



FINTECH

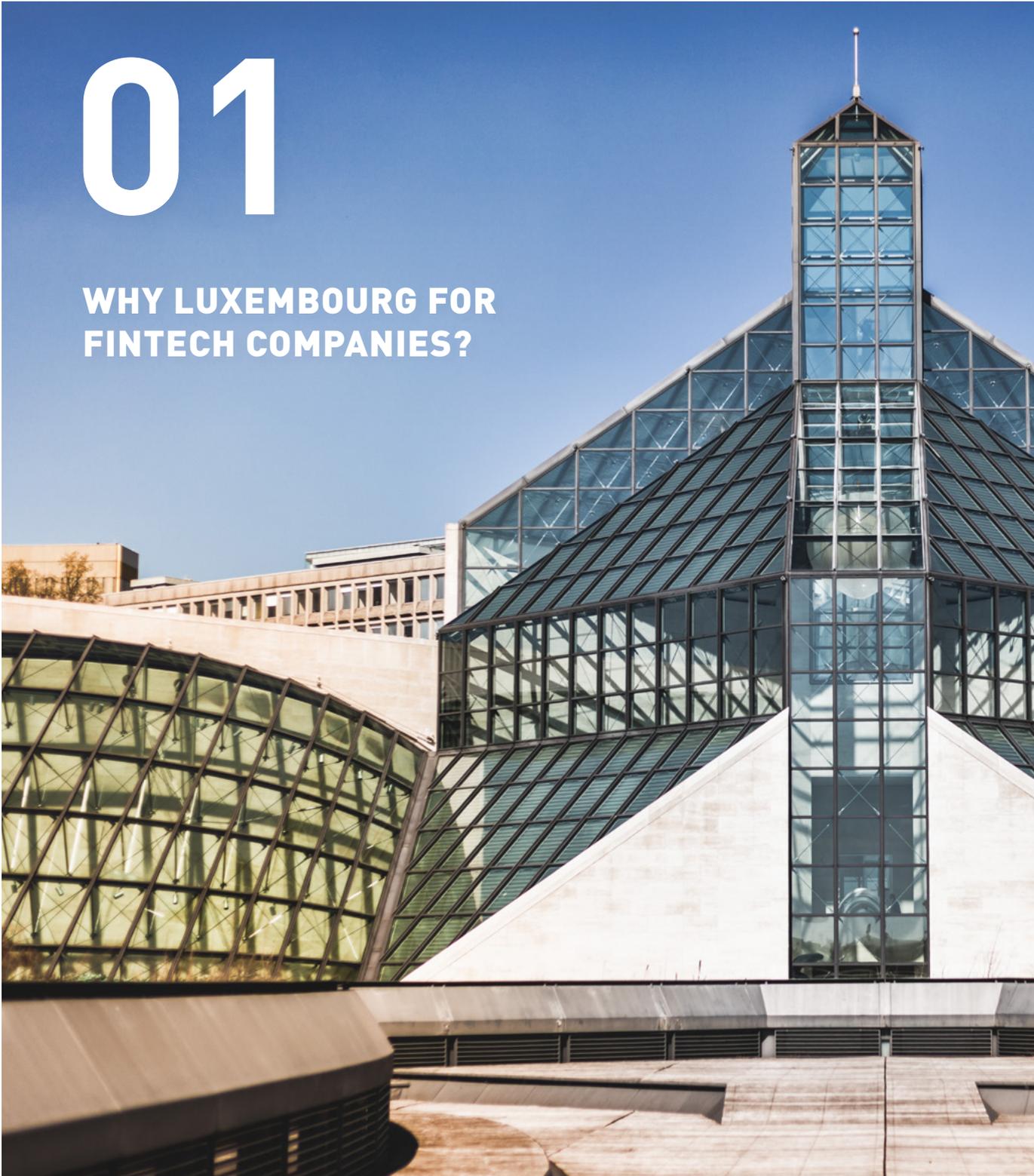


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01

WHY LUXEMBOURG FOR FINTECH COMPANIES?





Access to the European market

- Ideal hub to access the **EU Single Market** via the **European passport**
- Access to a large, **highly-skilled and multilingual talent pool**



Innovation-friendly regulatory environment

- Pragmatic and stringent **regulators**, open to **innovation**
- All relevant **legal texts** and filings for financial services companies are available **in English**
- **Fintech** companies fall under existing **financial services regulation**
- **Regulated FinTech companies** can benefit from the **EU passport**
- **Cloud-friendly** legislations
- Pioneering legal framework on **electronic archiving**



Access to a leading international financial centre

Luxembourg is the **largest fund centre in Europe** (second only to the US), a **leading wealth management and banking hub** as well as an EU payments hub offering:

- An **ecosystem** dedicated to cross-border financial services and products
- Presence of a **significant potential** client base, ranging from the investment fund industry and banks to wealth management and insurance companies
- Openness by a variety of banks to **on-board Fintech companies**
- Collaboration with the financial industry through **the Luxembourg House of Financial Technology**
- Easy access to industry decision makers



State-of-the-art infrastructure

- Highest density of **TIER4 data centres** in Europe
- 28 ultra **low latency fibre routes** connecting Luxembourg with major European cities



R&D expertise

- Collaborative projects with the **University of Luxembourg's** Interdisciplinary Centre for Security, Reliability and Trust (SnT), the Luxembourg Institute of Science and Technology (LIST), and the Luxembourg School of Finance



Access to support and funding

- Multiple sources of **public and private funding**, including innovation and R&D grants
- Various private and public **support initiatives**, including a dedicated national Fintech platform, the LHoFT (Luxembourg House of Financial Technology), that offers incubation and co-working opportunities
- Several **start-up acceleration programs**



Stability

- Luxembourg is a **politically stable, AAA rated country**, with a very **low public debt** and an economy that has performed strongly over a long-term period. Growth in Luxembourg is consistently above the EU average.



02

FACTS & FIGURES

Top 3 EU financial centre
(GFCI March 2018)



The world's
largest cross-border
fund distribution platform

Major European **banking and**
wealth management centre



Home to the Luxembourg Stock
Exchange, global leader in
international securities listing

A leading



insurance centre

#1 globally in terms of
knowledge intensive **jobs**
(WEF Global ICT Report 2016)



Best country for
political and regulatory environment
(WEF Global ICT Report 2016)



One of the highest proportions of **ICT**
entrepreneurs (10%) among the
world's innovation- driven economies
(GEM 2016/2017 Global Report)

Largest share of **highly skilled**
workers in the world: 62 %
(WEF Global ICT Report 2016)



8th globally for the availability
of **venture capital** (WEF
Global ICT Report 2016)



1st for **international bandwidth**
(WEF Network readiness index 2016)

03

LUXEMBOURG FINANCIAL CENTRE – INNOVATING IN THE DIGITAL ECONOMY



Financial technology and rapid digitalisation are transforming financial services across the globe and shaking up established business and operational models. It's not only individual financial institutions that need to anticipate and adapt, but financial centres themselves – as full-fledged ecosystems impacted by technology – also need to act.

In order to remain at the cutting edge and successfully manage this digital transformation, financial centres need to create an environment that is conducive to innovation. The Luxembourg government has made the digital transformation of the financial services industry a priority. The Grand Duchy is committed to fostering innovation and aims to become a leader in digital financial services.

Given the size of Luxembourg's international financial centre, ranked among the top 3 in the EU, it is unsurprising that a large share of Fintech companies based in Luxembourg focus on the B2B segment or provide B2B2C white label solutions to the local financial sector, in areas ranging from KYC and regulatory reporting to digital fund distribution and automated investment services. Indeed, asset managers, banks and insurance companies in Luxembourg are actively looking for solutions to succeed in their digital transformation. In order to develop further the local Fintech ecosystem and ensure that the financial industry has access to the latest and best in financial technology, the Luxembourg government together with key industry partners set up a dedicated Fintech hub in 2017: The Luxembourg House of Financial Technology or LHoFT.

As the national Fintech platform, the LHoFT brings together financial institutions, Fintech innovators, research and academia as well as public authorities to drive forward innovation and the development of solutions to meet specific industry needs. It also acts as a soft-landing platform for Fintech companies from abroad who want to access the local financial sector and market their solutions across the European Union.

Luxembourg's financial industry players are renowned for being able to swiftly identify and cooperate on the major issues that have potential to transform their business models. Luxembourg financial industry associations ALFI (the Association of the Luxembourg Fund Industry), ABBL (the Luxembourg Bankers' Association) and ACA (the Luxembourg Insurers' association) have established FinTech clusters and working groups in which FinTech companies are active

participants. Their respective members exchange knowledge and ideas on new technologies and on how digitalisation and the rise of FinTech impacts their respective industries.

The ABL has created a "FinTech Map of Luxembourg", a database of the various FinTech firms, software vendors and IT solution providers active in Luxembourg's FinTech ecosystem. The map outlines and categorizes FinTech stakeholders and supporters in the following areas: Public policy, Promotion of professional interests, Education and training, Support and funding for startups and established firms, Research and development, Media, Organisation of events.

The Luxembourg financial centre...

Having developed a diversified international financial ecosystem over the past half-century and more, Luxembourg has unrivalled expertise in cross-border financial services and products. As a recognised EU hub for banks, asset managers, insurance and financial technology companies, Luxembourg is today the home of the global fund industry and boasts one of Europe's core capital market infrastructures. The financial centre is also a standard setter in sustainable and climate finance as well as in international Renminbi business.

Luxembourg is the ideal gateway to the European Single Market. Its unique position allows the country to connect international investors with Europe, and European investors with the rest of the world. As a result, the majority of the world's leading asset managers have chosen to set up their global fund ranges in the Grand Duchy, while leading private equity houses structure their investments via Luxembourg. Supranational, government and corporate issuers from all over the world choose to list their securities in Luxembourg, and international banking and insurance groups serve their European customers out of their Luxembourg competence centres, leveraging their EU passport. Moreover, a considerable number of leading players in e-commerce and e-payments, such as PayPal, Amazon, and Rakuten, have chosen Luxembourg as their European hub. Global Fintech pioneer Paypal, for instance, has been operating out of Luxembourg since 2007 with a full banking license, allowing it to offer a broad range of services to its customers across 28 EU markets with a single license, as does Rakuten. Acting as an international trust centre, Luxembourg has a strong reputation for service availability, security and data protection.

...and how it benefits Fintech companies

The presence of a leading international financial centre has three major benefits for Fintech companies:

1. Home to around 4,000 regulated investment funds with over 4 trillion EUR under management, more than 140 international banks, and nearly 300 insurance and re-insurance companies, Luxembourg offers a large potential client base for Fintech companies and their solutions. Importantly, access to key decision makers of these institutions is also much easier than in most other markets.
2. Fintech companies have access to regulators that are innovation-friendly. These regulators are also unmatched when it comes to their long-standing experience in authorising and regulating financial institutions offering their products and services on a cross-border basis throughout the EU.
3. In order to develop and commercialise their activities in Europe, Fintech companies can leverage a financial centre ecosystem that is multilingual and uniquely specialised in international and pan-European business, ranging from fund administrators and custodians to wealth managers, bankers and insurers and from law firms and consultants to tax advisers.

Thanks to a highly developed financial services ecosystem and a tech-friendly regulatory and legal environment, Fintech companies find in Luxembourg an ideal environment to develop, test and commercialise their solutions on an EU-wide basis.

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Luxembourg is great because it provides all the ingredients needed to expand internationally.

Bert Boerman,
CEO & Co-Founder, [Governance.com](https://www.governance.com)

”

Governance.com is a RegTech platform that helps regulated companies organise their data, documents and controls.



04

FINTECH IN LUXEMBOURG



FinTech activities in Luxembourg have naturally developed around the main business lines of Luxembourg's international financial centre: banking and wealth management, investment funds, insurance and capital markets. Together, these constitute a broad ecosystem and a significant client base for FinTechs. Consequently, many FinTechs in Luxembourg are active in the B2B or B2B2C space, serving the financial centre's core competencies or working directly with financial institutions to develop white label solutions. This allows them to develop, test, market and distribute their products and services on a national basis and, at a later stage, across Europe and beyond.

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Luxembourg is a major jurisdiction that our clients choose in domiciling their funds. To support them and our extended European franchise, RBC Investor & Treasury Services has had a major presence in the Grand Duchy for more than 30 years and today employs in excess of 1,300 staff.

RBC I&TS has established several agile and Robotics Processing Automation (RPA) labs in Luxembourg that are accelerating the delivery of our technology and automation solutions. We have a wealth of expertise and understanding of the local market and funds industry which coupled with our global technology experience are delivering new applications that help our clients meet their daily challenges.

”

Sébastien Danloy,
CEO, RBC Investor Services Bank S.A.



Graph as of April 2018



MAIN FINTECH ACTIVITIES IN LUXEMBOURG

Mobile payments and e-money

Leading international players in the payments sector, such as PayPal, Amazon Payments or Six Payment Services have chosen Luxembourg as their hub to serve the entire EU market. In Luxembourg, they leverage a regulatory framework of payment licenses to passport their services across the EU (Payment Institution and E-Money Institution licenses), the country's supportive FinTech ecosystem, as well as its state-of-the-art IT infrastructure. As a testimony to Luxembourg's thriving Fintech environment, a number of home-grown Luxembourg payment service providers have in recent years been successfully acquired. These include Digicash, which was acquired by ING initiated Payconiq, as well as Paycash, which was acquired by Daimler Benz and now operates as Mercedes Pay.

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Luxembourg is one of Europe's main financial centers, offering; stability, regulatory rigour, an international workforce and a track record on innovation. Payconiq had the opportunity to partner with an innovative startup located in Luxembourg, a country which has proven to be an early adopter of this technology as well as entrepreneur friendly. It is for these reasons that Payconiq has decided to operate out of Luxembourg.

”

Duke Prins,
CEO, Payconiq International

PAYCONIQ

Payconiq offers an end to end payment solution, from consumer to merchant, across all channels.

RegTech (compliance and regulatory solutions) and Big Data analytics

Regulatory expertise, risk management and compliance are key strengths of Luxembourg's financial services industry. Unsurprisingly, a significant number of Fintech companies in Luxembourg focus on serving the regulatory and compliance needs of Luxembourg's financial centre: ranging from KYC and fraud detection to fund reporting and investor information tools. By using the latest technologies, many financial institutions are today focusing on reducing their regulatory and compliance costs by deploying technology to make regulatory reporting and compliance more cost-efficient and effective. For example, solutions developed in Luxembourg are assisting asset managers to improve the oversight and transparency of their governance network and processes (e.g., Governance.io, listed in the RegTech100), which gives them a real competitive advantage. Other solutions such as KYC3 or iDetect use advanced big data technology for compliance, counterparty risk management, fraud detection and competitive intelligence.

“

SEQVOIA is based in Luxembourg, a country that brings together all major players in the fund industry, a multitude of service providers, and an array of government-backed organisations working to develop the local scene – all but two hours from other major European financial centers! This unique environment allows SEQVOIA to stay at the pulse of the market, validate ideas with the industry and implement solutions in line with client needs.

”

Susanne Schartz,
COO, Seqvoia

SEQVOIA

Founded in 2012, SEQVOIA offers a SaaS solution allowing clients to create UCITS KIID, PRIIP KIDs, fund prospectuses and to share fund information across the organisation - to create other documents, to feed websites, and to communicate with internal and external stakeholders in many different languages.

DLT technologies

Use cases of Distributed Ledger Technology for financial services in Luxembourg are numerous, in areas such as payments, fund administration, reporting, clearing, and even ownership tracking of alternative assets. A number of Fintech companies in Luxembourg have therefore focused on developing blockchain-based solutions to meet industry needs. As an example, the Luxembourg Stock Exchange provides "digital signatures" on all documents publicly disclosed by issuers via decentralised public blockchain based on Ethereum, and the Luxembourg based FundsDLT consortium has built a blockchain-based fund purchase platform, allowing investors to purchase funds through a decentralised platform on their smartphones.

BLOCKCHAIN LEADS

FundsDLT is a project initiated by Fundsquare (the Luxembourg Stock Exchange's fund services subsidiary) in cooperation with leading players from the financial centre. The aim of the project is to build a distributed ledger environment to service the entire fund management process.

In July 2017, the project reached an important milestone. It was the first to complete a live blockchain transaction in the fund industry. The transaction was operated by a real investor buying a Natixis Asset Management fund, and was supported by CACEIS as the transfer agent.

Fundchain is an initiative set up by Scorechain, a Luxembourg-based tech company that has set up a consortium of key players from the fund industry. After rolling out a smart transfer agent proof of concept (PoC), Fundchain aims to have a distributed ledger-based product ready to bring to market in 2018.

Infrachain is a non-profit and public-private initiative, which aims to build the first worldwide trusted cooperative blockchain environment that respects regulatory & compliance guidelines. Infrachain enables all types of actors to exchange and find distributed solutions on governance, regulatory, and technology questions and to bridge the gap between Blockchain technologies and legal environments. It is a community-driven project, kickstarted by the Luxembourg government, which now includes private and public international players in the fields of finance, legal and technology.

The Luxembourg Bankers' Association (ABBL) in cooperation with the University of Luxembourg and its Interdisciplinary Centre for Security, Reliability and Trust (SnT) launched a 4-year joint research project on a distributed ledger prototype and data analytics for KYC (Know Your Customer), which aims to develop and test new conceptual and technological approaches to KYC procedures.

InsurTech

InsurTech enables insurers to improve their operational efficiency and obtain effective insights on customer behaviour by the use of technology. Many global insurers have their EU hubs in Luxembourg, and are using technology to disrupt the traditional insurance industry. InsurTech firms in Luxembourg offer ultra-customised policies, social insurance, and use new streams of data from internet-enabled devices to dynamically price premiums according to observed behaviour. Motion-S for example, is a spin-off that originated from Luxembourg University's interdisciplinary center for Security, Reliability and Trust (SnT). The company offers, among others, insurance telematics products from data collection to premium calculation and pricing. As an example, the spin-off has launched the app "Game of Roads" in collaboration with la Baloise Assurance. It is an online competition that rewards the best drivers.

“

Thanks to the great collaboration and the support from the regulator in Luxemburg we could launch a full-stack insurance carrier within months.

”

Christoph Samwer,
CEO, FRIDAY

FRIDAY is a digital insurance platform backed by Baloise Group that operates as an insurance carrier in Luxembourg. With an innovative pay-per-kilometer based product and monthly cancellation capability the team won 15,000 customers within nine months.

Security and authentication

Luxembourg has a long track record in developing and deploying security and authentication solutions. Luxembourg's Interdisciplinary Centre for Security, Reliability, and Trust (SnT) is a centre of excellence that partners with leading financial companies such as PayPal, Clearstream or the Luxembourg Stock Exchange on research and development of innovative solutions.

On the authentication side, LuxTrust, a public limited company provides IT services, created and supported by public, institutional and private partners. Its mission is to guarantee the digital identity and security of the electronic data of companies and citizens.

Automated investment services

Automated investment services, or robo-advisors, offer clients a convenient digital way of building up their investment portfolio. Another trend are "hybrid advisors", combining the professional expertise of an advisor with automated investment. In Luxembourg established banks as well as start-ups offer so-called robo-advisory services to their clients on the local and European market, leveraging on their European passport and on Luxembourg's strong investment fund and advisory sales experience.

“

Digital services are increasingly provided across national borders. We incubated our finance and technology driven, pan-European start-up in Luxembourg, located in the heart of Europe.

”

Sebastian Hasenack,
Co-CEO & Co-Founder, Investify

INVESTIFY

Regulated by the Luxembourg financial services regulator CSSF and operating with an EU-wide license, Investify offers portfolio management services. Clients are able to invest in an individualised way through ETFs and add actively managed sections to their portfolio from a broad range of investment topics including “wearables”, “water” or “smart home”. Since selection and investment processes are entirely digitalised, the platform does not require any paper documents nor signatures.

ENTRY GATE INTO THE EU

Alternative lending

Digital platforms such as Peer-to-peer lenders focus on debt finance by bringing together borrower and lender. The purpose in the beginning was often to remove the need for a middleman (a financial institution). In the meantime, P2P lenders often operate with institutional investors such as banks.

Several leading companies in the field of alternative lending have built their solutions based on Luxembourg securitisation vehicles.

Beyond serving the local financial industry, Luxembourg is an ideal launch pad for financial technology companies, from where they can leverage the European Passport and reach out to European markets, with one single license.

This is particularly important for more mature companies, that have developed their solution in another, often non-European market and are preparing the next step, which is to broaden their client base. The European Union, with more than 520 million consumers, offers a stable market and Luxembourg, in its role as entry gate into the EU, is the ideal entry point.

05

REGULATION



In order to be accepted by established financial institutions, clients and investors, regulation is crucial.

For a Fintech company, being well regulated significantly increases trust vis à vis their counterparts, and serves as a hedge for the company itself. The chances of doing sustainable business are simply much higher for regulated businesses.

The Luxembourg regulators' stance towards Fintech companies is straight-forward. Fintech companies that offer financial services need to be licensed.

The financial regulator is stringent yet open-minded towards innovation in a technologically neutral approach: it tends to enter into a constructive dialogue with FinTech companies that are setting up to ensure that the company is appropriately regulated and has the necessary license(s) to be able to offer its services and products. Crucially, the regulator is equipped to understand new technologies and their impact the most complex business models, including those that involve offering services and products in multiple jurisdictions.

A TECH-FRIENDLY LEGAL FRAMEWORK

Luxembourg is committed to fostering innovation by building on its regulatory expertise and ensuring that technology-based financial services are efficiently regulated. The government and regulatory bodies closely study emerging technology models and apply existing legal principles in combination with new European directives.

Luxembourg's legal framework is forward-looking and pragmatic. It provides legal security and predictability, while at the same time avoiding unnecessary administrative burdens. It is also especially designed to cater to the digital economy. For example: Luxembourg was the first country to pass cloud-friendly legislation that protects the best interests of both providers and clients. Luxembourg law guarantees that data owners can easily recover data in the event of bankruptcy of a Luxembourg-based cloud provider. The law allows for the customer data to be kept separate from other files in the cloud providers' systems.

The Grand Duchy is currently the only EU country to have an operational legal framework for electronic archiving. The legislation acknowledges the legal value of digital documents and, under certain conditions, provides substantial guarantees of their compliance with the original. This makes Luxembourg a unique place for financial institutions in need of operating most of their business digitally (without using paper).

Moreover, Luxembourg has established a unique framework of regulated outsourcing: companies that deliver operational services to financial institutions, such as IT systems operators for instance, are regulated by the financial sector supervisory authority. This ensures a high level data security and reduces operational risks for financial institutions when they entrust some of their operational processes to third party service providers.

Luxembourg's financial services regulator - *Commission de Surveillance du Secteur Financier*, CSSF – has a solid reputation for its competence and openness to innovation and has fostered a tailored and responsive FinTech regulation. The CSSF's Innovation Department, in action since 2007, leads a constructive and open dialog with the industry, gives insights on the regulation and offers guidance and follow-up of the regulation progress.

Similarly the regulator closely monitors innovation. Luxembourg's regulatory framework is constantly updated to keep pace with new technology. For example, the CSSF allows outsourcing to public clouds as well as video onboarding.

The CSSF identifies and appraises potential risks and determines prospective benefits of innovations. It also assesses whether there are regulatory barriers to business models that can be addressed within existing regulatory requirements. The CSSF also ensures that all relevant legal texts and documents are available in English.

BEFORE ITS TIME: REGULATORY STANCE ON CRYPTOCURRENCIES

Back in February 2014 the CSSF was the first European regulator to adopt a clear legal position with regard to virtual currencies.

In line with its technology-neutral stance, the regulator chose not to regulate the underlying technology nor the cryptocurrency themselves, but rather the operators who offer financial services around cryptocurrencies.

Bitstamp, the first European exchange platform enabling customers to exchange bitcoins against EUR and USD and vice versa, was authorised by the Luxembourg Minister of Finance in April 2016 to operate EU-wide bases under a payment institution license, Bitflyer, one of the largest exchanges in the world, received its Luxembourg license in December 2017: it thus became the first bitcoin exchange to be licensed on 3 continents.

“

The passporting of the license is relatively straightforward while having cross-border regulatory arrangements is not always easy. However, the regulator is always open for discussion which is amazing to me. We have a very interactive dialogue – even when we propose something very new, they don't push it back. Rather, they look into it and start to discuss how to make things happen rather than rejecting it. The attitude is very positive, and that is helping us to expand our services.

”

Toshihiko Otsuka,
CEO, Rakuten Europe Bank

Rakuten is a Japanese e-commerce conglomerate and online financial services giant that chose Luxembourg to establish its pan-European bank.

“

The regulator is very business orientated, and they want us to succeed in our projects.

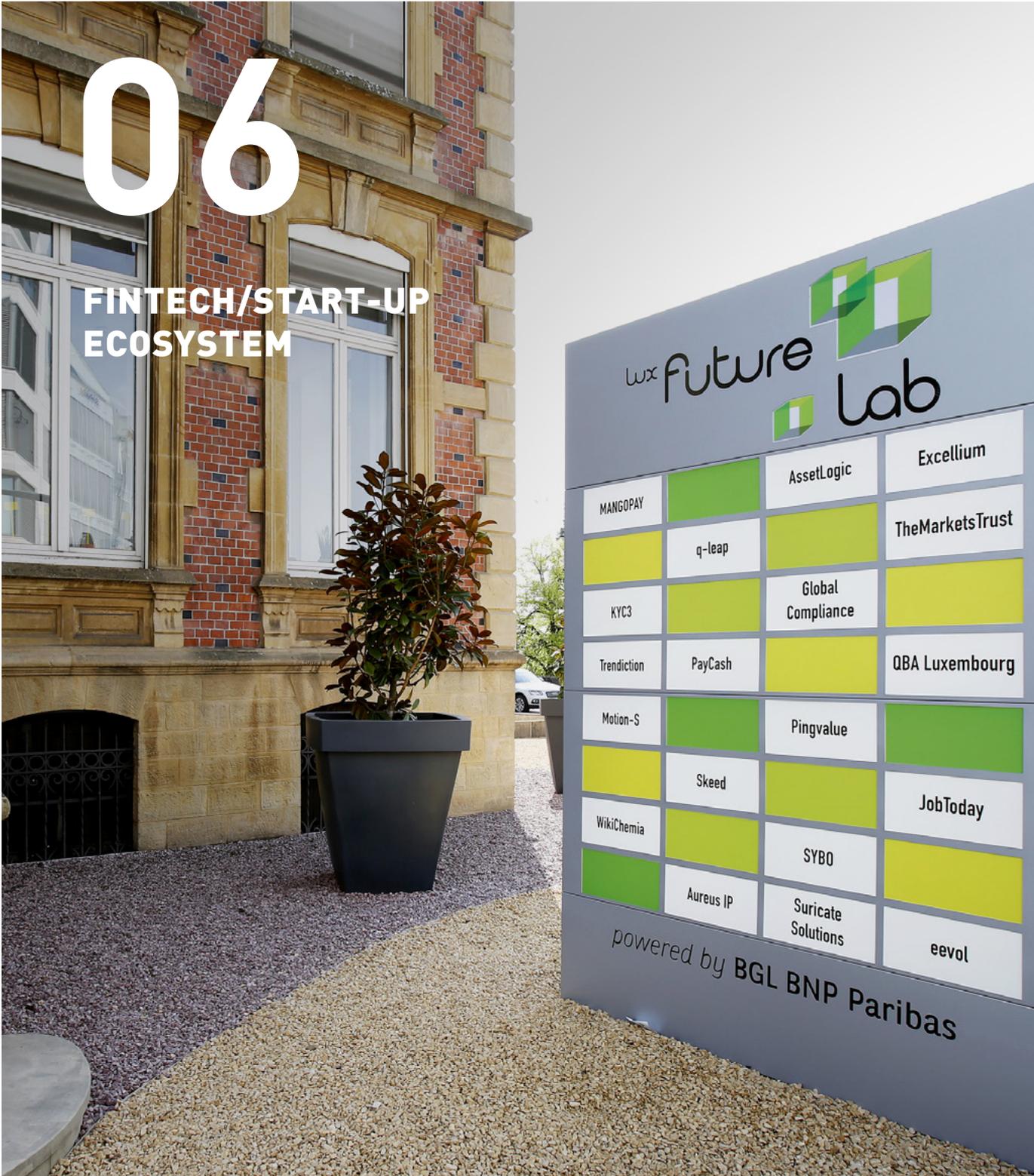
”

Romain Mazeris,
CEO, Mangopay

Mangopay offers end-to-end payment technologies, including e-wallets for marketplaces, crowd funding and the sharing economy. The company operates as a regulated e-money institution in Luxembourg.

06

FINTECH/START-UP ECOSYSTEM



THE LUXEMBOURG HOUSE OF FINANCIAL TECHNOLOGY (LHOFT)

Creating a conducive environment is part of Luxembourg's ambition to become a leader in digital financial services. In Luxembourg, FinTech start-ups can rely on a strong network of private and public incubators and accelerators, as well as on a winning combination of private and public funding sources. Additionally, Luxembourg offers various sources of both private and public funding to boost the development of FinTech companies over the various stages of their development.

Acting as the national Fintech platform, the LHoFT Foundation is a public - private sector initiative that drives technology innovation for Luxembourg's financial services industry, connecting the domestic and international Fintech community to develop solutions that shape the world of tomorrow. Senior executives from 13 leading private sector institutions sit on its board as leadership circle partners alongside representative from the Luxembourg Government as well as leaders of the Luxembourg Chamber of Commerce, Luxembourg for Finance and PROFIL, the Luxembourg Financial Industry Federation.

The Luxembourg House of Financial Technology is much more than an incubator, its role being to build and foster the Luxembourg Fintech ecosystem. The LHoFT extends the ecosystem internationally, connecting with leading Fintech hubs around the world by bringing together and collaborating with domestic and international stakeholders on industry-wide projects, working groups and initiatives.

The foundation supports the community, particularly its members and partners, in accessing the most appropriate solutions and resources. It enables the Fintech community through practical training, education and research. The LHoFT assists Fintech businesses to effectively set up and grow, providing a soft-landing platform for access to the EU market.

The LHoFT hosts Fintech firms in its co-working facility and supports them in their growth. It partners with larger corporates from the financial services and technology industries to help them meet their innovation goals as well as to access the right people and resources.



INCUBATORS AND EXCHANGE PROGRAMS

The LHoFT provides individually tailored support for Fintech firms setting up in Luxembourg and wanting access to the European market. The goal is to facilitate the launch, be it by organising meetings with key decision makers, training and education, or even helping with house hunting and immigration if required.

In addition to LHoFT, several initiatives support innovative companies in FinTech and other tech-related sectors.

Technoport is an internationally highly-ranked incubator, offering business incubation, co-working and a Digital Experience Studio. The incubator supports companies starting in, and international businesses seeking a first foothold in Luxembourg. Technoport offers various incubation programs comprising a full range of services. Technoport operates in 3 locations: in Belval, Luxembourg's city of science; in Foetz where it also offers industrial halls and workshops; in addition, a Fab Lab, an open prototyping platform for digital fabrication, is operated in Differdange within the 1535° Creative Hub.

Located on its campus in Belval, the **University of Luxembourg** operates its own incubator within its entrepreneurship programme targeting its students, alumni and staff.

Luxembourg House of Start-ups (HoST), a new start-up hub located at the heart of the capital city, is a joint project by the City of Luxembourg and the Chamber of Commerce. The initiative, located within a 4,200 m² facility, is composed of the Luxembourg City Incubator that offers accommodation to start-ups and **Nyuko**, another initiative that provides acceleration and support to start-ups throughout the various stages of their development. LHoFT (see previous section) is located in the HoST's premises as well.

Various private initiatives offer acceleration and incubation to companies, such as lux future lab by BGL BNP Paribas, Tomorrow Street by Vodafone, Paul Wurth InCub, PwC's Accelerator and Experience Centre, the Khube by KPMG, EYnovation by EY, the 6zero1 social incubator and InnoHub. Several forums are also regularly organised in Luxembourg such as Mind & Market Forum by Deloitte, the University of Luxembourg, the Luxembourg National Research Fund (FNR), and Luxinnovation.

Crédit Agricole has also set up Hub@Luxembourg, operated as a platform to internationalise start-ups in areas such as Fintech (incl. Insurtech), Cyber Security, Green Economy, Space and Smart City. The initiative is also located at the House of Start-ups.

Luxembourg-based start-ups with substantial market traction and whose products can scale up to the US market can benefit from the international program of Silicon Valley's **Plug & Play Tech Center**. The program enables them to carry out intense training and provides access international investors, within Silicon Valley's most successful accelerator programs.

The **House of Entrepreneurship** is Luxembourg's one-stop shop for company creation, providing assistance with business permits, tax & legal issues, as well as public funding.

PUBLIC AND PRIVATE FINANCING FOR FINTECH ACTIVITIES

Luxembourg Future Fund

This 150 million fund is a joint initiative between the European Investment Fund (EIF) and the Luxembourg government through its National Credit and Investment Company (SNCI). It aims to invest into innovative SMEs planning to launch activities in Luxembourg. The three sub-funds can invest in Venture Capital funds, co-invest with VC funds, or co-invest with Business Angels or Family Offices.

“

We chose Luxembourg for the first step in our international expansion – the ecosystem, infrastructure and political environment are particularly favourable & business friendly. Luxembourg is ideally positioned with all the main actors in easy reach. The country is certainly open for business.

”

Oliver Schimek,
CEO & Founder, CrossLend

CROSSLEND

CrossLend is a B2B FinTech with a mission to make the debt ecosystem more efficient, transparent and profitable. They provide securitisation as a service, transforming loans into notes on a portfolio or 1 loan: 1 note basis. An innovative securitisation setup allows investors to build diversified portfolios of loans (via bonds) at a pan-European level, while enjoying greater risk transparency. On the other hand, originators profit from flexible opportunities to scale their lending business – opening up much-needed financing avenues to SMEs across Europe. CrossLend’s business model aligns with the EU Commission’s plan to facilitate funding Europe’s collective future growth via a Capital Markets Union (“CMU”).

Founded in Berlin in 2014, in 2017 CrossLend opened an office in Luxembourg whilst partnering with the Luxembourg Future Fund and the BCEE.

Digital Tech Fund

Founded by the Luxembourg government, backed by a number of high-profile private and public investors and managed by Expon Capital, the Digital Tech Fund provides seed financing to entrepreneurs running innovative start-up companies active in the field of Digital Technology. The fund's aim is to foster long-term innovation and to support the technology start-up ecosystem in Luxembourg.

Luxembourg Business Angel Network (LBAN)

The national business angel network is a member of the European EBAN association. The association's members are highly active in early stage start-up investment, including FinTech and impact investing.

InnovFin – EU Finance for Innovators

InnovFin is an initiative by the European Investment Bank Group in cooperation with the European Commission under Horizon 2020. The program provides loans and guarantees, either directly through the EIB group or indirectly through banks for SMEs to large corporates. Thereby, it covers the entire value chain of research and innovation.

SNCI

The Luxembourg state investment bank SNCI offers several loans, including a start-up loan as well as a loan for "Innovative enterprises". The latter is granted to companies with an innovative technological industrial or an innovative technological, commercial, and/or organisational nature. In very specific cases, SNCI also operates equity investments.

PUBLIC FUNDING SCHEMES

Several funding schemes co-financing RD&I activities within a Luxembourg-based company are available as subsidies from the Ministry of the Economy. Luxinnovation, the National Agency for Innovation and Research, advises and supports companies through the public funding application process. In addition, the agency also acts as national contact point for European funding programs such as Horizon 2020.

Examples of funding schemes include:

- Aid for small innovative enterprises enables start-ups to benefit from an aid of up to € 800k under certain conditions.
- Aid for research and development (R&D) projects or programmes supports companies by co-financing costs related to R&D projects carried out in Luxembourg. The intensity of the aid varies with the size of the company and the type of research. Companies collaborating with research institutions can benefit from an increased intensity in aid¹.
- Aid for process and organisational innovation supports companies conducting projects in this field. For SMEs, project-related costs such as wages can be co-financed up to a rate of 50%.

ATTRACTIVE TAX SCHEME FOR TECH COMPANIES

In 2018, Luxembourg has introduced a new Intellectual Property (IP) tax regime. More specific for Fintech, companies developing software – that materialises as copyright or as patents – can benefit from a tax exemption of 80% on the net income derived from qualifying IP rights.

Fit4Start

An early-stage funding and acceleration program geared towards innovative early-stage start-ups active in ICT or FinTech. The program offers a 16-week mentoring support on the lean start-up methodology, free access to co-working space in an incubator, as well as EUR 50K funding. For successfully graduated companies, the Ministry of Economy grants additional EUR 100K, to the condition of a EUR 50K round.

¹ The terms of the aid can be found under innovation.public.lu or by directly contacting Luxinnovation

The Luxembourg National Research Fund (FNR)

The National Research Fund (FNR), as the main funder of research activities in Luxembourg, helps bring research and industry together, through facilitating research and development partnerships. Such collaborations are a win-win for both sides: businesses gain access to creative minds, while researchers get the chance to take their research to the next level and see it make an impact. The Industrial Fellowships (PhD and Postdoc grants to researchers) programme and the BRIDGES programme (project-based funding) are fostering cooperation between Luxembourg based companies active in R&D and public research institutions in Luxembourg and/or abroad.

<https://www.fnr.lu/innovation-industry-partnerships/>

Luxembourg Export Credit Agency (ODL)

The ODL offers various support schemes for the international development of Luxembourg companies. This includes aid to attend at trade fairs, design and translation of promotional support, related advertising costs as well as the opening of representation offices outside EU, to name a few fields.



07

ICT INFRASTRUCTURE



INFRASTRUCTURE – LOWEST LATENCY MEETS HIGHEST SECURITY AND RELIABILITY

Companies operating from Luxembourg are ready for the digital world of tomorrow where connectivity to Europe's major hubs is crucial. Storing data in a very secure location is another imperative. Local data centre providers offer a large choice of best-in-class infrastructure covering any need in terms of size and tier.

Numerous global leaders in the IT, e-commerce, Telecom, and satellite industries serve European and global markets from Luxembourg. All of them rely on excellent infrastructure. Luxembourg's state-of-the-art infrastructure includes the highest density of Tier IV data centres in Europe, as well as a best-in-class high-bandwidth network, making the country rank number 1 globally for bandwidth.

Indeed, about 7 out of 29 European Tier IV datacentres are located in Luxembourg, providing the ultimate level of security, redundancy, and reliability. Together with the available Tier I – III datacentres, businesses can choose from a range of data centres perfectly suited to their specific needs, a number of them running on 100% green energy. Furthermore, a number of colocation providers are at clients' disposal. Google has recently acquired land in Luxembourg and plans to build a USD 1 billion data centre in the Grand Duchy.

Centrally located, Luxembourg is connected with major European cities and financial centres through 28 fibre routes with ultra-low latency and an average round-trip time of c. 5 milliseconds.



Luxembourg ranks:

1st for technological readiness worldwide
(Global Competitiveness Report, WEF 2015)

2nd for intellectual property protection
(Network Readiness Index, WEF 2016)

1st globally for international bandwidth
and laws relating to ICTs (Global Information
Technology Report, WEF 2016)

5th in Europe in the Digital Economy
and Society Index 2018 as one of the leading
countries for connectivity, digital skills and
Internet usage

HIGH-PERFORMANCE COMPUTING (HPC)

Luxembourg is at the centre of the European High-Performance Computing project. As part of the European Commission's Horizon 2020 program, the HPC project will be a strategic resource for Europe's future as it allows researchers to study and understand complex phenomena while allowing policy makers to make better decisions and enabling industry to innovate in products and services.

The European Commission deems the HPC project to be as important as the foundation of Airbus in its time. It will significantly enhance Europe's competitiveness vis-à-vis China and the US.

Luxembourg is hosting the headquarters of the project. A supercomputer with the power of one petaflop per second will be developed and will, by 2023, be an integral part of a network of supercomputers together with Germany, the Netherlands, France, Spain, Portugal and Italy. The network will be at the disposal of scientific communities as well as public and private partners across the EU. In Luxembourg, activities will focus on FinTech, the manufacturing industry, R&D and simulation and prototypes.

HOST COUNTRY TO THE FIRST E-EMBASSY IN THE WORLD

The government of Estonia chose Luxembourg to open its e-embassy, the first of its kind worldwide. Based in a high security data centre, the e-embassy stores copies of Estonia's most critical and confidential data. The aim is to insure continuity in the event of a major cyber-attack or natural disaster. The e-embassy is governed by the same principles of sovereign territory under the Vienna Convention as physical embassies.

Other international institutions such as NATO and the European Patent Office also trust Luxembourg to store their critical data.



RESEARCH AND DEVELOPMENT COLLABORATION

Collaboration between the private sector and the University of Luxembourg takes place on a regular basis and offers a range of advantages, such as project funding through public funding schemes and the opportunity for companies to outsource market-driven research to international talents. With experienced PhD candidates working on these projects, companies can also plan medium-term recruitment with transfer of resources.

THE UNIVERSITY OF LUXEMBOURG

The University of Luxembourg, the world's second most international university (Times Higher Education 2016), founded the Interdisciplinary Centre for Security, Reliability and Trust (SnT) in 2009. Today, nearly 300 staff are active at SnT, working in key areas in ICT such as applied security, software verification, and automation. The Centre collaborates on R&D projects with leading international players in the finance industry, including PayPal, Clearstream, BGL BNP Paribas and the Luxembourg Stock Exchange.

As an example, Clearstream, part of Deutsche Börse Group, is conducting a joint four year R&D project with SnT, exploring how Artificial Intelligence (AI) and Natural Language Processing (NLP) can be used to simplify and standardise requirements analysis for IT projects in the financial industry. The project aims to render processes more cost- and time-efficient.

Another project by the SnT, together with the ABBL, the Luxembourg Bankers association, is focused on developing an innovative solution using Distributed Ledger Technology for KYC uses.

In a partnership with the LHoFT, both parties seek to address the needs of the local financial services sector.

The PayPal chair, another joint project with the SnT, is focused on digital financial services, notably addressing RegTech and compliance through IT solutions.

Besides the University, the Luxembourg Institute of Science and Technology (LIST) is a mission-driven Research and Technology organisation. Specifically, to the financial sector, the centre has formed a team covering business analytics in areas such as regulatory compliance technologies as well governance and process quality improvement.

The research units of the University of Luxembourg's Faculty of Law, Economics and Finance deal with the latest legal and financial developments regarding FinTech and the digital economy. The Luxembourg School of Finance (LSF) combines thorough theoretical research with data-heavy empirical work testing implications of theoretical considerations.

INDUSTRY COLLABORATION

Aside from collaboration with public research, several international financial services players have initiated strategic collaboration projects:

In May 2018, Deutsche Börse Group and its post-trade services provider Clearstream announced a partnership with Germany-based FinTech figo and Luxembourg-based RegTech start-up **Finologee** to create a common FinTech Acceleration Platform. The new platform will enable established financial industry players and Fintech companies to distribute and leverage each other's services, resulting in new revenue opportunities. It will allow easy access to Deutsche Börse Group's market and reference data as well as functional services via web based APIs. The first services offered by third parties will be an access to account gateway for banks for the second Payment Services Directive (PSD2).

The same month, several Luxembourg retail banks including BCEE, BGL BNP Paribas, Banque Reiffeisen and Post Luxembourg launched **LUXHUB**. The initiative is aiming at simplifying and accelerating PSD2 compliance and interconnecting the entire ecosystem of banks and third-party providers (TPPs). LUXHUB is open to any bank concerned by PSD2 and has European-wide ambitions.

09

TALENT





Luxembourg's labour market offers ideal conditions for start-ups seeking to recruit talent. Located in the middle of the Greater Region between France, Belgium and Germany, with 4 million inhabitants within a 1 hour commute, Luxembourg can rely on a wide pool of employees from beyond its borders, besides the international expat community that feels at home in Luxembourg. Indeed, the country ranks 2nd globally for attracting talent².

Luxembourg's cosmopolitan nature makes it the most multilingual country in Europe, with 3.6 languages spoken on average by residents³. English is widely spoken – Luxembourg ranks 7th in the world for English proficiency⁴. 47% of Luxembourg's population is composed of foreigners, representing 170 nationalities.

Technical skills are widespread. Luxembourg is one of the leading countries for connectivity, digital skills, and Internet usage in Europe. 86% of the population has at least basic digital skills. In terms of ICT specialists, it ranks 5th in the EU⁵.

The country also focuses on life-long-learning with specific courses. The House of Training, in collaboration with the banking association ABBL, developed a range of courses on digital banking and FinTech innovation covering such topics as digital banking transformation, distributed ledger technology, data analytics, and social engineering (cybersecurity).

At 62.3%, Luxembourg also has the highest share of people in knowledge-intensive jobs in the world⁶ while employee productivity is the highest in the world⁷.

² The Global Talent Competitiveness Index 2018, INSEAD

³ Eurobarometer

⁴ EF English Proficiency Index

⁵ Digital Economy and Society Index 2017

⁶ World Economic Forum - Networked Readiness Index, 2016)

⁷ OECD 2017

LUXEMBOURG'S GOT TALENT!

Luxembourg gives you access to a large, highly skilled and multilingual talent pool

A LARGE TALENT POOL

+11 million inhabitants
Luxembourg lies at the heart of Europe's largest cross-border region

5 million people live within a 1 hour commute to Luxembourg City

+175'000
daily cross-border commuters from France, Germany and Belgium

+135'000 Students
6 universities within a 100km radius, cooperating closely as part of the University of the Greater Region

ATTRACTING TALENT FROM ACROSS THE WORLD

First
globally for job security¹

Part of the Schengen **visa-free** travel zone and availability of EU Blue Card work permits

47% of the population is foreign
Multicultural
170 different nationalities

2nd in the world for retaining talent²

A MULTILINGUAL, HIGHLY SKILLED WORKFORCE

1st the Eurozone's leading financial centre³

Most **multilingual** country in Europe: Luxembourg's population speaks an average of **3.6** languages⁴

84% of the population speaks at least **2** languages⁴

Fluent in English:

7th in the world for English proficiency⁵

1st Luxembourg has the highest labour productivity in the world⁶

Average **2.5%** annual employment growth rate

Largest share of **highly skilled workers** in the world:

62% of all workers in Luxembourg are in high-skilled employment⁷

Sources: ¹ Expat Insider 2017, ² INSEAD Global Talent Competitiveness Index 2018, ³ GFCI, ⁴ Eurobarometer & European Commission, ⁵ EF English Proficiency Index, ⁶ OECD 2017, ⁷ WEF



HUMAN SCALE, GLOBAL SKILLS



- Luxembourg is the **most multilingual country** in Europe with Luxembourgers speaking 3.6 languages on average.

- **7th** worldwide for **English language proficiency**.

Source: EF English Proficiency Index 2016



- The financial sector regulator accepts official **documentation** in **English, French or German**.

- **Company statutes** and articles of incorporation can be submitted in **English**.



- Extensive European **talent pool**: 4 million people within 1 hour commute of Luxembourg city.

- **Attractive tax regime** on salaries.

- **1st** – Largest share of **high-skilled workers** in the world.

Source: WEF



- A **comprehensive toolbox** of instruments designed for the needs of corporates and investors.



- Courts and lawyers have experience in dealing with contracts governed by **different legal systems**.



- **Employee productivity** is the highest in the European Union.

Source: Eurostat productivity index 2016



2nd Luxembourg ranks 2nd in the world for **attracting talent** and **3rd** in the world for **retaining talent**.

Source: INSEAD Global Talent Competitiveness Index 2017.

GROW YOUR BUSINESS, LIVE YOUR LIFE

The cost of living in Luxembourg is lower than central London, Paris, Frankfurt or Brussels.
Sources: EIU Cost of Living Index, 2017

75 lux-Airport provides **direct flight** service to 75 destinations.



The airport is

15 minutes
from the city centre.

1ST Luxembourg ranks **N°. 1** in **efficient and helpful administrative services**.
Source: Mercer's Quality of Living Survey 2016.

Family-friendly environment with a broad choice of private, public and **international**



schools



Best **tax-friendly city** worldwide to live for a family.
Source: Knight Frank's Global Lifestyle Review 2016.

1ST Luxembourg ranks **N°. 1** in the world for **personal safety** with 10 out of 10 for its low crime rate.
Source: Mercer's Quality of Living Survey 2016.

#1

best place for expats to build their careers

Luxembourg offers a **stable economy, safe jobs** and **healthy work-life balance**.
Source: Expat Insider Working Abroad Index 2016.



“

Luxembourg appeared as an obvious choice due to its central geographical location with less than an hour's flight from Pictet's headquarters in Geneva. The country also offers a large talent pool composed of experts in IT and finance, from Luxembourg and beyond. This is furthermore enhanced by the government's proactive and attractive policy in terms of granting European work visas to access international talent.

”

Vincent Eggen,
CEO, Pictet Technologies

PICTET TECHNOLOGIES

Awarded the "Best Workplace in 2018", Pictet Technologies operates a unique and agile software factory in Luxembourg for the entire Pictet group. Pictet Technologies combines operational excellence with the constant search for innovative solutions applicable to the world of digital banking.

Awards

The FinTech Awards Luxembourg is an annual competition awarding the most promising start-ups in financial technology from all over the world. It is a unique opportunity to gain in visibility within the financial centre while winning a monetary price of EUR 50,000.

Pitch Your Start-up is a start-up pitching competition organised in partnership with leading tech and financial sector players at ICT Spring Europe, Luxembourg's annual international ICT fair. Laureates can win a EUR 100,000 price.

“

As a FinTech company, Luxembourg offers a great ecosystem where you can develop yourself. Our products and services can easily be offered to clients anywhere in Europe, and the strategic position as well as the IT infrastructure of the grand duchy plays an important role in this. Moreover, we receive incomparable support from the government and from Luxinnovation, two factors which make the country the ideal birthplace for innovative enterprises and startups: Luxembourg has all the ingredients to become a major digital player in Europe.

”

Jean-Pierre Schmit,
CEO & Founder, Jemmic

JEMMIC

Jemmic is a FinTech company serving banks and financial institutions to accelerate their digital transformation and implement in a secure and agile way. Over thirty banks with a million online users rely on jemmic to securely authenticate their customers and offer them an integrated customer portal that can be made of the most heterogeneous application landscape.

“

Over the last 30 years, Luxembourg has developed a sophisticated economic environment to support the financial industry. The country is very well positioned for this, FinTechs are not only tested in Luxembourg but also implemented here.

”

Lee Godfrey,
CEO, Kneip

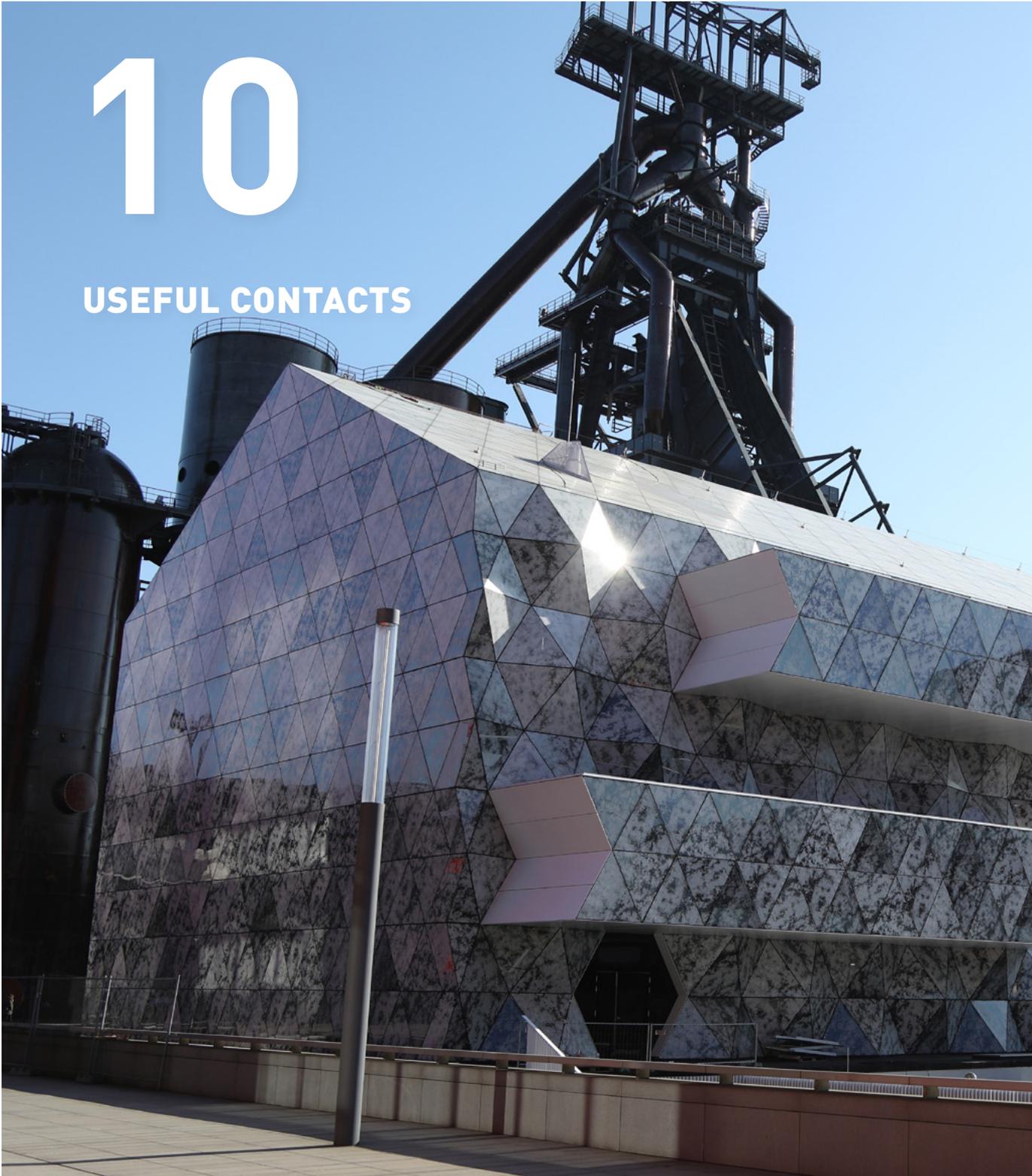
Kneip is a RegTech company providing data management and reporting solutions for the investment and insurance industry.





10

USEFUL CONTACTS



Luxembourg Government

www.gouvernement.lu

Digital Luxembourg

<https://digital-luxembourg.public.lu/>

Ministry of Finance

www.mf.public.lu

Ministry of Economy

(Invest in Luxembourg)

www.investinluxembourg.lu

Luxembourg for Finance

www.luxembourgforfinance.com

**Luxinnovation (National
Innovation Agency)**

www.luxinnovation.lu

**Luxembourg Financial Services
Regulator (CSSF)**

www.cssf.lu

Luxembourg Stock Exchange

www.bourse.lu

**Luxembourg Private Equity and
Venture Capital Association**

www.lpea.lu

**Association of the Luxembourg
Fund Industry (ALFI)**

www.alfi.lu

**The Luxembourg Bankers'
Association (ABBL)**

www.abbl.lu

**Luxembourg Insurance Regulator
(Commissariat aux Assurances)**

www.caa.lu

Insurance Companies Association

www.aca.lu

**Luxembourg House of Financial
Technology (the LHOFT Foundation)**

www.lhoft.com

**Luxembourg House of Start-ups
(HoST)**

www.host.lu

Nyuko

www.nyuko.lu

Technoport

www.technoport.lu

House of Entrepreneurship

www.houseofentrepreneurship.lu

Luxembourg FinTech Map

www.fintechmap.lu

**FEDIL Luxembourg Business
Federation**

www.fedil.lu

**The Intellectual Property Institute
Luxembourg (IPIL)**

www.ipil.lu

Luxembourg Chamber of Commerce

www.cc.lu

**Luxembourg Portal for Innovation
and Research**

www.innovation.public.lu

Luxembourg Business Portal

www.guichet.public.lu/entreprises/en

Luxembourg Future Fund

www.eif.org/what_we_do/resources/lff/index.htm

National Credit and Investment Company (SNCI)

www.snci.lu/en

Digital Tech Fund

www.exponcapital.com

Luxembourg Business Angel Network (LBAN)

www.lban.lu

InnovFin – EU Finance for Innovators

www.eib.org/products/blending/innovfin/index.htm

Fit4start

<https://fit4start.luxinnovation.lu>

Luxembourg Export Credit Agency (ODL)

www.odl.lu

The University of Luxembourg

www.uni.lu

Interdisciplinary Centre for Security, Reliability and Trust (SnT)

www.en.uni.lu/snt

Luxembourg Institute of Science and Technology (LIST)

www.list.lu

National Research Fund

www.fnr.lu

ABOUT LUXEMBOURG FOR FINANCE

Luxembourg for Finance (LFF) is the Agency for the Development of the financial centre. It is a public-private partnership between the Luxembourg Government and the Luxembourg Financial Industry Federation (PROFIL). Founded in 2008, its objective is to promote the expertise of the financial centre and the diversification of its services abroad through different communication channels.

The agency continuously monitors global trends and evolutions in finance to identify development opportunities for the Luxembourg financial centre and to serve different target markets and target groups. It is also the first port of call for foreign journalists. In cooperation with the various professional associations, LFF develops documentation on products and services available in Luxembourg and their relevant legal and regulatory framework. Furthermore, LFF organises seminars in international business locations and takes part in selected world-class trade fairs and congresses.

EDITORIAL CONCEPTION

Luxembourg for Finance

DESIGNED BY

Bizart

PRINTED BY

Print Solutions

PHOTO CREDIT

LFF, the LHoFT,
lux futurelab, uni.lu,

Michel Brumat /
University of
Luxembourg (p. 44 / 54)

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