



WALK ABOUT

Brussels introduces its long-awaited pedestrian zone, which closes a huge swath of streets around the Beurs to traffic

\ 2

CRAZY STAGES

How a farmer's son from Haacht became the best builder of concert and festival stages in the world

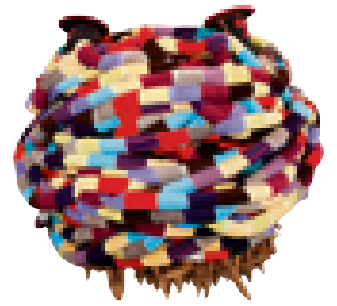
\ 7



COLOURFUL COILS

Ghent-based artist Marthine Tayou's Bozar exhibition starts surprising visitors as soon as they walk in the door

\ 14



© Courtesy ThromboGenics

In a spin

Spin-offs are breathing new life into Flanders' innovation scene



Senne Starckx
More articles by Senne \ flanderstoday.eu

For the past two years, Flanders' innovation motor has been sputtering. But both the government and industry agree that the best way to revive it is to encourage the creation of spin-offs and enhance their chances of success via universities and research parks.

The EU member states often find a mirror held up to their faces when it comes to economic performance. One of the European Commission's favourite ways to do this is by using scoreboard statistics – comparisons between countries and regions that tell them what position they hold in the race to the top.

In the area of innovation, the Commission compiles a new scoreboard every two years. In the latest, covering 2014, the Innovation Union Scoreboard labelled Germany and Scandinavia the leading innovators in Europe. Flanders was in the second group, made up of what the Commission calls

“innovation followers”.

Although Flanders' score is still way above the EU average, the report has a clear message for policymakers: Get to work.

Over the last two years, innovation has been slowing down in Flanders. That's in sharp contrast with the situation in the first decade of the century, when innovation was rocketing; for years, Flanders was one of Europe's leaders.

The remarks in the scoreboard report touch a sore point: while Flanders scores very well in both the quantity and quality of its international scientific publications, one of its weakest points is still the commercialisation of new innovations.

One of the most visible symptoms of this lack of commercialisation is the decline of start-up SMEs and venture capital projects over the last two years. This conclusion is even more painful knowing that Flanders has one of the strong-

est patent portfolios in Europe.

So what can help kick-start Flanders' innovation motor? “Although the number of start-up enterprises in Flanders has decreased lately, the number of spin-offs from universities and other strategic research centres has increased,” says Erik Tambuyzer, a member of the Royal Flemish Academy of Belgium for Science and the Arts.

“Spin-offs are a key element in innovation for a knowledge-based region such as Flanders,” he continues. “It's not easy, however, to turn a spin-off company into a commercial success.”

Tambuyzer organised a high-level conference on the topic earlier this month in Brussels' Palace of the Academies. Participants and speakers discussed ways to stimulate and increase the success rate of spin-offs from knowledge centres – a collective term for universities, colleges and research institutes.



In a spin

Universities and research parks are the ideal setting for ambitious spin-offs

continued from page 1

KVAB.BE

"Flemish spin-offs are discussed quite regularly in the general media," says Tambuyzer. "But very often the reason is that they've been acquired by foreign entities or gained international success. We have to focus on spin-offs in a broader perspective."

For Flanders, he continues, "it's crucial that we anchor the knowledge that these companies are based on and that this is embedded in our physical and geographical region".

According to the Academy, knowledge centres are the key to promoting knowledge-driven entrepreneurship in Flanders. One of the biggest and largest is to be found in Leuven.

Since 1972, the KU Leuven Research & Development Department (LRD) has guided the creation of 105 spin-offs, of which 87 are still active. Today, these companies employ more than 4,000 people.

Some are already world-famous, like Materialise, a pioneer in 3D printing, and ThromboGenics, an innovative drug developer (pictured on cover). And who knows: Maybe there's a new Google among these 87, or the new ones being created?

"That we can only hope for," says Koen Debackere, general manager of LRD. "Although I have to say that the prospects for our most recent spin-offs look very good."

As well as 3D printers LayerWise, there's Cartagenia, which develops software for medical diagnoses. "Cartagenia has become a market leader in a short period and is now expanding its reach as part of a large US group."

So what's LRD's recipe for success? "There's no simple formula," says Debackere. "Every start-up is different, as every research and market sector is different. The only thing we can do is to provide the best foundation so that spin-offs can arm themselves against continuously changing circumstances. But if you want a common denominator, here's one: Every strong spin-off seems to have a strong multidisciplinary character."

In the meantime, a working group at the Academy has listed seven recommendations in a position paper aimed at policymakers who want to give innovation in Flan-



© Rob Stevens/KU Leuven

Layerwise prints 3D implants for the medical sector, for both humans and animals

ders a boost. Some, just like the concept of innovation itself, are rather vague. Others are more concrete: "Incubation periods should be longer so that risk of failure is reduced"; "more investments are needed to help penetrate the global market".

According to Tambuyzer, one of the challenges is to free innovation in Flanders from its "golden cage". "In recent years, along with increased research funding, a large amount of human resources potential has been created in Flanders," he says. "But it sometimes seems that these excellent researchers are locked up in golden cages. Knowledge centres should actively scout for entrepreneurial talent between them, so that, with the right attitude and coaching, these individuals can actively engage in a spin-off and learn more about customer focus."

Successful commercialisation and the innovative character of a product or service go hand in hand. Or, in the words of Koen De Witte,

co-founder of reMYND, a successful KU Leuven biotech spin-off, it's all about creating "a flock of positive black swans", or unexpected events.

reMYND is at the forefront in the development of treatments for diseases like Alzheimer's, Parkinson's and diabetes. "When we started in 2002," De Witte says, "our business plan consisted mainly of performing contract research using our in-vivo mouse model for Alzheimer's and extending the

offering with in-vitro models."

Today, the Leuven-based spin-off still does contract research for the big pharmaceutical companies, biotechs and academic institutes, but the in-vitro model has also grown into different, unique pre-clinical treatments (still in the pre-clinical phase) that go far beyond treating Alzheimer's: from restoring the function of the pancreas in diabetes patients to restoring diseased neurons in people with Huntington's disease.

"We owe the current resilience of our company to the black swans in our portfolio," says De Witte.

The success of reMYND relies heavily on the "good science" provided by KU Leuven, the Flemish life sciences institute VIB and academic institutions worldwide. De Witte: "On the scientific and R&D side, the identification of novel mechanisms and drug targets requires excellent scientific collaborations, good advisors and a critical mass of trained researchers."

"Apart from that, research and innovation grants and financial incentives from the Flemish, federal and European governments were very welcome to overcome the incubation phase. It seems to be a common complaint in the spin-off world that venture capitalists are not keen on investing during this phase, because it's too risky."

Last but not least, De Witte mentions the importance of the positive image biotech has in Flanders for his company's success.

Another example of a successful Flemish spin-off is ProDigest, a company founded in 2008 at Ghent University that performs contract research for both the food and pharmaceutical industry. ProDi-

gest was founded by Sam Possemiers, who did his PhD in the gastrointestinal research lab of professor Willy Verstraete.

Today, the microbial inhabitants of our intestines are in the spotlight because of their role in nutrition processes and several disease-causing factors. With ProDigest, Possemiers is offering a lab model of the human intestine to interested companies.

After his PhD defence in the summer of 2007, Possemiers had to choose between an academic future or one in industry. "I decided to try both, by translating academic knowledge into industrial application," he says.

After the start-up in 2008, there was a four-year incubation period. "During this time, we turned our company concept, based on the model of the humane intestine, into a professional entity."

In June 2012, the next stage began, with the growth phase and the growing awareness that the company was there to stay. So what has Possemiers learned about the connection with the knowledge centre since his transformation into an entrepreneur?

"A knowledge centre is an ideal atmosphere for starting a company," he says. "Also, we were able to use the 'spin-in structure' of the university as a try-out. The crucial incubation phase, therefore, is turned into an embedded spin-off phase."

Possemiers also says the reality of entrepreneurship has transformed him personally. "A world of difference can be made in the self-confidence, creativity and open-mindedness of young people, just by getting them acquainted with the reality of entrepreneurship."

THE ROYAL FLEMISH ACADEMY FOR SCIENCE AND ARTS

The Royal Flemish Academy of Belgium for Science and the Arts (KVAB) was founded in 1772, as an organisation along the lines of the British Royal Society. Its main task is to nourish the societal debate, with scientific and artistic input, in a neutral and interdisciplinary way, by publishing position papers and organising thematic meetings for Flemish, Belgian and European researchers and other stakeholders.

The symposium on innovative entrepreneurship via spin-offs of knowledge centres is part of the Academy's Thinker's programme. Last year, there was a Thinker's programme on Flanders' Future as a Knowledge Society, for which Portuguese scientist and politician José Mariano Gago was the Thinker-in-residence at the Academy.