Develop your activities in Galaxia Business Park Transinne, Belgium



1. INTRODUCTION : THE REDU-TRANSINNE CLUSTER

Located in Belgium, between Brussels and Luxembourg, Redu and Transinne are two nice villages belonging to the Commune of Libin (Province of Luxembourg). Thanks to space, both of them have now an unusual and very promising future.

Redu, which was chosen for the strategic particularities of its location and landscape suited to set up a ground control station, is hosting the European space Security and Education Centre (ESEC) since 1968. The ESEC (formerly ESA Redu Centre) is the unique ground control centre of the European Space Agency in Belgium. The operations at this site are under responsibilities of Redu Space Services (Belgium). Redu Space Services has first to take care of ESA own missions and also to develop commercial activities with third parties from Redu.

Transinne, neighbouring Redu and crossed by the A4/E411 Motorway connecting Brussels to Luxembourg, is hosting two business parks developed by IDELUX Développement. The first one, called "Le Cerisier", covers 14 ha and is multisectoral; the second one, called "Galaxia", has been designed over 20 ha for companies active in the space sector.

Galaxia was created in 2008 thanks to the support of Wallonia in the frame of one of its major development axis. Galaxia is the most recent business park dedicated to space in Belgium. The objective was to host and support confirmed companies but also start-up companies active in this space field.

For several years, Galaxia is confirming its role which is very complementary to Redu as this major Transinne business park is constantly improved for hosting new activities that cannot so easily be hosted on the ESA site. Moreover, several significant international events have been successfully organised over the past years in Redu and Transinne.

Today, thanks to the international awareness of this pair of sites, Redu-Transinne is clearly considered as the new space cluster of Belgium.



Map of the Redu-Transinne cluster (Libin, Belgium)

2. GALAXIA BUSINESS PARK, TRANSINNE

2.1 DESCRIPTION OF THE EXISTING INFRASTRUCTURE

2.1.1 Galaxia Business Park – The Ideal Place for Space Activities

Created by IDELUX Développement and funded by the Walloon Region with the support of the European Regional Development Fund (ERDF), Galaxia Business Park is the most recent space park created in Belgium and is actually the second pillar of the Redu-Transinne cluster.

Since 2008, its objective is to offer the most convenient environment to ease the creation of new applications and systems based on space technologies: technology transfer, telecommunication, earth observation and satellite navigation programmes.

In order to properly answer theneeds of space companies, Galaxia business model has been implemented with the support of two key industrial partners: SES (G.D. of Luxembourg) and Vitrociset (Italy). As a result, IDELUX Développement is not only involved in the specific infrastructure set up in Transinne but is also providing a full range of services dedicated to support the growth of the space companies active in the site.

Moreover, in order to extend the possibilities offered to the companies hosted in the park, Galaxia is directly linked to the **ESEC Redu** through a very exclusive and private optical fibre connection. This unique link can be used either for satellite data collection or for satellite telemetry, tracking and command (TT&C) from Galaxia site.

Today, Galaxia Business Park offers a unique package of complementary instruments dedicated to the development of new businesses with the aim of boosting the creation of technical expertise and of high-level jobs:

- the **Business Park (20 ha)**, an extensive area of building land available for companies involved in the space and high-tech industries;
- the **Business Centre**, exclusively connected by fibre optics to the ESA-ESEC Redu Centre and home to several international companies;
- **Galaxia Space Innovation**, providing start-ups and spin-off companies with a wide range of business incubation services;
- the Euro Space Center: an educational centre that can host exhibitions, seminars and events;
- the **Galileo ILS Centre** (Integrated Logistics Support), the only one of its kind in the world. The Galileo programme is designed to benefit the European Union from its own satellite navigation system.
- the **ESA Education Training Centre** (ESEC-Galaxia) encompasses the E-Technology Lab, the Training and Learning Facility, and the CubeSat Support Facility.

2.1.2 ESEC Redu – A Source of Inspiration

Operational since 1968, the ESEC Redu - the only ESA Centre in Belgium - was at the forefront of the development of the current telecom geostationary satellites operators. The first telecom satellites Programmes of the European Space Agency, such as OTS and ECS were autonomously managed from the Redu site until the last ECS 4 de-orbited in 2002.

Today, the ESEC, as part of the ESA ground stations network, is responsible for controlling and testing a wide range of satellites. It is also home to the Space Weather Data Centre which is part of the ESA's Space Situational Awareness Preparatory Programme.

The ESEC provides S-band links for ESA's network of ground stations, as well as in-orbit testing (IOT) for telecommunication and navigation satellites.



Today, the ESEC is providing communications for the Artemis, Integral and Proba satellites (I, II and V).

The site located in the heart of Belgian Ardennes region hosts multiple steerable antennas operating in a variety of frequency bands such as a 20 m L-band, 4.5 m C-band and UHF antennas for Galileo IOT and other antennas of various sizes as backup facilities for the leading satellite operator SES.

In the early 2000, this ESA ground station has initiated a strategic development focused on third parties projects, leading to an increase of its activities and to the recognition of Redu as a key ESA Centre, fully integrated to the ESA structure of establishments and Centres (2009). In 2017 the ESA Redu Centre name was changed again to ESEC to better fit to the two new strong orientations taken in this site: security and education.

2.1.3 Euro Space Center – The Smart Way to Discover Space

The Euro Space Center is existing for more than 25 years. It is actually the first piece of the puzzle created by IDELUX Développement in the Galaxia Business Park. It represents now a pillar of the educative tourism in the Province of Luxembourg.

This is an exclusive edutainment centre designed to motivate young people – and others – to be curious, become more sensitive to the impact of space on our lives and finally learn about space technologies. Euro Space Center offers a wide range of various activities with regularly improved programmes. Today Euro Space Center is more and more focusing on the education of young people.

The second main role of Euro Space Center in Galaxia Business Park is to host special events thanks to the various and flexible facilities it offers. The last edition of the Space Days, the major space related event in Belgium, was organised in October 2014 by Skywin, the Aerospace Cluster of Wallonia

Thanks to an international reputation built year after year on its attractive offer, Euro Space Center is yearly recording 40 000 visits and 29 000 days of internship. Moreover, Euro Space Center is proud to welcome visitors coming from 60 different countries.



Euro Space Center – Space Days 2014

2.1.4 Galaxia Business Centre – High-Tech and Sustainable

This Business Centre is an ultra-modern building where promising space companies can develop under the most favourable conditions and where start-up companies receive additional specific incubation services (Galaxia Space Innovation). Moreover, this exclusive Business Centre is directly linked to the ESEC Redu through high performance optical fibres. This exclusive feature clearly makes this site unique. The fibres can be used either for data collection from satellites or remote operations on satellites (TT&C).

Designed with a priority on sustainability and efficient energy use, Galaxia also demonstrates that advanced technologies and environmental concerns can be compatible.

Today, several companies have decided to develop their activities within Galaxia. Among them two of the world leaders in the space sector, Vitrociset (Italy) and SES Group (G.-D. of Luxembourg) through Redu Space Services are setting the pace and are prepared to support new companies through their projects.

If these companies represent three nations, their staff members working in Transinne are coming from more than 10 different countries. Thanks to these innovative international companies on the site, Galaxia Business Park is now hosting a real international community of specialists.





Galaxia Business Centre (outside and patio)

2.1.5 SpaceSolutions.be – A Boost to Young Entrepreneurs

Since 2008, the Galaxia Business Park hosts WSLlux Incubator. WSLlux is the space related antenna of WSL, the renowned high-tech incubator which, more than 15 years ago, was the first space related incubator in Europe.

In 2012, thanks to its comprehensive range of services, WSLlux has been selected to manage the ESA BIC Wallonie Redu (BIC stands for Business Incubation Centre). More than a label, this contract enabled WSLlux to provide young entrepreneurs active in the space sector with an additional bonus: technical support, specific funding schemes and increased visibility through ESA. The ESA BIC Wallonie Redu was the first ESA BIC created in Belgium and was part of a network of 13 incubators spread across Europe; it has successfully supported the creation of 12 start-up and spin-off companies specialised and/or using space technologies.

From 2018 to 2022, a new contract with ESA for supporting new entrepreneurs will apply. The context is similar for Galaxia but with more interactions with the Flemish incubation structure and also a better link between incubation and technological transfer. This awarded Belgian initiative is called: SpaceSolutions.be.

2.1.6 Extension of the Business Park – The Next Steps...

Galaxia Business Park is continuously improving in terms of services (intensified support to companies, SpaceSolutions.be, Knowledge Centre) and also in terms of infrastructure.

Regarding infrastructure, IDELUX Développement has made 20 ha available in Galaxia to promote the development of space activities.

In 2014 construction works in the park have led to the creation of a new access road and 400 new parking places. A roundabout on the N40 Road has been created to safely serve the two IDELUX Développement business parks (Galaxia and Le Cerisier). The heart of the park has also been shaped and the "Place du Soleil" esplanade is radiating in the centre.



View of the heart of the park – "Place du Soleil"

The next step is an ambitious expansion plan of the Galaxia Business Park. The objective is to continue the development to serve more space companies while offering them facilities designed according to their needs and also to make Euro Space Center more attractive.

In practice, besides a revamping of the Euro Space Centre, several new infrastructures are planned in the park: a triple temporary hall, a second business centre, ...

In such a context, there is no doubt that any company specialized in space has a legitimate role to play in Galaxia.



Vision of the future Galaxia Business Park

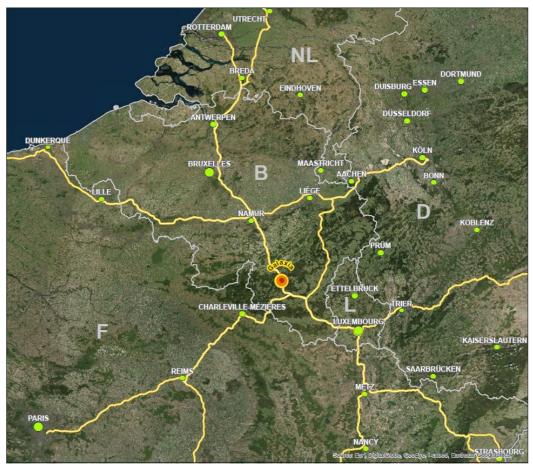
2.2 LOCATION OF GALAXIA – IN THE VERY HEART OF EUROPE

Galaxia Business Park, the site proposed to host DE ORBITAL DEVICES SRL premises, is located in Transinne, Belgium.

<u>Address</u> :	Rue Devant les Hêtres 2 B-6890 Transinne (Libin) Belgium	
<u>Coordinates</u> :	Latitude: Longitude:	50°N 0' 30" 5°E 13' 10"

As shown on the following map, Galaxia is located in the heart of Belgian Ardenne, in Transinne. Situated along the A4/E411 Motorway connecting Brussels to Luxembourg, Galaxia is a business park extremely easy to reach.

Transinne is 6 km far from Redu, where the unique ESA Centre in Belgium is located. Both Redu and Transinne (Commune of Libin) are in the west of the Belgian Province of Luxembourg (also called Belgian Luxembourg), in the Walloon Region (Wallonia).



Map of Belgium – Location of Galaxia Business Park

Transinne is ideally located between all the western European capitals and is served by a powerful and dense communication network linking the north of Europe to the south.

As such, Galaxia site in Transinne is:

- at the crossroads of the major communication networks : the A4/411 Motorway connects Zeebrugge to Luxemburg via Brussels, whereas the A26/E25 Motorway links Arlon with Maastricht (the Netherlands) via Liège;
- providing a direct and toll-free Motorway access to five international freight and passenger airports, namely Brussels National, Brussels South (Charleroi), Liège-Bierset, Luxemburg-Findel and Maastricht-Aachen;
- 80 km from the Container Terminal of Athus, the biggest dry port in Belgium, with a potential capacity exceeding 120 000 containers a year;
- only 30 km from Ardenne Logistics, the growing multimodal (rail road) logistics hub created by IDELUX Développement at the junction of A26/E25 and A4/E411 in Neufchâteau;
- close to two major railway lines, namely Zeebrugge Zurich, via Brussels and Strasbourg, and the Athus - Meuse line connecting Galaxia to the Athus Container Terminal;
- offering an easy access (by road and rail) to the major North Sea ports of Antwerp (2nd biggest European port), Zeebrugge and Rotterdam (1st European port);

2.3 EASY CONNECTIONS

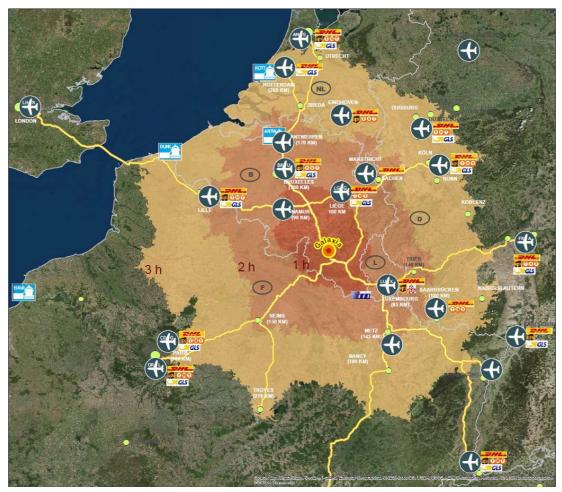
2.3.1 Road

Galaxia Business Park is ideally located along the A4/E411 Motorway, immediately visible and reachable at Exit 24. This Motorway crossing the Ardennes is particularly comfortable to use as despite of a respectable traffic level, it is much less disturbed by traffic jams and heavy troubles usually met in the big cities and their suburbs.



Aerial view of Galaxia Business Park and Access Map

Regarding connections, Belgium is famous for its very dense road and motorway networks. Galaxia is therefore served by an infrastructure making it very easily reachable from any important city, and vice versa.



Driving times towards main cities

The next table gathers some of the main cities reachable from Galaxia.

Driving time	Cities reachable from Galaxia
Up to 1 hour	Brussels (B), Luxembourg (L), Bastogne (B), Liège (B), Arlon (B), Namur (B), Charleroi (B), Marche-en-Famenne (B), Sedan (F)
From 1 to 2 hours	Metz (F), Reims (F), Lille (F), Antwerp (B), Maastricht (NL)
From 2 to 3 hours	Paris (B), Zeebrugge (B), Amsterdam (NL), Rotterdam (NL), Eindhoven, (NL), Saarbrücken (D), Köln (D), Düsseldorf (D)

Main cities reachable from Transinne

2.3.2 Railway

Like roads and motorways, the railway network density is also particularly high in Belgium.

For access to Galaxia, the railway connection is good and can be used either for people or for goods. The two major railway lines serving Transinne area are:

- Zeebrugge Zurich, through the stations of Brussels and Strasbourg
- Athus Meuse, the line providing a connection with the Container Terminal of Athus

The closest passenger train station is located in Libramont-Chevigny which is 15 km far from Galaxia Business Park. Taxi or public transport can be used to reach Transinne from Libramont-Chevigny. Galaxia has its own bus stop and is served by a regular public transport service: Line 61, Libramont - Redu.

For longer distances, the High-Speed Train (TGV / Thalys / Eurostar / ICE) is also available and provides good connection to major European cities. TGV, Thalys, Eurostar or ICE can be taken from the following train stations: Liège, Brussels, Luxembourg and Sedan.

2.3.3 Air

In addition to the roads and motorways crossing it, the Province of Luxembourg can also be easily reached by air. Not less than five international airports are situated within a strategic distance from Transinne. These airports are listed hereafter.

Airport	Distance from Galaxia	Number of Destinations	Number of Countries		Cargo and Express Courier
Luxembourg Airport (Findel), LUX <u>www.lux-airport.lu</u>	90 km	64	24	Major Freight Hub	Cargolux Lufthansa C, Qatar C, DHL
Brussels South (Charleroi), CRL <u>www.charleroi-airport.com</u>	100 km	67	19	Passengers only	-
Liège Airport (Bierset), LGG <u>www.liegeairport.com</u>	108 km	18	8	Major Freight Hub	DHL, TNT, GLS
Brussels Airport (Zaventem), BRU <u>www.brusselsairport.be</u>	123 km	199	67	Freight & Passengers	DHL, TNT, UPS, GLS
Maastricht-Aachen Airport, MAA <u>www.maa.nl</u>	140 km	10	7	Mostly Passengers	DHL

This list of nearest airports can even be extended further with three additional ones: Antwerp (B, 160 km), Metz (F, 178 km) and Lille-Lesquin (F, 213 km).

According to this information a location in Transinne provides direct motorway access to five international airports within a distance of 140 km constituting an extremely good "airports package" in terms of proximity, including several alternatives. Moreover, the international Brussels Airport (BRU) and – especially – the Airports of Liège (LGG) and Luxemburg (LUX) are major European hubs for freight transport.

2.3.4 Water

In addition to two convenient inland river ports located in Liège and Mertert, most of the major European seaports are reachable within a distance from Transinne ranging from 160 km (Antwerp) to 480 km (Le Havre). These ports have regular shipment towards Galileo Remote Sites.

These river ports and major European seaports are listed hereafter with the corresponding distance to Galaxia.

Port	Distance from Galaxia	Remark
Liège (B)	96 km	River port (Albert Channel)
Mertert (L)	130 km	River port (Moselle)
Antwerp (B)	160 km	#2 in Europe ^(*)
Zeebrugge (B)	240 km	-
Rotterdam (NL)	265 km	#1 in Europe ^(*)
Dunkerke (F)	285 km	-
Amsterdam (NL)	315 km	#6 in Europe ^(*)
Le Havre (F)	480 km	#8 in Europe ^(*)
Port data		1 ^{*/} 2012, Source: Eurostat

2.4 **IDELUX DÉVELOPPEMENT SERVICES**

Created in 1952, IDELUX Développement is the Economic Development Agency of the Belgian Luxembourg. Its main mission is to support the activities of companies with the aim of creating new employments in growth sectors. Today more than 650 companies take benefit from IDELUX support services in the Belgian Luxembourg.

Space is clearly a priority sector for IDELUX Développement. This is why, Galaxia Business Park was created in order to capitalise on the economic development potential derived from space applications.

Thanks to its tailored organisation, the expertise of its staff and to the permanent support provided to the companies hosted in Galaxia, IDELUX Développement is aware of the specificities and needs of space companies.

Therefore, keen on long-term relationships based on its long experience in companies support and to the specific services set up for space companies in Galaxia, **IDELUX Développement is the ideal partner to contribute to a successful implementation of new space activities in Belgium.**

2.5 SECURITY AND SAFETY

Transinne is clearly a safe and secure location.

On one hand, before considering the characteristics of the hosting facilities, the security of the hosting site - Galaxia Business Park - is a preliminary guarantee compared to other locations in, or close to, big cities.

On the other hand, Transinne area is also safe regarding natural hazards.

- Floods: impossible, Transinne is on a hill,
- Earthquake: the park is not in a critical zone,
- Typhoon, twister: no track record in Transinne area.

2.6 SOCIAL, ECONOMIC AND CULTURAL ASPECTS

The Belgian Luxembourg is not only a nice place to work... it is also certainly a nice place to live. Indeed, the Belgian quality of life is renowned all over the world.

Moreover, people working in Transinne area can rediscover every day the natural landscapes of this beautiful region. Quietness is easy to find around Transinne but the place has much more to offer. For people expecting more urban activities, in a 50 km radius around Transinne, several cities - from small to large - provide a wide range of possibilities: Libramont-Chevigny, Marche-en-Famenne, Bastogne, Rochefort, Bouillon, Arlon, Dinant and Namur. They are surely worth a visit.

These various pleasant cities and other very attractive villages offer many interesting spots

and curiosities related to sport activities, culture, leisure, pubs and restaurants.

In addition, the countryside location of Transinne brings another benefit: the housing costs are rather cheap compared to the main Belgian cities. Regarding short- or medium-term residence, 9 hotels (from 2 to 4 star) and more than 80 bed and breakfasts are located no more than 15 km away from Galaxia.



View of the Province of Luxembourg

2.7 THE SERVICES PROPOSED IN THE BUSINESS CENTRE

In the Business Centre IDELUX Développement offers a full range of services, as it can be expected in such a business centre.

2.7.1 All Inclusive Services

- Private use
 - recent secured offices in private use (from 19 sqm to 58 sqm),
 - new furniture,
 - reserved space in the 90 sqm server room,
- Security
 - building access control system (badges and codes),
 - security cameras,
- Collective areas
 - welcome desk,
 - reception staff dedicated to the welcome, phone calls (when requested), mail dispatch and various services,
 - lobby equipped with Wi-Fi,
 - colour copy machine & printer (via





internal network),

- 2 meeting rooms with Wi-Fi & multimedia equipment,
- kitchen and dining room,
- lavatories,
- Connectivity
 - connection to the Internet (optical fibres),
 - connection to the ESA Redu Centre (optical fibres),
- <u>Running and maintenance</u>
 - green electricity (solar power),
 - air conditioning,
 - water,
 - cleaning.



These services are immediately available in the Business Centre for a unique monthly fee based on the office surface privately occupied by the company.

2.7.2 **Optional Services**

The choice of some other services is left to each companies according to its own needs:

- telephone,
- access to the Internet (optical fibres),
- access to the connection to the ESA Redu Centre (optical fibres),
- incubation services (for start-up and spin-off companies) :
 - through WSLlux (via selection),
 - through SpaceSolutions .be (via selection with ESA).
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2.8 CONTACT PERSON

Joël MARINOZZI

Space and High Technologies Manager

IDELUX Développement

 Telephone : +32 63 23 19 59

 Mobile : +32 499 94 70 81

 E-mail : joel.marinozzi@idelux.be

Drève de l'Arc-en-Ciel 98 6700 Arlon Belgique