BELVAL FOR SCIENCE
Where scientific curiosity meets entrepreneurial spirit
Belval has opened up and developed like hardly any other place in Europe. Once a location of the steel industry for almost a hundred years, Belval today is a centre for science, research and development.

Agora, the company for the area development in Belval, is a public/private partnership of the State of Luxembourg and ArcelorMittal, the former occupant of the site at Belval. There, in the south of Luxembourg, Agora has been developing a new urban city district since 2000. Situated at the heart of Europe and notable for its high level of internationalism, the campus is of particular appeal to research institutes and companies, for example in the fields of biomedicine or ICT. Belval offers them tailor-made space – from compact start-up offices to safety-checked laboratories, or from representative headquarters to individual sales areas.

Nor do the people who work in Belval miss out: as well as finding the optimum working and research conditions here, they also enjoy an urban life. In the competition for the best scientists and managers, the appeal of a company or institute has long since ceased to be the sole attraction: the setting is just as important.

More than 200 companies are already enjoying the benefit of the advantages offered by Belval. The University of Luxembourg and major government research institutes are also based here. Combined, they provide jobs for around 4,000 people, including some 600 researchers. The gathering of researchers, students and companies in one place provides plenty of new impulses. Discover Belval!

Luxembourg is experiencing rapid change. In just a few short years, the former industrial site has become one of the world’s most important financial centres. And now the Grand-Duchy is developing further, into a place of innovation and knowledge products: the University of Luxembourg has established itself as an attractive, international site for research and education.

Our diverse competencies in science and research are an opportunity for innovation-oriented companies. Thanks to its location at the heart of Europe, Luxembourg is the perfect starting point for conquering one of the biggest and most attractive markets in the world – the European Union. And the country’s internationalisation – people from 170 different nations live here – also make the Grand-Duchy an excellent test market.

There are lots of catalysts in Luxembourg that will get your company off to an uncomplicated start here. Catalytic effects are developed, for instance, by Luxinnovation, Luxembourg’s National Agency for Innovation and Research, and – specifically for Belval – Agora as the local developer. Together we make sure that you can enjoy the benefits of Luxembourg from the very first day of your new life here. But why not put us to the test!
Belval is the new address in the Grand-Duchy of Luxembourg. Spanning a former industrial area the size of 120 football pitches, a new urban district has been evolving since 2000 featuring a unique opportunity to combine work, study, research, living and recreation. Belval is home to the University of Luxembourg, numerous research facilities and public institutions. It involves the largest development project in Europe which has been awarded a gold certificate for sustainable urban development by the German Sustainable Building Council (DGNB).

Geographic location:
49°30'3'' northern latitude and 5°56'43'' eastern longitude
Located in southern Luxembourg in the municipalities of Sanem and Esch-sur-Alzette (after Luxembourg City, the second largest city in the Grand-Duchy)

Direct flights from Luxembourg to all European centres: Berlin, Hamburg, Frankfurt, Paris, Amsterdam, London, etc.

Belval development site:
120 hectares, of which 19 hectares are parkland and more than 10 hectares make up the research campus

FACTS AND FIGURES

4,000 jobs
3,500 schoolchildren and students
1,400 residents
600 researchers
185 companies
27 start-ups in the Technoport
24 public institutions

Scientific institutes based in Belval:
• University of Luxembourg which has its headquarters here
• Luxembourg Centre for Systems Biomedicine (LCSB)
• Interdisciplinary Centre for Security, Reliability and Trust (SnT)
• Luxembourg Institute of Science and Technology (LIST)
• Luxembourg Institute of Socio-Economic Research (LISER)
• Cross-national Data Center in Luxembourg (LiS)
• “Centre virtuel de la connaissance sur l'Europe” (CVCE) research infrastructure for European integration
• “Institut Universitaire International Luxembourg” education and training centre (IUIL)
• “Luxinnovation” research agency
• Fonds National de la Recherche (FNR)
• “De Widong” centre for professional training in healthcare

Recreation:
More than a dozen restaurants, 2 gymnasiums, over 40 shops, a multiplex cinema with seven screens and the “Rockhal” concert hall with up to 200 events a year as well as a large park for sport and recreation
Luxembourg is reinventing itself. From a former steel-works and financial centre, the country is successfully developing into a sought-after location for science and research. An ambitious vision is becoming the reality in Belval: over 900 members of staff and more than 2,000 students at the various faculties of the University of Luxembourg, plus more than 600 members of staff at its numerous research institutes, work here in close association with industry.

As a new location for the University of Luxembourg, Belval attracts scientists as well as students and administrators. Anyone looking for highly qualified executives will find them here. Graduates from the multi-lingual courses at the University of Luxembourg provide fresh ideas. Young researchers will bring the latest scientific findings to your company. And you will find numerous partners for fruitful co-operations in the university’s numerous institutes and other research facilities.

Far from being a static concept, a company’s requirements are constantly changing. In the early days, an office is all that is required, but later on there may also be a need for laboratories or showrooms. Belval offers all this – and flexibility. From compact start-up offices to safety-checked laboratories, representative headquarters to individual sales areas, you’ll find business premises for all your needs and requirements here.

At Belval, innovative companies will find plenty of contacts for exchanges and co-operations at the University and other research institutes. Luxinnovation, the National Agency for Innovation and Research, and FNR, the national research fund, are also based here. Luxembourg also provides a research-friendly atmosphere: in some areas, the Grand-Duchy even exceeds EU standards, and it has also developed a system of attractive funding instruments. Various forms of support are provided for investments in product development.

Are you looking for a plot of land, the right office area or an experienced negotiator between companies, service providers and customers? You will have a strong and experienced partner on site in Agora, the development company for Belval. The Agora team will actively support you, quickly and unbureaucratically, so you can concentrate fully on developing your company.

Short routes help to save time. Belval is only 20 minutes by car from Luxembourg’s international airport. Direct motorway links provide quick connections to Luxembourg City, France, Germany and Belgium. Well-scheduled bus lines and its own rail connections guarantee easy travelling for staff, customers and business partners. And from the city centres of Sanem or Esch-sur-Alzette, Luxembourg’s second-biggest city, it’s only a few minutes to Belval – for working and for living.

Belval has what you need at every stage of family life: nursery school, school and retirement homes are on-site. You can walk to the office or laboratory, supermarket or gym. The park, Rockhal, cinema and restaurants are perfect for relaxing and clearing your head. Belval has what you need. PLACE OF SCIENCE AND INNOVATION

PLACE FOR CLEVER MINDS

PLACE WITH TAILOR-MADE PREMISES

PLACE WITH QUICK ROUTES

PLACE TO LIVE
Belval can accommodate companies of all sizes that are planning to base their activities in Luxembourg. “However, the matter of office or laboratory premises is often only addressed as the last link in a chain of decisions that companies have to make when deciding where to base themselves,” says Vincent Delwiche, General Manager of the Belval development company Agora. “First the business model needs to be established, and the Grand-Duchy of Luxembourg has to convince as a possible location with all its geographic, fiscal and labour legislation law facets.”

Agora has all these aspects in its sights when in discussions with interested companies. “We have a large and professional network that we activate for interested companies in order to represent the advantages of Belval as a location as comprehensively as possible,” he adds. As well as providing companies with assistance when settling, the development company also supports them with matters of communication and marketing, or will put companies and customers in touch with each other.

Belval’s green lung can be found right beside its modern architecture: a large park links the Belval North and Belval South residential areas and the Square Mile business district with the heart of the campus. Offering walkers, cyclists, joggers and nature fans plenty of scope for outdoor activities as well as peace and relaxation – enabling them to enjoy life and recharge their batteries for a new day at the office or lab in Belval.

The blood analysis laboratory Ketterthill is an excellent example of this approach despite the fact that the company had already been active in the country for a long time. Its former company base was too small and, due to its location in an industrial area, no longer suitable for the long term. Agora provided the company with regular information on the research environment at Belval, and finally set up contacts with various private project developers. Today, Ketterthill has a modern head office with state of the art equipment at Belval.

It’s easy to clear your head in Belval after a day in the lab or at the office, whether in the form of after-work drinks with colleagues, dinner with friends or family, strolling or a workout at the gym – there is something for everyone here. Scattered around the campus, there are numerous restaurants and cafés with sunny terraces, and the multifunctional Belvalplace world of experience has a shopping mall, more restaurants and a multiple cinema to offer. The ‘Rockhal’ nearby offers unforgettable concerts staging international stars such as Nana, Joe Cocker, the Scorpions or Pink.

Belval has undergone transformation like no other place in Europe. Home to the steel industry for almost one hundred years, Belval today is a science, research and development hub, attracting people from many countries and other continents.

WORKING LIFE BALANCE IN THIS ULTRA-MODERN DISTRICT

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Biomedical research is a pioneer at the Belval research location: the Luxembourg Centre for Systems Biology (LCSB) was the first institute at the University of Luxembourg on the new Belval campus. And things are also moving fast for the spin-off companies: Information Technology for Translational Medicine (ITTM S.A.) is a new spin-off at the LCSB that specializes in the processing and evaluation of data from clinical studies.

"We accompany the entire process of data collection at the LCSB, and we develop bioinformatics tools to evaluate the experiments," explains Dr. Reinhard Schneider, director of the Bioinformatics Core Facility at the LCSB and one of the founders of ITTM. "Which is also of interest to pharmaceutical companies, as they have vast quantities of data that is considered as having been evaluated. But if it is analysed again using new bioinformatic approaches, it can lead to new diagnostic or therapeutic approaches."

In order for this to happen, the data needs to be organized properly and standardized. "This expertise is the business principle of ITTM," says the CEO of ITTM, Dr. Andreas Kremer: "Lots of pharmaceutical companies want us to process and evaluate their data again, and we have already completed the first orders." The IT infrastructure is of particular importance: "And it is excellent at Belval," confirms Kremer. "Which is of the greatest importance to us as a location factor."

HuMiX is the reproduction of a human intestine that scientists at the Luxembourg Centre for Systems Biology (LCSB) have developed on Belval campus. With its various intakes and outlets and triple-layered spiral on the inside, HuMiX is about the size of a beer mat and looks rather like an oversized computer circuit board. And, as unassuming as it looks, it is a trailblazing invention that provides scientists with entirely new insights into the human body.

The team of the "Ecosystem Biology" department led by research group director Prof. Paul Wilmes invented HuMiX. It allows human intestine epithelial cells and microbial communities to be grown separated only by a membrane so scientists can systematically research intestinal bacteria. What kinds are there? How do they affect human cells, and what is their role in the development and progression of specific diseases?

The results from the research with HuMiX will in future help to alter microbial communities in the intestine so that they are able to positively influence diseases such as allergies, autoimmune disturbances or diabetes. "HuMiX can also be used to simulate specific sequences in the gastrointestinal tract, such as the breakdown of medication," explains Dr. Pranjul Shah, co-inventor of HuMiX. One of the researchers' aims: the individual prediction of the breakdown and effect mechanisms in order to achieve the optimum drug therapy. Interest in the results from the research with HuMiX is high, not least for the pharmaceutical industry.
Professor Klump, more than 10 years since it was first founded, the University of Luxembourg has arrived at Belval. What does the University bring with it?

Rainer Klump: The University of Luxembourg focuses on points that will help to shape the economic future of Luxembourg. This applies to biomedicine, to information and communications technologies, and to areas of law and the financial sector. Excellent focuses have also been set in the fields of education and historical research. Furthermore, like the rest of the country, the University is multilingual, which is an important factor in the international context. And in view of its youth, it is extremely dynamic and also relatively flexible in its development. All this is now coming to Belval.

Professor Balling: In 2011 the LCSB became the University’s first research centre to settle at Belval. How did you experience these years here?

Rudi Balling: It was a time of tremendous change. I first stood on the campus in 2009, which at the time was really still a huge excavation pit, and at best a building shell. And now, just a few years later, a large University has moved in, and with it urban life. What impressed me most was the speed at which it all happened. We also had tremendous support from all sides. That was what enabled the LCSB to grow so quickly – from two people in 2009 to almost 200 in 2015, and from the originally planned approximately 3,300 m² to some 8,000 m² of laboratory and administration areas today.

So what does the move to Belval mean for the University?

Rainer Klump: The important financial investments by the Grand-Duchy are a clear indicator of the strategic importance of research and education in the country. What is exciting for the University is the possibility of redesigning the co-operation between the faculties, with other research facilities and research enterprises at Belval. It is a unique opportunity for the University – and for its partners.
The experience that companies gain during this process is invaluable for additional network of experts from fields such as taxation and law. The experience that companies gain on the test market Luxembourg make them compatible for representative basic population of customers residents from many European countries. New services or products can be tested on a fully appropriate basic population of customers which is based at Belval. And if necessary, the appropriate measures can then be taken to remove harmful substances from the home.

Sounds simple – but it's a long way from the idea to realisation of the project, and it requires a network. Touillon has mastered this health-technological challenge. He founded the company airBoxLab and developed a product called Foobot. Foobot is a stylish instrument which integrates in any living room or office. These sensors measure a wide range of harmful substances in the air. The box is connected to the Internet via Wi-Fi, where the measured data is evaluated and from where suggestions to improve the air quality are generated. It wants just to that easy to find partners to provide the premises, the finance and to realise the project, says Touillon. The breakthrough came when I was put in touch with the incubator “Technopoint” at Belval.

LIST moved to Belval in the summer of 2015. Dubois particularly appreciates the proximity to its partners: “Start-ups are at tremendous value in fruitful co-operations.” As one example, he quotes “TAO” (Testing Assisté par Ordinateur). The software is used to carry out evaluation processes exclusively on computers. TAO was developed by researchers of the University of Luxembourg and LIST, and is already being used in a joint spin-off company.

“Belval represents a tremendous opportunity for us,” says Dr. Stéphane Gidenne, director of the Laboratory of Pathology, Ketterthill. Ketterthill offers a broad spectrum of clinical and self-learning software at the Luxembourg Institute of Science and Technology (LIST). We're now working closely on these topics together – for the next Foobot generation.

However, there is something else that is of far greater importance to the director of the Laboratories. “Our neighbourhood in Belval is the Luxembourg Centre for Systems Biology, and we are planning close co-operations with the LCSB for analysing blood or microsample studies. The LCSB needs this for its research into Parkinson’s disease, to which the Institute is committed. As a provider of medical services, we want to develop a new market, laboratory analyses for scientific purposes. And that’s why Belval is the perfect location for us.”

“Let’s develop the Smart Campus Belval!”

“BE.DAL ass and self-learning software at the Luxembourg Institute of Science and Technology (LIST). We're now working closely on these topics together – for the next Foobot generation.”
There are museums, theatres and concert halls everywhere which attract both visitors and artists of all genres. No fewer than 170 different nationalities live in the Grand-Duchy, attributing a unique aura to this city and country which is multicultural, multilingual, creative and diverse. Luxembourg’s cultural programme reflects this diversity in a very impressive manner.

Luxembourg is one of the few countries whose inhabitants speak several languages fluently. While Luxembourgish, French and German predominate, it goes without saying that English is the lingua franca in the science sector. This linguistic diversity accounts for a major chunk of the Luxembourgish identity. In the throes of significant economic growth and a policy of upward mobility, this polyglot nation has also benefited from the native languages of around 250,000 foreign residents over the years.

Good to very good is how Luxembourg’s inhabitants describe their life satisfaction. Only Scandinavians regard themselves as even happier than Luxembourgers. Analyses repeatedly confirm that Luxembourg enjoys a high standard of living as well as a solid economy and a dynamic employment market. The country has an efficient healthcare system and an impressive public school system. Add to this the fact that life expectancy in Luxembourg is above the European average.

Thanks to its vineyards and breweries, patisseries, bakeries and diners, Luxembourg has a wide range of unique delicacies to offer. Small traditional producers handle their ingredients with love and care. Stylish pedestrian precincts invite shoppers to browse and visit Luxembourg’s numerous boutiques. Most shops and restaurants in Luxembourg City are accommodated in historic buildings which lends them a very unique atmosphere.

Luxembourg is primarily famous as a financial centre – but it is also currently and speedily developing as a popular science location. Various European institutions are also headquartered in Luxembourg City. Luxembourg’s business district is synonymous with a dynamic business platform which is not limited to financial activities. It is also home to international online retailers as well as global media companies or service-providers in the high-tech sector, e.g. operating communication satellites.
The University is a multilingual, international, research-based university with three faculties and two interdisciplinary centres, lecturers from over 20 countries, and more than 6,000 students. www.uni.lu

LUXEMBOURG CENTRE FOR SYSTEMS BIOMEDICINE (LCSB)
The LCSB bridges the gap between system biology and medical research. The focus is on neurodegenerative diseases and the metabolic networks of diseases. www.uni.lu/lcsb

INTERDISCIPLINARY CENTRE FOR SECURITY, RELIABILITY AND TRUST (SNT)
Research at the SnT focuses on the security and reliability of IT systems. www.uni.lu/snt

LIFE SCIENCES RESEARCH UNIT (LSRU)
Research into the fundamental processes of human diseases and their meaning in biomedical applications. www.uni.lu/research/fstc/life_sciences_research_unit

COMPUTER SCIENCE AND COMMUNICATIONS (CSC)
Applied and basic research in communications and information technology. www.uni.lu/research/fstc/computer_science_and_communications_research_unit

INTEGRATED BIOBANK OF LUXEMBOURG (IBBL)
The IBBL collects and stores biological samples and the associated records for research purposes, in particular in the medical area. www.ibbl.lu

LUXEMBOURG MINISTRY OF ECONOMY
www.eco.public.lu

LUXEMBOURG CHAMBER OF COMMERCE
www.cc.lu

ESCH-SUR-ALZETTE LOCAL AUTHORITY
www.esch.lu

SANEM LOCAL AUTHORITY
www.sanem.lu

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Location development company and first port of call for matters of urban planning and real estate, and for initiating contact with developers, investors, companies, partners in Belval, and museums and public institutions.
www.belval.lu

Realisation and texts: scienceRELATIONS
Layout: www.spezial-kommunikation.de
Photos: Bohn Foto & Design (U1, U4, 6, 7, 8, 10, 11, 12, 13, 15, 16, 17), Brumat Photo/Foersom Sàrl (U2), Habib Hakimi (3), Luxinnoivation (3), LCSB (U1), LCSB/scienceRELATIONS (10, 11), scienceRELATIONS (12, 13) airBoxLab (14), Kurt/dreamstime.com (17), Fotolia (16, 17)
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