

A digital nation driving growth

Initially developed to support Luxembourg's flourishing financial, broadcasting and space sectors, the rapidly growing information and communication technologies (ICT) industry has also enabled Luxembourg to evolve into a global centre of excellence in cybersecurity and data protection.

Luxembourg has successfully embraced the IT revolution whilst consolidating its position in media. Two Luxembourg giants – RTL Group in media and SES in satellite transmissions – have developed the country's reputation in these sectors. Leading players of the ICT sector – Amazon.com, PayPal, eBay, Rakuten, Skype, Vodafone and many others – have chosen Luxembourg as their base for accessing European and worldwide markets.

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Luxembourg's first-class infrastructure includes 23 data centres, 8 of which have Tier-IV certification. Tier-IV data centres provide the highest level of quality and security.

4-8

milliseconds

The Grand Duchy is connected through 27 different fibre routes to the main internet exchange hubs in Europe: Frankfurt, London, Paris, Brussels, Amsterdam and Strasbourg with particularly low-latency rates of between 4 and 8 milliseconds.

Trusted Data Hub

Luxembourg has all the ingredients to create and maintain a Trusted Data Hub:

- ICT architecture – infrastructure;
- Governance;
- ICT skills and security;
- Regulatory environment:
 - E-archiving law (electronic contracts have legal status in Luxembourg) and secure e-archiving procedures,
 - Cloud-friendly legislation.

Luxembourg has multiple computer security incident response teams, a national cyber security administration (ANSSI) as well as a cybersecurity portal promoting behavioural, organisational and technical security.

Business Continuity Plan Mechanism

Luxembourg was the first European country to put into place a “business continuity plan mechanism”. The mechanism allows third-country companies - victim of severe cyber attacks or natural disasters in their country of origin that jeopardise the further operation of their business - to apply for a “business continuity residence permit” to temporarily continue their activity on Luxembourg territory under certain conditions.

World's first data embassy

Estonia will open the world's first data embassy in Luxembourg. The data embassy will contain information vital to the functioning of the Estonian state, and make an attack on the country's systems more difficult.

R&D and ICT working hand-in-hand

The University of Luxembourg works closely together with the ICT sector.

The Interdisciplinary Centre for Security, Reliability and Trust of the University of Luxembourg (SnT) provides high-quality research in secure, reliable and trustworthy ICT systems and services. Other ICT research competencies at the University include digital communications, information processing, systems and robotics as well as algorithmic number theory.

The ICT for Innovative Services (ITIS) department bolsters research through multidiscipline scientific and technological research to develop innovative ICT services.

Digital Lëtzebuerg

With its **Digital Lëtzebuerg** strategy, the Luxembourg government gave a boost to the development of six key domains in order to make Luxembourg a Digital Nation: FinTech, infrastructure, support for innovation and access to financing for start-ups, e-Administration, e-Skills and promotion.

A supercomputer in Luxembourg

Luxembourg will develop by 2018 a High Performance Computer (HPC) with the power of one petaflop/second, which corresponds to 1,000,000,000,000,000 operations per second. Also Germany, Spain, France, Italy, the Netherlands and Portugal will join forces to implement the strategy of a European HPC network - which the Grand Duchy initiated.

The project will focus on eight subjects, including smart mobility, Industry 4.0, smart space and smart agriculture, smart cities, energy, water and buildings and Fintech.

Infrachain

This initiative aims at the development of a common blockchain infrastructure. By creating an inclusive environment with a secure community chain, Infrachain will ease the entry of startups and innovative solutions and technologies in the Luxembourg ecosystem.