

wallonia and brussels

autumn 2019

wab
magazine

Discover a region that combines
technical knowhow with quality of life

FANTASY WORLD

WELCOME TO ONE-STOP CREATIVE
WORKSHOP PIX & REAL

- Teamwork is at the heart of Wallonia's shift to green energy
- Remembering the end of World War Two





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Editorial

Where Wallonia was once an industrial leader, now it is contributing to the global switch to cleaner energy. Our Focus article outlines the current transition in the region to green energy and a more circular economy. It is meeting the challenge with a multi-player initiative involving business, academia and innovation under the umbrella organisation of regional clusters. A prime example is professor and engineer Damien Ernst (pictured), profiled on p6, who has been rewarded for his ground-breaking work in the field of electrical energy systems.

Going green is also the philosophy of the agricultural economy, with the region leading the way in the transition to organic farming. Meanwhile, creating hubs is part of the digital revolution transforming Namur into a smart city. We preview the city's Kikk festival, which attracts creative techies from around the world. Wallpaper designer Pascale Risbourg puts this into practice by using digital printing to create wallpapers of tomorrow. Selected by Wallonie-Bruxelles Design Mode business development agency to represent the region at the Maison & Objet design fair in Paris in January, she tells us how she runs her international business.

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Wallonia and Brussels - Contact

AWEX Wallonia Export-Investment Agency
www.awex.be

WBI Wallonie-Bruxelles International
www.wbi.be

Welcome Offices
www.investinwallonia.be



Wallonia.be

EXPORT
INVESTMENT

Editor Sarah Crew

Deputy editor Sally Tipper

Reporters Lisa Bradshaw, Andy Furniere, Clodagh Kinsella, Ian Mundell, Tomáš Miklica, Saffina Rana

Art director Liesbet Jacobs

Managing director Hans De Loore

AWEX/WBI and Ackroyd Publications

Pascale Delcomminette – AWEX/WBI

Marie-Catherine Duchêne

AWEX, Place Saintelette 2, 1080 Brussels, Belgium

Tel: 00.32(0)2.421.85.76, **Fax:** 00.32(0)2.421.83.93

Email: mc.duchene@awex.be



10



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- 4** News and business updates from around the region
- 6** Profile: Professor Damien Ernst on the electrical energy systems of tomorrow
- 8** Cerhum is creating revolutionary made-to-measure bone grafts
- 10** How cryotherapy could one day prevent heart attacks
- 12** Pix&Real is a one-stop shop for all your audiovisual and special effects needs

16



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- 14** Namur's Kikk festival challenges the role of technology
- 15** Meet the expat: Grey Guo from China loves living in Waterloo
- 16** Discover how Wallonia's enterprises are collaborating to ensure a smooth transition to a greener industry
- 21** Europalia arts festival puts Romania in the spotlight
- 23** Wallonia and Brussels commemorate the momentous events of 1944-45

22



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- 25** The region's organic farms go from strength to strength
- 26** Designer Pascale Risbourg's wallpaper demands admiration
- 28** Panorama: Namur architect Nicolas Godelet builds bridges in China
- 30** Our pick of cultural events in Wallonia and Brussels

Cover: Art concept by Pix & Real Studio Louvain-la-Neuve

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GIANT MOTORWAY SCULPTURE CLOSE TO COMPLETION

The largest sculpture in Europe is in its final stages of completion on the E411 at Lavaux-Sainte-Anne in Namur province. Arc Majeur is a 60m-high structure arching over the Brussels-Luxembourg motorway, designed by internationally renowned French architect Bernar Venet. It will be inaugurated on 23 October. Weighing 250 tonnes, the public artwork was originally commissioned in the 1980s by French president Francois Mitterrand to adorn the A6 motorway in France. The €2.5 million construction and placing of the sculpture – a technical feat – is being financed by the John Cockerill Foundation, an engineering company based in Seraing, Liège. The collective project involved private partners as well as public institutions, including the Walloon Region.



Sonaca Aircraft unveils new assembly site & showroom

Sonaca Aircraft officially inaugurated its assembly hall at Temploux Aerodrome in Namur in September. The site's new facilities also include a showroom and offices. The site has 60 Sonaca 200 aircraft on the order books and a maximum production capacity of 80 a year. The single-engine, two-seater plane is destined for the flight school and leisure market, and is largely being sold abroad. The new 2,000m² assembly hangar enables eight aircraft to be assembled simultaneously. While aircraft parts are made in Romania and transported overnight by road, they are assembled at Temploux by a 35-strong team that includes aeronautical mechanics from the Namur, Liège and Charleroi area. Once in full production, the company predicts a workforce of around 50. It is situated next to the new tarmac runway. "The aerodrome at Namur presented numerous advantages," said CEO Harold Van Der Straten. "We are near the company's headquarters in Gosselies, and we have direct access to the runway to test the aircraft once they have been assembled."

sonaca-aircraft.com

CONSULAR HOUSE CULTURAL CENTRE OPENS

Set on the river Meuse in Liège, the Consular House is a 1930 Art Deco building and the new seat of the consulates of France, Italy, Greece and Guinea. To attract a wide audience, it also functions as a cultural centre and art gallery and has a riverside brasserie. A series of exhibitions launches its first cultural season this autumn: they include works by portrait photographer Christophe Martinez; ALQUIN, the son of COBRA founder Pierre Alechinski, who returns to Belgium for the first time in 20 years with an exhibition based on his 'sculptins'; and paintings and sculptures by Liège artist Robert Alonzi. The Villa Consulaire sits in the Parc de la Boverie in the Outremeuse quarter. It is accessible from the city's Guillemins railway station via the cycle and footpath known as La Belle Liégeoise.

ccri.international



SELF-DRIVING ELECTRIC SHUTTLE BUS TESTED AT CHARLEROI AIRPORT

Mobility company Flibco has trialled a self-driving electric vehicle linking transit passengers between Charleroi airport's two terminals. The Navya was tested on the tarmac of Brussels South Charleroi Airport for two days in September. With an enclosed compartment seating 15 passengers, the self-driving shuttle buses are aimed at making more journeys between the two terminals, to improve mobility fluidity. The trial days will now be analysed and assessed before a long-term plan is drawn up for the connection link. Luxembourg company Flibco has more than 130 Navya vehicles operating in 20 countries. The director of Flibco Belgium, Paul De Muynck, said: "It was only natural that we should work with Navya to offer the latest mobility solutions to optimise the user experience within Brussels South Charleroi Airport, whilst also respecting the environment."



BRIEFS

Air Belgium has launched direct flights to Guadeloupe and Martinique in the French Antilles from Brussels South Charleroi Airport. The new regular scheduled flights to the Caribbean start in December and will be operated with Airbus A340 aircraft configured in three classes.

Global goods giant Cargill is investing €4 million in its Mouscron site to produce low-sugar chocolate. At the cutting edge of research and development in the field, the Mouscron site has already received considerable financial backing from the US company and is seen as its flagship factory for chocolate production. The latest funds will buy new equipment.

Liège University veterinary medicine researcher **Bénédicte Machiels** has been **awarded a €1.5 million grant by the European Research Council** for her Virome project (Viral Regulation of Monocyte Education). Machiels hopes to uncover the mechanisms responsible for the education of monocytes, a type of white blood cell, with a view to developing therapeutic strategies to improve control or redirect certain new immune reactions.

Namur University pharmacy professor **Jonathan Douxfils** has **won the Eberhard F Mammen Young Investigator Award** for his research into thrombosis. Douxfils was awarded the prize at a world congress in Melbourne. He is also responsible for the spin-off Qualblood, which is developing prevention medication to combat thrombosis. The spin-off is partly financed by the Wallonia Public Service.



© KSW Photography

NEW LOOK FOR NAMUR CULTURAL HOUSE

After more than two years of renovation, Namur's cultural centre opened in September under a new name – The Delta. Overlooking the confluence of the Meuse and Sambre rivers, the existing 4,500m² building has been enlarged to 6,000m², with numerous halls, exhibition spaces, reading room and a garden terrace.

ledelta.be



IN THE SPOTLIGHT Damien Ernst

The Liège professor was awarded the 2018 Blondel Medal in recognition of his outstanding work in the field of science and the electrical industry



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My mentor told me to believe in my ideas and not be shy of sharing them

Can you tell us a little about your work?

I'm working on the electrical energy systems of tomorrow, focusing on the electrical grid – the biggest machine ever built by humankind to transmit and distribute energy and keep it flowing. This machine is changing because of how the energy is now produced, with more and more solar energy generation and wind farms appearing. We are in the process of extending the machine to connect all the power systems in the world. It's very important to be able to tap into renewable energy where it is being very cheaply produced in abundance and export it to other parts of the world that need it. With cheap electricity, the economy could grow and the whole world would benefit.

What are the challenges?

There are many. Fluctuations in the system in moving the energy around – over voltages, under voltages and congestion issues are a big challenge. The global electrical networks of tomorrow need software to control and drive the power around 24 hours a day. I'm designing the software mostly using artificial intelligence techniques.

What does the Blondel medal signify?

It's one of the highest awards that an electrical engineer doing research can ever receive under the age of 45. It was mostly for my work in artificial intelligence, in the control of electrical power systems. It's not an award you get for one single well-

defined work, but for a body of work. You need to show also that the work has already had an impact in the industry and that the industry has already used what you have developed, which if you are under 45 is quite a feat.

What's the best piece of advice you've ever had?

When I was a young researcher, my mentor told me to believe in my ideas and not to be shy of sharing them. It's extremely important, as many people have excellent ideas at work but they don't put them forward, they prefer to put forward the ideas they believe their boss would like to hear. I think this is a huge mistake in the field of research, especially if they are developing the ideas of something they do not believe in. It's good advice for young researchers, and something I encourage as I work with young researchers a lot. I am very careful to leave the doors open to be sure they can tell me openly when I am wrong or they do not believe what I'm doing is going in the right direction.

What do you enjoy in your free time?

I really enjoy my research, I have a lot of fun with it and it energises me, it's a real pleasure. Otherwise I also enjoy doing sport, between four and six hours a week, and I like going to the movies or watching them on Netflix to relax. It's very rare that I read books in my spare time.

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True to nature

Cerhum is 3D-printing implants that are almost identical to real bones

By Andy Furniere

Using 3D printing and an innovative material that mimics the properties of real bones, Liège company Cerhum produces tailor-made implants that reduce pain and trouble for patients. Its flagship technique MyBone, to be used first of all in maxillofacial surgery, will be used on its first patient at the end of the year.

Cerhum is the brainchild of biomedical scientist Grégory Nolens (pictured below,

left), who established the start-up in 2015 after working at the Belgian tech industry's knowledge centre Sirris. The young company has unique expertise in implants made of a ceramic material, composed mainly of phosphate and calcium, with characteristics similar to that of real human bones.

“Our material entirely removes the risk of implants being rejected by the body, which is a genuine risk when working with implants

made of plastic and metal,” says Nolens. “As the body’s cells consider our material to be organic tissue, they immediately start to integrate it in the surrounding natural tissue.”

The implants are made to measure with a 3D platform from partner company 3D-Side, based in Louvain-la-Neuve. A model for an implant is developed on the basis of medical images – like CT and MRI scans – which are uploaded to the platform. Surgeons can

© KHANH GREG



make the necessary modifications before the implant is printed and prepared for surgery.

Cerhum's technology has already produced such implants for spine and orthopaedics surgery. With MyBone, the company is first targeting patients with maxillofacial issues – those who need an implant in their mouth, jaw or face for reasons such as cancer, an accident or a cleft lip and palate.

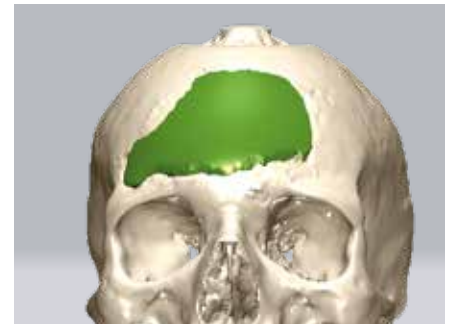
“Such patients now often have to undergo several surgical interventions for which a piece of bone is taken from their leg to make an implant,” says Nolens. “Our technique limits the number of interventions, the risk of secondary effects like infections, and the rehabilitation time.” As less surgery time is needed, the technique also has economic benefits.

MyBone will be used to treat a human patient for the first time at the end of the year and will then be gradually commercially distributed. Cerhum targets various European markets – including France, Germany, the UK and Switzerland – and is also targeting the United States, starting in Texas. With the support of Wallonia's export agency, AWEX, the company has identified the opportunities there

and is planning its next steps to get a foot in the door.

Cerhum also produces various other products for a range of sectors, with their unique materials and methods as crucial assets – for example, special dental crowns, technical parts for the aeronautics sector and jewellery. Still, the focus will always be on medical implants and Cerhum doesn't lack ambition in this field. Nolens already envisions improving the MyBone technique by using stem cells, which would help create implants for bigger and more complicated maxillofacial issues than Cerhum's current implants can resolve.

“In the long term, I even hope to work on designing synthetic tissue to create organs,” he says. Cerhum also plans to develop a new technique and material, to be called Resorb-



able, which would be used in facial plastic surgery and to solve problems with joints – for example in orthopaedics.

From the start, Cerhum has been strongly supported by the Walloon Region, which invested €2 million in the company for research and development. Cerhum's promising activities have also attracted financial input from the EU and private investors. To accelerate its progress, at the beginning of the year, Cerhum started a campaign to raise another €2.5 million in funding.



cerhum.com

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Our material entirely removes the risk of implants being rejected by the body

Cure with cold

Start-up CryoTherapeutics develops treatment against cause of heart attacks

By Andy Furniere

Medical start-up CryoTherapeutics, which aims to use cold therapy to treat coronary artery disease, has moved from Germany to Awans near Liège. At its new facilities, the company will develop technology to treat patients who have suffered a heart attack and in the long term to even prevent heart attacks from occurring.

CryoTherapeutics was established in Germany by an international group of entrepreneurs about a decade ago, but moved to Awans this summer after raising €7 million in funding, with Liège-based investment firm Noshag and the Walloon government as important investors. Its goal is to battle coronary artery disease, a

major cause of heart attacks. The company is first aiming to help people who have already suffered a heart attack, through cryotherapy.

“Our technology mainly consists of an intravascular catheter, which applies a temperature of between minus 10 and minus



20 degrees Celsius,” says CEO John Yianni (pictured, right). “It heals affected coronary arteries by reducing inflammation in that area and promoting the formation of collagen, a substance essential for the stability of the blood vessels.” Coronary arteries are the blood vessels that transport oxygenated blood to the heart.

CryoTherapeutics’ device can in many cases serve as a better alternative for stents, the devices that are frequently used to keep blood vessels open after a heart attack. “Stents are necessary when the arteries are severely narrowed, to relieve chest pain caused by a lack of blood flow to the heart,” says Yianni. “But if there is sufficient blood flow, our solution can allow patients to recover without having a permanent implant and the linked aggressive drug therapy to avoid blood clots. That drug therapy is costly, so our innovation also offers economic benefits.”

After successful tests on animals, which were also carried out in Belgium, the start-up is now preparing tests on people. The first clinical trial will be carried out in Sweden on 20 patients who have had a heart attack. Belgian hospitals will be



involved later on. In a year or two, CryoTherapeutics should be able to launch its technology on the market. But Yianni is already looking further into the future. “The ultimate goal is to detect inflammation in the coronary arteries at an early stage and treat it so a heart attack can be prevented,” he says. “To achieve that, we need to collaborate with companies specialised in image guidance. Several globally leading companies have already shown an interest.”

The company is currently hiring staff and hopes to assemble a team of about 15 employees by the end of next year. “The focus is now on establishing an R&D group with technical specialists that can turn our clinical prototype into a device that is ready to be launched on the market,” says Yianni. “The recruitment process is going smoothly; I’m very impressed by the number of people with the right skills in the region.”

Apart from its large pool of talent and the financial incentives, CryoTherapeu-

tics was also attracted to the region by its booming life-sciences eco-system. “That makes it relatively easy to set up valuable collaborations with clinical centres, hospitals and other companies in the same domain.”

A good example of the success of that eco-system is Miracor Medical, which also works in the cardiovascular sector. The two companies are currently sharing facilities. “It’s an ideal place to raise our activities to the next level, as we can also exchange our knowledge and experiences,” says Yianni.

While the company is, for the moment, concentrating on its clinical trial programme, CryoTherapeutics is already exploring the export possibilities for its innovation. “Our technology of course has global relevance, but we will certainly aim to obtain access to the markets in the US and Asia, as well as Europe.”

cryotherapeutics.com

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I’m very impressed by the number of people with the right skills in the region

Building Wallywood

Two design companies join forces to become an all-in-one creative workshop

By Tomáš Miklica

What do mole-rats and Nicolas Cage have in common? No, this isn't the setup for a joke but a perfect example of the creative versatility on offer at Louvain-La-Neuve's Pix & Real. The one-stop creative workshop is here for you, whether you need storyboards for a death-metal horror starring Mr Cage (like director Panos Cosmatos did for Mandy last year) or you're building a naked mole-rat exhibit for an animal park such as Pairi Daiza. "The ability to work on projects that are not alike is a Walloon speciality," says Pascal De-

grune, Pix & Real Studio's creative director and co-founder. "From experimental films to American blockbusters, from shows to theme parks, they all have a place here."

With Pascal Berger and Laura Jiménez Sanchez, Degruné has built a facility that can accommodate almost every need a director or producer might have. Pix & Real is an association of LM3D and One Reality Studio, bringing together Degruné's knowledge of storyboards, concept art and scenography and Berger's experience with making crea-

tures, robots and special effects. "We realised that our skills were complementary, and decided to create a shared label," says Degruné. "The Pix & Real Studio focuses on the visual development and designs that come alive in the Pix & Real Workshop."

The goal is to have as many professions and talents as possible under one roof. "At Pix & Real we offer a real set of complementary skills in one place," says Berger, CEO and founder of Pix & Real Workshop, about the 1,500m² of workshops located in Louvain-la-



© All photos Courtesy Pix & Real

Neuve's Einstein Scientific Park. "For a director or a producer, it's invaluable in terms of economy and time-saving." Pix & Real's services range from idea development, previsualisation and concept design to on-set special effects, costumes and make-up. "We are only five but our network of talents allows us to adapt to projects of all sizes," says Berger. "In May, we worked on sets and props for a big international sci-fi film and employed up to twenty people full-time in the studio."

Though their joint label only came into existence in January, 'Mr Pix' (Degrune) and 'Mr Real' (Berger) met a few years ago when working on the Las Vegas and Macau shows of Belgian theatre director Franco Dragone. And they both have more than 20 years of experience in the film and show industry. References could come from local attractions Pairi Daiza and Walibi, or from artists such as the multiple European Best Event Awards winner Luc Petit, musician Stromae or the France-based director Xavier Mairesse. Their impressive list of clients also includes the Belgian cinematographer Benoît Debie, the 2019 winner of the César Award for Best Cinematography.

The main reason for Pix & Real's success is of course their hard work, but the location



is significant as well. "Wallonia is endowed with two fantastic tools: the most attractive tax-shelter mechanism in Europe, and the Wallimage fund," says Berger. Wallimage, the region's audiovisual economic fund, invested a record €6.58 million in 44 TV and film projects last year, almost €1 million more than in 2017.

And earlier this year, Wallimage released an app for film fans. Degrune says the app's name, Wallywood, fits the region's potential. "Many audiovisual companies are nearby in the region," he says. "Digital special effects, post-production, sound



and film studios in one small area... For a producer, it's a dream." A dream Pix & Real helps turn into reality.

pixandreal.com

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We realised our skills were complementary, and decided to create a shared label



© C Lessire

Get your Kikks

Namur's digital festival challenges the role of technology in the world

By Sarah Crew

More than 25,000 people from all over the world will be descending on Namur this autumn for four days of digital and creative culture. The international Kikk festival showcases new technologies from Wallonia and abroad, providing an economic boost to a wide range of digital and artistic projects. Aimed at building bridges between science, technology and art, it offers a dual programme for professionals and the public, with conferences and workshops, a demo market, indoor and outdoor art exhibitions and a city-wide artists' trail.

For its ninth edition, the festival is tackling the topic of fragility within technology, the planet and its ecosystems, exploring topical questions of migration and North-South relations. In selecting the theme, curator Marie de Chastel wanted to highlight the beauty and diversity of the

planet as well as how technology can connect people.

"We also want to look at the downside of technology: the question of ethics, representation and inclusiveness," she says, pointing out the risks of a sector dominated by white Western males of a certain age. "With the rise of AI, it's important to think about how we categorise data and how it can lead to discriminatory decisions." This is one reason the festival is designed to be as accessible as possible. "We invite people from different disciplines and who have a critical point of view on society as well as using technology in their practices."

The hub of the festival – running from 31 October to 3 November – will be a marquee in Place d'Armes, with the majority of events within walking distance at the Théâtre Royal, Stock Exchange and new cultural centre

The Delta. Visitors are invited to take a tour of the city with AfriKikk, a parcours by artists from Africa with some 20 locations and installations. There are also kids' activities, including a music forest, a sound and light installation and French-language theatre performances at the Abattoirs de Bomel.

The festival exemplifies Namur's pioneering work in the digital sector. Non-profit Kikk is a founding partner of the creative hub and multidisciplinary co-working site Trakk, along with the University of Namur and the province's economic bureau, BEP. This co-creation space and fablab includes the Smart Gastronomy Lab in Gembloux, the first Belgian living lab to explore gastronomy in the light of technology, and Wallifornia MusicTech, an association aimed at promoting music and technology.

kikk.be



MEET THE EXPAT



Grey Guo was born and raised in South China. He studied journalism and lived in Shanghai before beginning an international career in Germany and Singapore, then came to Belgium in 2018. He lives with his family in Waterloo

I head the global communications department at BASF's Performance Materials division, headquartered in Waterloo. What excites me most in my job is the freedom and opportunity to use creativity and strategic thinking to develop big concepts that create brand experience and impact on business and culture. I feel lucky that I work with a multinational team, which has a shared understanding that creativity and business impact can go hand in hand.

Outside work, I relax and travel with my wife and 10-year-old son. Among my hobbies, I like photography and cooking. Food and the convenience of travelling are what I appreciate most about Belgium. As food is an important part of Chinese culture, I am happy that it occupies a similar place here. The quality and variety is superb. We love seafood; it is amazing to have live crabs in the supermarket. My family and I like spending time on Sunday mornings at the open markets, where we not only buy groceries but also chat with the stall owners and sometimes eat a few delicious oysters.

Belgium is a hidden gem as a travel destination and underrated by tourists. There are so many nice places to discover such as La Hulpe, Dinant and Durbuy in Wallonia. I am fascinated by the mix of centuries-old and modern architecture and how cities connect with nature. Another beauty

of travelling in Belgium is that many places can be reached within 90 minutes. It is also a convenient hub for travel to neighbouring countries.

Living in Waterloo is enjoyable. This is the first time we have had a house with a garden (it's often used as soccer field). After huge Asian cities, we appreciate the quiet of Waterloo. It may be small, but it is international and we can always find the things we want. My wife is learning gardening with advice from our neighbours, kids cycle to school together and a recent neighbourhood party brought back childhood memories.

Exploring nature is easy; my son and I like cycling together in the forest and around the Waterloo battlefield area. Another spot we are fond of is Château de la Hulpe, a beautiful castle surrounded by a peaceful park. The best moments are kids playing soccer and chasing each other in an open green field with an amazing sunset in the background. These are also the best moments for my third eye – my camera.

We are supposed to stay in Belgium for only four years. This summer, we came up with a plan to discover a new place each month. I am curious to see how many and what other places we will experience by 2022. Or will we stay longer in this lovely country? Who knows.

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My family and I like to spend time on Sunday mornings at the open markets

More from less

Wallonia's companies are working together as the region makes the transition to a greener, more circular economy

By Ian Mundell



The transition to environmental sustainability means companies need to be smart about how they use resources. “We are moving into a circular economy, where we create economic value for companies while decreasing the amount of primary materials entering the production system,” says Véronique Graff, managing director of GreenWin, an organisation devoted to environmentally sustainable chemistry, materials and construction in Wallonia.

The same goes for energy, where there is a shift to more efficient processes and cleaner energy sources. “Wallonia is a small region

with high energy consumption, so we face a significant challenge when it comes to renewable energy,” says Cédric Brüll, director of Tweed, which is devoted to sustainable energy. “But we are also working on energy efficiency, and when it comes to industry we have had quite good results.”

GreenWin and Tweed are, respectively, innovation and business clusters, organisations set up by the Walloon government and industry to help business address economic challenges. They bring together companies and experts from the region’s universities and research centres, making connections and encouraging the sharing of knowledge, skills and equipment. The clusters help

their networks develop projects involving new technologies and economic models, from the initial conception, through funding to their implementation. They also support their sectors with tools such as reports and studies on specific issues, and they host conferences and organise trade missions overseas.

Wallonia’s energy transition began with an agreement in 2003 that provided incentives for energy-intensive industries to become more efficient. These accords de branche have supported major changes in industrial processes. “For example, all the paper pulp industries have built the co-generation of energy into their processes,” Brüll explains.



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This is very ambitious, but the idea is to have a direct impact on climate change

Véronique Graff, GreenWin

They have also helped an energy service industry develop in Wallonia. “One of our assets is that we have great engineering companies, both small companies that can help industry here become more energy-efficient, but also big companies such as Tract-

ebel, TPF and John Cockerill that have the strength to carry out energy-efficiency projects all over the world.”

Increasing the use of renewable energy has been more challenging. Putting solar panels

on a factory roof will help a little, but more sophisticated approaches are required to create a deeper change. One way Tweed addresses this is by creating working groups to look at specific sectors. “For example, we’ve brought together hospitals and energy providers, and



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We are working on energy efficiency, and when it comes to industry we have had quite good results

Cédric Brüll, Tweed

have created some exciting projects involving solar panels in hospital parking lots that can be combined with electromobility.”

A particularly hot topic is the creation of energy communities, in which consumers come together to share a local renewable

energy source. “When people consume solar or wind power directly, that reduces the cost of the grid and avoids the problem of ‘not in my back yard,’” Brüll says. Part of the attraction is price, but people are also drawn in by being independent and able to control their power supply.

Tweed’s E-Cloud project is working on micro-grids so that companies in the same industrial zone can invest in and share local renewable energy production and storage. A specific test case is MeryGrid, which brings together three smaller companies on the Mery industrial estate in Esneux,



Liège province, to share solar and hydro-electric power and to develop a storage capability.

One of the keys to this kind of project is not the energy source but digital technologies that allow supply and demand to be monitored and managed in a sophisticated way. “We already have some companies with good knowledge of ‘smart grids’ at the European level,” says Brüll, citing n-Side, Opinum and Dapesco as examples. Meanwhile, the challenge of storing energy is being addressed by companies such as CE+T Energrid.

Wallonia is also seeing whole new sectors emerge, such as hydrogen energy. “Two or three years ago, apart from a couple of R&D projects, no one here was working on hydrogen energy, but now we have industrial partners who are investing in this area.”

Among them is John Cockerill, which created a hydrogen business in 2018 and, with Chinese partner Suzhou Jingli Hydrogen Production Equipment, recently won a contract to provide 85 zero-emission buses to the 2022 Winter Olympics in Beijing. A project is also under way to equip Liège Airport with hydrogen-powered vehicles.

Meanwhile, WallonHy, one of the R&D projects Tweed helped create, has spun off a company called Hyflux, which will develop a more efficient method of hydrogen energy production.

GreenWin has also found that digital technologies play an important part in the transition to a greener industry. “Digital technologies allow companies to fine-tune their production lines, and therefore drastically reduce their energy consumption and use of primary materials,” Graff says. But they can also have an impact in the construction sector, for example by recording the type and location of materials

WALLONIA IN TRANSITION

Here are a few of the many enterprises contributing to the region going green:

Aleyon Belux supplies a complete range of products to veterinary centres
alcyonbelux.be

AMB Ecosteryl processes medical waste with methods that have a low impact on the environment, recycling 90% of the material produced
ecosteryl.com

Coretec is a consultancy specialising in the study, implementation, optimisation and supervision of energy solutions
coretec.be

Cuisine Sauvage promotes edible plants with foraging walks, cooking classes and gourmet tours
cuisinesauvage.org

Enersol helps companies and individuals through energy transition, reducing their consumption and introducing renewable energy and storage capabilities
enersol.be

Opinum integrates sensors and smart data processing to optimise the energy and environmental performance of buildings
opinum.com



• AMB Ecosteryl

Plastic Pool Europe offers an industrial-scale plastic grinding service, converting hard plastics such as crates into feedstock for recycling
pp-europe.be

Protelux specialises in processing deep-frying oil and other waste materials from cooking and food preparation
protelux.lu

SEDE Benelux treats farming waste, composting organic waste and processing water and mud, often through innovative alliances with other industries
sede.be

Belvas makes chocolate with green credentials, from the organic, fair-trade ingredients to solar power and heat recovery system that makes its workshop 50% self-sufficient in energy
chocolaterie-belvas.be



• Cuisine Sauvage

used in a structure. “This means that, for the whole lifespan of the building, you can be very precise when it comes to renovation and the recycling of materials from the building.”

Developing new construction materials and methods is also important. GreenWin’s Atisol project, for example, has produced a plant-based insulation material that is completely recyclable. “This fits the idea of the circular economy, but it is also easy to use, and that’s very important for the construction sector,” Graff says.

Another project, called Frensis, set out to develop windows that combined thin, highly insulating glass with a highly insulating frame, producing a much higher than normal energy efficiency. While the combination proved hard to achieve, the vacuum double glazing developed in the project demonstrated significant potential on its own. “So one door closes, and another opens.” This has since been brought to the market by AGC Glass, in particular for use with existing frames. The company has also started a glass replacement service for building renovation projects, a shift away from simply selling products that is another facet of the circular economy.

For the future, one of the biggest challenges is to find ways of capturing carbon dioxide (CO₂), the principal gas involved in climate change. This is something GreenWin is pursuing as a member of CO₂ Value Europe, an international project that brings together large CO₂ emitters to develop and test new approaches to carbon capture.



SOLAR ENERGY STORAGE PUT TO THE TEST

Making the most of solar power is not simply a matter of putting up as many solar panels as possible. As the size of an installation grows, serious thought needs to go into how the energy produced will be managed, stored and used. This is where the MiRIS project, costing around €10 million, comes in. Unveiled by the technology group John Cockerill (then called CMI) in 2018, MiRIS is made up of 6,500 solar panels, covering 10,000 square metres on top of John Cockerill’s industrial halls in Seraing. These panels have a peak production capacity of 2MW, enough to power 500-600 households for a year.

Over the past year, MiRIS has been testing four different battery technologies – lithium-ion, two kinds of flow battery and a sodium-sulphur battery – and an energy management system developed by John Cockerill and the University of Liège. The aim has been to characterise how they perform in real-world conditions.

“The important difference with Miris is that we are working with industrial-scale batteries,” says Régis Frankard, president of John Cockerill Energy Storage. “In contrast to a demonstrator, where we might test a single cell or a battery module, it’s really the complete system.” The total battery capacity is 5.4MWh. The knowledge gained from MiRIS will inform how John Cockerill develops systems for its clients, such as micro-grids for establishing energy communities. “MiRIS gives us the capacity to disconnect from the network and test applications off-grid, so we can show our clients how the solutions we propose will perform.”

johncockerill.com

“In Wallonia, we are working on systems for the mineralisation of CO₂, which will allow us to re-use it in construction materials,” Graff says. “This is very ambitious, but the idea is to have a direct impact on climate

change. Being able to work collectively on that will make all the difference.”

greenwin.be
clusters.wallonie.be/tweed-en



© Centre Pompidou, MNAM-CCI, Dist.RMN-Grand Palais - Adam Rzepka, Sabam Belgium, 2019

Belgium, meet Romania

Europalia is a chance to discover the land's rich history and culture

By Ian Mundell

The Europalia festival takes place across Belgium every two years, exploring the history and culture of a particular country through exhibitions, performances and events. This year the country of interest is Romania, a return to Europe for the festival after a decade of globetrotting that saw it feature Brazil, India, Turkey and Indonesia.

As a country, Romania is not much older than Belgium. It was formed in 1859 by the union of two principalities – Moldavia and Wallachia – that for centuries had been vassals of the Ottoman Empire. Independence was granted in 1878, but it was not until 1920 that Romania gained the territory of Transylvania, almost doubling its size.

But the land on which Romania stands has a long, rich history. Its earliest peoples are put in the spotlight at the Grand Curtius Museum in Liège, in an exhibition on Neolithic and Bronze Age cultures along the lower Danube. It was here that crafts such as pottery and metalworking first established themselves in Europe.

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It's all about trying to create a dialogue between different countries and communities, through art



© National Museum of Romanian History



© Centre Pompidou, MNAM-CCI, DistRMN-Grand Palais - Adam Rzepka, Sabam Belgium, 2019



© Janco-Dada Museum, Ein Hod

The exhibition will feature many pieces from recent excavations, which are being shown for the first time. There will be beautiful geometric ceramics, mysterious anthropomorphic figurines, and jewellery and weapons in gold and bronze.

The region's story continues at the Gallo-Roman Museum in nearby Tongeren, with an exhibition on the Dacians and other peoples living in the Romanian lands when they were conquered by the Romans in 106 AD. Then more recent history is covered in Perspectives, at Bozar in Brussels, which presents an artistic history of Romania, from the 19th-century search for national identity and independence through to the fall of Communism in 1989.

“It explores how art in Romania evolved, with contemporary artists reflecting back on these periods, recurring themes and, at its centre, a focus on the Romanian historical avant garde,” explains Dirk Vermaelen, Europalia's artistic director.

This complements Europalia's flagship exhibition, also at Bozar, which is devoted to the

sculptor Constantin Brancusi, Romania's most famous artist and a major figure in 20th-century modernism. Brancusi left Romania as a young man to live in Paris, but remained intimately connected to his homeland. Themes from Romanian folklore recur in his work, and some of his methods – such as direct carving in wood – come from traditional art rather than his academic training.

The exhibition will follow his development, from academic works made in Romania, though the first figures he produced during his early years in Paris, to some of his most celebrated sculptures, such as Mademoiselle Pogany and Bird in Space. “The underlying theme is the sublimation of form,” Vermaelen says. “What is typical of his work is that he has a limited set of subjects, which he repeats, trying to find their essence.”

Europalia is not just about highlighting Romanian art and artists, but encouraging interactions with those in Belgium. “It's all about trying to create a dialogue between different countries and communities, through art,” explains Vermaelen.

At Les Drapiers gallery in Liège, for example, textile designer Daniel Henry will exhibit work inspired by Romanian fabrics, from the gold used in the Orthodox church to traditional embroidered, woven and felted materials. And at the Theatre de Liège, Wanda Mihuleac will exhibit her collection of 101 'slate books', produced in collaboration with 101 French-speaking poets from around Europe. Belgians involved include Yves Namur, Laurence Vielle, Béatrice Libert and Jan Mysjkin.

Meanwhile, the Museum of Fine Arts in Tournai hosts an exhibition of work by six Romanian and Belgian photographers whose work resonates with the museum's collection. The natural and mining landscape, architecture and heritage, territory, and cultural heritage are just some of the themes explored.

europalia.eu



© Topfoto/Beiga

Celebrating freedom

Brussels and Wallonia mark the 75th anniversary of their liberation during the dramatic final months of World War Two

By Sarah Crew

As a final curtain to five years of major war commemorations, Belgium is marking the 75th anniversary of its liberation from the Nazis with a year-long programme of events. Wallonia's agenda focuses on the Ardennes, in particular the anniversary of the Battle of the Bulge, which was fought in the winter of 1944-45.

Additional activities are laid on for the annual Nuts celebration weekend in Bastogne in mid-December – named after US General Anthony Clement 'Nuts' McAuliffe, a senior officer in the Bastogne campaign – while the exhibition Art Liberty at the town's war museum honours both the liberation and the 25th anniversary of the fall of the Berlin Wall. Over the same weekend, the nearby

village of Manhay will echo to the rumble of military vehicles and the sounds of the 1940s in a concert by The Manhattan Dolls from Tucson, Arizona. Manhay History 44 Museum serves as the hub for the commemorations.

A major event for each region is a military parade of wartime and modern vehicles organised by the War Heritage Institute. The

northern route from Mons to Leopoldsburg took place at the end of August; January sees the southern route pass through villages and towns in Liège and Luxembourg provinces. In the capital, the Museum of the Armed Forces recalls the course of the city's liberation in a new permanent exhibition. Understanding the history of those dramatic days is key to appreciating the suffering of Belgians across the country.

Following the Allies' dramatic landing in Normandy on 6 June 1944, by the end of August citizens were uncertain of their fate. After more than four years of occupation, German forces had begun to flee Brussels, heading east. Citizens had not expected to be liberated so soon, and after fears of all-out-fighting faded, huge crowds rushed into the streets on 3 September and greeted the liberators with euphoria. A few skirmishes between Belgian resistance and German soldiers took place in Cinquantenaire park, while flames rose from the Palais de Justice as the departing army set fire to its archives.

One of the bloodiest battles of the war was yet to break out, however. In a desperate gamble to split the Allied armies by a surprise blitzkrieg through the Ardennes to Antwerp, Hitler ordered hastily assembled Panzer divisions to strike in the strategic border town of Bastogne. A series of battles in freezing temperatures followed between 16 December and 25 January, in which more than a million soldiers fought for control of this wooded, hilly area. The Ardennes Offensive became known as the Battle of the Bulge, referencing the shape of the Allied line.

About 85,000 Allied soldiers were killed, injured or reported missing during the battle, with the US bearing the brunt. The equivalent figure for the German army is estimated at 100,000. Almost 3,000 civilians died, and the siege left an indelible legacy on the local community. It wasn't until the end of January, after particularly bitter weather, that the Allies succeeded in smothering the German advance and effectively ending their European campaign. Germany eventually capitulated on 8 May and the war ended on 2 September 1945. Peace finally reigned in western Europe.



© Topfoto/Belga

WHAT TO SEE

Nuts Weekend

The 75th anniversary of the Battle of the Bulge will be marked by exhibitions, a sound-and-light show, military fair, Christmas market and 1940s concerts and re-enactment. *13-15 December, Bastogne*
bastogne75.be
walloniabelgiumtourism.com/battleofthebulge

75th Anniversary of the Battle of the Ardennes

Weekend of commemorations in Manhay, with a gathering of military, re-enactments and live music. *13-15 December*
ardennes-history-remember.be

Liberation Column

Parade of historic and modern military vehicles through Houffalize, La-Rochee-Ardenne, Hotton, Manhay, Vielsalm, Stavelot, Spa, Malmedy and Elsenborn. *17-21 January*
belgiumremembers44-45.be

War-Occupation-Liberation

New permanent exhibition of more than 1,000 collectors' objects. *Royal Museum of the Armed Forces & Military History, Brussels*
klm-mra.be

Baugnez 44 Historical Center

This site just outside Malmedy saw the slaughter of American prisoners; today the museum presents the final operations and battles in the Ardennes.
baugnez44.be

101st Airborne Museum, Bastogne

The 'shelter experience' brings alive the experience of the town's population during their besiegement.
101airbornemuseumbastogne.com

Manhay History 44 Museum

New museum telling the story of the Battle of Manhay in the winter of 1944-45.
mhm44.be

Mons Memorial Museum

A permanent exhibition on the city's military history.
monsmemorialmuseum.be
en.monsmemorialmuseum.mons.be

Bastogne War Museum

Modern memorial centre to the Battle of the Bulge with interactive displays, personal stories and military memorabilia. Adjacent to the Mardasson Memorial, honouring fallen US soldiers.
bastognewarmuseum.be



© jchoremans



To market

In Wallonia, one farm in seven is organic

The number of organic farms in Wallonia continues to rise. In many cases, it's a younger generation of farmers who are converting their family business to organic. Bio Wallonie, a non-profit organisation based in Namur and financed by the Wallonia region, provides free advice along the way.

During an Organic Week earlier this year, organised by the region's agricultural promotional agency Apaq-W, it was announced that the number of certified farms in the region had risen by 7% to 1,742 farms during

2018, with 117 businesses having converted to organic farming. Wallonia boasts 90% of Belgium's organic acreage and 77% of the country's organic farms. Consumer spending on organic produce tripled between 2009 and 2018, and the rising demand has led to growers increasing their acreage for organic fruit by 17% and vegetables by 50%.

In 2013, the Walloon government initiated a strategic development plan for organic farming as part of Horizon 2020, an EU research and innovation programme. With the objectives of this plan already reached

in December 2017, the target has been increased to reflect the boom in the organic market and boost the flourishing sector – the target now is to have 2,000 organic farms in the region by the end of 2020, accounting for 18% of total acreage. An additional investment of €3 million has been earmarked to reach the following increased targets: organic farming on 18% of available agricultural land, 2,000 organic certified farmers and 6% of all food sales.

biowallonie.be
apaqw.be

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The target now is to have 2,000 organic farms in the region by the end of 2020

Wall art

Pascale Risbourg has carved out a niche for playful, contemporary wallpaper that refuses to remain in the background

By Clodagh Kinsella





In the late 1980s, Pascale Risbourg took part in an exhibition at the Fondation Cartier – then in Jouy-en-Josas, outside Paris. Synonymous with traditional toile de Jouy, or cotton cloth printed with pastoral scenes, typically in blue or red, the town has a museum dedicated to the genre, which Risbourg visited. “Seeing these designs of people hunting, fishing or on swings, I felt they lacked something,” she recalls. “Eroticism!”

A graduate of Paris fashion school Esmod, Risbourg had always been more interested in the research side, tipping over into other media – and a decade after the visit she developed her own decadent toile de Jouy wallpaper. “When you look at it from afar you think, ah, toile de Jouy, but up close you see these little erotic figures worked into the print and smile,” she says. “I feel that there’s often a lack of humour in the design world.”

It was moving to Brussels six years ago that prompted Risbourg to specialise in wallpaper, launching a brand inspired by great brands such as Pierre Frey. “I like to work on projects where I have to learn everything from scratch and I wanted to create a singular wallpaper collection where I could do vegetal designs, graphics and dreamier things. Wallpaper was a domain that let me pursue my eclectic interests.”

Apart from her impish toile de Jouy, which has since become a signature, Risbourg’s designs often reference geometric shapes and Art Deco, or feature lush scenes of nature running riot, from wild artichokes mingling with exotic birds to giant pineapples looming against jungle backdrops.

Demand for her work has risen as wallpaper has come back into vogue – due partly to technical developments such as better glue, and partly the zeitgeist. “People are starting to have fun with the walls of their homes,” she says. “It’s no longer like before when people set up home and kept the same decor forever. A wall is like a painting: every two or three years you change the mood. Wallpaper is a small thing that can have a big impact.”

Her brand’s main showcase is Ixelles boutique Patterns, run by her husband, Christian Giraud, and stocking vintage and contemporary design, while select French sales points include Paris boutique Au fil des Couleurs. The majority of business comes via decorators and architects working on hotels and shops, or for private clients. “I want this to stay quite niche and rare,” says Risbourg. “Maybe it’s not good business, but an architect told me it makes him feel like he’s done his job because when he shows my work to clients they’ve never seen it before.”

In previous generations, wallpaper was printed with cylinders on a cheap and cheerful industrial level, but that technique has now become scarce. “The new way is digital printing on – in my case – a very high-quality, non-woven paper which is very matt and soft to the touch,” explains Risbourg. “My work is also luxury in the sense that all my orders are made to measure – I don’t have any stock.” Owing to her meticulous approach, Risbourg only produces two or three designs a year. She has been selected by the Wallonie-Bruxelles Design Mode business development agency to represent the region at the Maison & Objet design fair in Paris in January.

With her toile de Jouy now 15 years old, the designer recently gave it a modern spin at Brussels contemporary design fair Collectible, where visitors could use an animation app to bring the wallpaper’s characters to life. While toile de Jouy is an antique tradition, the restless Risbourg couldn’t be keener to embrace new technology. “Today I think we should use technological advances like the higher quality of printing and apps to add value to the wallpaper of tomorrow,” she says, adding: “We still have a lot of work to do!”

facebook.com/pascale.risbourg4design

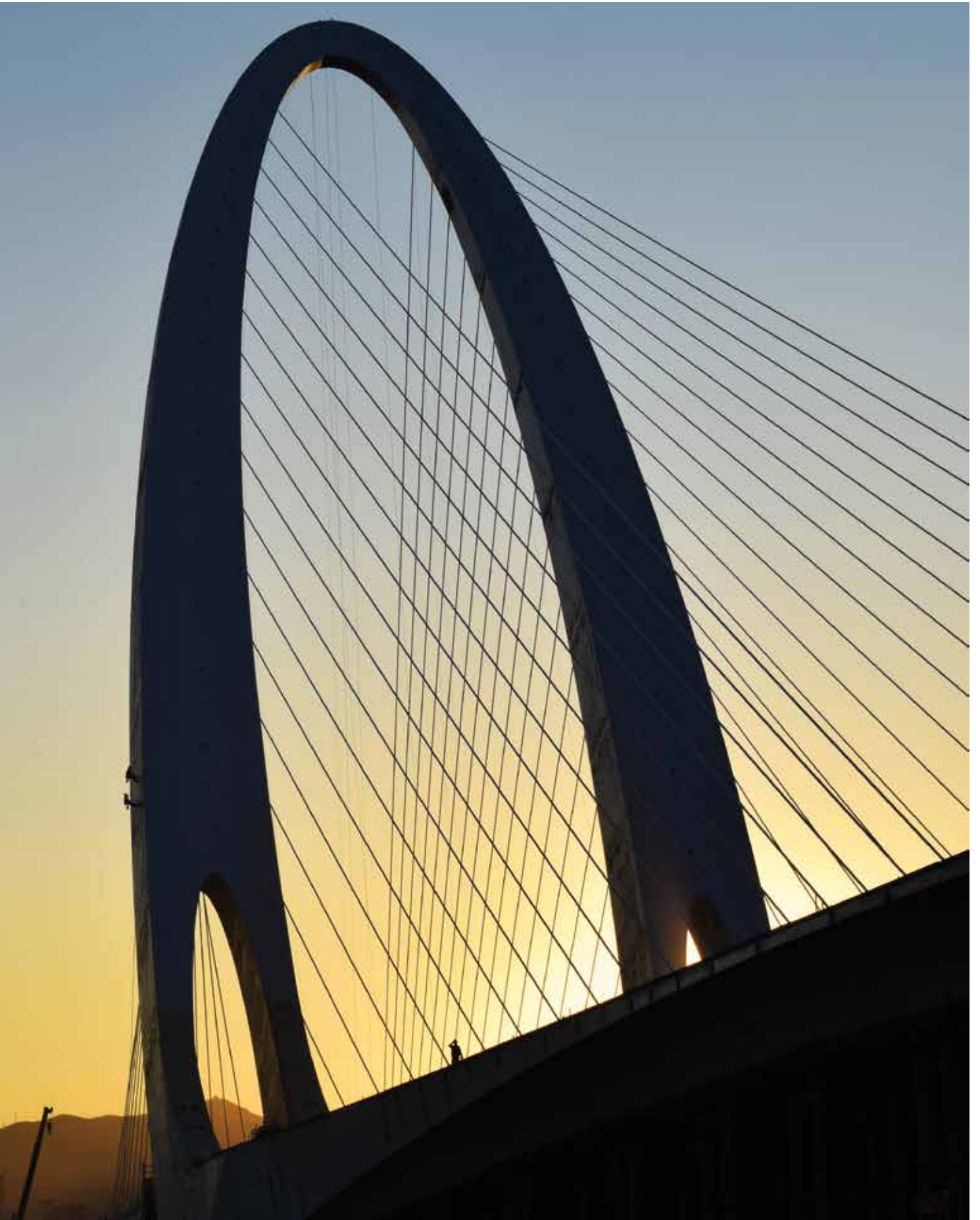
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A wall is like a painting: every two or three years you change the mood

MIND THE GAP

The Chinese bureau of Walloon architect Nicolas Godelet is the driving force behind a remarkable road bridge that will connect Beijing with a new suburban development to the west when it is completed at the end of 2019. The ChangAn bridge is 1,350m long, with a 600m deck shrouded by two asymmetrical arches representing two gates. From a particular angle, the structure also reveals the Chinese character 'ren', resembling a walking man. The complex structure is seven times as heavy as the Eiffel Tower and required its designers to use calculation and 3D modelling methods more commonly used in the aeronautics industry. Godelet, from Namur province, told RTBF that one of the project's aims was to "give a soul to a suburb that today has been abandoned".

ng-lab.net



© Paul Joostens Claey's Gallery



© Antica Namur

© A. Robin



© Olivier Monnard



EXHIBITION
DALI & MAGRITTE

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The two biggest icons of surrealism, Salvador Dalí and René Magritte, meet in this highlight of Brussels' 2019-20 arts season. For the first time, a large number of works will be brought together to show how the pair saw – and influenced – each other. In 1929, Magritte spent a fateful month at Dalí's home in Cadaqués. The Surrealist movement really took off soon after, and the artists' reputations were sealed. The exhibition in the Fine Art Museums includes paintings, sculptures and film as well as photographs of the pair and archive materials.

11 OCTOBER-9 FEBRUARY
fine-arts-museum.be



FAIR

ANTICA NAMUR 2

Generations unite at this opener of the art market season, which brings together 135 arts and antique dealers from Belgium and around the world. While the big European houses take their place as always, there's an emphasis this year on new and young dealers, who are shaping the art market of tomorrow. The range of items is broad, from furniture to paintings to jewels to manuscripts. Prices vary as well; Antica isn't just for avid collectors with major investments to make. Book early to ensure a ticket.

9-17 NOVEMBER

antica.be

EXPO

DARWIN L'ORIGINALE 3

Wander through lush vegetation and Victorian streets in an interactive show at Liège's Cité Miroir dedicated to one of the most famous scientists of all time. Aside from offering us an explanation of evolution in many volumes – most notably *On the Origin of Species* – the 19th-century biologist was a humanist who spoke out against the slave trade, believed in religious freedom and pioneered the study of animal and human behaviourism, with its emphasis on empathy and collaboration. Experience the man's – and society's – evolution from a theological-based concept of natural history to one that embraced learning through examination of the world at our feet.

UNTIL 2 FEBRUARY

expodarwin.be

FILM

OCEAN FILM FESTIVAL 4

Nature and wildlife are an abiding subject for the documentary genre, and, with sea life more threatened than ever by the growing plastic soup, this festival has its finger on the pulse. The nomadic event sells out across Belgium – including in Brussels and Namur – every year, pulling in fans of sea life, sea adventures and cinema alike. The short films swing from educational to exciting, as they introduce us to creatures both strange and awe-inspiring.

24 OCTOBER-6 DECEMBER

oceanfilmfestival.be

FINE ART FOR EVERY BUDGET

Luc Darté is the director of Antica Namur, Wallonia's premiere antiques and fine arts fair. In its 43 years, it has grown from being essentially an antique furniture fair to one with a wealth of objects, from decorative sculpture to jewels to paintings by old masters

"This year is the 43rd edition of the Antica Namur Fine Art Fair. In the beginning, Antica was a local event, a regional fair. Most of the dealers exhibiting were from Namur and Liège, and there were a few from northern France. It specialised in furniture, also from the area, as well as French and English antique furniture.

After a few years, it became a national and then an international event. That was Antica's first big evolution. The second was broadening the scope to include art, jewellery and antique objects. Now we actually have less furniture than we used to. And the current trend is for 20th-century painting. There is more of that now than ever before.

We have 133 galleries and dealers represented this year. The fair has become so popular that we have a waiting list. Galleries and dealers apply for a spot, and we choose them through a special committee. The city of Namur is really a crossroads between Belgium, the Netherlands, Luxembourg, France and Germany, so most of our exhibitors come from those countries.

While 80% of our exhibitors return every year, we make sure that we have a good mix in our selection. One might be specialised in furniture, another will be specialised in paintings. It's crucial for there to be a good balance because that's what's most intriguing for visitors. Our fair's reputation rests on the quality of our exhibitors.

Antica is especially popular among collectors. That's because anything is possible here. The variety of pieces is so diverse, you can pick up a piece of glass art at one stand for €200, while next door is a painting by an old master for €300,000. That sounds crazy, but that's the beauty of Antica; it's possible to find something for every budget."

antica.be



© Fairtime

Feel inspired



Wallonia, a world of opportunities

1,602 FOREIGN INVESTMENTS
_____ in 18 years

400 M CONSUMERS
reachable
WITHIN ONE DAY _____

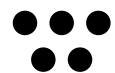
 Very high density
Of **UNIVERSITIES**
and **HIGH SCHOOLS**

6 COMPETITIVENESS
_____ CLUSTERS in
LEADING-EDGE sectors

an exceptional
QUALITY
OF LIFE 

Highly skilled
AVAILABLE
WORKFORCE 

70% of business
turnover comes
from **EXPORTS**



Wallonia.be