

# The future of data centres in Europe

## Luxembourg: Where Else?



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# Editorial



**François Biltgen**  
Minister for Communications and Media

Dear reader,

The digital economy is built on huge amounts of data. Electronic data is growing at an exponential rate. The demand for data centre space and connectivity has rocketed these last few years. With new trends like cloud computing and e-archiving, ever larger data hubs are required.

This is not only a challenge, but, for Luxembourg, it is a tremendous opportunity. During the last years, Luxembourg has indeed become a renowned centre of excellence for ICT and data handling. It is firmly committed to continue its fast yet sustainable development in this area.

Conditions were excellent from the start. Luxembourg is a pioneer when it comes to media and communication. Blue chip companies like RTL, SES Astra or Skype were founded in Luxembourg and are still headquartered in the Grand-Duchy. In addition to these companies, the Luxembourg financial sector relies heavily on highly efficient and secure international connectivity. Thus, Luxembourg is in an ideal position to become a data hub, providing ideal storage facilities for all kinds of content and data.

The Government, as well as the private sector, made huge investments in order to make good use of this asset and become a substantial player in the European ICT and data markets.

As a result, first-class communication networks and award-winning data centre space in Luxembourg have exploded in recent years. Their number tripled over the last decade, with some new data centres already working on extension projects.

Luxembourg's data centres enjoy an excellent, redundant, connectivity. A large number of these data centres offer the whole Tier-IV design, built to support the country's corporate and banking sector with highly secure facilities.

What's more, this sector has attracted a highly qualified workforce to Luxembourg, thus creating an extraordinary pool of excellence.

The technical infrastructure was matched with a business-friendly regulatory framework. In order to be a good “host” to these masses of precious data, Luxembourg has shaped innovative intellectual property laws.

Today, Luxembourg is well positioned when it comes to international benchmarks. For instance, it ranks at the top in a recent study undertaken by the International Telecommunication Union, where we are seen as the second most developed ICT country.

The Government recently launched a new strategic plan in order to substantially boost the ICT infrastructures and make the Internet in Luxembourg even faster. Our aim is to rapidly connect all the commercial activity zones by redundant fiber, and to offer fiber to the home to 100 percent of our population, providing 100 Mbit/s Internet connections for every household by 2015 and 1 Gbit/s connections by 2020.

On top of this, the Government has integrated information security and high performance telecommunication networks as new R&D priorities.

With its first-class ICT infrastructure located at the heart of Europe, Luxembourg is now a global hub presenting a highly efficient business environment to those companies wishing to develop their European activities in the field of data handling.



**François Biltgen**  
Minister for Communications and Media

# Executive summary

Supporting the continuous digitalisation trend over the last 10 years, the data centres industry has been acting as a key business enabler.

Data centres are strategic to the development of most dynamic and promising sectors such as entertainment & media, biotechnologies & health or e-commerce, but also clean technologies in relation with the specific infrastructures being put in place.

From a European perspective, data centres play a highly strategic role, as economic growth drivers are directly tied with data intensive industries: half of European productivity growth over the past 15 years was driven by information and communication technologies.

For countries placing economic growth at the forefront of their agenda, the ability to create an adequate business eco-system for ICT intensive companies is of paramount importance.

For this reason Luxembourg has defined its data centres offer as a key component in its development strategy for over five years. The recently adopted EUR 100 million ICT infrastructures investment plan is a direct illustration of this commitment.

## **Government actions focus on two main areas:**

- Developing state-of-the-art infrastructures; and,
- Implementing an efficient regulatory framework.

## **Luxembourg positioned itself as a key platform for:**

- ICT intensive companies targeting the European market; and,
- Data centres.

This brochure should serve as a guide to discovering the main driving forces at work shaping both the data centres industry and its main client industries. Next, it brings up the Luxembourg business case by presenting the competitive advantages it developed to become a highly strategic location for data centres willing to capture the European market.

# A. Market outlook

## 1. Driving forces

Efficiency, agility, security, reliance, outsourcing or bandwidth are key words when talking about data storage and management. They are the main driving forces explaining the steadily increasing demand for data centres services over the last 10 years.

Dematerialisation or the so-called digitalisation trend is the other underlying force at work. This trend implies a conversion of hard documents into soft and versatile data – turning financial institutions into integrated IT systems or R&D centres into IT simulation platforms.

From a business standpoint, those forces represent a tremendous opportunity to optimise production and management processes and achieve significant efficiency and reliance gains at all corporate levels.

## 2. Leading industries

Having a look at the current economic landscape, most of the industries which have promising growth prospects are highly ICT intensive:

- Entertainment & Media;
- Biotechnologies & Health;
- e-commerce.

They provide a clear indication of the main current and future markets for the data centres industry.

Understanding and targeting these sectors are of particular importance for data centre players who intend to anticipate customers' needs and growth patterns.



## Entertainment and media

Representing an estimated USD 477 billion market in Europe only for 2010, the entertainment and media industry is undergoing significant changes: as the digital migration seen to date continues to expand and accelerate, over the next five years, digital technologies will become increasingly pervasive across all segments of this industry. In the medium term, there will be “no hiding place” from the impact of digitalisation.

The change will occur and manifest itself across three parallel dimensions:

**Economic:** The current economic environment will accelerate and intensify the migration to digital technologies among both providers and consumers of content in order to streamline business processes at all value chain levels (content production, management, broadcasting, etc.)

**Consumer behaviour:** The new consumption habits and so-called digital behaviours will accelerate and reinforce the migration to digital technologies. Mechanically, this trend will further increase requirements for data storage and management as consumers are increasingly seeking:

- Higher value from their entertainment and media choices; and,
- More control over where, when, and how they consume content.

**Advertising:** As digital behaviours become more widespread and embedded, a new generation of ad-funded revenue models will emerge, aiming to reflect and capitalise on the evolving consumption habits by delivering advertising that is more targeted and relevant to a specific audience. This increased refinement in customers targeting is based on new ICT tools leveraging the growing amount of customer-related information.

In the coming years, digitalisation will continue to reshape the entertainment and media landscape at all value chain levels. This structural change will have a tremendous impact on the data centres industry, requiring increased versatility and capacity.

### SES, the world's pre-eminent satellite operator

SES operates a fleet of more than 40 satellites reaching 99% of the world's population. These spacecrafts transmit more than 13,000 services each day and keep billions of people connected all over the world. As a leading satellite operator, SES applies the highest standards of performance and reliability to its infrastructures and technologies.

SES headquarters and operations are based in Luxembourg, benefiting from cutting-edge infrastructures and a competitive regulatory framework. Broadcasting of television channels is a major source of revenue for the SES group.

## Biotechnologies, Health and Patient Management

As a combination of the living and technology, biotechnologies is one of the most demanding industries for ICT players.

The ability to store, access, manage and process significant amounts of critical data – which can range from DNA information to protein behaviours – is of critical importance for companies involved in this field.

The potential of biotechnologies should not be underestimated. Significant developments for mass market applications are ongoing, especially in the fields of diagnostics and genetics.

For example, personalised medicine; the use of information about a person's genes, proteins, and environment to prevent, diagnose and treat disease, is a promising field of research which is becoming mainstream.

Implications are clear for the data centres industry: biotechnologies require tremendous amounts of information to be stored, managed or processed with the highest security requirements.

Also, biotechnologies research centres are typically concentrated in specialised clusters. In those specific locations, data centres are playing a strategic supporting role to those organisations.

The health sector is also at a turning point. Patient electronic medical records, and therapy management decision support systems are progressively revolutionising this sector. These tools are of pivotal importance when it comes to providing optimal therapy to chronic and complex diseases such as cancer, HIV, and hepatitis.

Acting as key business enablers, data centres support to the patient medical record and therapy support revolution is key. To quantify this change, Global Industry Analysts expect the electronic medical record market to reach USD 1.4 billion by 2015 in Europe.

Source: PwC – Diagnostics 2009 – Moving towards personalised medicine, Global Industry Analyst

### Advanced Biological Laboratories (ABL)

ABL's vision is to help improve the quality of care for people living with HIV, Viral hepatitis, Tuberculosis, Cancer, Neurology and Cardiovascular chronic diseases by assisting their healthcare providers with specific therapeutic decision support and medical record systems that use the latest medical research and expertise in the field.

Among the products offered by ABL, TherapyEdge-HIV is a HIV specific PC and Web-based patient record, monitoring and reporting system with built-in decision support. As a Client-Server application, it can be easily used by doctors for taking decisions on the optimal anti-HIV therapy to be administered to the patients as it provides a user-friendly report including the possible options to be considered for the therapy. The architecture of this tool is designed around an extensive patient database combined with scientific evidence, the most recent therapy guidelines, algorithms and multiple IT based functionalities to optimise data management and reporting.

By developing this product, ABL pioneered the field of "Clinical Informatics" with a system that uses medical records to provide advanced decision support at the point of care. ABL uses several data centres, to secure data saved on the TherapyEdge servers and also to transfer data from partnered databases to respective hospitals and clinics using the TherapyEdge platform. In the future, ABL is exploring the hosting of its applications through optimally equipped data centres offering the highest security and confidentiality standards.

Used in more than 32 countries, this system is currently implemented in the EU project "European HIV resistance" which is a prospective project to manage 4000 newly infected HIV patients in all Europe. It is also used in 75 clinics in South Africa and other developing countries to contribute towards optimal management of HIV and TB infected patients.

Located in Luxembourg, ABL is leveraging the international talent pool available in the Grand Duchy by combining high-profile scientist and technical experts to develop cutting-edge technologies.

## e-commerce

In May 2010, the European Commission released the Digital Agenda; an action plan to boost Europe's prosperity and well-being to achieve the Europe 2020 strategy. This agenda lays the foundations of Europe's digital future. Among the seven priority areas for actions it presents, the creation of a digital single market is at the top of the agenda.

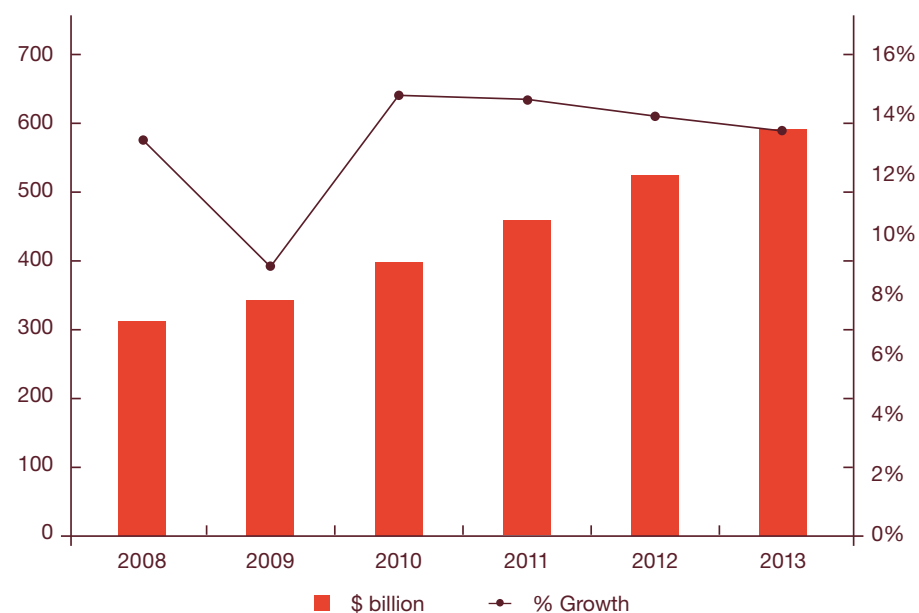
Also, one month before the release of the Digital Agenda, in April 2010, the Ministers of Telecommunications of the European Union unanimously approved the Declaration of Granada, which defines the comprehensive broadband coverage in the EU by 2013 and the removal of regulatory obstacles for cross-border transactions as strategic priorities.

This political commitment illustrates the European consensus around the importance of the emergence of the European e-business single market. As of today, most Internet-based transactions take place within the boundaries of each country. This sub-optimal market structure naturally favours national players and reduces competition. With the Declaration of Granada, major legal and technological barriers will be removed, favouring a more integrated e-business landscape, as well as easier access to the European market as a whole for leading e-business players.

Those players will have to locate operations in strategic locations offering the best infrastructures, costs and resource pools to penetrate the European market as a whole.

As a consequence Luxembourg, benefiting from its international resources pool, its unique infrastructures and its central location at the heart of Europe, is a place of choice for e-commerce players willing to establish or reinforce their presence on the European market.

Global Internet Retail Sector Value Forecast \$ billion, 2008-2013



Source: Spain Presidency EU website, Datamonitor – March 2009, European Commission – Digital Agenda – May, 2010

## Other ICT-intensive sectors

Digitalisation is a prevailing trend impacting most industries at various value chain levels. Among highly ICT intensive sectors, the financial services industry, the automotive industry or logistics industry are subject to major changes. Key fields impacted are typically paper based business processes, supply chain management and research & development.

Historically, the financial sector is highly demanding with the data centres industry, especially in terms of data security and reliability. Over the last decade, by shifting from hard to soft copies, it illustrated how digitalisation is impacting business models. Internally, the vast majority of business processes are now IT based; and, externally, from a customer's perspective, digitalisation drastically changed commercial relationships, as all operations can be conducted online (from trading to international cash transfers). In the most advanced cases, banks are fully dematerialised and only operate via Internet based interfaces.

The automotive sector illustrates the impact of digitalisation in industry related sectors. Key business processes are streamlined via ICT interfaces. For example, by using CAD – Computer-Aided Design – tools to design & test parts or products, research and development services are now heavily relying on simulation models and statistical series. In addition, all technical specifications are stored and managed in electronic format. Data storage confidentiality and reliability are key words in this industry.

The logistics industry is undergoing major changes. Thanks to innovative ICT tools, it achieved significant efficiency gains by improving supply chain management. Product tracking and process optimisation enabled reductions in delivery time and costs. On the customer side, the ability to monitor the location of products and expected delivery date or stock levels enabled improved inventory tracking and management. This trend is expected to further impact the industry, as new technologies are spreading across the industry such as radio frequency identification (RFID).

The different industry trends presented in this “Market outlook” section aim to illustrate how digital technologies are becoming an everyday component of businesses and consumers' life in numerous mainstream industries. Implications for data centres are clear: demand for data storage services related to those industries will further increase and require high levels of versatility, security and reliability at competitive prices.

From a business standpoint, Luxembourg is able to offer a unique value proposition to data centres aiming at responding to this growing demand: its advantageous location combined with its state-of-the-art infrastructures, unique resources pool and flexible regulatory framework enables data centres players to penetrate the European market from a central and highly competitive location.



# B. Luxembourg: a prime business location for data centres in Europe

By implementing a voluntary policy to favour cutting-edge connectivity networks and data centres deployment in the Grand Duchy, Luxembourg became highly attractive to ICT intensive companies willing to access the European market.

Historically, data centres located in Luxembourg were mainly related to the financial industry.

Due to this very specific client profile and the stringent service and technical performance levels they required, local data centres have developed the ability to design tailored services delivering high customer value (see part A. Market outlook).

This ability to create an industry specific value proposition enables Luxembourg's data centres to be typically positioned on the short list of the most dynamic and promising ICT intensive sectors such as entertainment & media, biotechnologies & health or e-commerce (see part A "Market outlook").

Moreover, to address the increasing demand, data centres are continuously investing to reinforce this positioning.

## 1. Leading data centre industry

As of January 1, 2010, a network of more than 15 data centres is present in Luxembourg. Thanks to those infrastructures, Luxembourg is home to one of the best data centre parks in Europe.

The data centre park in Luxembourg is split into two equal groups: 50% offering Tier IV design service level (the highest existing level) and 50% in Tier III, just one grade below.

At least 70% of the 207,743 ft<sup>2</sup> (19,300 m<sup>2</sup>) of new IT space planned to be operational by 2013 will meet the Tier IV design standard. This will bring the total IT space available in Luxembourg up to 486,540 ft<sup>2</sup> (45,200 m<sup>2</sup>).

As a result of the Luxembourg government's efforts for ICT, globally Luxembourg offers the second most advanced ICT economy.

### 2009 Ranking

- 1<sup>st</sup>** Among 28 countries for share of ICT-using occupations in the total economy
- 1<sup>st</sup>** European city for economic perspective until 2015
- 2<sup>nd</sup>** Among 159 countries for the most advanced ICT economy
- 5<sup>th</sup>** Among 159 countries regarding lowest ICT tariffs

### Most connected OECD country

Luxembourg is ranked 1<sup>st</sup> out of the OECD countries in terms of the number of communication access paths, of which it has 222 per 100 inhabitants. These include analogue, ISDN lines, DSL cable modem, fiber and mobile subscribers.

Source: OECD Information Technology Outlook, Institute FERI / CAPITAL, International Telecommunication Union (ITU), Information and Innovation Foundation (ITIF) & European-American Business Council, Luxembourg for ICT

### Connectivity infrastructures

Luxembourg benefits from its high capacity networks connected to the major European hubs:

**LuxConnect:** offers connectivity to the major international Internet exchange points of Amsterdam, Frankfurt, Paris and Brussels with a capacity of up to 80 x 40 Gbits.

**TERALINK:** P&TLuxembourg's international high-speed fiber network, is accessible from Luxembourg and currently spans across 5 different countries including Germany, France, England, Belgium and the Netherlands. This network connects the leading European Internet exchange points and, with its current 15 PoPs in these countries, allows us to access all major worldwide networks and to deliver redundant high-speed connectivity across borders. TERALINK offers up to 88\*40 Gbit/s between all its network's PoPs.

**Cegecom (artelis):** this fibre optic network is connected to the most important European hubs. It has enabled the set-up of a secured loop linking Luxembourg, Saarbrücken, Frankfurt, Brussels and Luxembourg again to allow a circular connection guaranteeing the permanent availability even if one section of the service is interrupted.

Besides the connectivity offer from the Luxembourg companies as mentioned above, a vast number of international operators provide connectivity to their own European or worldwide network.

— Lux Connect  
— Teralink  
— Cegecom



Source: International Telecommunication Union (ITU), Luxembourg for ICT, LuxConnect

## 2. Cutting edge infrastructures

The ICT infrastructures developed in Luxembourg were designed to meet the highest international standards of the demanding financial and telecommunications industries. As a concrete example, thanks to stringent Luxembourg legislation, fiber-optic cables must be buried at deep levels and redundant cables have to be installed.

Luxembourg is connected to the backbone of Europe (T1 link) via different companies, therefore, businesses located in Luxembourg can select both their providers and their links. In addition, Luxembourg data centres are interconnected via a national ring.

Benefiting from the extended offer available in Luxembourg, companies are enjoying highly advanced infrastructures and competitive prices; among 159 countries, Luxembourg has been awarded 2<sup>nd</sup> most advanced ICT economy, and 5<sup>th</sup> for the lowest ICT tariffs.

## 3. A unique value proposal

Due to their extended service and product portfolios, the data centres located in Luxembourg can provide their clients with the highest level of performance and flexibility.

Most of them offer “one-stop-shop” solutions to reduce costs and complexity and to help customers focus on their core business.

Also, the “Commission de Surveillance du Secteur Financier” (CSSF) offers ICT companies the opportunity to be accredited as PSF (Professionnels du Secteur Financier) in order to ensure the achievement of the highest risk management standards. In particular Luxembourg regulators have created the highest standards of private data protection.

### Latency for international connectivity

Thanks to its state-of-the-art infrastructures, Luxembourg is able to offer the following latency rates:

Luxembourg – Brussels	3 ms
Luxembourg – Frankfurt	4 ms
Luxembourg – Amsterdam	6 ms
Luxembourg – Paris	5 ms

## Skype

Founded in 2003, Skype is one of the most successful Internet based companies. It is headquartered in Luxembourg with offices in Europe, the US and Asia.

Responsible for 12% of global international calling minutes, and with its users having made 3.1 billion minutes of calls to landlines and mobiles in the third quarter of 2009, Skype is a leading global Internet communications company.

After having assessed different alternatives, Skype chose Luxembourg to locate its headquarters for three main reasons:

- The business friendly environment;
- The support and dynamic approach of the authorities;
- A resolutely international outlook.

## 4. Green data centres

Soaring energy prices and global warming are becoming everyday business concerns. To face those challenges, data centres have to carry out their green revolution.

As an illustration, data centres consume 10 to 100 times more energy per square meters than a typical office building. Moreover, at current rates, power requirements could double in 5 years.

According to Gartner Inc., 2% of global carbon dioxide (CO<sub>2</sub>) emissions are directly related to the global ICT industry. A figure equivalent to aviation.

The reasons presented above explain why data centres in Luxembourg are developing and implementing innovative technologies to improve their energy efficiency and therefore decrease both their operating costs and environmental footprint. They are members of LEED, endorse the EU Code Of Conduct for Datacentres and adhere to environmental standards, especially Green Grid Datacenter Power Efficiency.

Innovative technologies currently developed and implemented in Luxembourg include:

- “free chilling”: when the outside temperature falls below 6°C, the outside air is used to cool the data centres;
- Re-route of the heat generated in offices;
- Use of green energy such as hydraulic, solar or wind;
- Power consumption tracking models; and,
- Virtualisation.

Also, the new framework of the law of February, 18, 2010 offers a wide range of financial aid for companies, including data centres, who would like to reduce their environmental footprint.

## 5. A unique resource pool

Thanks to the presence of leading international companies in ICT intensive industries, Luxembourg benefits from an exceptional pool of international, multilingual and highly qualified ICT professionals.

Moreover, the University of Luxembourg is at the forefront of IT research and education.

In 2009, the University of Luxembourg launched the Interdisciplinary Centre for Security, Reliability and Trust (SnT), establishing a crucial instrument for the University to foster interaction and collaboration between academia and industry in the area of interconnected communication networks and systems.

In light of the digital revolution, the University of Luxembourg has created the research unit called Laboratory of Algorithmic, Cryptology and Security (LACS) to focus on computational number theory, system and network security as well as information security management.

### **LU-CIX: the Smart Alternative to established European Internet eXchange points**

LU-CIX stands for Luxembourg Commercial Internet eXchange. It was founded in 2009 based on a cross-industry initiative. Thanks to LU-CIX, companies generating IP traffic and attracted to Luxembourg by the favourable economic environment, are now in a position to find all the means and tools to carry their traffic to all Internet users around the world.

## **6. A supporting government**

In February 2009, the Luxembourg Minister for Communications and Media together with the Minister of the Economy and Foreign Trade unveiled an ambitious EUR 100 million action plan aimed at boosting and reinforcing the Luxembourg ICT landscape, in line with the willingness to ensure that Luxembourg remains highly competitive.

The following concrete steps of this plan are:

- Further extension of the data centre park in Luxembourg;
- The building of a new redundant network;
- The extension of the existing network, including by connecting the LuxConnect network to Brussels;
- The creation of a new decentralised data centre.

Launched in March 2010, the national strategy for ultra high-speed broadband will bring fiber-to-the-home to 100% of the population by the end of 2015, while providing 1 Gbit/s to every household in Luxembourg by 2020. In addition, it aims to connect all commercial activity zones by 2013 through optical fiber.\*

Also, the government is actively supporting numerous ICT intensive industries such as the entertainment & media sector, biotechnologies & health or e-commerce. These dynamics create a stimulating business environment for data centre operators.

## **7. A stimulating tax environment**

With a total tax rate of 20.9% \*\* (a special indicator which measures all the tax cost borne), Luxembourg ranks as the most tax competitive economy in the EU. The political and economic stability of the Grand Duchy are the cornerstones of this environment.

This unique situation stems from the local authorities' commitment to create a friendly and stimulating business environment.

To foster innovation and build tomorrow's economy, the Grand Duchy is committed towards supporting the ICT industry via different tools:

- Investment tax credits;
- New business tax credit;
- Specific tax regime for R&D; and
- Specific tax regime for IP.

Sources: \* Minister for Communications and Media – ICT Spring – March 2010

\*\* "Paying Taxes - 2010" a study conducted by the World Bank and PricewaterhouseCoopers

## 8. Technologies available in Luxembourg

### Numerous Tier IV designs

- Half of Luxembourg's data centres offer Tier IV design service level, the other half is almost entirely classified as Tier III;
- Newest data centres offer IT Room Heights up to 12.46 ft (3.8m) above the raised floors;
- Raised Floors of 3.28 ft (1 metre) in most facilities;
- Floor Charges usually within 1500 and 2000 kg/m<sup>2</sup>.

### Advanced Power supply

- UPS systems 2 x (n+1) in the latest data centres;
- Ultra high density racks available.

### Cooling systems

- Cooling typically 2N, in some cases upgradable to 2 x (n+1);
- Liquid and Air cooling available.

### Power

- Diverse Power lines to the three surrounding countries.

To illustrate the highly competitive offering for data centres services in Luxembourg, a presentation of key players present in the Grand Duchy is available at the end of this brochure (Note: the information contained in these flyers is the sole responsibility of the companies presented).

The data centres who participated in this project are:

- CETREL
- Datacenter Luxembourg
- Data centre LAb
- e-Business & Resilience Centre, "eBRC"
- European Data Hub
- IBM Services Financial Sector
- Lab DataVault PSF S.A.
- LuxConnect
- Luxembourg Telecom
- root
- SecureIT
- SES ASTRA TechCom
- SunGard Availability Services
- Telindus' Datacentre solutions
- Visual Online Colocation-Center

# C. Luxembourg's five key advantages for doing business

## 1. A strategic position at the heart of Europe

Around 40% of the European Union's wealth is concentrated in a 500 km area around Luxembourg. Extend this to 700 km and the figure rises to around 70% of EU wealth. One of the prime features of Luxembourg's success is its geographical setting giving access to both European and international markets.

## 2. Business-friendly and politically stable

The business-friendly political environment is conducive to welcoming decision-makers and entrepreneurs. Indeed, attracting international players is considered paramount in building an efficient business framework and economic growth, and allows Luxembourg to establish a permanent and innovative business community.

## 3. A strong commitment towards R&D and innovation

Sizing up the weight of innovation in future economic growth, Luxembourg's Ministry of the Economy and Foreign Trade, together with Luxinnovation, the National Agency for Research & Development, has deployed a series of clusters since 2002. As of January 1, 2010 a total of seven clusters – including the ICT InfoCom cluster – are active in Luxembourg.

## 4. An efficient tax framework

Luxembourg benefits from a favourable total tax rate of 20.9%, it therefore ranks as the most tax competitive EU economy in 2010 (according to "Paying Taxes", the yearly study issued jointly by the World Bank and PwC).

## 5. A multicultural workforce

Benefiting from its strong reputation, Luxembourg is able to attract and retain international talent: over 50% of its residents come from other countries and many of them speak three or more languages.

The economy of the EU combines the economies of 27 Member States and generates an estimated nominal GDP accounting for about 31% of the world's total economic output.

The EU27 is home to over 500 million people who make up a vast single market where consumers enjoy a high average purchasing power.

Luxembourg enjoys a strategic position at the crossroads of Europe, with direct routes to major European cities: Paris (now just 2h15 by train), London, Amsterdam, Brussels, Berlin, Zurich, Milan and Geneva.

40% of the EU wealth  
70% of the EU wealth



Source: "European Distribution Report" C&W - 2006

# How to set up your business in Luxembourg?



# How can PwC help you?



PricewaterhouseCoopers Luxembourg



For an investing company, doing business in a foreign environment requires local knowledge and expertise to guide it through the local context, identify business opportunities and operate successfully in the selected markets.

Contacting us for information about Luxembourg could be an additional asset, to help you to discover all the economic and financial opportunities Luxembourg can offer.

Thanks to our vast network and our numerous contacts in Luxembourg, we can help you make an effective contribution to your company and your decision-making.

For example we can, on your behalf, organise visits and meetings with authorities in Luxembourg. This could be the opportunity to quickly meet the right people.

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# How can “Luxembourg for ICT” help you?

**Instantly Grow  
Your Customer Base by  
500 Million.**



**Luxembourg • eGateway to Europe.**

**.luxembourgforICT**

The key objective of Luxembourg for ICT is to provide companies with a «one-stop-shop» for detailed information on business opportunities in Luxembourg and hands-on administrative guidance and contacts in the ICT, media, e-commerce and data management sectors.

Luxembourg for ICT works on developing Luxembourg as an attractive environment perfectly adapted to the needs of the digital economy. It For example, it triggered the Government's decision to provide the country with state-of-the-art technical infrastructure, datacentres and ultra-high-speed connectivity to all major European centres.

Luxembourg for ICT also commissions studies on the Luxembourg market, edits information material and promotes Luxembourg as an ICT and data hub abroad.

Luxembourg for ICT is a partner of the “Luxembourg for Business” initiative.

Contact us!

## **Luxembourg for ICT**

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# Acknowledgements

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## Key institutional contacts for foreign companies

**Chamber of Commerce of the Grand Duchy of Luxembourg**  
[www.cc.lu](http://www.cc.lu)

**Board of Economic Development, Ministry of the Economy and Foreign Trade**  
The “one-stop-shop” for new investment projects  
[www.investinluxembourg.lu](http://www.investinluxembourg.lu)

**Ministry of the Middle Classes**  
The dedicated Ministry for small and medium-sized businesses  
[www.mcm.public.lu](http://www.mcm.public.lu)

**Luxembourg for ICT**  
The Luxembourg government agency for Media and ICT  
[www.luxembourgforict.lu](http://www.luxembourgforict.lu)

**Luxembourg for Business**  
The trade promotion organisation  
[www.luxembourgforbusiness.lu](http://www.luxembourgforbusiness.lu)

**Luxembourg for Finance**  
The agency for the development of the financial sector  
[www.lff.lu](http://www.lff.lu)

**The National Credit and Investment Corporation (SNCI)**  
Luxembourg’s state investment bank  
[www.snci.lu](http://www.snci.lu)

**Luxinnovation**  
The agency for innovation  
[www.luxinnovation.lu](http://www.luxinnovation.lu)

**The National Research Centre (Fonds National de la Recherche)**  
[www.fnr.lu](http://www.fnr.lu)

**The Commission for the Supervision of the Financial Sector (CSSF)**  
[www.cssf.lu](http://www.cssf.lu)

## Foreign associations

**American Chamber of Commerce (AMCHAM)**  
[www.amcham.lu](http://www.amcham.lu)

**British Chamber of Commerce for Luxembourg (BCC)**  
[www.bcc.lu](http://www.bcc.lu)

**Indian Business Chamber of Luxembourg**  
[www.ibcl.lu](http://www.ibcl.lu)

## Professional associations

**Luxembourg Business Federation (FEDIL)**  
[www.fedil.lu](http://www.fedil.lu)

**Association of the Luxembourg Funds Industry (ALFI)**  
[www.alfi.lu](http://www.alfi.lu)

**The Luxembourg Bankers’ Association (ABBL)**  
[www.abbl.lu](http://www.abbl.lu)

## Public Research Centers and University

**Public Research Centre Henri Tudor**  
[www.tudor.lu](http://www.tudor.lu)

**Public Research Centre Gabriel Lippmann**  
[www.crp-gl.lu](http://www.crp-gl.lu)

**Public Research Centre for Health**  
[www.crp-sante.lu](http://www.crp-sante.lu)

**University of Luxembourg**  
[www.uni.lu](http://www.uni.lu)

## Tourist information

[www.visitluxembourg.lu](http://www.visitluxembourg.lu)



## FACT SHEET

**Name:** Cetrel S.A.

**Website:** [www.cetrel.lu](http://www.cetrel.lu)

**Address:**

Cetrel S.A.  
10 Parc d'activité Syrdall  
L-5365 MUNSBACH  
PO BOX  
L-2956 Luxembourg  
Grand Duchy of Luxembourg

**Contact:**

Phone: +352 35 56 61  
Email: [info@cetrel.lu](mailto:info@cetrel.lu)

**Number of Centres:** 2

- CIA, Münsbach
- Backup Center, Luxembourg City

**Total capacity:**

M²: 410  
Megawatt: 0.275  
KVA: N.A.

**Power supply redundancy:** Each data centre has two different power supply connections, its own Power generator, two short-breaks and is connected over a matched fibre channel network.

**Number of staff:** 180

**Owner of infrastructure:** Yes

**Manager of infrastructure:** Yes

## SERVICES

**Tier level:** Tier III

**24/7 access:** Yes

**Shared/Cage/Suite:** No

**Network security:** VPN, Firewall

**Qualification certification:** Yes

**PSF\* certification:** Yes

**Managed services:**

- Remote hand: Yes – only in Luxembourg
- Operational system management: Yes
- Application management: Support team dedicated by Business Line
- Monitoring/alerting: N.A.
- Back up/storage: SAN
- Criterion SLA: Yes

\*PSF: Professional of the financial sector status

**Office space available:** No

**Disaster Recovery – DRC/DRP:**

- Multi invocation policy: N.A.
- Procedures/restore: 11 DRP tests and 1 BCP test annually
- Number of work positions: N.A.

**Document management:** N.A.

**Connectivity:**

- Carriers: Multiple carriers
- Capacity: Max 10 Gigabit/s per fibre

**Client profile:** Banks of retail market, Institutions, Merchants, etc.

**Other advantages:**

The Luxembourg operations, embodied by CETREL, are build on a dual pillar structure of which the first one is the E-Money hub for all payment card related services and the second pillar is dedicated to financial technology services.

# DATACENTER L U X E M B O U R G

Empowering Businesses Online

## FACT SHEET

**Name:** Datacenter Luxembourg

**Website:** [www.datacenter.eu](http://www.datacenter.eu)

**Address:**

Datacenter Luxembourg  
2 Rue Leon Laval  
L-3372 Leudelange  
Grand Duchy of Luxembourg

**Contact:**

Phone: +352 26 19 16 1  
Email: [sales@datacenter.eu](mailto:sales@datacenter.eu)

**Number of Centres:** 2

- eBRC, Windhof
- SecureIT, Gasperich – Cloche d'or

**Total capacity:**

M<sup>2</sup>: 250  
Megawatt: N.A.  
KVA: 250

**Power supply redundancy:**

- 2 x (n+1) for eBRC; and
- 2 x (n+1) for SecureIT.

**Number of staff:** 8

**Owner of infrastructure:** No

**Manager of infrastructure:** No

## SERVICES

**Tier level:** Tier III et Tier IV Design

**24/7 access:** Yes, manned (eBRC), not manned (Secure IT)

**Shared/Cage/Suite:** Shared Rack; Dedicated Half and Full Rack; Cage

**Network security:** VPN, firewall, IDS, HIDS, proxy, antivirus, strong authentication

**Qualification certification:** Systrust in eBRC, ITIL in SecureIT

**PSF\* certification:** No

**Managed services:**

- Remote hand: Yes
- Operational system management: Yes, RedHat
- Application management: Yes, MySQL
- Monitoring/alerting: Yes
- Back up/storage: Yes
- Criterion SLA: MTTR - 2 hours during office hours and 4 hours outside office hours

\*PSF: Professional of the financial sector status

**Office space available:** No

**Disaster Recovery – DRC/DRP:**

- Multi invocation policy: N.A.
- Procedures/restore: N.A.
- Number of work positions N.A.

**Document management:** Outmail Server, DNS server

**Connectivity:**

- Carriers: Own International looped backbone for IP-Transit, Level3, EPT, Cogent
- Capacity: Mutiple 10Gbps, DWDM technology

Up to 20Gb/s full duplex routing with Level3, EPT, Inexio, Global Crossing

**Client profile:** DCLux has 30 clients within several industries such as e-commerce, e-business, financial, media, audiovisual, publishing, telecom, ICT service integrators, industrial.

**Other advantages:**

- Bandwidth and IP through an international looped dark fibre backbone as well as managed services on server and connectivity needs;
- Datacenter Luxembourg offers scalable server solutions and takes care of adhoc storage and server resources needs through a SAN infrastructure and professional virtualisation platform.



## FACT SHEET

**Name:** e-Business & Resilience Centre

**Website:** [www.ebrc.lu](http://www.ebrc.lu)

**Address:**

Goldbell Center, Tour A  
5, rue Eugène Ruppert  
L-2453 Luxembourg  
Grand Duchy of Luxembourg

**Contact:**

Phone: +352 26 06 1  
Email: [info@ebrc.lu](mailto:info@ebrc.lu)

**Number of Centres:** 4

- RCC-1: Resilience Centre Luxembourg City 1 in the Goldbell Centre, Gasperich
- RCC-2: Resilience Centre Luxembourg City 2 in the Hitec Centre, Gasperich
- RCW: Resilience Centre Luxembourg West in Windhof
- RCS: Resilience Centre Luxembourg South in Kayl

**Total capacity:**

M<sup>2</sup>: 11,400 m<sup>2</sup> of server space  
Megawatt: between 0.69 and 4 kW/m<sup>2</sup>  
KVA: N.A.

**Power supply redundancy:** up to 2 x (n+1)

**Number of staff:** 90 experts

**Owner of infrastructure:** Yes

**Manager of infrastructure:** Yes

## SERVICES

**Tier level:**

- Resilience Centre Luxembourg City 1 in the Goldbell Centre (RCC-1): Tier II classified;
- Resilience Centre Luxembourg City 2 in the Hitec Centre (RCC-2): Tier III+ classified;
- Resilience Centre Luxembourg West (RCW) in Windhof: Tier IV Design classified;
- Resilience Centre Luxembourg South (RCS) in Kayl: Tier IV Design classified.

**24/7 access:** Yes, the clients have a 24/7 guarded keycard access, an on-site security team being available 24/7/365. Access is granted on a personal basis.

**Shared/Cage/Suite:** Depending on the needs, fully Private IT Suites or Shared IT Rooms can be offered. Caging can be implemented.

**Network security:** N.A.

**Qualification certification:** Systrust, ITIL V3, ISO 27001 Lead Auditor, Green Grid Member and endorser of the European Code of Conduct for Data Centres.

**PSF\* certification:** Yes, PSF - OSIP certified.

**Managed services:**

- Remote hand: Yes
- Operational system management: Yes
- Application management: Yes

\*PSF: Professional of the financial sector status

- Monitoring/alerting: Yes
- Back up/storage: Yes
- Criterion SLA: Yes

**Office space available:** Yes, depending on the location, eBRC can provide office space.

**Disaster Recovery – DRC/DRP:**

- **Multi invocation policy:** Yes, thanks to the process maturity in terms of Disaster Recovery planning, eBRC mutualisation principles enable multi-invocations at every level of the business chain.
- **Procedures/Restore:** Available on a 24/7/365 basis, recovery solutions are deployed within 2 business hours.
- **Number of work positions:** Up to 1,000 high-tech back office and front office recovery work positions.

**Document management:** N.A.

**Connectivity:** The eBRC carrier hotel supplies all major telecom operators, ISP's and internet exchanges providers – from local to leading international Tier 1 operators, thus offering unlimited connectivity.

**Client profile:**

- 65%: Bank and finance;
- 35%: European Institutions, ICT, e-commerce, industry.

**Other advantages:**

The power provision to eBRC Data Centres is 100% green and from renewable sources.



## FACT SHEET

**Name:** European Data Hub

**Website:** [www.europeandatahub.eu](http://www.europeandatahub.eu)

**Address:**

European Data Hub S.A.  
12D, rue Guillaume J. Kroll  
L-1882 Luxembourg  
Grand Duchy of Luxembourg

**Contact:**

Patrice Roy  
Phone: +352 27 12 55 55  
Email: [patrice.roy@edhub.eu](mailto:patrice.roy@edhub.eu)

**Number of Centres:** 1

**Total capacity:**

M<sup>2</sup>: 5,500 m<sup>2</sup>  
Megawatt: N.A.  
KVA: N.A.

**Power supply redundancy:** S+S

**Number of staff:** 30

**Owner of infrastructure:** Yes

**Manager of infrastructure:** CSC

## SERVICES

**Tier level:** Tier IV Design

**24/7 access:** On site presence on a 24/7 basis with two security guards and M&E technicians onsite around the clock guaranteeing high security and availability.

**Shared/Cage/Suite:** Large modularity in terms of room sizes ranging from 40 m<sup>2</sup> to 700 m<sup>2</sup> per room.

**Network security:** Yes

**Qualification certification:** ISO 9001, ISO 14001, ISO 18001, ISO 20000, ISO 27000, Global SAP Partner Hosting, SAS 70.

**PSF\* certification:** Yes

**Managed services:**

- Remote hand: Yes
- Operational system management: Yes
- Application management: Yes
- Monitoring/alerting: Yes
- Back up/storage: SAN/NAS
- Criterion SLA: Yes

\*PSF: Professional of the financial sector status

**Office space available:** Within the offices in the Drosbach complex, European Data Hub has around 1,800 m<sup>2</sup> of offices reserved for Data Centre clients. Fully equipped dedicated rooms are also available.

**Disaster Recovery – DRC/DRP:**

- Multi invocation policy: N.A.
- Procedures/restore: N.A.
- Number of work positions: Yes

**Document management:** No

**Connectivity:** Drosbach Data Centre is already connected with three providers: P&T, Coditel and LuxConnect. The connections are provided through two different entry points. Each of these connections join a separated and dedicated loop in order to avoid any single point of failure not only in the Data Centre but also at the level of the national and international network.

**Client profile:** N.A.

**Other advantages:**

The architecture of the Data Centre, a Tier IV Design architecture with two production lines in an active/active mode entirely independent from each other and with no single point of failure.

## FACT SHEET

**Name:** IBM SERVICES FINANCIAL SECTOR

**Website:** [www.ibm.com](http://www.ibm.com)

**Address:**

IBM SERVICES FINANCIAL SECTOR  
1, Ceinture Um Schloss  
L-5580 Hespérange  
Grand Duchy of Luxembourg

**Contact:**

Thierry SEIGNERT  
Phone: +352 36 03 85 21 2  
Email: [thierry\\_seignert@be.ibm.com](mailto:thierry_seignert@be.ibm.com)

**Number of Centres:** 3

- IBM Data Centre at LuxConnect, Bettembourg
- IBM Data Centre at SecureIT, Gasperich
- IBM Data Centre at Verizon, Contern

**Total capacity:**

M²: 500  
Megawatt: 6.3  
KVA: 1.150 W/m (average)

**Power supply redundancy:** 2 x (n+1)

**Number of staff:** > 100

**Owner of infrastructure:** No

**Manager of infrastructure:** No

## SERVICES

**Tier level:** Tier IV Design

**24/7 access:** Yes

**Shared/Cage/Suite:** Shared or Privated Cage/rooms

**Network security:** IBM is positioned in Network Security competencies in implementation and management of VPN, Routing, switching and firewall.

**Qualification certification:** ISO 9001:2000, ISO 14001:2004, CMMI Maturity Level 3, Certificate of Accomplishment, March 31, 2005.

**PSF\* certification:** Yes, ISFS IBM Services Financial Sector is the PSF of IBM.

**Managed services:**

- **Operational system management:** Yes
- **End User Support:** Yes
- **Application management:** Yes
- **Monitoring/alerting:** Yes
- **Risk Management:** Yes
- **Managed Security Services:** Yes
- **Back up/storage:** Yes, SAN & NAS
- **Criterion SLA:** 99,999% of availability

\*PSF: Professional of the financial sector status

**Office space available:** 210 positions

**Disaster Recovery – DRC/DRP:**

- **Multi invocation policy:** Yes
- **Procedures/restore:** Yes
- **Number of work positions:** 210

**Document management:** Yes

**Connectivity:** All carriers present on Luxembourg territory.

**Client profile:** All Sectors: Banking, Insurance, Industry, Public sector, etc.

**Other advantages:**

- Free chilling is operational below 7°;
- The cooling towers only need extra water supply as from an outside temperature of 24°;
- Heat recovery system implemented;
- Modular systems such as the use of 500 kW UPS's reduce energy losses; and,
- Photovoltaic installation.



## FACT SHEET

**Name:** Lab DataVault PSF S.A.

**Website:** [www.labgroup.com](http://www.labgroup.com)

**Address:**

Rue Edmond Reuter, 2-4  
L-5326 CONTERN

**Contact:**

Mr. Francis Gillard  
Phone: +352 350 222 1  
Email: [info@labgroup.com](mailto:info@labgroup.com)

**Number of Centres:** 3

- Contern – Lux Tech Centre
- Munsbach – Lab Data Centre
- Dublin

**Total capacity:**

M<sup>2</sup>: up to 3500  
Power: availability of 9 Megawatt  
KVA: standard up to 7,4 KVA per rack

**Power supply redundancy:** n+1

**Number of staff:** >70

**Owner of infrastructure:** Yes

**Manager of infrastructure:** Yes

## SERVICES

**Tier level:** Tier III

**24/7 access:** Yes

**Shared/Cage/Suite:** Shared and dedicated IT rooms are available. Caging provided on demand. Full, half and third of rack available up to 1 “U”.

**Network security:** Yes - Included & managed by our IT specialists and supervised by an external specialized auditor.

**Qualification certification:** ISO9001:2008 certification for all procedures, ISO27001 Lead Auditor.

**PSF\* certification:** “Client Communication Agent” (29-1) and “System Operator” (Primary: 29-3 and Secondary: 29-4).

**Managed services:**

- Remote hand: Yes
- Operational system management: Yes
- Application management: Yes
- Monitoring/alerting: Yes
- Back up/storage: Yes
- Criterion SLA: Yes

**Office space available:** No

**Disaster Recovery – DRC/DRP:**

- Multi invocation policy: Yes
- Procedures /restore: Available on a 24/7 basis according to agreed Recovery Time Objective
- Number of work positions: 65 extensible

**Document management:** Full suite of Document Management services from storage and retrieval – via scanning and up to secure destruction by means of ArcStore for Windows.

**Connectivity:**

- **Carriers:**  
P&T, Cegecom, LuxConnect, Luxembourg TELECOM, Cogent, Verizon Business, Lu-Cix
- **Capacity:**  
Immediately available : STM16, STM 64 and dark fibre. All of the capacities are upgradable on demand.

**Client profile:**

- 55% banking and finance
- 45% other

**Other advantages:**

- Compliant data archiving and dematerialisation service.
- High availability Cloud Computing on demand.



## FACT SHEET

**Name:** LuxConnect

**Website:** [www.luxconnect.lu](http://www.luxconnect.lu)

**Address:**

4, rue A. Graham Bell  
L-3235 Bettembourg  
Grand Duchy of Luxembourg

**Contact:**

Alfred Wilms  
Phone: +352 27 61 68 25  
Email: [alfred.wilms@luxconnect.lu](mailto:alfred.wilms@luxconnect.lu)

**Number of Centres:** 2

- DC1.1 Bettembourg
- DC1.2 Bettembourg

**Total capacity:**

M<sup>2</sup>: 4,200  
Megawatt: 12.6 MVA

**Power supply redundancy:** 2 x (n+1)

**Number of staff:** 13

**Owner of infrastructure:** Yes

**Manager of infrastructure:** Yes

## SERVICES

**Tier level:** Tier IV Design

**24/7 access:** Yes

**Shared/Cage/Suite:**

- Dedicated rooms of 325 m<sup>2</sup>
- Cages or racks in shared rooms

**Network security:** see note

**Qualification certification:** see note

**PSF\* certification:** see note

**Managed services:** see note

**Note:**

The business model of LuxConnect is a strict wholesale model. LuxConnect customers are Telecom Operators, Hosting Companies, System Integrators.

The added value services delivered at the centres are the sum of all competencies of the LuxConnect customers.

\*PSF: Professional of the financial sector status

**Office space available:**

- Inside the datacentre perimeter: 400 m<sup>2</sup> dedicated technical space (for example NOC's)
- An office building of 1,500 m<sup>2</sup> is available outside the datacentre perimeter

**Disaster Recovery – DRC/DRP:** see note

**Document management:** see note

**Connectivity:**

- **Carriers:** All that are present in Luxembourg; host of the Luxembourg Commercial Internet Exchange;
- **Capacity:** virtually unlimited.

**Client profile:** All sectors but with focus on Internet related and/or high-end applications such as E-Commerce, Cloud Computing, High Performance computing.

**Other advantages:**

LuxConnect has as mission to promote, enable and support the ICT market in and for Luxembourg. LuxConnect puts its infrastructure to the disposal of partners (Telecom Operators, System Integrators and Hosting companies) who in turn address the needs of the end-user market.



LUXEMBOURGTELECOM

## FACT SHEET

**Name:** Luxembourg Telecom

**Website:** [www.luxtelecom.lu](http://www.luxtelecom.lu)

**Address:**

89, Pafebruch  
8308 Capellen  
Grand Duchy of Luxembourg

**Contact:**

Vincent Nicolay  
Phone: +352 44 64 82  
Email: [vnicolay@luxtelecom.lu](mailto:vnicolay@luxtelecom.lu)

**Number of Centres:** 2

- Main DC: LuxConnect Bettembourg
- Secondary DC: Sungard, (LuxConnect Roost in 2012)

**Total capacity:**

M<sup>2</sup>: 650  
Power: 1150 W/m<sup>2</sup> (average)  
KVA: 400

**Power supply redundancy:** 2 x (n+1)

**Number of staff:** 53

**Owner of infrastructure:** No

**Manager of infrastructure:** Yes

## SERVICES

**Tier level:** Tier IV Design

**24/7 access:** Yes, 365 days a year

**Shared/Cage/Suite:** Rooms or Racks (dedicated or shared)

**Network security:** Yes

**Qualification certification:** N.A.

**PSF\* certification:** Yes

**Managed services:**

- Remote hand: Yes
- Operational system management: Yes
- Application management: Exchange, SQL, Sharepoint;
- Monitoring/alerting: Yes via NOC
- Back up/storage: Yes
- Criterion SLA: Yes

\*PSF: Professional of the financial sector status

**Office space available:** Only for operator desks.

**Disaster Recovery – DRC/DRP:**

- Multi invocation policy: Yes
- Procedures/restore: Yes
- Number of work positions: 400 (Via partnership with Sungard)

**Document management:**

- Storage and backup on line.

**Connectivity:**

- DWDM services onto LuxConnect optical fiber network;
- Ring between all the Data Center in Luxembourg (from 2MBps to 10GBps);
- International connectivities via LuxConnect international network and others operators;
- Internet accesses (single or dual).

**Client profile:**

- Financial, Telecom, Industry;
- Partnerships with local and international companies.

**Other advantages:**

- The data centre is situated in Bettembourg with an easy and direct access to the highway. The site is ideally located at the intersection of the north-south axis and the east-west axis;
- The centre occupies about 10,000 m<sup>2</sup> and offers connections to Frankfurt, Paris, Brussels and Amsterdam.



## FACT SHEET

**Name:** root S.A.

**Website:** [www.root.lu](http://www.root.lu)

**Address:**

35, rue John F. Kennedy  
L-7327 Steinsel  
Grand Duchy of Luxembourg

**Contact:**

Phone: +352 20 50 0  
E-Mail: [info@root.lu](mailto:info@root.lu)

**Number of Centres:** 1

root S.A., Steinsel

**Total capacity:**

Surface: 1,500 m<sup>2</sup>  
Megawatt: 1.0  
KVA: 1,200

**Power supply redundancy:** currently none, UPS and generator planned

**Number of staff:** 12

**Owner of infrastructure:** Yes

**Manager of infrastructure:** Yes

## SERVICES

**Tier level:** Tier II

**24/7 access:** Possible on appointment

**Shared/Cage/Suite:** Shared, cage on demand

**Network security:** On demand

**Qualification certification:** None

**PSF\* certification:** No

**Managed services:**

- Remote hand: Yes
- Operational system management: Yes
- Application management: Yes
- Monitoring/alerting: Yes
- Back up/storage: On demand
- Criterion SLA: No

\*PSF: Professional of the financial sector status

**Office space available:** Yes, 20-50 m<sup>2</sup>

**Disaster Recovery – DRC/DRP:**

- Multi invocation policy: No
- Procedures/Restore: No
- Number of work positions: None

**Document management:** No

**Connectivity:**

- Carriers: Global Crossing, TeliaSonera, over 400 Peerings on AMS-IX, DE-CIX, LINX, LU-CIX, LIX
- Capacity: 80 GB (8 x 10 GB Fiber)

**Client profile:**

- Number of clients: 2,500
- Sectors: Small and medium sized companies, organisations, private persons

**Other advantages:**

- Nearly 2,000 servers;
- More than 1,800 registered domain names;
- Over 2,000 customers; and,
- A total available bandwidth of over 50 Gbit/s.



## FACT SHEET

**Name:** SecureIT S.A.

**Website:** [www.secureit.lu](http://www.secureit.lu)

**Address:**

BP 74, L-3201 Bettembourg  
Grand Duchy of Luxembourg

**Contact:**

Phone: +352 26 19 18 1  
Email: [info@secureit.lu](mailto:info@secureit.lu)

**Number of Centres:** 3

- DCC - DC Cloche d'Or
- DCB1.1 - DC 1 Bettembourg
- DCB1.2 - DC 2 Bettembourg

**Total capacity:**

M<sup>2</sup>: 3,250  
Megawatt: from 0.5 up to 3  
KVA: from 700 up to 3200

**Power supply redundancy:**

- DCC: n+1
- DCB1.1: 2 x (n+1)
- DCB1.2: 2 x (n+1)

**Number of staff:** 9 + subcontractors

**Owner of infrastructure:**

- DCC: Yes
- DCB: No

**Manager of infrastructure:**

- DCC: Yes
- DCB: Partially

## SERVICES

**Tier level:**

- DCC: Tier III design
- DCB1.1: Tier IV design
- DCB1.2: Tier IV design

**24/7 access:** Yes

**Shared/Cage/Suite:** Yes, all

**Network security:** Yes, provided through specialised partners such as HP, IBM, System Solutions, Getronics and Datacenter Luxembourg.

**Qualification certification:** TÜV

**PSF\* certification:** No, services provided through certified partners

**Managed services:**

- Remote hand: Yes
- Operational system management: Yes
- Application management: Yes
- Monitoring/alerting: Yes
- Back up/storage: Yes
- Criterion SLA: 99.99% to 99.9995%

\*PSF: Professional of the financial sector status

**Office space available:** Yes, up to 300 m<sup>2</sup>

**Disaster Recovery – DRC/DRP:**

- Multi invocation policy: Yes
- Procedures/restore: Yes
- Number of work positions: Over 260 available

**Document management:** Yes, provided through specialised partners such as HP, IBM, System Solutions, Getronics.

**Connectivity:** The company is Carrier neutral and is supported by all national and international Carriers present in Luxembourg. The DCs are interconnected via a private Dark Fibre network.

**Client profile:**

- Number of clients: > 50;
- Sectors: International Internet Business Clients, National financial institutions, Tier-1 added value partners.

**Other advantages:**

To reduce its environmental footprint, SecureIT has achieved a PUE of 1.6 at DCB1.1 and strives to implement a PUE of 1.35 or better at DCB1.2.

## FACT SHEET

**Name:** SES ASTRA TechCom

**Website:** [www.ses-astra.com](http://www.ses-astra.com)

**Address:**

Chateau de Betzdorf  
L-6815 Betzdorf  
Grand Duchy of Luxembourg

**Contact:**

Jos Giannandrea  
Phone: +352 71 07 25 25 9  
Email: [jos.giannandrea@ses-astra.com](mailto:jos.giannandrea@ses-astra.com)

**Number of Centres:** 1

SES ASTRA technical facilities, Betzdorf

**Total capacity:**

M<sup>2</sup>: N.A.  
Megawatt: N.A.  
KVA: N.A.

**Power supply redundancy:** 2 x (n+1)

**Number of staff:** 34

**Owner of infrastructure:** Yes

**Manager of infrastructure:** Yes

## SERVICES

**Tier level:** Various

**24/7 access:** Yes

**Shared/Cage/Suite:** All solutions possible

**Network security:** Highest level of security with dedicated personnel

**Qualification certification:** SES ASTRA TechCom is ISO 9001:2008 certified

**PSF\* certification:** No

**Managed services:**

- Remote hand: Yes
- Operational system management: Yes
- Application management: Yes
- Monitoring/alerting: Yes
- Back up/storage: Yes
- Criterion SLA: Availability, reliability, service request response times, temperature and humidity variations

\*PSF: Professional of the financial sector status

**Office space available:** Yes

**Disaster Recovery – DRC/DRP:** Services offered:

- Multi invocation policy: N.A.
- Procedures/restore: N.A.
- Number of work positions: N.A.

**Document management:** Services offered.

**Connectivity:** The site is offering various carriers with physical redundant connectivity schemes.

**Client profile:**

- Media;
- Enterprise;
- Institutional.

**Other advantages:**

- Multi-carrier & physically redundant connectivity to Tier I / Tier II service providers;
- Satellite Teleport Transmission and Reception services;
- Discrete and secured hosting;
- Engineering and planning assistance;
- 24/7 operations and management services.

ASTRA TechCom Services stands for shared technical competencies. It is also the name of the service company – subsidiary of the SES group – providing engineering and operations services to a large range of media, enterprise and institutional partners. In that frame, SES is hosting and managing since 1989, its own but also third-parties-owned technical infrastructure.

## FACT SHEET

**Name:** SunGard Availability Services S.A.

**Website:** [www.availability.sungard.com](http://www.availability.sungard.com)

**Address:**

6, Parc Syrdall  
L-5365 Münsbach  
Grand Duchy of Luxembourg

**Contact:**

Thierry RIESTER  
Phone: +352 35 73 05 30  
Email: [thierry.riester@sungard.com](mailto:thierry.riester@sungard.com)

**Number of Centres:** 1

SunGard Availability Services, Münsbach

**Total capacity:**

M<sup>2</sup>: 800 m<sup>2</sup> for datarooms + 2,000 m<sup>2</sup> for workplaces  
Megawatt: 2 transformers 20 KV  
KVA: transformer n°1 = 1,000 KVA  
transformer n°2 = 1,250 KVA

**Power supply redundancy:** n+1

**Number of staff:** >3

**Owner of infrastructure:** Yes

**Manager of infrastructure:** Yes

## SERVICES

**Tier level:** Tier II

**24/7 access:** Yes

**Shared/Cage/Suite:** Yes, all

**Network security:** Yes

**Qualification certification:** N.A.

**PSF\* certification:** Yes, available through partners

**Managed services:**

- Remote hand: Yes, through partners
- Operational system management: Yes, through partners
- Application management: Yes, through partners
- Monitoring/alerting: Yes
- Back up/storage: Yes, through a partner
- Criterion SLA: Yes, through a partner

\*PSF: Professional of the financial sector status

**Office space available:** Yes

Available in shared or dedicated mode

**Disaster Recovery – DRC/DRP:**

- Multi invocation policy: Yes
- Procedures/restore: Yes  
“first in/first served”
- Number of work positions: 400 workplaces with possible extension

**Document management:** N.A.

**Connectivity:**

- Carriers: P&T, Luxembourg Telecom, Verizon, Telenet, Cegecom, BT, Colt, Coditel
- Capacity: N.A.

**Client profile:**

- Number of clients: 40 in Münsbach;
- Sectors: 90% Bank & Finance.

**Other advantages:**

- SunGard provides disaster recovery services, managed IT services, information availability consulting services and business continuity management software;
- With annual revenue exceeding \$5 billion, SunGard is ranked 380 on the Fortune 500 and is the largest privately held business software and IT services company.

## FACT SHEET

**Name:** Telindus' Datacentre solutions

**Website:** [www.telindus.lu](http://www.telindus.lu)

**Address:**

Route d'Arlon 81-83  
L-8009 Strassen  
Grand Duchy of Luxembourg

**Contact:**

Phone: +352 45 09 15 1  
Email: [contact@telindus.lu](mailto:contact@telindus.lu)

**Number of Centres:** 1

Luxconnect S.A., Bettembourg

**Total capacity:**

M²: 2,800 m²  
Megawatt: Up to 30 kW/rack  
KVA: 6,3 MVA

**Power supply redundancy:** 2 x (n+1)

**Number of staff:** 330

**Owner of infrastructure:** No

**Manager of infrastructure:** Yes

## SERVICES

**Tier level:** Tier IV Design

**24/7 access:** Yes

**Shared/Cage/Suite:** Yes

**Network security:** Yes

**Qualification certification:** No

**PSF\* certification:** Yes via Telindus

**Managed services:**

- Remote hand: Yes
- Operational system management: Yes
- Application management: Yes
- Monitoring/alerting: Yes
- Back up/storage: Yes
- Criterion SLA: Response time, restore time and availability time.

\*PSF: Professional of the financial sector status

**Office space available:** Yes, 28 m²/office

**Disaster Recovery – DRC/DRP:**

- Multi invocation policy: Yes
- Procedures/restore: Yes
- Number of work positions: Yes possible, up to 400 positions (in partnership).

**Document management:** N.A.

**Connectivity:**

- Carriers: PT Luxembourg, Cegecom, Verizon, Inexio, BT, KPN, LuCIX (Lux Commercial Internet Exchange), Global crossing et Level 3 (via LuCIX).
- Capacity: N.A.

**Client profile:**

- Number of clients: 10,000 satisfied customers in the field of IT solutions (group);
- Sectors: Finance, Government, Healthcare, Media, Retail & Manufacturing, Services & Utilities.

**Other advantages:**

- Telindus Luxembourg focuses on customers' needs managed through a single point of contact to meet overall ICT requirements;
- The company has more than 10,000 satisfied customers in the field of IT solutions (group) from different sectors as Finance, Government, Healthcare, Media, Retail & Manufacturing, Services & Utilities.



## FACT SHEET

**Name:** Visual Online Colocation-Center

**Website:** [www.vo.lu](http://www.vo.lu)  
[www.colocation-center.com](http://www.colocation-center.com)

**Address:**

6, rue Goell  
L-5326 Contern  
Grand Duchy of Luxembourg

**Contact:**

Pascal Knebler and Francisco Malpica  
Phone: +352 20 40 42 44 92  
Email: [sales@vo.lu](mailto:sales@vo.lu)

**Number of Centres:** 3

- Colocation-Center, Contern
- Resilience Center, Windhof
- Resilience Center, Kayl

**Total capacity:**

M<sup>2</sup>: 400 m<sup>2</sup>  
Megawatt: N.A.  
KVA: 400 KVA

**Power supply redundancy:**

- 2 x (n+1) Resilience Center
- 2n at Colocation-Center

**Number of staff:** N.A.

**Owner of infrastructure:**

- Colocation-Center: Yes
- Resilience Center: No

**Manager of infrastructure:** Yes

## SERVICES

**Tier level:**

- Colocation-Center: Tier II
- Resilience Center: Tier IV Design

**24/7 access:**

- Colocation-Center: 24/7
- Resilience Center: 24/7 & Manned

**Shared/Cage/Suite:** Yes

**Network security:** Yes

**Qualification certification:** N.A.

**PSF\* certification:** Rooms meet the requirements

**Managed services:**

- Remote hand: Yes
- Operational system management: Yes
- Application management: Yes
- Monitoring/alerting: Yes
- Back up/storage: Yes
- Criterion SLA: Yes

\*PSF: Professional of the financial sector status

**Office space available:** No

**Disaster Recovery – DRC/DRP:**

- Multi invocation policy: No
- Procedures/restore: No
- Number of work positions: No

**Document management:** No

**Connectivity:**

- Carriers: Independent of any carrier
- Capacity: 3 x 10 Gbit

**Client profile:** Banking and Insurance, Industries, Information technologies and services, Business centers.

**Other advantages:**

- Visual Online offers both Tier II and Tier IV Design alternatives;
- Visual Online can easily expand the hosting space availability to 3 000 m<sup>2</sup>;
- Visual Online is also a Domain name registrar for TLDs through its <http://www.dns-stock.com> platform;
- Visual Online provides Dedicated Servers.