



## The Universities of the “Fédération Wallonie-Bruxelles” have a great deal of potential for innovation



Dr Ir Michel Morant, President of LIEU Network  
and Dr Ir Olivier Vande Vyver, General Manager of LIEU Network

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An interview with Dr Ir Michel MORANT,  
President of the LIEU Network,  
Past Vice-President of ASTP Proton

### Who are the members of the LIEU Network?

The LIEU Network brings together the KTOs of Belgian French-speaking Universities:

- Université catholique de Louvain – UCLouvain;
- Université libre de Bruxelles – ULB;
- University of Liège - ULiège;
- University of Namur – Unamur;
- University of Mons – UMONS;
- Université Saint-Louis – Bruxelles.

The LIEU Network works closely with other players for innovation such as SynHERA, PiCarré, Innovatech, Sowalfin, Europe Entreprises Network...

### What partnerships have you developed?

The LIEU Network and academia have a good record of collaboration with the 6 Walloon competitiveness clusters (BioWin, Wagrallim, Skywin, Greenwin, MecaTech, Logistics in Wallonia) and works at different levels. When calls for tenders are being launched by the Walloon Government through the clusters, each thematic working group helps the clusters to identify university teams that may be interested.

The LIEU Network also assists them in drawing up projects submitted for public funding and helps them map out regional university research potential. The LIEU Network also helps promoting the results generated by cluster projects and is typically involved in brokerage events organised by the clusters, such as the BioWin Days.

It is important that the LIEU Network and the clusters coordinate their efforts to achieve optimal effectiveness.

### Could you introduce the 6 working groups organised by professional sectors of the LIEU Network?

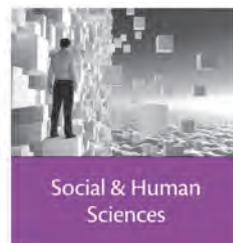
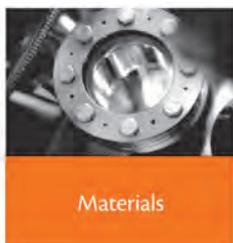
We quickly realised the benefit of organising ourselves into thematic working groups that bring together the scientific

### Could you remind us of the missions of the LIEU Network?

The “Fédération Wallonie-Bruxelles” Universities have a great deal of potential for innovation, which they want to use for the development of the region. This is the aim of KTOs (Knowledge Transfer Offices), also known as interfaces. In 2003, these organisations decided to work together and create the LIEU Network, which is supported by the Walloon Government and the Conference of Rectors.

The LIEU Network has four objectives:

- to promote the scientific resources of universities and facilitate their access to companies;
- to develop research collaborations between companies and research units;
- to operate the tech transfer, from scouting inventions to licensing and spin-off creation;
- to support the teams in a continuous process of professionalisation.



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The LIEU workings groups, 6 sectoral gateways dedicated to economic sectors



advisers from the various institutions according to their field. The LIEU Network brings together the skills of more than 10,000 researchers in the following areas: agro-food, biotechnology and health, energy and environment, materials, digital technologies, human and social sciences.

These thematic working groups are actual technology platforms, operational gateways to the labs for companies seeking access to university expertise: they analyse the requests from industry, direct them to the academic teams who are in the best position to handle the technical challenge and assist them in setting up collaborations. These platforms are also platforms to promote new results, new technologies which are available for companies.

Of course, these platforms work in close collaboration with relevant partners, especially the 6 Walloon competitiveness clusters, the 23 industry research centers or sectorial federations in such varied fields as chemistry, electronics, agribusiness, etc.

### What are your technology offers?

The technology offers showcase innovative technologies whose intellectual property has been secured thanks to the support of the scientific advisers and the patent experts of Knowledge Transfer Offices. These technologies are available

for valorisation, commercialisation. This can take different forms: a license agreement or research collaboration with a private company.

Technology offers therefore promote these innovative technologies in a language that has been popularised and adapted to companies. For instance, LTTO (UCLouvain) is proposing a miniaturised device for determining a breathing pattern while ULB highlights novel methods for isolating and enhance cardiovascular cells production. For its part, ULiège is enhancing a new tool to optimise anti-EGFR therapies and UNamur is stressing its knowhow in nanoparticles, drug design, genetics and cell response. And let us not forget neither UMONS' research potential (with its 10 research institutes), nor the wide offer in agriculture/food, environment, materials and non destructive analyses for instance.

### Could you tell us about your services to the 10,000 researchers of the "Fédération Wallonie-Bruxelles"?

A researcher's primary job is to carry out research, with all this entails in terms of scientific publishing and excellence. With this in mind, it is the responsibility of the LIEU Network and KTOs to mobilise researchers and support their efforts into the innovation process and also to contribute to the regional development. This mobilisation ranges from awareness-raising actions and





intellectual property, to research contracts and funding, even though researchers are much more familiar with this than they were 15 years ago.

Responsibility of LIEU members is to help researchers to bring projects from TRL (Technology Readiness Level) 2 to TRL 4 or even TRL 5 to 6. This includes managing IP (Intellectual Property), achieving the proof of concept, looking for relevant partners, setting up agreements, and finally transferring properly the technology to the more suitable partner to get the market. Additionally, the LIEU Network brings some support for promoting the laboratories among companies, using industrial language and standards, instead of pure scientific approach.

### How do you assist companies?

Our first area is providing access to university expertise that can meet the needs of companies. This is a considerable task as the knowledge and technologies available are highly diverse. Our second area is the organisation of meetings to match offer and demand.

Finally, our third area is assisting in implementing research collaborations and technology transfers. It is essential that these fundamentally different environments of research and business understand each other and work together in the interest of both sides and regional development.

### What are the ways to strengthen the impact of university research on society?

## Ampacimon SA: a remote sensor for grid managers

Ampacimon is a spin-off company of the Montefiore Institute at the University of Liege. Prof. Lilien used to be a world expert of galloping of electrical conductors and Prof. Destine is a specialist in microelectronics. The ampacity – capacity of current – of a high voltage line depends on the sag of the overhead line, and the sag influences the natural vibration mode.

By developing a remote sensor, clamped on the conductor on the line, based on energy harvesting, digitally connected to a server, the online ampacity can be measured and calculated with accuracy, and the temporary flow of current can be increased by up to 50%, especially when the wind is blowing, and green energy has to be transported. A device has been developed at the university, with several patent filings. Then a proof of concept has been set up on an actual line, with the support of the Belgian grid.

The company was created in July 2010, with a capital of 125.000 €. A first installation of a full system to equip a 400 kV overhead line was delivered in 2015. Today the capital of the company has been increased over 2 M€, and the turnover rises yearly, with 3.6 M€ last fiscal year. The company employs about 24 FTE, and has set up a subsidiary company in the US in 2017. Today, grid managers have an accurate and reactive tool of direct line rating for managing the electrical grids taking into account the fluctuating production of wind farms and solar farms.

[www.ampacimon.com](http://www.ampacimon.com)

## 2018 ACTION PLAN

### Building a trusted ecosystem to retain the companies-researchers relationship

Innovation is part of a long term strategy leaning on companies loyalty and the fostering of a trusted ecosystem.

To carry on its initiative in 2018, the LIEU Network undertakes to:

- ▶ Strengthen its support actions for structural research projects (FEDER, WALInnov, WISD...)
  - Expansion of the accompanying process to all the structural research projects financed by the Walloon Region

#### BRINGING OUT RESEARCH RESULTS

- ▶ Promote new results in networking events to accelerate the transfer to the socio-economic world
  - Organization of events dedicated to FEDER projects portfolios and meetings targeted towards socio-economic stakeholders

#### SHARING RESEARCH RESULTS

- ▶ Capture companies' needs and fulfill them through a personalized support thanks to the sectoral gateways
  - Multiplying meetings with companies and other players, support to the setting up of structural research projects

#### INTEGRATING THE SOCIO-ECONOMIC NEEDS



" Our knowledge transfer activity is growing: a consistent screening of research results is running thanks to LIEU tools and in collaboration with the competitive clusters. In May 2018, the LIEU Network hosts in Liège the ASTP-Proton Annual Congress, the European knowledge transfer association. This is the opportunity to highlight key strengths of the Walloon innovation ecosystem. "

Michel Morant, *President of the LIEU Network management committee*



**Fytofend:  
becoming the world number 1 in elicitors**

The origin of FytoFend lies in the Plant Cellular and Molecular Biology Research Unit (URBV) of the University of Namur. Its director, Prof. Pierre Van Cutsem, a specialist in the signals triggered in plants by pectin fragments, had the idea of combining these fragments with chitosans taken from the walls of fungal pathogens. To verify the biological interest of this complex, he contacted the Walloon Region which immediately supported him. At the end of 2006 a patent was issued and in mid-2009 a spin-off was created with Raffael Buonatesta, the current CEO. With the target of becoming the world number 1 in elicitors, the future challenges consist in extending the network of distributors and obtaining approvals in the largest possible number of countries.

Staff: 6  
Number of collaborations with the universities: 4  
Number of commercial contracts: 16

[www.fytofend.com](http://www.fytofend.com)

**Bone Therapeutics,  
world leader in cellular bone therapy**

Bone Therapeutics is a spin-off of the Université libre de Bruxelles (ULB) which was created in 2006 based on a wide range of research projects carried out at Erasme Hospital (ULB) and Liège CHU. The company focuses on neglected diseases linked to bones such as osteonecrosis. This disease affects relatively young patients (30-40 years old) whose bones are no longer able to regenerate. In order to counter the osteonecrosis, Bone Therapeutics uses cellular therapy and it has a vast and diverse portfolio of innovative allogenic cellular therapy solutions that cover a whole range of indications.

Since it was founded, Bone Therapeutics has employed a highly qualified team to develop its bone regenerative cellular therapy products. In January 2017, over 100 people were working for Bone Therapeutics, over 30% of whom are at doctoral level. Today it is one of the world leaders in bone cellular therapy.

[www.bonetherapeutics.com](http://www.bonetherapeutics.com)

**What are the salient features of your 2017 activity report?**

In 2017, the LIEU Network sensitised 2,917 researchers to calls for projects, intellectual property and valorisation. It also supported 127 patent applications and conducted 1,646 contacts between companies and researchers at meetings it himself organised with its KTOs.

In addition, the LIEU Network welcomes its 179 announcements and declarations of inventions and the signing of 708 applied research contracts (research agreements, service agreements and others). It can also avail itself of 161 technology transfers and 14 spin-off companies created.

Let us recall that since its creation, the LIEU Network has supported the creation of 223 spin-offs still active today.



20 years of the FIRST-SPIN OFF Program (Namur, March 6, 2018)

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