

# Luxembourg

A perfectly connected host:

European Cybersecurity Industrial,
Technology and Research
Competence Centre

### Table of contents

Foreword	3
A digital hub for the European Union: strong synergies through the proximit	y to the
European Commission's digital pole and to the EuroHPC	5
Potential premises	6
A vibrant cybersecurity ecosystem	7
Excellent connectivity, security and interoperability with IT facilities	10
Accessibility	11
Excellent childcare and education in a naturally diverse and open system	14
Labour market and healthcare	17
A safe environment	19
Quality of life	19
Useful links	22

#### **Foreword**

By Prime Minister, Minister for Communications and Media, Minister for Digitalisation Xavier Bettel &

Minister for Foreign and European Affairs Jean Asselborn

The COVID-19 pandemic has further underlined the need to accelerate the digital transition in Europe. As agreed by the European Council of 1<sup>st</sup> and 2<sup>nd</sup> October 2020, enhancing the European Union's ability to protect itself against cyberthreats is part and parcel of a common effort to build a borderless and trusted digital single market.

Luxembourg fully subscribes to these objectives and the need to strengthen European competences in cybersecurity. An important step in this direction is the establishment of the European Cybersecurity Industrial, Technology and Research Competence Centre, which Luxembourg is offering to host.

As our societies have to rely on resilient and robust networks, Europe needs to step up its game to develop and deploy strong cybersecurity expertise in order to enhance trust and foster stability of our digital infrastructure and services.

Over the past decade, Luxembourg has become a perfectly connected digital hub of the European Union. Several European Commission Directorates and units in the digital area, part of DG Connect and DG Digit, are established in Luxembourg, and under its Digital Pole Initiative, the European Commission is locating more of its digital services in Luxembourg, thereby further enhancing a critical mass of knowledge and expertise in the Grand Duchy. Luxembourg is also home to the European High Performance Computing Joint Undertaking (EuroHPC), which allows the European Union and EuroHPC participating countries to coordinate their efforts and pool their resources. In Luxembourg, the European Cybersecurity Competence Centre will hence be part of a pre-existing and meshing European institutional digital ecosystem, which will in turn facilitate the creation of numerous synergies allowing for a rapid and cost-effective setting-up and running of the Centre.

The European Cybersecurity Competence Centre can draw furthermore on a very vibrant, open and inclusive national cybersecurity ecosystem. Over the past two decades, Luxembourg has become a fertile ground for more than 310 companies, including 75 start-ups that are providing cybersecurity services and products in Luxembourg and beyond. Thanks to the sector's steady growth, ICT specialists currently represent 5,4% of total employment, thus ensuring the availability of a large number of varied and cutting-edge skills on the market.

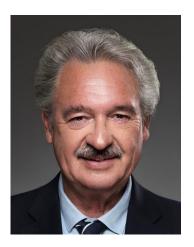
Luxembourg offers also exceptional connectivity secured by very fast, ultra-low latency connections and nation-wide coverage of ultra-high-speed broadband.

A welcoming and experienced host to European and international organisations, Luxembourg will provide not only perfect working conditions for the staff of the Centre, but also an ideal environment for them to thrive personally. Their families will find everything they need, from healthcare, childcare and education to culture, sports and employment opportunities in a city that has consistently been ranked one of the safest capitals in the world. Finally yet importantly, Luxembourg is the cradle of the European School system, founded here in 1953. The children of the Cybersecurity Competence Centre's staff will have the choice between attending one of the European Schools, various international schools or the local school system. Their access to the European Schools is guaranteed.

For all these reasons, and many more, Luxembourg is the right choice, the perfectly connected host for the European Cybersecurity Industrial, Technology and Research Competence Centre.



Xavier Bettel Prime Minister, Minister for Communications and Media, Minister for Digitalisation



Jean Asselborn Minister for Foreign and European Affairs

#### A welcoming and experienced host

As the first historic seat and one of the three European capitals, Luxembourg prides itself of being a welcoming and experienced host to European and international organisations.

As shown most recently with the setting-up of the EuroHPC Joint Undertaking and the European Public Prosecutor's Office, Luxembourg is able to draw on considerable experience and effective inter-ministerial cooperation and coordination in order to ensure the best living and working conditions for EU staff and their families and a swift operationalisation of the European Cybersecurity Competence Centre.

Experience in implementing Protocol No. 7 on the Privileges and Immunities of the European Union and in concluding a headquarter agreement is a given.

## I. A digital hub for the European Union: strong synergies through the proximity to the European Commission's digital pole and to the EuroHPC

#### Luxembourg, the EU's digital pole

Under its Digital Pole Initiative, the European Commission is locating more of its digital services together in Luxembourg, thereby further enhancing a critical mass of knowledge and expertise in Luxembourg. Thus, cooperation across these services is strengthened in four priority areas: (1) digital infrastructures; (2) data economy; (3) modernising public services and (4) digital solutions.

The Luxembourg Digital Pole hosts:

#### **DG CONNECT's:**

- Directorate C: Digital Excellence & Science Infrastructure;
- Directorate G: Data;
- Units A.1: Robotics & Artificial Intelligence, H.3: eHealth, Well-Being & Ageing and H.4: eGovernment & Trust.

In order to strengthen further the Luxembourg Digital Pole, DG Connect's Directorate H: Digital Society, Trust & Cybersecurity is to be moved to Luxembourg.

#### DG DIGIT's:

- Director General;
- Directorate C: Digital Workplace & Infrastructure;
- Directorate D: Digital Services;
- Unit S2: IT Security Operations, which includes the Computer Security Incident Response Capability.

Luxembourg is also home to the European High Performance Computing Joint Undertaking (EuroHPC), which allows the EU and EuroHPC participating countries to coordinate their efforts and pool their resources with the objective of deploying in Europe a world-class exascale supercomputing and quantum computing infrastructure and developing innovative supercomputing technologies and applications.

Luxembourg contributes furthermore extensively to the establishment of a network of European cybersecurity competence centres by actively participating in 3 out of the 4 pilot projects selected in the framework of the Horizon 2020 programme (Concordia, Sparta and CyberSec4Europe).

The immediate proximity of the new Centre to these relevant Commission services and EU bodies will enable an efficient and cost-effective setting-up and running of the new Centre and allow for strong synergies between the different entities. Locating the Centre in Luxembourg will allow in particular for the swift and efficient redeployment of relevant staff from the competent Commission services already present in Luxembourg.

#### II. Potential premises

Building on its long-standing experience as host to EU institutions, bodies and agencies, Luxembourg offers free of charge, tailormade, high-quality premises in a safe and secure environment.

Luxembourg has identified several suitable locations, which all offer major benefits in terms of access, security and proximity to the various relevant actors and decision-makers, be it EU institutions, bodies and agencies, competent European Commission services like DG Connect and DG Digit or the EuroHPC Joint Undertaking; be it national cybersecurity infrastructures and research facilities.

The European Cybersecurity Competence Centre will thus be able to take full advantage of the vibrant national, European and international cybersecurity ecosystem in Luxembourg.

Premises 1, which seem particularly well suited for the Centre, are located in the heart of Luxembourg's European Quarter at Kirchberg. The "Tower B" building is owned by the Luxembourg Government and is going to host, from January 2021 onwards, the permanent offices of the European Public Prosecutor's Office (EPPO), with very high security and safety standards in place. Once the new European Commission building Jean Monnet 2 is completed in 2023 and Commission services are regrouped again at Kirchberg, the Centre would also be located in the immediate proximity of relevant Commission Directorates and units in the digital area (DG Connect and DG Digit).

Several floors - 2400 m² gross floor area - have been reserved at this stage for the European Cybersecurity Competence Centre in "Tower B", which counts 18 floors overall, with the possibility for further expansions. The premises would be fully set-up and out-fitted according to the Centre's specific needs and in close cooperation and coordination with the Centre's staff. The work could start as soon as Luxembourg is selected as host for the Centre.

A team of experienced specialists from the Luxembourg Public Building Administration would be designated to this effect.

If requested, provisional offices, in particular for the staff in charge of getting the Centre set-up and running, could be provided too, at no cost. The Centre could thus become operational in a very short timeframe.

Premises 2 are located in the same building than the European High Performance Computing Joint Undertaking (EuroHPC), and in the immediate vicinity of the current offices of the Directorates and units of DG Connect and DG Digit in the Cloche d'Or neighbourhood, close to Luxembourg Central Train Station.

Premises 3 are located in the same building than Luxembourg's national Cybersecurity Competence Center (C3), right in the city centre.

All potential premises can take full advantage of the existing high-performing telecommunications and data storage networks as Luxembourg offers one of the highest densities of Tier IV certified data centres in Europe and acts as an ultra-low latency hub.

#### III. A vibrant cybersecurity ecosystem

Building on a 20-year strong experience in cybersecurity, Luxembourg offers world-class skills in this field. It has a very vibrant, open and inclusive national cybersecurity ecosystem, which constitutes an attractive environment for cybersecurity actors, notably by facilitating public-private partnerships. Some 310 companies, including 75 start-ups, are providing cybersecurity services and products in Luxembourg. Thanks to the sector's steady growth, ICT specialists currently represent 5,4% of total employment, thus ensuring the availability of a large number of varied and cutting-edge skills on the market. Luxembourg ranks 2<sup>nd</sup> worldwide and 1<sup>st</sup> among EU Member States in Cisco's 2019 Digital Readiness Index. The Grand Duchy also ranks 11<sup>th</sup> in the Global Cybersecurity Index.



#### A VIBRANT CYBERSECURITY ECOSYSTEM

#### SERVING THE PRIVATE SECTOR













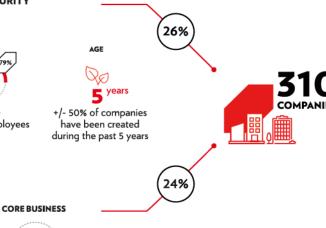


### COMPANIES WITH CYBERSECURITY AS A CORE BUSINESS

#### EMPLOYMENT









#### START-UPS

Start-ups represent more than 20% of the national cybersecurity ecosystem



One third of start-ups have cybersecurity as a core business

#### **DIVERSIFIED SOLUTIONS**

Luxembourg companies mainly specialised in risk identification and systems protection



#### **AMONG THE TOP 7 SOLUTIONS**

COVERING 61% OF THE NATIONAL MARKET, ARE: \*\*





Data security



Penetration testing



<sup>\*</sup> Based on the latest available figures from Editusdata and the LBR

<sup>\*\*</sup> Based on the categories from the ECSO Cybersecurity Market Radar Content of infographic: Luxinnovation

#### A top-notch digital infrastructure

Thanks to its first-rate digital infrastructure and its ambition to develop a state-of-the-art, sustainable and reliant digital economy, Luxembourg was selected by the EuroHPC Joint Undertaking as one of only eight sites in the European Union to host a peta-scale supercomputer. Through its own such high-performance computer, the MeluXina, Luxembourg can actively participate in the establishment of the European HPC network. This initiative will further support the digital transition of the economy by facilitating the competitiveness and innovation of companies, with a particular focus on SMEs and start-ups.

#### A laboratory for testing digital innovations and analysing emerging threats

Being located in the heart of a dynamic cross-border region incorporating five regions from four countries, Luxembourg constitutes a microcosm of Europe and is hence the perfect laboratory for testing digital innovations and analysing emerging threats. It is already engaged in cross-border cooperation with various entities such as universities and local companies in promoting experimental approaches around cybersecurity training or exploitation of research results through entrepreneurial initiatives. It also participates in the "European Cyber Valleys" pilot action for developing interregional cooperation on cybersecurity.

#### Digital skills promotion and research

In its national digital skills strategy, Luxembourg puts growing focus on advanced digital skills and encourages the deployment of a wide-ranging education and continuous training offer for a tech savvy population. The Government initiative "Digital Luxembourg" systematically supports advanced training programmes addressing skills needs in AI, blockchain and 5G. Luxembourg's cybersecurity actors are a natural ally in these efforts. Luxembourg actively promotes the Digital Skills and Jobs Coalition, a platform initially designed by the European Commission, which counts a growing number of active members comprising key actors from the cybersecurity field.

The European Cybersecurity Competence Centre will benefit from the University of Luxembourg's Interdisciplinary Centre for Security, Reliability and Trust (SnT), which conducts ICT research, including in cybersecurity, in a dynamic interdisciplinary research environment with some 320 experts from over 60 countries. By attracting talent from around the world and engaging in demand-driven research with local and international actors, SnT and the University of Luxembourg fuel the sector with talent and innovative ideas.

The Centre will benefit also from Luxembourg Institute of Science and Technology (LIST)'s IT for Innovative Services (ITIS), which conducts research in informatics and combines both scientific and applied research activities with some 120 skilled engineers and highly qualified researchers. On the scientific side, the team dedicated to cybersecurity focuses on modelling, designing and analysing new algorithms, protocols and systems for cyber-resilience. The research activities are supported mainly by funding from the national research fund and Horizon 2020 programme. On the applied science side, the research focuses on practical cybersecurity challenges, e.g. security and privacy issues in mobility, transportation and energy services as well as in emerging issues like 5G infrastructures, AI, blockchain and Distributed Ledger Technologies (DLTs), and their applications in both public and private sectors' innovative technologies.

European Cybersecurity Competence Centre staff members could be involved in teaching at the University of Luxembourg within the *Master in Information and Computer Sciences* or the *Master in Information System Security Management* and at the European Institute of Public Administration (EIPA) as well as taking part in the many events, workshops, seminars taking place in Luxembourg in the vibrant cybersecurity domain.

#### IV. Excellent connectivity, security and interoperability with IT facilities

Ranking 1<sup>st</sup> worldwide for ICT access in the World Intellectual Property Organisation's 2020 Global Innovation Index, Luxembourg remains fully committed to providing state-of-the-art infrastructure that is efficient and secure to support the development of a digital hub of excellence for the European Union.

#### Excellent ICT infrastructure

Luxembourg is highly regarded as a digital trust centre in Europe. It prides itself on its excellent ICT infrastructure in the field of connectivity and data centres.

Thanks to one of the highest densities of Tier IV certified data centres in Europe, Luxembourg is hosting extensive and green data centres, not only from a large number of EU institutions and bodies, including the European Commission, the European Investment Bank and the European Public Prosecutor's Office, but also from multiple organisations, including the NATO Support and Procurement Agency and the European Patent Office.

Luxembourg is also home to the world's first "data embassy" opened by Estonia. This fruitful and trust-based partnership highlights the collective potential of countries that embrace ICT cooperation.

Luxembourg's Tier IV data centres are designed to comply with the highest cybersecurity standards.

#### Strong connectivity

The highly fault-tolerant data centre landscape is built on strong and reliable connectivity: Luxembourg has the 3<sup>rd</sup> best connectivity in the EU, offering exceptional connectivity secured by very fast, ultra-low latency connections and nation-wide coverage of ultra-high-speed broadband. The Grand Duchy indeed acts as an ultra-low latency hub to both citizens and businesses, excelling in this field with 28 international fibre routes to main European hubs, served by 31 different carriers.

#### Luxembourg's Cybersecurity Competence Center

The primary mission of Luxembourg's national Cybersecurity Competence Center (C3) is to support companies in reaching a mature level of competence management in cybersecurity. It focuses furthermore on supporting the ecosystem maturation through initiatives aimed at developing new types of training, spotting and coaching emerging talents in cooperation with education institutions and research laboratories. One of its core goals is to ensure SMEs have access to affordable and meaningful tools and services.

Its experience can be most valuable to the European Cybersecurity Competence Centre and offer potential for collaboration in a comprehensive digital ecosystem.

#### V. Accessibility

Located at the very heart of Europe, Luxembourg stands at the confluence of the continent's main communication and travel routes: all of Europe is within easy reach by road, rail and air.

Direct flights are available to 85 destinations in Europe and beyond from Luxembourg's sleek, modern airport, which is known for its short queues, a mere 15-minute drive from the city centre.

Luxembourg is also well connected by road and train to European capitals and major destinations, including by TGV to Paris.

EU Member State	City	Flights	Frequency	Airlines	Flight Duration (in hours)
Austria	Vienna	direct	2/day	Luxair	01:50
Bulgaria	Sofia	transfer	several	Austrian, KLM, LOT, Lufthansa, Swiss	04:30
Croatia	Zagreb	transfer	several	Austrian, KLM, Lufthansa, Swiss	02:50
Cyprus	Nicosia	transfer	limited	Austrian, LOT, Lufthansa	04:00
Czech Republic	Prague	direct	3/week	Luxair	01:20
Denmark	Copenhagen	direct	2/day	Luxair	01:45
Estonia	Tallinn	transfer	several	KLM, LOT, Lufthansa, SAS	04:25
Finland	Helsinki	transfer	several	KLM, LOT, Lufthansa, Luxair, SAS	04:00
France	Paris-CDG	direct	3/day	Luxair	01:00
Germany	Berlin- Brandenburg	direct	3/day	Luxair, easyJet	01:30
Germany	Frankfurt	direct	4x daily	Lufthansa	00:40
Greece	Athens	direct	2/week	Aegean	02:50
Hungary	Budapest	direct	2/week	Luxair	02:10
Ireland	Dublin	direct	2/day	Luxair	02:30
Italy	Rome	direct	1/day	Luxair	01:50
Latvia	Riga	transfer	several	KLM, LOT, Lufthansa, SAS	03:55
Lithuania	Vilnius	transfer	several	KLM, LOT, Lufthansa, SAS	03:55
Malta	Valletta	transfer (direct flights starting April 2021)	several	Air Malta, Lufthansa	03:50
The Netherlands	Amsterdam	direct	2/day	KLM	01:10
Poland	Warsaw	direct	4/week	LOT	01:55
Portugal	Lisbon	direct	3/day	Easyjet, Luxair, Ryanair, TAP	02:45
Romania	Bucharest	direct	2/week	Luxair	02:20
Slovakia	Bratislava	transfer	several	CSA, Lufthansa	04:00
Slovenia	Ljubljana	transfer	several	Austrian, KLM, LOT, Lufthansa, Swiss	03:00
Spain	Madrid	direct	2/day	Luxair, Ryanair	02:10
Sweden	Stockholm- Arlanda	direct	1/day	Luxair	02:40

<sup>\*</sup> As throughout Europe, the flight schedule is currently subject to adjustments due to Covid-19.

Concerning accessibility by free public transport from Luxembourg airport to the Centre's premises: several bus lines run at 5 minutes interval during peak times and at 10 minutes interval during the rest of the day from the airport, via the European Quarter, where *inter alia* the "Tower B" building, which is being proposed as one of the potential premises, is located, to the city centre and Luxembourg Central Train Station.

Luxembourg is the world's first and only country to offer free public transport: bus and train rides throughout the country and in the near border regions are free of charge.

The tram line, operational since 2017, is currently being extended to connect the city centre of Luxembourg to the Central Train Station by December 2020, key residential and business districts by 2022 and to the airport by 2023.

Like bus and train transport, tram rides are free of charge.

Luxembourg City's network of cycle lanes and bike-hire stations continues also to grow, encouraging "soft mobility" and complementing the 1.000 km of cycling routes criss-crossing the country.

#### Hotel infrastructure

Luxembourg offers a wide variety of hotels, ranging from family hotels and boutique hotels to international hotel chains. There is a large number of business hotels known for their remarkable historic setting as for the modern convenience and comfort in and around the Luxembourg City. Located close to the city airport, in the city centre or set in the countryside, more than 7.300 hotel rooms are available throughout Luxembourg. New projects are under way that will increase capacity further.

#### Conference and meeting infrastructure

More than 100 event and conference venues of different sizes, equipped with the latest communication facilities, are available all over the Grand Duchy, ready to host smaller as well as larger events up to 6.000 people. Venues range from high-tech modern conference venues such as the European Convention Centre Luxembourg, the meeting venue of the Council of the EU, ideally located at the heart of the European Quarter, or the *Luxexpo The Box*, a perfect venue for all types of events and trade shows (with multiple halls, the largest one ranging up to 6.400 m²), to smaller, alternative sites. Many venues are modular and can be tailored to accommodate individual needs. Given the size of the country, they are easily accessible, allowing for a flexible use of space and efficient time management.

The Luxembourg Convention Bureau can assist business events' organisers when planning an event. The bureau is a non-profit organisation that provides free resources, information and support for those planning business events including meetings, conventions and conferences. A dedicated website has been set up in this regard: https://www.business-events.lu/.

#### VI. Excellent childcare and education in a naturally diverse and open system

#### Childcare

Childcare in Luxembourg is affordable, multilingual and accessible: with up to 20 hours of free childcare available per week for every child, from birth to the age of four, all children are given the best opportunities, even before school age.

There are currently 532 public and private nurseries in the Grand Duchy, all subject to the same high standards and with most of the staff being at least bilingual.

#### High-quality primary, secondary and tertiary education

What sets education in Luxembourg apart is the multilingualism at its core. Given that more than 60% of pupils and students come originally from outside of Luxembourg, multilingualism ensures that education is inclusive.

Learning more than one foreign language to a high level is the norm in Luxembourg. Indeed, in the country's public-school system, all students learn at least three foreign languages: German, French and English, with the option to learn additional languages later on in the curriculum.

#### European, international and local schools

The Luxembourg education system stands out for its wide choice of multilingual schooling options. The Cybersecurity Competence Centre's staff will have the choice between the European Schools, public or private international schools and the local multilingual school system. Access for their children to both European Schools located in Luxembourg is guaranteed.

Since over 60% of pupils in the Grand Duchy are non-Luxembourg natives, the public and private schooling system is geared towards catering for the needs of the country's international population:

#### European Baccalaureate

#### - European Schools of Luxembourg (ESL)

The very idea of a European School was born in Luxembourg in 1953. The first European Baccalaureate was awarded here in July 1959 and the qualification was recognised as fulfilling basic entrance requirements by all the universities of the EU Member States and beyond.

There are two European Schools in Luxembourg, one in Kirchberg (ESL 1) and the other in Bertrange/Mamer (ESL 2). Both campuses follow the same syllabus and share the same administrative structure. Both schools offer nursery, primary and secondary levels. Both Schools have English, French and German speaking sections and teach Irish. Pupils of the following mother tongues and sections are enrolled automatically in the ESL 1: Bulgarian, Dutch, Estonian, Finnish, Latvian, Lithuanian, Polish, Portuguese, Spanish, and Swedish, whereas pupils of the following mother tongues and sections are automatically enrolled in the ESL 2: Czech, Danish, Greek, Hungarian, Italian, Maltese, Romanian, Slovenian, Slovakian and Croatian.

Luxembourg also has four international public schools accredited by the European School system, in Differdange/Esch-sur-Alzette, Clervaux, Junglinster and Mondorf-les-Bains, covering the nursery, primary and secondary levels, all with French, English or German sections. Luxembourgish is also taught at these schools.

#### International Baccalaureate (IB) – English/French

The <u>International Baccalaureate diploma</u> (IB) is a classic diploma offered by 2.500 secondary schools in 140 countries worldwide, in three languages: English, French and Spanish. In Luxembourg, both French and English are available.

#### Private schools:

- <u>International School of Luxembourg</u> (IB in English)
- <u>Ecole Waldorf</u> (IB in French)

#### Public schools:

- Lycée technique du Centre (IB in French)
- <u>Athénée de Luxembourg</u> (IB in English)

#### A-levels and IGCSE

- St. George's International School

St. George's International School Luxembourg welcomes students of all nationalities between the ages of 3 to 18+ years, whose parents require an English speaking, international education for their children. The school follows the precepts and practices of the National Curriculum of England and Wales, leading to I/GCSEs (International General Certificate of Secondary Education) and A (Advanced) levels.

- English classes at the International School Michel Lucius

The public International School Michel Lucius enables students to follow all subjects in English and choose French and/or German as a second or third language. It caters for both international and local students wanting to follow an international education. The syllabus prepares the students for the following qualifications:

- International General Certificates of Secondary Education (IGCSE);
- Advanced Subsidiary levels (AS-levels);
- Advanced levels (A-levels).

#### French diplomas

- Vauban – Ecole et Lycée français de Luxembourg

The Lycée Vauban follows the national French education syllabus and is certified by the French Ministry of Education. It belongs to the Agency for French Education Abroad (AEFE) network and

welcomes pupils from 3 to 18+ years. The school is located in a new campus, bringing together pupils from the "maternelle" to the "terminale" (French Baccalaureate).

#### - École privée Notre Dame Sainte Sophie (EPND)

The EPND offers elementary school education as well as years 6, 5 and 4 of the French collège. The EPND is also certified by the French Ministry of Education.

#### - École privée Grandjean (EPG)

The *EPG* prepares pupils for the Brevet d'études professionnelles "Métiers des Services Administratifs" (professional studies for administrative services) and for the STMG degree (Sciences et technologies du management et de la gestion --- sciences and management technologies and management).

#### German and Luxembourgish diplomas

#### - Lycée germano-luxembourgeois de Schengen

The Lycée germano-luxembourgeois de Schengen in Perl welcomes students from Germany and Luxembourg. It combines elements of the two school systems. The language used for lessons is mostly German. Some subjects are taught in French.

#### Certifications:

- certificate of completion of compulsory schooling (Hauptschulabschluss);
- "mittlerer Bildungsabschluss", at the end of year 10;
- Baccalaureate (Abitur), simultaneously with the end of secondary school certification;
- Administrative and commercial technical diploma.

The recognition of diplomas by both countries is guaranteed.

#### Higher education

In terms of higher education, students based in Luxembourg have access to six universities, within a 100km radius, as part of the University of the Greater Region (UniGR) network: the Saarland University, the University of Liège, the University of Lorraine, the University of Kaiserslautern, Trier University and the University of Luxembourg (Uni.lu). Hence, the opportunities for students and PhD candidates are manifold as they have free access to research facilities of partner universities, may enroll in courses and take exams at partner universities and even see their travel costs within the Greater Region reimbursed. The study programmes of partner universities include but are not limited to law, medicine, social sciences, philosophy, architecture, literature, mathematics and digital studies.

Founded in 2003, Uni.lu is ranked number 12 of the world's young universities by the 2020 Times Higher Education. It offers a multilingual environment, an international atmosphere and a research-oriented curriculum.

Uni.lu has three faculties and three interdisciplinary centres:

- The Faculty of Science, Technology and Medicine (FSTM)
- The Faculty of Law, Economics and Finance (FDEF)
- The Faculty of Humanities, Education and Social Sciences (FHSE)
- The Interdisciplinary Centre for Security, Reliability and Trust (SnT)
- The Luxembourg Centre for Systems Biomedicine (LCSB)
- Luxembourg Centre for Contemporary and Digital History (C2DH)

Students can also choose between a number of private universities, including foreign universities present in Luxembourg, such as Miami University (Ohio), Sacred Heart University, Luxembourg School of Business or the *Institut Supérieur de l'Économie* (ISEC).

#### VII. Labour market and healthcare

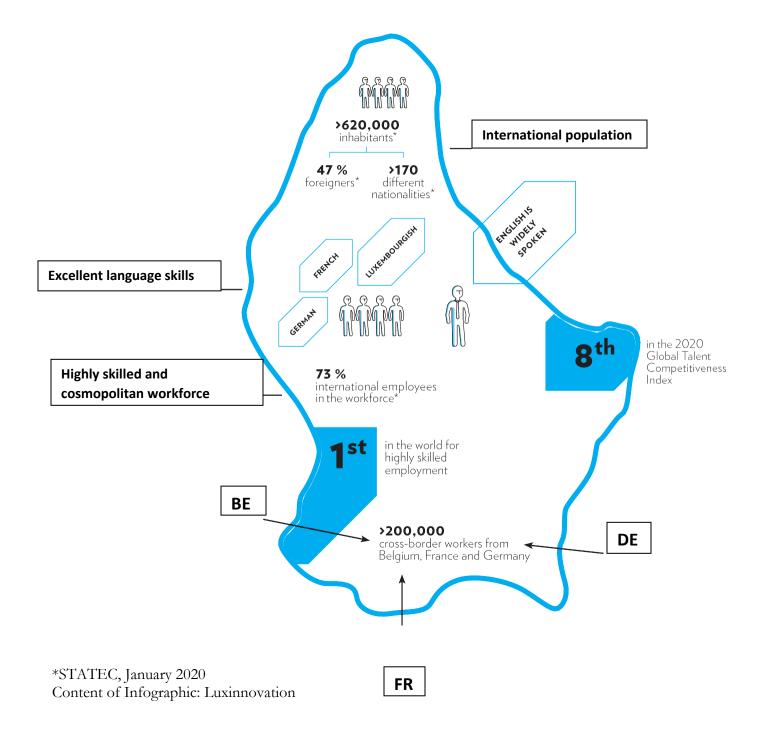
#### A dynamic labour market with an international, highly-skilled workforce

Partners and spouses will find that the Luxembourg labour market is very dynamic and very international. It mirrors the country's diverse population: it is a melting pot of cultures and nationalities, with the highest share of high-skilled workers in the world as 6 in 10 workers hold a job that requires tertiary education skills (World Economic Forum's 2015 Human Capital Study).

It also has the largest cross-border labour market in the EU, with more than 200.000 daily commuters from its three neighbouring countries. Due to the country's diverse economy and its international scope, the choice of job openings is broad, especially for people used to a cosmopolitan environment. Luxembourg has been ranked the number one country, globally, for economy and job security (Expat Insider 2019) and among the best locations for expat families looking for an improved quality of life (OECD).

Aside from being a high-level financial hub, Luxembourg has become a globally recognised hub for information and communication technologies (ICT) and a centre of excellence in cyber security and data protection. It equally offers a wide range of possibilities in other sectors ranging from more traditional sectors such as manufacturing and logistics to more forward-looking ones such as space exploration and start-ups. The life sciences sector is also rapidly expanding in the Grand Duchy and attracting researchers from across the globe. The "Creative Industries Cluster" managed by the Ministry of the Economy/Luxinnovation brings together actors in the field of creative industries in the Grand Duchy to increase their visibility and enhance their innovation potential. It is fair to say that everyone working in Luxembourg will cater to an international clientele. The economy is rooted in this multilingual environment, which makes it easily accessible for newcomers.

Partners and spouses can register as jobseekers with the national employment agency (ADEM, *Agence pour le Développement de l'Emploi*). A personal employment advisor will deal with each individual file and assist in terms of job hunting and careers advice. Alternatively, it is possible to make use of the large network of professional headhunters established in Luxembourg.



#### Healthcare and social security

Luxembourg has a generous social security system and world-class healthcare, with an extensive network of hospitals and assistance and care at home.

The Centre's staff, their spouses and children are covered by the medical insurance provided by the EU's Joint Sickness Insurance Scheme (JSIS). If spouses work in Luxembourg for an employer other than the EU institutions, bodies and agencies, they are covered by Luxembourg's generous social security system, which is among the broadest in the world.

Doctors in Luxembourg regularly consult in English, French and German. Beyond, there are doctors happy to consult in other languages (some 25 different ones).

During the COVID-19 pandemic, Luxembourg's health-system has proven extraordinarily resilient and flexible. The country has rigorously pursued a large-scale testing strategy, in line with the recommendations of the European Centre for Disease Prevention and Control (ECDC), containing the virus at manageable levels. Early on during the pandemic, Luxembourg was also quick to react in solidarity with France by welcoming intensive care patients from the Grand Est region to Luxembourgish hospitals.

#### VIII. A safe environment

Luxembourg is an exceptionally secure and stable place to live and work. Here, new arrivals and their ventures find a welcoming, dynamic and inspiring environment. Whether you are starting a family, building a business or founding an institution, Luxembourg allows you to think long term.

The values of neighbourliness and friendship are as important to the Luxembourgish national identity as international partnerships and alliances. These ideas transcend the political, economic and social spheres and are confirmed by study after study.

For many years, Luxembourg has consistently ranked as one of the safest capitals in the world, topping the 2019 Mercer quality of living survey in terms of safety.

#### IX. Quality of life

Luxembourg is an attractive place to live and offers an excellent work-life balance. Parks and green spaces make up half of the capital, Luxembourg City, whose old quarters and its medieval fortress are a UNESCO World Heritage Site. Short commutes make it possible to maintain a healthy and well-balanced family and social life.

A well-marked network of hiking routes, cycle paths and mountain bike tracks throughout the countryside is available for outdoor pursuits. Luxembourg's location in the heart of Europe makes it the ideal starting point for visiting its neighbouring countries Germany, France and Belgium. Amateurs of sports will find a plethora of leisure activities to accomplish, from climbing and cycling, to nautical sports and aviation, combining physical challenges with entertainment for both young and old. Modern gym facilities, Olympic sized swimming pools, wellness, health and spa centres throughout the country allow one to get away from everyday life within 15-30 minutes of one's home.

Restaurants offer something for everyone, including the most Michelin-starred restaurants per capita in the world.

The cultural offering is rich and the mind-set resolutely international; a true reflection of the diverse and multicultural population of Luxembourg.

Top-notch infrastructures offer a varied range of major events, be they classical, jazz or world music, with the world's top conductors and orchestras at the acclaimed *Luxembourg Philharmonie*, live opera, dance and theatre productions at the capital's *Grand Théâtre*, rock, pop and indie concerts at the *Rockhal*, open-air festivals in summer or contemporary art at *MUDAM* or *Casino Forum d'Art Contemporain*.

It's no surprise then that Luxembourg City has been European Capital of Culture twice and that in 2022, it will be the turn of the city of Esch-sur-Alzette.

These and many other factors make that 96% of residents are highly satisfied with life in Luxembourg (Eurostat "Urban Europe") and that the staff of the European Cybersecurity Industrial, Technology and Research Competence Centre will feel right at home.

## Luxembourg, a perfectly connected host for the European Cybersecurity Industrial, Technology and Research Competence Centre

- It is a digital hub for the European Union, hosting several European Commission directorates and units in the digital area and the EuroHPC Joint Undertaking;
- It has long-standing experience as the seat for numerous EU institutions, bodies and agencies;
- It offers free of charge, tailor-made, high-quality premises in a safe environment;
- It boasts a dynamic and open cybersecurity ecosystem;
- It offers state-of-the-art, high-performance and secure IT infrastructure;
- It is located at the heart of Europe with direct connections to over 85 European destinations and free country-wide public transport;
- It enjoys an exceptional quality of life;
- It stands out for its wide choice of multilingual schooling options, including European Schools;
- It has a dynamic labour market offering an impressive choice of job openings for non-nationals;
- It offers one of the best and most generous healthcare systems in the world.

#### Useful links

#### Cybersecurity in Luxembourg

https://cybersecurite.public.lu/fr.html

https://securitymadein.lu/

https://www.c-3.lu/

https://www.cases.lu/

https://www.circl.lu/

https://www.cert.lu/

#### Administrative support

https://guichet.public.lu/en.html

#### Education

http://www.euroschool.lu/site/

https://men.public.lu/fr/secondaire/offre-scolaire-organisation/offre-scolaire.html

https://men.public.lu/fr/enfance/01-vaste-offre.html

www.islux.lu

www.st-georges.lu

www.vauban.lu

https://wwwen.uni.lu/

https://www.lifelong-learning.lu/Accueil/en

#### Job Centre

www.adem.public.lu

#### The Grand Duchy

https://www.visitluxembourg.com/en

https://gouvernement.lu/en.html

