

POSITIVE DESIGN AT LIÈGE TRIENNALE

Rise of the smart city: Wallonia joins the urban movement

Google invests in Mons data centre



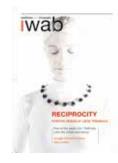
Editorial

While digital technology has profoundly changed the way we communicate, it's now set to transform almost every aspect of daily life for city dwellers. That's the scope of the smart city movement, an efficiency drive that improves urban networks and services through digital and telecommunication technologies. All Wallonia's major metropolises are setting up initiatives to create cities of the future – no easy task for these historic centres. From public transport and municipal car parks to utility services and street lighting, the benefits for communities are a greener and more cost-efficient society. In our main feature, read about Wallonia's matching and how the region's key actors are investigating four smart cities in France this autumn.

Meanwhile, in our Create section, we look at Liège design triennale Reciprocity, which is innovatively promoting design as a social medium to improve neighbourhood life and encourage sustainable development. There are free activities for all during the three-week event in October.

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Reciprocity Design Liège: Elya Tettelin A Touch of Steel © Johan Blomm



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Crossing continents

When it opens to traffic in just over a year, the Yavuz Sultan Selim bridge over the Bosphorus Strait in Istanbul will be a mammoth feat of construction: 2.4km long and 58m wide, the €700 million bridge will carry eight lanes of traffic and two trains. And Liège study bureau Greisch will have made it possible. The bureau's job is to carry out all the crucial architectural measurements required for a bridge that joins Europe and Asia, which until now has taken

up 55,000 hours of calculations. "The two pylons measuring 322m and 318m are completed, as is the concrete structure of the embankments," said administrator Vincent de Ville. "Now the placing of the fifty-six segments that will form the span is under way."



WORK NEWS



Liège: gateway to 200 destinations

A new daily flight from Liège airport to Munich offers access from the city to more than 200 destinations, thanks to an agreement between German airline Lufthansa (pictured) and the British carrier BMI Regional. Munich is one of Europe's most important hubs, with flights to destinations all over Europe including Reykjavik, Ibiza, Moscow and Beijing, and numerous cities in the US, including New York, Chicago and Philadelphia. At the same time, VLM Airlines will begin offering flights from Liège to Nice, Avignon, Venice and Bologna.

Fossil with blood-red teeth found

A researcher working for the Royal Belgian Institute for Natural Sciences in Brussels has discovered a mammal thought to be 70 million years old – 15 million years older than the one previously thought to be the oldest. Barbatodon transylvanicus was found on what used to be an island in the region of Transylvania in present-day Romania. The mammal, about the size of a rat, had blood-red incisors covered with an enamel containing iron to help it eat hard foods like grains, researcher and palaeontologist Thierry Smith explained. The skull is the most complete mammal fossil from the Upper Cretaceous period.



Emines Fort for sale

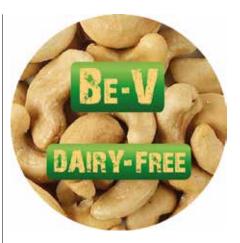
The Emines Fort, one of the nine structures that formed the fortifications of Namur in 1914-18, is up for sale with a price tag of $\in 1$ million. The fort, which is in private hands, is being described as habitable with an area of 3,000 square metres within a total of six hectares of grounds, mostly woodland. The fort was bought in 1992 by Albert Hublet, whose father had worked there during the German occupation of 1940-45. The mayor of La Bruyère is reported to have expressed an interest, but is only prepared to go as high as €125,000. The eventual new owner must respect one condition: the fort has to remain open to the public until the end of the World War One centenary commemorations in 2018.

Google honours Mundaneum's Otlet and La Fontaine

This summer, Google devoted one of its commemorative Doodles to the creators of the Mundaneum, based in Mons. Paul Otlet and Henri La Fontaine were both lawyers with an interest in the classification of information, and together built up a database of 400,000 entries classified on index cards. The system would later comprise 15 million facts with sources, taking up an entire wall of filing cabinets. Their work is seen as a forerunner of Google's own database. The Doodle appeared on 23 August, the 147th anniversary of Otlet's birth.

I-Care expands worldwide offices

Mons industrial maintenance company I-Care has announced that it is setting up new offices in Australia and the Middle East. Specialised in predicting and detecting technical problems from a distance, its latest product, Wi-care, enables the Mons office to identify when a machine fails, thousands of kilometres away. I-Care was set up 11 years ago and has offices around the world.



V-Cheese launched

Six students from the Haute Charlemagne university college in Huy have been invited to present their new vegan 'cheese' at the World Expo in Milan in October. Be-V is a spread made from barley and cashew nuts and contains zero lactose. The barley byproduct, following germination, goes on to be used to make a beer called La Charlhutoise. The team will take part in Milan in a European competition with a prize of $\pounds15,000$.

Chinese incubator at Louvain-la-Neuve

The construction model for the new Chinese business incubator in Louvain-la-Neuve was presented by Chinese and Walloon partners during the recent state visit to China. The China Belgium Technology Centre, on an 8.3-hectare site in the Science Park, will consist of five incubators, for biotechnology, IT, electronics, opto-electronics and sustainable development, and will provide 1,500 jobs, including 800 for locals. The total cost of the project, which also includes offices, labs, conference facilities, a hotel and restaurant, comes to \notin 200 million.



Rixensart shopping centre opens

Les Papeteries de Genval, the new shopping and residential complex in Rixensart, opened to the public in August on the site of the former paper factory of the same name. The complex brings together 25 retail businesses in open and green surroundings, from 5 à Sec to Leonidas.

The frame game

Saluc scores big in the global competition of billiard ball production

BY ANDY FURNIERE

A long a canal in the tiny town of Callenelle sits Saluc, the main player on the global market of billiard ball production. From this corner of Hainaut, Saluc's billiard balls roll around the world.

Saluc, short for Société Anonyme Les Usines de Callenelle, has been knocking out the competition in the billiard ball market since the company started targeting the field in around 1950. It was founded decades earlier, in 1923, but at the time concentrated on chemical production for tanneries.

"With its chemical knowhow, the company managed to create billiard balls that lasted much longer than others and with which players could achieve a higher level of precision," says CEO Curt Bossuyt. "The key is the special kind of resin we create."

Currently, Saluc holds about two-thirds of the billiard ball market. It has a range

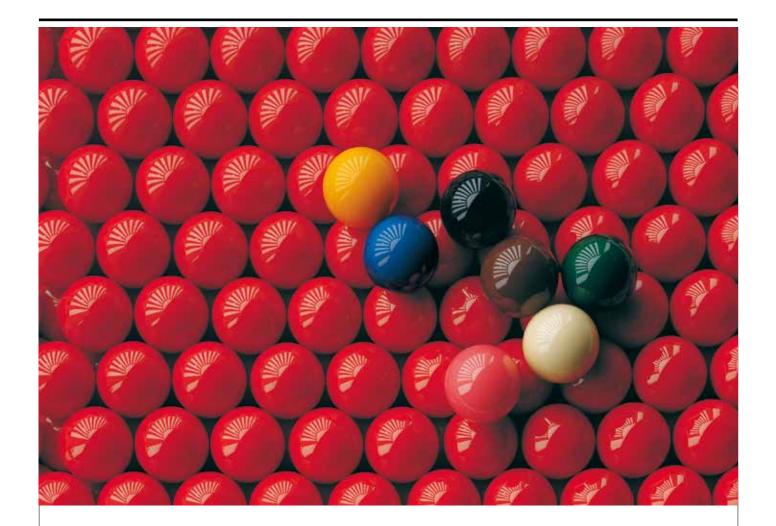
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IN FIGURES

Founded in **1923** Exports to **100** countries Annual revenue **€25** million **99** percent share of export in revenue 270 staff **270** of about 100 types of ball, branded as Aramith. Mostly, the company produces high-quality balls for pool, snooker and carom billiards. "But we produce for smaller, local billiard sports as well and invest in materials for emerging sports," says Bossuyt. To ensure none of the billiard balls are sent out with defects, all of them are still checked by human eyes.

Because of their high quality, most professional tournaments of billiard sports use Saluc's products and the company sponsors sports federations. "It's a win-win situation," says Bossuyt. "By promoting the sports, we raise the public's interest in them and hopefully sell more of our products as a result."

Saluc's investment in R&D has been essential to its success. From the outset, a special department created new machines and production techniques, giving it an edge over its competitors. "It's an expensive strategy, but one that has paid off," says Bossuyt. After one of



their partners sold information about their working methods to a competitor in the 1980s, Saluc has guarded its secrets with the utmost care. "Since then, we have never allowed outsiders to visit the plant," says Bossuyt. "We've invested too much in innovation to let others reap the rewards."

The other main reason for Saluc's success is its focus on exports. With the help of AWEX, Wallonia's export agency, Saluc has steadily been building a large network of distributors all over the world. Today, the company has a presence in about 100 countries, and exports account for about 99% of its revenue. Saluc has two branches in North America, in Chicago and Georgia, but that's not its main export market. "We export mostly to Asia and Europe," says Bossuyt, and China in particular is an essential client country, even though Saluc increasingly faces competition from companies selling cheaper products. "But it seems there are enough clients who will choose quality over price," says Bossuyt.

North America used to be the main market for Saluc, but this changed with the subprime mortgage crisis of 2007. "Fewer people could afford to buy a new house and this affected the sale of billiard balls for residential use," explains Bossuyt. "Before, we profited from the fact that many Americans were installing a billiard table in their new house." In Europe, it's much less common for people to have a billiard table at home. But Saluc is trying to convince more people to play at home through their Fusion table, which was launched in 2008. This is a large design table that can be converted to a billiard table by removing the top layer.

The merge in 2012 with Iwan Simonis, a specialist in the creation of billiard table cloth, has further boosted Saluc's success. Iwan Simonis is based in Andrimont, near Verviers in Liège province, and together they make a winning team.

"Commercially, it's been a great move to partner with another Walloon top scorer on the billiard market," says Bossuyt. "Among other advantages, we are profiting from Iwan Simonis' base in the United States."

As one possible development, Bossuyt envisions entering the market of other billiard products such as cues. He says Saluc also hopes to establish a platform in South America, to expand their activities there, while Africa is another market that still holds much potential. And though billiards is its main game, Saluc also plays a role in the industrial domain. The company makes balls that are essential to a multitude of applications, such as in the functioning of soap pumps, seat belts, trackballs and ball bearings. "You may not always notice them, but they are everywhere," says Bossuyt.

Call off the search

Google expands capacity of its data centre at Mons

BY ANDY FURNIERE





In June, Google opened a second data centre facility at its site in Saint-Ghislain, near Mons. The original site became operational in September 2010 after an investment of \notin 250 million, and for this expansion, Google has invested another \notin 300 million.

In all, Google has 13 data centres around the world, of which three are in Europe. They house high-tech computer system technology that stores data, and could be considered gigantic hard drives. The data stored in Wallonia is used to run services like Google's search engine, its email service Gmail, video site YouTube and Google Maps. These programmes take data from servers and transmit them to users.

As more and more data is moving around the world, Google needs increasing capacity. Freddy Bonhomme, hardware operations manager of Google Belgium, explained at the inauguration of the new facility why Google has to keep expanding the scope of its data centres. "When we opened our first data centre around the turn of the millennium, YouTube didn't exist and Gmail was only starting up," he said. "But now everybody has a personal computer in their pocket, in the form of a smartphone, and about 300 hours of video material are uploaded to YouTube every minute." According to Bonhomme, 100 billion queries a month are carried out via Google's search engine.

The federal minister of the digital agenda, Alexander De Croo, stresses that this trend is only gaining force.

"The volume of data created in the digital world will multiply tenfold by 2020," he said in a statement. "This technological revolution is changing the way of working in different sectors, not only in informatics but also in industry, healthcare and transport."

At the opening, the economic consultancy bureau Copenhagen Economics presented a report on the impact of Google's investments in the region of Mons. The researchers concluded that the investments led to an impact of about €110 million a year for the Belgian economy. Most of this comes from the construction and operations of the centre, but also from money spent by Google staff and subcontractors in the local economy. In total, Google has contributed about €900 million to the Belgian economy since the data centre opened, according to Copenhagen Economics.

The centre currently employs 300 people, from electro-technicians to catering staff. About half the staff come from the region around Mons and are in low-skilled positions. But the study states that Google has indirectly helped 1,200 more people a year to have a job. "Investments like these are very important, because they don't just create jobs themselves but also attract other investments in the region," said De Croo. "With a strong digital agenda for Belgium, I want to ensure that we further strengthen our attractiveness for investors." He added that the internet economy would be one of the strongest drivers for the economy and welfare in the coming years, so Google is a prestigious name that can attract other investors to the region

DANIEL OLIVER

Belgium should embrace all new digital opportunities.

On its website, Google explains why it has chosen Saint-Ghislain as an important base. "Saint-Ghislain has the right combination of energy infrastructure and developable land," it says. "The local authorities also have a strong vision of how the internet can bring economic benefits and jobs to the area."

Google also mentions the Digital Innovation Valley project in Mons, which "has created a cluster of hightech businesses and put technology at the heart of the education system. As a result, we had a great team of people supporting investment in the area, who were very helpful during our site selection process."

During the opening, it was clear that the love between Google and the Walloon authorities is mutual. Mons mayor and former Belgian prime minister Elio Di Rupo said the arrival of Google in the region had played an important role in the conversion of Mons from an industrial area to a digital technology zone. "Mons is now a centre of excellence, where the successes of tomorrow in new technology are being developed," he said.

Saint-Ghislain mayor Daniel Olivier was equally pleased. "Google is a prestigious name that can attract other investors to the region and which has a large impact on the local job market," he said. "I hope this will motivate youngsters to study informatics and high-tech technologies in the region, with a guarantee of finding a job afterwards."

On its website, Google highlights that it wants to have a positive influence on the local community through support for cultural and educational initiatives. For example, the company has signed a partnership with the Mundaneum museum in Mons, which reopened this summer and is one of the flagships of Mons' programme during its stint as European Capital of Culture. The Mundaneum archive was established in 1910 by two Belgian lawyers who aimed to gather and index all the world's knowledge, and is seen as the predecessor of Google. "We are sponsoring the current exhibition, as well as a speaker series on internet issues with the Mundaneum," writes Google. "We will be engaging in other local partnerships over the coming months and years."

Olivier thanked Google for its support

for cultural projects. "We can now permanently show 2D images of the Abbey of Saint-Ghislain during the Middle Ages (in our Musée de la Mémoire)," he said.

To fulfil its goal of hiring staff locally, Google is working with secondary schools, universities and colleges, helping them to develop their technology programmes. "In doing so, we hope to assist the members of the community who are just entering the job market, retraining or progressing on their career paths," the company said. "We want to help invigorate participation and opportunity in technology, increase knowledge in the community and benefit potential employers in the area in the future."

Google also awards community grants, from €4,500 to €45,000, for non-profit and certain public organisations, to support educational, social, cultural, technological and ecological initiatives. The data centre in Saint- Ghislain is a good example of Google's ecological aspirations. It was the first Google data centre worldwide to run entirely without refrigeration, using instead an advanced evaporative cooling system that draws grey water from a nearby industrial canal. This helps to keep the computers running at their highest efficiency and reduces the overall energy use.

The company has plans to further expand the data centre in the near future with a third facility, and the site at Saint-Ghislain is large enough to make this possible.

Street smarts

Can street lighting, electric car-sharing or a trip to France help transform Wallonia's cities into intelligent urban zones?

BY TOM PEETERS



▲ Aspern smart city, Vienna

Today, 54 percent of the world's population lives in urban areas and more than 80 percent of global GDP is generated in cities. Cities are responsible for more than 70 percent of global greenhouse gas emissions, and with this number set to increase rapidly in the next few decades, it's obvious our cities have to become smarter.

To cope with fast urbanisation, we have to create a safe, resilient and sustainable framework for our cities. We're talking not just about energy saving, but about a global, more intelligent approach towards a better, greener organisation of our housing, mobility, health, public safety, digital communication and waste and water management, among other areas.

New technologies are crucial, but they have to be facilitated by effective policy co-ordination and the right investment choices. "The biggest challenge of smart city development is to get all the stakeholders, representatives of city authorities and private businesses around one table," says Ingrid Reynaert, business group leader of smart cities at Agoria, the technology industry federation. Defending the interests of the local technology industry, she is an advocate of 'smart city cells'.

"Internationally, we are running four to five years behind," she admits. "We're not keeping pace with European cities such as Helsinki, Barcelona, Hamburg... but there's a break in the trend." Since Agoria started to rank the smartest Belgian cities, taking into account criteria that facilitate a more sustainable city, she has witnessed more openness.

"At first, authorities didn't know about the smart city concept," she says. "Walloon cities ranked poorly in our lists. But instead of angry phone calls from administrations and city councils, people called us to ask what they could do about it. Realising something had to change, they put smart city development on the agenda of the city councils." As a result, Wallonia's cities are now adopting initiatives, encouraged by the European Feder 2014-2020 development programme, which focuses not only on the creation of jobs and the increase of GDP per capita, but also on revitalising urban centres and supporting investments in renewable energy and energy efficiency,

consequently reducing greenhouse gas emissions.

In Charleroi, Feder funding will revamp the upper town. Charleroi District Creatif pools 16 projects that tackle the northwest quadrant of the city centre: the Palais des Expos, Palais des Beaux-Arts and other landmark buildings will undergo major renovations; a new conference centre at the current bus station will be conceived as a low-energy house; streets will be reconfigured and a lighting plan will be introduced. Mayor Paul Magnette called energy efficiency a leitmotiv in all the proposed projects.

The city of Namur lies in 7th position in a Belgian ranking of smart cities and is 1st concerning its initiatives. It has launched Namur Innovative City Lab. Supported by BEP, the province's economic development agency, it combines several projects. They include Trakk, a creative hub revitalising the local economy via a multidisciplinary centre dedicated to creativity and innovation. It comprises a fab lab, creative lab and incubator offices for companies. The space is aimed at entrepreneurs, students, individual citizens, artists and local authorities. Trakk runs a programme of

activities including workshops and fairs to encourage cross-fertilisation and cocreation among disciplines. Thanks to Feder, the hub will soon have its own building. "Success needs creativity, even more so the public sector," says Maxime Prévot, the mayor of Namur and vicepresident and minister of the Walloon government.

Among other projects in the Walloon capital, Espace Confluence is creating a public open space and digital port at the confluence of the Meuse and Sambre rivers. Acycle and footbridge will connect the banks of the Meuse, also linking the Walloon government and parliament. Within the Feder framework, a project aims to install smart technology: bus shelters, information panels, interactive apps, waste management and other urban services, such as smart lighting and touchscreen planners.

Tournai has created SmarTournai in association with the Eurometropolitan e-Campus and research centre Multitel. This task force will also facilitate the development of intelligent city innovations. "At the moment we're in a pilot project on smart mobility," says François Narbonneau, smart "At the moment we're in a pilot project on smart mobility"

RANÇOIS NARBONNEAU

city group leader at Multitel. "We are analysing urban traffic – watching who's blocking who in the city – and parking occupancy. The most original thing we're doing is working with existing video-surveillance systems, which are now focused mainly on security. But we believe CCTV infrastructure can give us other meaningful information about mobility and traffic, while it can also monitor parking availability and count people."

By using complex video analytics, it's possible to estimate the number of available and occupied parking places, as well as detecting people, while car tracking can lead to the development of intelligent mobility apps. Multitel has already implemented a cost-effective parking occupancy monitoring system, while its pedestrian occupancy maps and road usage statistics can help understand people's behaviour in the city.

The city of Mons currently holds the prestigious title European Capital of Culture 2015 under the slogan "Where technology meets culture". Its mayor, Elio Di Rupo, says, "For a number of years, the city of Mons has realised that the future of urban centres will involve rationalisation and more intelligent management, as well as a smarter transport system, economy and management of the environment. With its digital cities programme backed by the region, the city is propelled directly into the era of smart cities by equipping itself with the tools – notably its IT infrastructure – capable of developing future smart city projects.

"The second half of 2015 as well as 2016 will see the launch of diverse projects and initiatives. A research group, already active in the city, is laying down the strategy for the coming years. This group will be active in the next months, as well as other actors, private and public, including companies and the university, and of course the setting up of public meetings with local citizens, who are and must remain at the centre of these considerations."

"While the city of Mons decided, at least for 2015, to invest in its function as European Capital of Culture, other major Walloon cities are starting to move," Reynaert points out. "And Liège is a real trailblazer. Four years ago, they were nowhere, but now, the team of mayor Willy Demeyer is doing a great job investing in sustainable infrastructure and pedestrian zones."

Since the beginning of the year, intelligent city innovations have been encouraged by the Smart City Institute (SCI). This new academic body, which A lot of people believe street lighting can become the backbone of a smart

city



aims to encourage the development of scientific research, education and entrepreneurship in smart cities, is led by Professor Nathalie Crutzen from the management school of the University of Liege (HEC-ULg). "In 2010 we created a chair on sustainable strategy," she explains. "But very soon we noticed that it was more urgent, for our private partner Accenture and for our students, to work at the level of a territory."

Trying to develop a sustainable strategy for Liège, they started working with the city authorities. Finally, in January 2015 the SCI was founded with two more private partners, Belfius bank and telecoms operator Proximus. Crutzen explains: "We wanted to shift the focus of the smart city concept from urbanism and engineering skills to our own expertise, such as strategy, finance and business modelling."

Two studies will be published in autumn. For one, the SCI researched how both city authorities and private enterprises see their role in the development of smart cities. "We examined, for instance, whether Liège is ready to work with private partners to transform itself into a smart city, and what the advantages and challenges of such a transformation are."

The main working point seems to be a more streamlined collaboration between private enterprises, city authorities and citizens. "Politics can still be at the centre of reflection, but a joint effort is needed,"



▲ SmartNodes public lighting

says Crutzen. "We suggest making use of an 'integrator' to connect the different parties. Creating a positive dynamic and a global vision, that everyone around the table benefits from, is fundamental." A ULg doctor's degree is investigating how to articulate the differences between stakeholders in a smart city initiative. Who carries the project? Who initiates? Who's responsible?

In Liège, they really want to make progress, Crutzen believes. "But of course, we always have to keep in mind that the rhythm in private companies such as Belfius or Accenture is different to that in a university or a city."

More than just a study bureau, the SCI is also an incubator for projects initiated by ULg students, granting them mentors and offices. Until now, their City VentureLab has selected four projects. "LetsGO City is an interactive digital city guide available as an app for iOS and Android," says Crutzen. "Nextride and Parklife are apps where users can consult timetables for public transport and to find a parking spot."

But the most challenging project is SharinGo, which is trying to sell the idea of electric car-sharing to citizens and businesses who are used to driving their own or company cars. The project was developed by Anaïs Ehlen while studying under Crutzen, and two other young graduates. introduced the project to the city council and the reactions were very positive," she recalls. "The concept already exists in Brussels, but in Liège we still need to convince the public that our service can really solve future mobility issues, such as air and noise pollution, city congestion and parking shortages."

With 235,000 cars entering the city daily, resulting in a big traffic jam, the city decided it was time for action. Liège will develop a tramway by 2018 and hopes to become Belgium's capital of electric cars in 2020. "Defining the smart city of the future is a joint project," Demeyer said at the opening of the SCI. "Public authorities and universities, as well as citizens and businesses, all have one part of the answer, whether it's technological or social. But we have one common goal: to improve quality of life."

SharinGo contributes to the city's green mobility aspirations. There's not only the short-term advantage of decreasing traffic jams: in the long term, costs for healthcare and road maintenance will go down. Every shared car, the initiators say, replaces 15 other cars. The words of a former General Motors chief who's now lecturing at the University of Michigan may seem exaggerated, but they do show what smart city development means: "If the internet and sharing culture continues to grow, we can reduce the production of cars in the world by eighty percent."

CityLab coaching is not only available

for students: local SMEs can also ask for guidance to launch a smart city project. SmartNodes doesn't need that support anymore. The story of the pioneer in intelligent street lighting started in 2011. Launched as an idea within SPI, the economic development agency for the province of Liège, it was further developed by the universities of Liège and Louvain and two private partners.

"Initially, we were only looking for an innovative solution for the public lighting in remote industrial zones, where illuminating at full power all night doesn't make sense," says Jean Beka, co-founder and CEO of SmartNodes. "Putting together a private-public consortium, we installed our first smart lighting system at a roundabout in an industrial park in Grâce-Hollogne, near Liège-Bierset airport."

The main objective of the 55 street lights equipped with the first version of the integrated lighting system was keeping the lamps to a minimal output level, except when road users were present. The result was a drastic decrease in power consumption, light pollution and ecological footprint, while the visual comfort and safety of the road users was maintained. This project laid the foundation for the SmartNodes.

Soon the power of their technology, creating a 'light bubble' by switching on specific lamps around a road user, will be seen in a residential area. With a total of 244 lights, their project in Wavre

"Last year during a seminar, we

will be one of the biggest intelligent street lighting projects in Europe. SmartNodes presented their state-ofthe-art technology at this year's World Expo in Milan as part of LiègeTogether, introducing Liège as "an open, creative and connected metropolis". Last June, the company received the Belgian Energy and Environment Award in the Business Product Innovation category, not least because their standalone lighting system module has decentralised intelligence that can determine the position, speed and means of transport of a road user.

"We found that our smart module. which is equipped with sensors, communication means and a microcomputer, can also hold extra information," says Beka. "This is where the real smart city development comes in. We can distribute this information about energy use, environment and mobility to the municipality and the management in charge of the network, but we can also plug into other sensors, for instance air pollution sensors. The street lighting network can be much more than just street lighting. A lot of people believe it can become the backbone of a smart city."

And SmartNodes is not alone. Novilleles-Bois-based Schréder is responsible for the illumination of Brussels' Grand' Place – now all 27 buildings are illuminated using the same energy consumption as it once took to light two. The new swimming pool in Ans, near Liège, uses Schréder's innovative LED lighting with lamps connected to a daylight detection system.

"They have different smart lighting solutions," says Beka, "but we have no problems connecting our modules with lamps from Schréder if a client wishes. "We have one common goal: to improve quality of life"



In fact, for the new pedestrian path at the student campus in Sart-Tilman, we were asked to do just this."

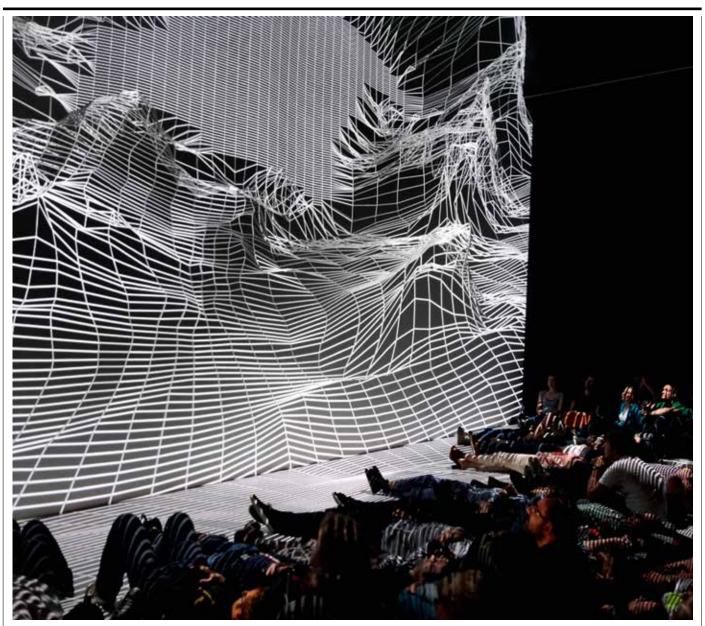
For a manager like Beka, the real challenge of developing smart cities is to decide what has to be done now, and what later. "On which horse are you betting? Or in our case, which application can bring a benefit to the municipality or to the management company distributing our network?"

To help answer those questions, and to introduce managers from the public

and private sector to the impact of smart city solutions, the Wallonia Export-Investment Agency (AWEX) and Wallonie-Bruxelles International (WBI) have organised an exploratory mission to France. "Based on data we received from our trade commissioners and their ranking among intelligent cities, notably in France, we selected four," explains Violaine Barthélemy, who specialises in the French market at AWEX. "These cities, Strasbourg, Issy-les-Moulineaux, Bordeaux and Nantes, have launched important projects, whether it be in eco-districts, smart energy networks, transport and mobility, environment, digital initiatives or open data."

Two double city trips have been organised - one to Strasbourg and Issyles-Moulineaux in October, another to Bordeaux and Nantes in November - and are open to private enterprises, business poles, clusters and federations, she explains. Market research institutes and universities will also join, as will delegates from Charleroi, Liège, Mons, Namur and Tournai. The presence of Jean-Claude Marcourt, vice-president and minister of economy, SME, foreign trade and new technologies of the Walloon government, emphasises the growing importance policymakers are attaching to smart city solutions.

"It's important to bring them all together," Reynaert says. "But it's crucial to act together, because making a city smarter is teamwork. It's not about having the upper hand, or keeping control. Successful foreign cities already have smart city cells. Here, deputies and administrations are still focusing too much on their own competencies. If we can change that, we can drastically increase the smartness of all our cities."



▲ Jef Neve & NOHlab

Cultural crossroads

EUROPALIA Turkey explores cultural heritage and contemporary artists

BY SARAH CREW

n the eve of EUROPALIA's jubilee edition, artistic director Dirk Vermaelen outlines the festival's mission and some of the diverse events being staged from 7 October to 31 January. For its 25th edition, in its 45th year of existence, the international arts biennial features Turkey as its guest country.

What were the priorities in programming the festival?

We have a new mission to work around four elements. Besides heritage and contemporary, we're increasing our focus on creation and exchange, to become a platform for young artists. Each festival is, for them, an opportunity to create work and to meet artists, choreographers, authors, curators, from a different part of the world and to work together. It's also important to find new partnerships and stage co-productions. Based on our 25/45 anniversary, we have a mini festival that focuses on new works and collaborations. Legacy is very important. I wanted to avoid having a festival that's like a beautiful



^{▲ 1986} Motorcycle by Gülsen Karamustafa



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The aim of the festival is to cover a lot more than Istanbul

vase of flowers which fade and are then thrown away. At EUROPALIA you have to plant seeds, treasure them and make sure they keep growing after the festival is over. We've also engaged someone who is taking care specifically of international affairs, developing a whole network in Europe and beyond to see how we can engage in new partnerships and make projects travel around Europe.

What are the themes of the two main exhibitions at Bozar in Brussels?

There needs to be an interesting theme and original point of view to introduce the guest country. In **Anatolia: Home of Eternity** (7 October to 17 January) we work around the subject of rituals. There is an amazing continuity as a lot of conflicting civilisations followed each other and rituals were taken over and integrated. We also needed to talk

about Istanbul as the artistic capital, so Imagine Istanbul (15 October to 24 January) shows how the city inspired artists, mainly photographers. It looks at early photography, where you see how photographers were immediately attracted to the city. The main artist is Ara Güler, known as 'the eye of Istanbul' for his important series in the 1950s and 60s which are iconic for the Turkish people and are also familiar to us. We work around him and two other big photographers from a younger generation, looking at how they relate to Istanbul and to Güler. Do they follow in his footsteps or do they try and find another way of capturing Istanbul? Other visual artists from Turkey and Europe also make an appearance. Photographer Cartier Bresson worked with Güler, and young Belgian photographer Bieke Depoorter will be showing new work at Bozar.

You have to plant seeds and make sure they keep growing after the festival is over

What does Turkey bring to the EUROPALIA project?

Artistically, we don't know much about Turkey and its important contemporary artists. That's why, for instance, I wanted to programme some important names such as Gülsün Karamustafa, whose work is presented with Koen Theys in Mystic Transport (29 October to 28 February, La Centrale, Brussels). So much of our culture is focused on Europe, you realise again how dreadfully Eurocentric we are. It's always important for me to make sure that we don't give this Eurocentric view. Istanbul may be the artistic capital of Turkey, but the aim of the festival is to cover a lot more and show more remote regions. People generally visit Istanbul and some tourist places and think it's similar to Europe, but once you travel outside these regions, you understand that it's very different.

What is EUROPALIA doing to attract younger people?

Our 25th anniversary is an ideal moment to question what we're doing. We were worried that our image was mainly about heritage, so we've freshened it up with a new logo and put more focus on contemporary works, working with young artists and establishing residencies. The younger audience is very important. We're working with venues that attract a younger audience and with universities to develop teaching files in schools. It's important not just to invite them, but to actively involve them. Students can write articles on the festival which will be integrated in a digital media centre, and young people visiting the two main Bozar exhibitions on a school visit, can enter for $\in 1$.

How is EUROPALIA working with Belgium's Turkish community?

We've listened to a lot people from the Turkish community. We're planning concerts such as Turkish pop diva **Sezen Aksu** (1 November, Bozar, Brussels), which we hope will also interest a non-Turkish public. There are more concerts around the country and an exhibition on puppetry, **Karagöz: The Art of Shadows** (31 October to 24 January, Malmedy).

What are your personal highlights?

If I had to pick one event per discipline, I would say first **Anatolia: Home of Eternity**, as it gives such a unique introduction to Turkey. The new research covers a vast period from the Göbekli Tepe, which is the most ancient civilisation, up to the Ottoman period. With over 200 objects from 30 museums in Turkey, this is unique in itself.

Among the contemporary projects, Gauthier Oushoorn's **Absence of a Permanent 1** (8 November to 21 February, CID, Grand Hornu) is really important. He is a young Belgian sculptor who works with architectural concepts and space; for EUROPALIA TURKEY he was inspired by Persian architecture and Sufism. He travelled not only to Istanbul but other regions, researching Muslim architecture. This is a very personal choice; he's a very strong artist and I'm very happy to have him in our festival

In music there are a few projects: **Görkem Şen** (26 November, PointCulture, Brussels), is a young musician, sound designer and composer who has developed a new instrument. I saw a brief concert by him in Istanbul and I'm very curious. He's an absolute hit on the internet, so it's a unique opportunity to see him live. Another unique exchange is **Jef Neve & NOHlab** (22 January, Flagey, Brussels). The Belgian jazz musician composes the music and the Turkish multimedia collective produce a 3D visual performance.

In the performing arts programme, **Christian Rizzo** (14 November, Valenciennes; 5 & 6 January, Halles de Schaerbeek, Brussels) is a French choreographer who is creating three new shows. He takes elements of Turkish tradition and works with his muse, Turkish dancer Kerem Gelebek.

For film, there's **Nuri Bilge Ceylan** (6 & 7 December, Cinematek & Bozar, Brussels), the winner of the Palme d'Or in Cannes last year. As well as master classes, there's also an exhibition. His photography is amazing and helps you understand why his films have such beautiful photographic scenes. It will be a very interesting new portrait of his work. As for literature, I'm looking forward to hearing **Ahmet Ümit and Pascale Fonteneau** talk about crime writing and the city in Istanbul and Brussels (29 October, town hall, Brussels).

7 WWW.EUROPALIA.EU





The organ grinder

Benoît Paulis makes and repairs mechanical instruments. He lives with his family above the Pauliphonic workshop in the centre of Stavelot in the Ardennes, a building filled with pianos and organs that are evocative of a bygone era. It's a long way from the grandiose museum in Taiwan where Paulis has created the scenography for probably the largest collection of musical instruments in Asia.

A s a teenager in Spa, I played the organ in church. An organ manufacturing company in Francorchamps was looking for an apprentice, and that's how it started. I then specialised in barrel organs and mechanical instruments and went to work for the Invisible Musicians museum in Brussels. It was a private collection and I was part of a team that set up exhibitions around the world. In 2000, while I was in Taiwan, I was invited to visit the prestigious Chimei museum. It was founded by a philanthropic industrialist and is probably the largest collection of When you restore a historic instrument, you try and make authentic repairs western art in Asia. I later became selfemployed and married a Taiwanese woman. As we visited the country every year, I contacted the museum offering to repair their mechanical instruments, which would pay for the annual family holiday. Then it took on another dimension when the owner, who is now 87, decided to create an enormous new museum as his legacy: a marble structure based on the palace of Versailles, dedicated to the artistic education of the Taiwanese people.

I was asked to reorganise the mechanised instruments. It was important for me that barrel organs were included in the musical scenography, which nobody had yet thought about. One sleepless night, I drew some sketches which were met with enthusiasm and three days later the director put me in charge of the scenography of the whole music section. It was a real challenge, as we had to start by itemising and completing the collection. The owner had bought at auction, following his heart. It was a colossal task but extremely enriching. We started with traditional folk instruments, moved into orchestral music, and then the question was, if vou don't have music at home and vou don't go to concerts, where do you hear it? Here, we arrived at the history of the gramophone and mechanical music. We drew a path in the history of music in all its forms.

Modern barrel organs like those that I build are based on the instruments made by immigrant Italians living in France and Germany in the 18th century. Still driven by a handle or crank, they are mainly used today to accompany a singer. In my workshop, I have pianos, barrel organs and even a jukebox, a 1947 American model.

We forget that mechanical music popularised, for example, opera. Why did people sing in *Figaro*? The aristocracy went to the opera while everyone else heard it in the streets played on a barrel organ by gypsies and travelling fairground entertainers. Organs may now be outmoded and replaced by recorded and digital music, but they played an important role.

The market for automatic pianos can be pitiful. An unrestored, but playable mechanical piano can be bought at auction for €3,000-€4,000 and if it needs restoring, it's worth nothing as the restoration costs around €6,000-€8,000. Fortunately, it's different for other instruments, such as the fair organ I'm currently working on. It is from the French company Limonaire and it will be worth €25,000 when I've finished. They are like normal pianos or organs but with different mechanics. Underneath each note, there's a pneumatic bellow that works with air tubes. When you operate the foot pedals (with a barrel organ, it's the handle), you pump air which passes through small boxes and this is pushed into tiny holes. The perforated paper is linked to the bellows, which is what plays the notes. It's possible to mechanise any instrument - banjo, harp, violin - and my job in Taiwan was to bring these hundred-year-old instruments back to life for the visitor.

All the materials in the instrument deteriorate over time. When you restore a historic instrument, you try and make authentic repairs. For this piano, which hasn't been repaired in almost 100 years, we buy leather that's been tanned in a traditional way, and that costs a fortune. We also respect the spirit of the renovation so that the next person who restores the instrument can draw inspiration from your work, even if that's in a hundred years. The same ethos applies to art and paintings. There's a big dilemma in restoration today. I think that if you maintain an instrument for its original function rather than in its original state, that means you can still play it. If you believe in conservation, the instrument cannot be played.

I consider myself an artisan because I have a direct relationship with the client. If a client asks me a question about the restoration, I know all the answers. Living in a region like this suits the artisan life because of its quiet rhythm. Half our clients are gypsies and professional musicians, and each person who buys an organ has a story to tell. We're lucky that way.

7 WWW.PAULIPHONIC.BE







▲ Faltazi's Ekokook kitchen



▲ Bodin Hom's Solari solar-powered cooker



A Ringo by students at Institut des Ursulines, Brussels

Design the change

Reciprocity triennial returns to Liège with host of free events

BY OONAGH GANNON

Throughout October, Liège will open up to the rest of the world as it stages the second edition of Reciprocity Design Liège. It's an international triennial of design and social innovation, which had a successful start in 2012 thanks to the creative collaboration of artistic director Giovanna Massoni and organisers Wallonie Design.

Under the slogan "To design the change be part of it" 40,000 visitors responded to the invitation in 2012. This year's edition offers a wealth of free participative activities that are accessible to all.

A great believer in the role of design as a vector of change in society, Massoni has put together a programme of exhibitions. film screenings, workshops, seminars and debates where the emphasis is heavily on social innovation, putting the public at the forefront as a key player in the design process. "The aim of design is not to change the world but to help people find solutions to societal problems by broadening their vision," she says. "Reciprocity's lifeblood is a multidisciplinary laboratory - a collaborative and lasting project."

In this spirit, Reciprocity has kept up



Graphic design and visual communication are a dynamic tool that can contribute to social change

TERESA SDRALEVICH

the momentum of one of its initial projects started in 2011 to bring about change in communities. Through the exhibition *Welcome to Saint-Gilles*, Reciprocity 2012 saw the results of research by art and design schools in Liège, Tournai, Brussels, Aachen, Maastricht and Hasselt in response to a challenge to analyse a problematic neighbourhood of Liège, Saint-Gilles, by meeting inhabitants and proposing micro-solutions. Since then, the schools have pursued this dialogue, from which multiple community projects have seen the light, including pop-up stores and new methods of food distribution.

The effectiveness of the approach has led to a new collaboration between Reciprocity and Eriges, the autonomous regional authority of Liège district Seraing, to find solutions for the renewal and redevelopment of an 800-hectare area of Seraing. Since the beginning of the year, curators Nik Baerten and Virginia Tassinari have joined forces with key players in the field of design for social innovation to set up a design laboratory, working closely with inhabitants and local organisations to gather ideas that will sow the seeds of positive social change in the physical environment and in the local mindset. Reciprocity 2015's edition of Welcome to at Cité Miroir will provide insight into the ongoing work in Saint-Gilles and Seraing through various media as well as a programme of workshops and debates around social innovation.

For 2015, Reciprocity has chosen to throw new light on architecture and graphic design, two fields that for Massoni are "inextricably connected in the process of sociocultural and economic innovation of a city or

CREATE DESIGN



▲ A project by architecture bureau helium3



▲ Brussels-based design + architecture collective Rotor



▲ Meeting Point at 3D digital printing organisation RElab

а province". The up-and-coming Brussels-based design and architecture collective Rotor has been invited for its fresh look at the practices used in dismantling buildings designated for demolition and the reuse of building materials and architectural elements. Rotor's exhibition, in the Athénéé Léonie de Waha, will showcase alternative practices that could go as far as reshaping the future economy in terms of construction materials and will raise questions on the notion of waste. how labour and material costs relate in Europe and the complex relationship between architects and the building industry.

On the same note, Reciprocity will provide a platform for debate around sustainable development in the sectors of architecture, design for social and public innovation, arts and the economy, with an agenda echoing the themes of the forthcoming annual UN Climate Change Conference in Paris.

Meanwhile, as visitors walk around the city they can feast their eyes on a series of Reciprocity 2015 posters designed by Teresa Sdralevich for Printed Commons, Reciprocity's focus on graphic design. "Graphic design and visual communication are everywhere and yet they are barely recognised as a dynamic tool that can contribute to social change," says Sdralevich. As well as the posters and an exhibition at the Saint-Luc school of design, the public, students and children are invited to take part in workshops throughout October to raise awareness of graphic design as a collaborative act that shares tangible know-how and not as a pure technique.

IN FIGURES

- **0** admission price to all events
- 1 meeting point
- 4 main exhibitions
- 5 guest exhibitions and events
- 8 seminars and round-tables
- 8 extra-muros exhibitions and events14 workshops
- 19 satellite exhibitions and events

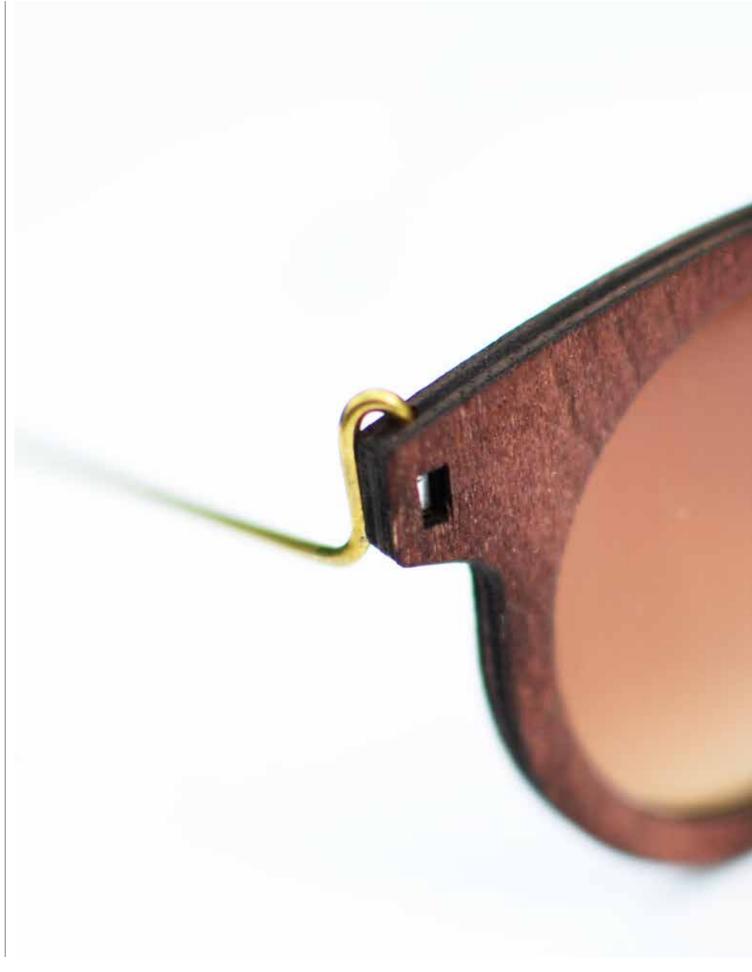
Echoing the theme of Milan's Expo 2015, Feeding the Planet: Energy for Life, the Museum of Walloon Life will host one of Reciprocity's main exhibitions, The Taste of Change, curated by Massoni and based on the concept of design for food - tools, services and systems. The exhibition brings together a selection of 60 out of the 200 entries that followed an international call to design sustainable solutions for food preparation, consumption, conservation and distribution. A Belgian and international jury featuring a broad spectrum of influencers from the field of design and food - Dorothée Goffin of the Smart Gastronomy Lab known for 3D food printing, Clio Brzakala, the director of Wallonie Design, and Jean-Luc Pigneur from the Vieusart Academy of Culinary Arts - have awarded prizes. Among the exhibits, visitors will get a true flavour of how they can change their habits and lifestyle through award-winners Local Eat, a free app

designed by Julie Royaux, which allows consumers to find the nearest fresh local produce, and Tiffin, a takeaway meal service in the shape of a reusable stainless steel compartmentalised dish designed by Violaine Dupuis.

The hub of Reciprocity 2015 is the Meeting Point on Place Saint-Etienne in the city centre on the premises of RElab, a 3D digital printing organisation. As well as providing visitors with practical information and hosting meeting and refreshment spaces, RElab promises an agenda of events based on social innovation, open design and DIY. These include Laurence Humier's workshop for children, Alchemist Matter, based on food and science, and a conference by Marianne Goebl, managing director of the Finnish furniture designers Artek, whose furnishings are part of RElab's interior design. Visitors will also have the opportunity to experience how 3D food printing works at a fabrication laboratory set up for Reciprocity 2015.

The Meeting Point will direct visitors to all corners of Liège, where Reciprocity is running mainstream and multiple fringe events, and beyond. Reciprocity 2015 will be on the Mons 2015 agenda at the Maison du Design with *Innovation and Ready-Made*, an exhibition addressing issues related to the evolution of design manufacturing tools and technologies and their impact on daily life. Additional parallel events take place in other cities extending to Genk and Hasselt in Belgium, Maastricht and Kerkrade in the Netherlands and Aachen in Germany.

↗ RECIPROCITYLIEGE.BE



Looking good

Goldson is a new brand of innovative handcrafted sunglasses. Produced by Liège object designer Arnaud Eubelen, the glasses feature unique wooden frames and brass wire arms. Each pair is created with handmade tools conceived by Eubelen himself. He has also developed a technique for assembling the glasses without the use of screw or glue. The result is a strong, flexible and light product, all made by hand in the young designer's Liège workshop.

Launched in 2014, the Goldson collection consists of six different models in varying shapes and shades. A new model in exotic wood is due out this autumn.

↗ GOLDSENGLASSES.BLOGSPOT.BE

CREATE

AGENDA



BRUSSELS INTERNATIONAL FILM FESTIVAL

This festival showcases the best in Belgian, international and young talent, with screenings in venues across Brussels – Flagey, Bozar, UGC and Cinema Galleries. If you're interested in working in film, don't miss the Jobs Cinema Day where students and the public can meet professionals in the trade. There will also be a day dedicated to the cinema of the deaf community – the first of its kind for a film festival in Belgium – with a showing of *La Famille Bélier* (pictured) in the presence of its lead actress and director.

WHAT? BRUSSELS INTERNATIONAL FILM FESTIVAL

WHEN? 17-21 NOVEMBER WHERE? ACROSS BRUSSELS www.fifb.be

SPECIAL EVENTS



ANTICA

If you're getting into the world of antiques, Namur's Antica fair is the one to start with. Popular with dealers, collectors and amateurs alike, it's back in November for its 39th edition, with this year's theme of animals. For those who want to learn more about the antique world, there are also four conferences during the fair. WHAT? ANTICA FINE ART FAIR WHEN? 14-22 NOVEMBER WHERE? NAMUR EXPO www.antica.be



ART NOUVEAU AND ART DECO BIENNIAL

Brussels is famous for its Art Nouveau and Art Deco architecture; however, works created at the time were largely funded by private commissions and so much remains behind closed doors. The eighth edition of this biennial opens more than 20 of these normally private spaces for a rare glimpse into the city's artistic heritage. Every weekend in October there are guided walking tours and visits around Brussels. You'll see all the landmarks and discover many more hidden gems.

WHAT? ART NOUVEAU AND ART DECO BIENNIAL

WHEN? THROUGHOUT OCTOBER WHERE? ACROSS BRUSSELS www.biennale-art-nouveau.be



EDITH CAVELL CENTENARY

As part of the World War One centenary, Belgium celebrates the life of British nurse Edith Cavell, who helped hundreds of Allied soldiers escape occupied Belgium to the Netherlands before she was executed by German firing squad on 12 October, 1915. The centenary lasts all year but the main events are in October. These include a free exhibition (10-30 October) and a screening of the recently restored 1928 biopic Dawn (28 October), as well as a concert and memorial service.

WHAT? EDITH CAVELL CENTENARY WHEN? THROUGHOUT OCTOBER WHERE? ACROSS BRUSSELS www.edith-cavell-belgium.eu

EXHIBITIONS



ABM-

LEVEZ L'ENCRE!

This exhibition dedicated to the maritime world and navigation highlights the fascination that people have always had with the sea. It's organised around themes: ships, naval battles and exploration. The sea has also inspired many writers from Jules Verne to Daniel Defoe, and the exhibition explores how our view of the sea has been shaped by these accounts. Discover also the role mythology has played. WHAT? LEVEZ L'ENCRE! WHEN? 3 OCTOBER-10 JANUARY WHERE? MUSEE ROYALE DE

MARIEMONT, MORLANWELZ www.musee-mariemont.be



VERLAINE: CELLULE 252

Mons's European Capital of Culture programme continues into its last phase this autumn with one of its main exhibitions dedicated to French poet Paul Verlaine and his links with the region. Verlaine famously shot and injured his lover, fellow poet Rimbaud, in a hotel room in Brussels in 1873 and served a two-year prison sentence in Mons, during which he continued to write. The exhibition is his story and is explored through letters, manuscripts and paintings from private and public collections.

WHAT? VERLAINE: CELLULE 252 WHEN? 17 OCTOBER-24 JANUARY WHERE? BAM, MONS www.bam.mons.be



THE MAN, THE DRAGON AND THE DEATH

Mons is also the site of an exhibition on Saint George, the hero of the city's Doudou festival. The legend of Saint George and the Dragon has long been a symbol of the triumph of good over evil, and this exhibition illustrates his influence in many European countries throughout the centuries as the cult of Saint George spread. Through paintings, drawings and sculptures, discover how the story lives on today.

WHAT? THE MAN, THE DRAGON AND THE DEATH

WHEN? 18 OCTOBER-17 JANUARY WHERE? MAC'S, GRAND HORNU www.mac-s.be



BERNARD BOUSMANNE

Bernard Bousmanne is the commissioner of the *Cellule 252* exhibition, and has spent the past five years researching and collecting items pertaining to Paul Verlaine. The result is the biggest ever exhibition on the French poet, with an accompanying book.

"I've liked Verlaine and Rimbaud's work since I was a teenager," says Bousmanne. For anglophones, Verlaine is comparable to Oscar Wilde, he says. "There are lots of parallels. They experienced the same things, and they got on well." Verlaine spent two years in prison in Mons after shooting his lover, Arthur Rimbaud, in the wrist at a hotel near the Grand' Place in Brussels. "Some of his most beautiful poems were written in Mons," says Bousmanne. "There is a big difference in Verlaine's work before and after the shooting – his writing was different after, less joyful. More real, less idealistic."

Bousmanne says the exhibition will appeal to everyone: both specialists in literature, as there are items there that have never been seen before, and also the general public, especially young people. "It's not just an accumulation of letters – it tells a story, and follows his relationship with Rimbaud. It's very dynamic. Rimbaud was his great love. The story remains very contemporary for young people. It's not about just an old writer, but about this love story too."

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