hub where any type of business basing its activities on digitalisation can thrive.

Luxembourg is home to numerous global players as well as a dynamic start-up community with international ambitions. Fintech, e-skills, e-government, big data, open data, cybersecurity, e-mobility, digital health: new exciting and innovative activities are constantly enriching Luxembourg's business landscape that also encompasses digital content distribution, online retail platforms, communication and cloud services, and so on.

## A top government priority

Luxembourg is extremely well-attuned to business opportunities both in Europe and further afield. In particular, the country aims to take a strong role in the EU's emerging digital single market. The government is well aware of the need to be vigilant and ready to act in order to support existing companies, attract new investment and encourage young businesses.

Technology is at the heart of Luxembourg's future, and political decision-makers understand that their role is to enable growth without intervening unnecessarily. The government listens to companies' needs and is 100% committed to embedding innovation throughout every sector of society. New laws are digital by default and designed to back company development. Public services are well adapted to the needs of fast-moving businesses, and specialised funding schemes and venture capital help overcome financial hurdles.

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## Most advanced digital economies in the EU



Source:  
*Digital Economy and Society Index (DES) 2017, European Commission*

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### High Performance Computing - investing in the future

High Performance Computing (HPC) is revolutionising industry and digital business across the world and has been high on Luxembourg's agenda for several years. Europe has been lagging behind in this field, and in late 2015, Luxembourg presented the idea of a pan-European approach on HPC to the EU Council of Ministers. The country is now taking a leading role in an Important Project of Common European Interest (IPCEI) on HPC and Big Data-enabled applications launched together with several other EU countries.

Already in 2018, Luxembourg will acquire an HPC with the power of one petaflop per second, which corresponds to 1,000,000,000,000,000 calculations per second. Five years later, the target is for Europe to have one of the three most powerful HPC infrastructures of its type in the world. As soon as it is operational, it will be put to practical use in large-scale pan-European projects in fields including smart energy, smart mobility, smart manufacturing, smart space, personalised medicine and fintech. Business needs are at the very centre, and there will be plenty of opportunities for companies, not least SMEs, to develop specialised solutions and to plug gaps in the relevant value chains.



- to offer **data reversibility**
- to implement **the EU payment service directive**
- to issue **a payment institution license** to a virtual currency operator

### Taking fintech forward

As a globally recognised leading financial centre, Luxembourg is well positioned to take the lead in the disruptive fintech revolution. It combines a highly favourable legal and regulatory framework with support measures to promote this sector's development.

Luxembourg is already home to a wide range of fintech companies and start-ups active in fields such as wealth management, asset management, capital markets, insurance and payments. The banking regulator CSSF recognises virtual currencies. Luxembourg-based companies can also benefit from the "Professional of the Financial Sector" status that requires financial centre regulation, thus adding significantly to investor protection and client confidence.

Blockchain technologies also open major opportunities in the field of financial services. For example, Luxembourg has launched the Infracchain initiative to develop a trusted and compliant blockchain infrastructure that will be available for start-ups and established companies developing new services.

The LHoFT - Luxembourg House of Financial Technology - is Luxembourg's dedicated fintech platform. Offering start-up incubation, co-working spaces including a soft-landing platform, the LHoFT connects and creates value for the entire Luxembourg fintech ecosystem.

### **An information society for all**

To keep its position at the forefront of the digital economy, the government has set up the Digital Lëtzebuerg initiative in order to develop best practice, act as a forum for new ideas, strengthen and consolidate the country's ICT capabilities and make a powerful contribution to economic diversification. It is built around creative, open-minded ICT business promotion policies and initiatives. Ambitions do not stop there, however. The ultimate goal of Digital Lëtzebuerg is to create an information society that benefits each and every one of our citizens.

### **Choosing Luxembourg**

Luxembourg's unique combination of strengths has attracted numerous public and private organisations, including the European Commission and many financial institutions, as well as companies such as:



# OUTSTANDING ICT INFRASTRUCTURE

## Ultra-low-latency hub



## A top government priority

- 100 Mbps internet links for 98% of the population
- 1 Gbps connections (min. 50% coverage)

## Available from 2020

- Nation-wide coverage of ultra-high-speed broadband ("Fibre to the Home")
- 1 Gbps connections (100% coverage)

The Luxembourg Commercial Internet Exchange (LU-CIX) provides carriers with an access to high-capacity lines with very competitive round-trip times without congestion.

## Europe's most modern data centre park



**23**

data centres,  
including  
8 with Tier IV  
certification

Luxembourg  
hosts

**40%**

of all European  
Tier IV data  
centres



The data centres are powered by low-cost, eco-friendly energy from a highly reliable power grid.

# GREAT PLACE FOR INTERNATIONAL GROWTH



# “WE ARE OUT TO REINVENT THIS INDUSTRY.”

CHARLES-ANTOINE BEYNEY,  
FOUNDER, ETIX EVERYWHERE

No question, Etix Everywhere is one of the most exciting Luxembourg start-ups of recent years. Set up in 2011 by Charles-Antoine Beyney and Antoine Boniface, it specialises in modular, fully customisable data centres, involving the client at every stage of the process. The company’s refreshing approach and innovative solutions have led to rapid growth with offices in New York and San Francisco and clients as far away as Africa and Brazil.

Put boldly, Etix Everywhere is doing so well because it knows its business inside out. Emphasising transparency, simplicity and sustainability, its policy is to cut costs, not corners. Its starting point is the customer; they meet them and together devise a solution, from a dedicated space for the client in one of Etix Everywhere’s existing colocation data centres to a fully customisable, modular and scalable data centre built to order. The customer is fully involved at every stage from the choice of location to final delivery, a process that can take as little as 16 weeks. Etix Everywhere also deploys DCIM – Data Centre Infrastructure Management – in its data centres, which means fewer engineers on site and further cost savings for the customer.

Innovation is the driver behind Etix Everywhere. The company was recently selected as one of 18 future European “unicorns” – start-up companies valued at over \$1 billion – by the Start-up Europe Comes to Silicon Valley (SEC2SV) programme. With 30% of the turnover and 50% of Etix Everywhere’s employees being devoted to R&D, a pool of creativity and technology has been achieved in which the developers and electronics engineers are encouraged to work with the latest technologies to develop innovative projects. “We wouldn’t be looking at that kind of growth if we didn’t have great people,” says Mr Beyney. “Moreover, Luxembourg has become one of Europe’s top locations for ICT with an innovative and dynamic business environment, advanced expertise in the field and plenty of opportunities.”

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# CYBERSECURITY EXPERTISE

Driven by the needs of the financial sector, Luxembourg has developed exceptionally high standards of cybersecurity that are readily available to all companies. This expertise in protecting individual client data and systems is essential for e-businesses and the economy at large.

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## A resilient and secure ICT environment

<b>Physical security</b>	<ul style="list-style-type: none"><li>• High levels of redundancy, resilience and emergency recovery services</li><li>• Bandwidth suppliers offer closed-loop control systems</li></ul>
<b>Digital security</b>	<ul style="list-style-type: none"><li>• Features include encryption and digital signing</li></ul>
<b>Organisational factors</b>	<ul style="list-style-type: none"><li>• Expertise in risk management</li></ul>
<b>Legal protection</b>	<ul style="list-style-type: none"><li>• Well-designed laws</li></ul>

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### Cybersecurity

Various national platforms focus on specific aspects of cybersecurity:

The Luxembourg emergency response community CERT.LU monitors and manages cybersecurity incidents on a national basis, defends essential infrastructure, exchanges critical information with other countries and generally raises awareness.

SECURITYMADEIN.LU acts as an information and strategy forum for of cybersecurity companies. Its two main divisions CASES and CIRCL provide tools, diagnostics and training to ensure that businesses and public sector organisations are aware of potential threats and have the means to protect against, detect and mitigate any risk to their systems and data.

To meet the needs of the vibrant and fast growing smart economy, the new Cybersecurity Competence Centre C3 will provide threat intelligence, cybersecurity skills and expertise, as well as training and testing facilities in areas like the Internet of Things, space technologies, fintech and autonomous driving.

### Becoming a European centre of excellence for secure, reliable and trustworthy ICT

The Interdisciplinary Centre for Security, Reliability and Trust (SnT) of the University of Luxembourg conducts internationally competitive ICT research with high relevance for business. Research focus areas include secure and compliant data management, fintech, cyber security, satellite systems, connected vehicles and smart cities. Through its partnership programme which involves the most prominent ICT players, the SnT develops concepts that give companies in Luxembourg and beyond a solid and long-lasting competitive advantage.

# A FAVOURABLE BUSINESS ENVIRONMENT

## Political and economic stability

- **Open, diversified** and stable economy
- Top **GDP performance**
- **Sound macroeconomic** fundamentals - AAA-rated country
- **Second-lowest government debt ratio** in the EU (20% of GDP in 2016)
- **11<sup>th</sup> most competitive** economy in the world (IMD World Competitiveness Yearbook 2016)
- Constitutional monarchy, **parliamentary democracy**

## A business-oriented regulatory framework

- **Easy access** to government officials
- Bureaucratic procedures, including those for licenses and permits, are **streamlined and transparent**
- **Advantageous total tax rate**
- **Advantageous tax system:** 80 double tax treaties
- **Advantageous import and export** regulations

## High productivity, optimised labour costs

- **World's highest labour productivity** (GDP generated per hour worked 2014, OECD)
- **Optimised labour costs:**

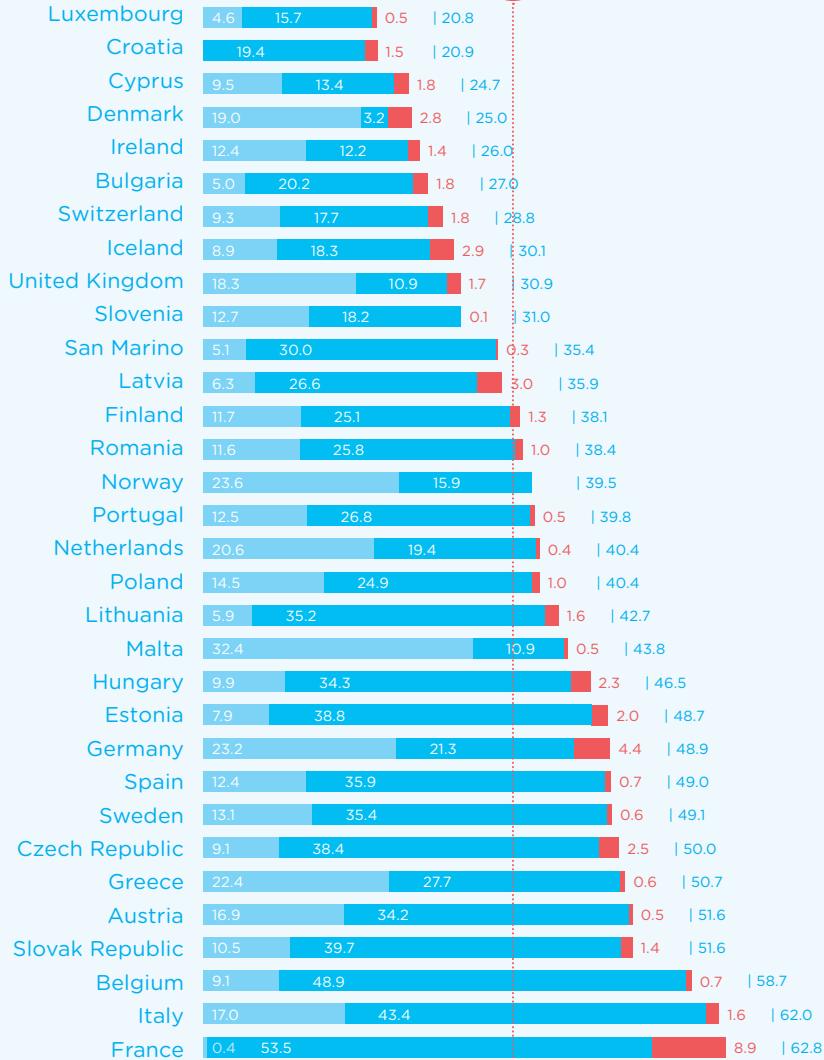
2016 Figures in EUR*	Germany	France	Netherlands	Belgium	Luxembourg
Cost for Employer	112,383	147,468	109,745	130,000	113,370
Employer's Contribution	12,383	47,468	9,745	30,000	13,370
<b>Gross Annual Salary</b>	<b>100,000</b>	<b>100,000</b>	<b>100,000</b>	<b>100,000</b>	<b>100,000</b>
Employee's Contribution	- 12,383	-23,661	-9,133	-13,735	-12,369
Tax in Income	-21,621	-7,340	-33,929	-31,400	-17,210
<b>Net Annual Salary</b>	<b>65,996</b>	<b>68,999</b>	<b>56,938</b>	<b>54,865</b>	<b>70,421</b>

\*Married taxpayer with 2 dependent children, resident and working in home country

Source: "Luxembourg Tax Environment", KPMG

## Advantageous Total Tax Rate (%)

40.3  
Regional  
average



Source: "Paying Taxes 2017"; World Bank Group & PwC

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### Easy procedures to start your business here

- **Vibrant start-up ecosystem** with support measures for ICT start-ups from pre-start to growth phase
- **€1** company creation
- **Free support and advice** for company creation formalities
- **No restrictions relating to the nationality**, residence or status of shareholders, directors and managers
- **Articles may be drafted in English** (with a French/German translation)
- **Any currency may be used** for accounting/reporting
- **Easy work permit procedure** for qualified personnel

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### Access to capital

- **Excellent access to private finance:** banks, business angels, venture capital
- State investment bank SNCI specialises in **medium and long term financing** of Luxembourg-based companies and their projects
- Digital Tech Fund provides **critical venture capital support** for promising early-stage high-tech start-ups
- The Luxembourg Future Fund **invests and co-invests** in early and growth innovative European technology SMEs as well as in venture capital funds
- **Luxembourg Export Credit Agency** (Office du Ducroire) offers support for Luxembourg-based companies when trading abroad
- **Attractive R&D and innovation grants** and investment aids for SMEs

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### Facilities

- Good **availability of land and office space**
- The **national incubator Technoport** offers 16,000 m<sup>2</sup> of facilities – office space, co-working space and industrial workshops – to start-ups and international companies looking for their first premises in Luxembourg.
- **Several private** co-working spaces, incubators and accelerators

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### R&D capabilities

- The research-driven **University of Luxembourg** conducts high-level ICT-related research, in particular at its Faculty of Science, Technology and Communication, its Interdisciplinary Centre for Security, Reliability and Trust (SnT) and the Luxembourg Centre for Systems Biomedicine (LCSB).
- The **Luxembourg Institute of Science and Technology (LIST)** is a research and technology organisation active in the fields of materials, environment and IT.
- The **Luxembourg Institute of Health (LIH)** generates and translates research knowledge into clinical application with an impact on the future challenges of health care and personalised medicine.

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# HOW WE CAN HELP YOU

Would you like to find out more about Luxembourg and how your company can benefit from the opportunities offered here? We have extensive experience with supporting international companies and can provide you with useful information and customised assistance.

## **In-depth information**

Please contact us for fast, reliable information on all aspects of doing business in Luxembourg.

## **Tailor-made Luxembourg visits**

We can set up tailor-made visit programmes that will enable you to meet all relevant contacts – government officials, service providers and potential partners – in just 2 days. You will particularly appreciate the availability of authorities and their willingness to collaborate.

## **Introduction to key networks**

Our sector specialists will help you identify and introduce you to potential customers as well as business, innovation and R&D partners.

## **Company set-up support**

We can guide you through the procedures of setting up a company in Luxembourg and show you the ropes for fast and reliable progress.



Contact  
us today

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## **Luxinnovation**

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