

Editorial

2016 has got off to an excellent start. The I-SITE project of the Community of Universities and Institutions of Burgundy Franche-Comté has been selected for the second Programme of Investment for the Future. The new programme had been launched by the Prime Minister in TEMIS when he came to Besançon in September 2014.

The project will help improve the competitiveness of our region and its ability to innovate. It will also give our laboratories, higher educational institutions and companies a chance to show their excellence. Thanks to the considerable additional financial resources generated, our region will be able to reinforce its position in the world in the fields of advanced materials and intelligent systems, the environment, the regions, food products and healthcare and individualised care.

I would like to congratulate all those who have worked on the project and remind them that we will support them in its deployment for the benefit of research, innovation and generally the development of an entire region.

Jean-Louis Fousseret,
President of TEMIS



I-SITE

Burgundy Franche-Comté:
we're off!





Temporary project image - Competition stage - document not contractual

MICROTECH 2, IN BRIEF

- Useful area: 2,400 m²
- Rental services: Rue Manton
- Type: spaces that can be adapted upon request - Rental offer
- Operation: TEMIS Technology Park
- Conducted by sedD - Aktya

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MICROTECH 2: WORK WILL BEGIN ON THE SITE

■ The Microtech 2 building construction project is making progress. This new programme is part of the development strategy of the technology park, which is particularly looking to offer lasting solutions for setting up facilities and renting or buying properties to companies as they leave the nursery, and also to any microtechnology company in order to support growth in the markets for microsystems, luxury goods, or aeronautics.

TEMIS is responsible for development, and sedD for building. That 2400 square metre building is designed for micro and nanotechnology and meets the requirements for industrial and scientific premises. It is ideal for high-technology activities, because it offers highly modular spaces that allow a combination of offices, small laboratories or even light production. This new construction will emerge on rue Manton. Work should begin by the start of the second half of 2016, with delivery scheduled for the end of 2017.



GEOIDE CRYPTO&COM: SOLUTIONS FOR COMMUNICATION AND GEOLOCATION THAT ARE MOBILE AND SECURE

■ **Geoide Crypto&Com** is a specialised start-up, offering tailored hardware and software solutions for communication, IT security and geolocation. Founded in July 2015 by **Grégory Gille**, a former special forces serviceman, the company targets the markets of defence, civil and military aviation and also extreme sport. Information technology, electronics, geolocation, satellite and radio transmission, encryption and automation are some of the areas of know-how required for creating the miniaturised systems developed by this young company from Besançon. No bigger than a packet of cigarettes, the new prototype of Geoide is particularly useful for sending or receiving information securely. Based in the nursery in **TEMIS Innovation**, Grégory Gille has already set up several partnerships, such as with Impact, a former incubatee of TEMIS. With the first security software released in the market, **Geoide Crypto&Com** has also contacted international giants such as Thales, which distributes its products, and Panasonic, which regularly collaborates with it in representation events. The French special operations command is one of the company's supports. **Geoide Crypto&Com** is a fledgling company with a lot of promise in these niche markets with high added value.

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HIPTTEST: A RESPONSE FOR THE NEW CHALLENGES OF SOFTWARE TESTING

■ Software is everywhere in our lives, and must be efficient or even absolutely unflinching, given its great economic importance. The least bug can lead to colossal losses. That is why it is important for software to be tested before it is released in the market. Hiptest was founded for that purpose, and offers a cloud software test platform to enable agile project teams to test their web and mobile applications at the required rate on a continuous basis. Based on a unique on-the-fly test refactoring differentiator and a simple operating mode, thousands of accounts have already been created with several hundreds of paying users and over 600,000 business actions (test scenarios) completed. The customers of Hiptest are mainly located in Europe and the USA. 5% of the users are in France, including the neighbouring company Parkeon. In spite of fierce competition, Laurent Py intends to stand out by the degree of automation of the test scenarios of his system and its ease of use. The system is expected to quintuple its number of users in the next four or five years. Hiptest is already thinking of developing other tools to exploit information saved by and for customers.

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INNOVATIVE THERAPIES: A NEW PLATFORM FOR BIO-PRODUCTION IN BESANÇON

The design of the new production platform for advanced therapy medicinal products (ATMPs) of EFS Burgundy Franche-Comté addresses the requirements of good manufacturing practices for pharmaceuticals. The platform in Besançon is now one of the five national facilities of the EFS pharmaceutical institution along with Nantes, Grenoble, Toulouse and Créteil.



Exciting new treatment solutions

Since 24 November 2015, EFS Burgundy Franche-Comté has the capability to produce advanced therapy medicinal products within its pharmaceuticals establishment. These new-generation treatments hold out great hope and could **revolutionise the therapeutic approach**. "This is the future of human therapeutics", says Dr Pascal Morel, Director of EFS Burgundy Franche-Comté. "We will work on diseases with which we currently have little success: graft tolerance, inflammatory diseases like Crohn's disease or rheumatoid arthritis, multiple sclerosis and cancer. Our specialism is to educate the immune system".

The platform inaugurated on Tuesday meets the strictest quality and safety standards under European law. €2.5 million has been invested in the new facility for producing advanced therapy medicinal products. European funds have contributed 40% of the value of the operation.

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B4B-CONNECTION: A DAY AND A HALF OF NETWORKING IN THE MEDICAL DEVICES INDUSTRY, 23 AND 24 MARCH 2016 IN BESANÇON

Proposed by the microtechnology cluster and the TEMIS technology park, B4B-Connection - Diagnoses and Medical Devices mainly aims to bring together those involved in diagnoses and medical devices, pharmacology, biotechnology and microtechnology.

Purpose: to allow the parties in the industry to network through conferences, business meetings and informal breaks. Taking stock of the latest advances (technology, regulations, trades etc.) and generate synergy and innovative projects in the diagnosis industry.

Early events of the programme

- **23 March 2016 in the afternoon:** lectures of interest, particularly with Philips Healthcare/BioMérieux, Delpharm and presentations of business that are particularly engaged in innovations
- **24 March 2016:** company presentations, business meetings via the B4B-MatchMeeting platform, networking

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Are you based in the TEMIS technology park or a member of the microtechnology cluster?

Claim your 10% discount on the two-day pass by entering 'PMT Member' in the comments field of the dedicated form.



PICOXEA: A LATEST-GENERATION OPTICAL MEASUREMENT INSTRUMENT DEVELOPED BY AUREA TECHNOLOGY



■ Resulting from two years of research, PicoXea is an optical measuring instrument that includes a picosecond pulse laser, a photo detector, embedded time-correlated circuitry and analysis software. This all-in-one system is capable of measurements of the fluorescence lifetime and photoluminescence of materials, nanostructures or biological cells. It has applications in the fields of biomedical testing, nanoparticles and semiconductors. Thanks to PicoXea, Aurea Technology won the first prize for innovation from the Optical Society of America, in the photonic analysis instruments category at the CLEO international photonics fair in San José, USA.



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ALCIS, A SURGICAL CONCEPT TO TREAT EPILEPSY IN THE VERY YOUNG

■ Alcis, installed in TEMIS Santé, has been operating in the area of neurosurgery for close to 15 years. In particular, the company offers a range of deep electrodes devoted to the surgical diagnosis of epilepsy.

Today, Alcis is developing an innovative solution for managing drug-resistant epilepsy in children below the age of three. Thanks to that significant advance, early surgery could be envisaged. Olivier Delalande, founder of the paediatric neurosurgery department of the A. de Rothschild Foundation in Paris and partner of Alcis points out: "Present-day methods are designed for adults and can be dangerous with children below three, as their cranial bones are still developing and are thus fragile. Thanks to Alcis, we will have a plate to double the cranial bones of young children. Thus, we will not deform any structure. The electrodes will allow insertion without applying pressure and will then be left for a week on the brain lesions that need to be studied during attacks". The method could bring a cure for 15 to 20% of partial epilepsy sufferers.

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INNOVATION, A GROWTH OPPORTUNITY FOR MICRO-MEGA®



Since the launch of their Giromatic®, the first contra-angle for the mechanical reaming of tooth canals in 1963, commitment to innovation is in the DNA of MICRO-MEGA®. The history of the company is marked by technical innovations, all geared to making endodontic treatment **ever simpler and safer**.

- **Simpler:** everyone has forgotten that you needed 20 files to carry out root canal work before MICRO-MEGA® came up with its set of six instruments in 2001! That number went down to three in 2008, and now you only need a **single instrument**.
- **Safer:** for the practitioner, who can count on a **perfectly reliable device**, and for the patient, with the development of **single-use medical devices**, the latest development of MICRO-MEGA®, which offers full sterility and draws on hospital processes.

MICRO-MEGA® is continuously investing in research and development. Internally, with a **reinforced R&D department**, where **PhD students** (particularly from FEMTO-ST) have been hired to further enhance research competencies. Besides, the company is now working with the **university hospital of Besançon** on a **new development programme** in order to develop innovative solutions that are beneficial to both practitioners and patients.

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SENSORS FROM SENSEOR SELECTED BY RTE

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RTE, the French electricity transport operator, has selected SENSEOR and its wireless and battery-free sensors for monitoring critical components of its high-voltage system as part of its open innovation approach. RTE is highly interested in these sensors, which are the only ones to date to make it possible to monitor electrical equipment up to very high levels of current and voltage, at the most critical hot spots. Sensors from SENSEOR are to be installed on several types of equipment in the experimentation stage.

François Gégot, Business Development Director of SENSEOR, based in Besançon, is very satisfied with the partnership: *"If the business with RTE develops as we hope, we could eventually envisage subcontracting the manufacturing of sensors here, in the clean rooms of TEMIS".*

WP SIGNALISATION: SMART ROAD SIGNS FROM WORLDPLAS

WorldPlas, a plastics company based in TEMIS is diversifying its markets and releasing its own products. Its range of **contactless thermoplastic smart connected road sign boards** are stronger than steel or aluminium sign boards. They are also more environmentally friendly: the 100% recyclable signboards are made from technical thermoplastic material

and can integrate natural products such as wood flour, oyster shells and hemp.

The development of this ultra-competitive product took seven years of research and investment worth €2 million.

To start marketing its products, Denis Gunes, director and founder of WorldPlas, has set up a subsidiary: **WP Signalisation**. *"Our goal is to achieve turnover of €500,000 in 2016 and we ought to double that every year thereafter"*, says the director.



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ÉCOLE SUPÉRIEURE
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DIGITALE
BESANÇON



2089: DIGITAL SCHOOL IN TEMIS

Innovation to serve learning

**Interview with Hervé Pizon and Stéphane Bonnotte,
founders of the 2089 school**

In September 2015, you inaugurated a private school for digital communication, called the 2089 school. Today, this school is an outlier among higher educational institutions as it intends to function differently. In particular, it advocates flipped learning. Could you tell us more about it?

Our motto is 'learning by doing'. Content is delivered to students before lessons. The classroom is the place for group work and discussions about the actual issues faced by modern-day companies. Also, 2089 stresses 'à-la-carte' learning, where strong points are turned to good account. 2089 is a small, flexible and adaptable school. It is an experiment that relies on students' intelligence and helps them develop their know-how and behaviours to allow them to be increasingly independent and proactive.

When school started in September, the students were away for a month, meeting French tech companies. They went to 8 cities such as Bordeaux or Lyon with a programme of talks, meetings and missions lasting 24 or 48 hours with set requirements and objectives.

Your website speaks of "professionals trained by professionals".

Precisely. The essence of 2089 is that is connected to the reality of the workplace. That is why we have brought in a certain number of major players, sponsors or partners, such as Laurent Solly (CEO of Facebook France), Nicolas Bordas (VP of TBWA) and Catherine Barba (CEO of CB Group), who gave up some of their time to allow that link and continuous and indispensable exchange between companies and learning institutions. That interface is necessary for a clear view of the needs and issues of the day so as to work on the creation of relevant and innovative solutions.

The school is located in Besançon, at the heart of the technology park. Was that an obvious choice?

We wanted to set up the school of our dreams away from Paris. It so happens that we are both from Franche-Comté.

Selecting a location in our home region makes sense to us and signals that today, exciting new developments can emerge anywhere. We had thought of other options in Besançon, but TEMIS turned out to be the right choice! Thierry Bisiaux (Excamed - CRYLA) offered to rent their premises, which are available for two years. So we are on the lookout for other possible locations in TEMIS for the years after that. For the moment, we are making the most of the view and our presence in a vibrant environment of entrepreneurship.

How do you see the future?

We hope that our revolution in learning will attract greater numbers of students. Our aim will be to reach a goal of 70 students next year, and eventually 130. We also hope to count on the loyalty of our partners, meet new ones and set up valuable collaborations. We hope to be still around in 2089, with successful alumni, so that we may hear the words "that was my school!" or see others teach at their alma mater.

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...
The classroom is the place for group work and discussions about the actual issues faced by modern-day companies.

A UNIQUE HEALTHCARE TRAINING INSTITUTE IN TEMIS SANTÉ

Nine industries brought together in a 6000 square metre building by 2020

■ Designed to unite 900 students who are currently spread over several facilities, the future Institute for Healthcare Training ought to emerge in early 2017, and will be put into service in 2020. Nine training areas will be housed here, for nurses, operating and paediatric anaesthetists, physiotherapists, nursing auxiliaries, ambulance workers, childcare workers and healthcare managers.

Located next door to the university of medicine and pharmacy, the new institute will enable students to benefit from university facilities (library, canteen etc.) and closeness to the regional university hospital.

The city of Besançon has provided 10,000 square metres of land and the Franche-Comté region will take charge of project ownership. Cost of the project: €23.6 million.



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MICROTECHNOLOGY CLUSTER

TWO NEW APPROVED PROJECTS PRESENTED AT THE LATEST CALL FOR PROJECTS FROM THE SINGLE INTER-DEPARTMENTAL FUND

■ **Surf-In**, a project dedicated to the surface engineering of parts made using additive manufacturing, and **BisCelTech**, which offers disruptive technology for Braille cells, are two projects approved by the microtechnology cluster and presented at the 21st call for projects from the fund in December 2015.

The Surf'in project is aimed at revolutionising the manufacturing of radio frequency parts (RF). The purpose of the project is to replace parts made using conventional methods (machining, silver-plating and soldering) that are expensive and time-consuming, with

parts that are made using an additive manufacturing process that is more cost-effective and far faster.

The BisCelTech project aims to develop an original mechanism for controlling a touch interface in Braille keyboards. The technology would offer the added benefit of cutting the cost of manufacturing the keyboards, in order to allow a wider use of this product designed for the blind and sight impaired, and invest new markets, particularly those of developing countries.



CALL FOR CHALLENGES IMAGIN'ÈRE SANTÉ

The microtechnology cluster and Alsace Biovalley are coming together to develop innovative projects in the area of healthcare. Companies, research laboratories and healthcare institutions in Alsace Champagne Ardenne Lorraine and Burgundy Franche-Comté are asked to take part in Imagin'ère Santé, which is a call for challenges in the areas of mini-invasive surgery (medical imagery, medical robotics, medical instrumentation).

The winners of the contest will receive support from the staff of the clusters to organise their project and find partners and funding.

➔ **LAST DATE FOR ENTRIES: 25 MARCH 2016**

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in brief

I-SITE Burgundy Franche-Comté selected for the Investment for the Future programme

Out of the 13 I-SITE projects entered, four were shortlisted by the international panel of judges in November 2015. **Only two of them were selected at the end in January 2016, including I-SITE BFC** sponsored by the community of universities and institutions of Burgundy Franche-Comté (COMUE-BFC).

Three main areas of excellence

I-SITE Bourgogne Franche-Comté has the ambition to make the broader region an international standard-setter in **three areas of excellence: (i) advanced materials, waves and smart systems, (ii) territories, environment and food for sustainable quality of life and (iii) healthcare and integrated individualised treatment.**

Developed by a consortium of **15 partners** from higher education and research, national research bodies and university hospitals and supported by members of the social and economic fabric and local government agencies, the I-SITE project ought to allow a reinforcement of the **international dimension and excellence of the courses and research** of the University of Burgundy Franche-Comté to draw talented students and researchers from all backgrounds. The commitment of companies to the project will help adapt the training and the research programmes to their needs.

I-SITE BFC, the leverage effect

The project represents a total of €420.5 million in capital funded by the programme for investment in the future (PIA2) over 10 years. That capital will generate approximately €10 million per year as interest. The interest will fund a total annual budget of about €40 million per year, particularly co-funded in the amount of €7.5 million by the regional authority and €1.5 million by private partners.

Annie Vinter, President of the COMUE BFC was happy to say: "The I-SITE BFC project will be a valuable driver for the deployment of the COMUE and is a starting point for our community dynamic. It will develop an effective pathway for international development, which will work for all those involved. And we will make sure it does so."



More information: www.i-site.ubfc.fr



I-SITE BFC

_diary

10 March
3 to 7 pm - Dijon

Silver Economy forum

The university of Burgundy Franche-Comté, working along with the inter-regional geriatrics centre (PGI) of Burgundy & Franche-Comté and the microtechnology cluster are **organising a forum dedicated to the silver economy**. The aim is to help university students, young graduates and high-school students discover the silver economy and its trades.

Information and enrolment:
Laurent Gautheron,
laurent.gautheron@u-bourgogne.fr

7 April
3 to 6 pm

Innovation day at the regional university hospital of Besançon



These annual meetings organised by the university hospital and the microtechnology cluster put all the parties engaged in healthcare innovation, whether they be academics, hospitals or businesses, in contact with each other. They create opportunities to visit the departments of the hospital, share experience, information, ideas and so on, to better innovate together.

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24-26 May
Paris Porte de Versailles
Pavillon 1

TEMIS and the microtech- nology cluster to participate in the first Intermeditech fair

For three days, Intermeditech will provide a platform dedicated to those working in the areas of medical technology and medical equipment. This new event will be held during the Paris healthcare week, at the same time as the HoptalExpo, GerontHandicap and HIT fairs.

For more information and visits:
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