



New facility for  
researchers and businesses  
in the  
micro- and nano-  
production sector

## News

### NEW CLEAN ROOM NOW OPEN AT TEMIS

The extended clean room at Temis Innovation Maison des Microtechniques – developed as part of the Temis Sciences project – is now open. This new facility doubles the dedicated controlled-atmosphere micro-production space available at the site. Featuring the very latest technology and equipment, it will enable FEMTO-ST's researchers and academic and industrial partners to keep up with international competition in the micro- and nano-technology sectors.

#### An ultra-clean environment for micro- and nano-production activities

The clean room has been extended by 850 square metres, bringing the total size to 1,400 square metres, including 865 square metres of ISO class 5 to 7 space. It is managed by a dedicated team of 15 engineers and technicians from FEMTO-ST Institute and houses a range of lithography and engraving equipment, along with material application facilities (piezoelectric, insulating and conductive materials). It also features a collection of characterisation and connectivity and packaging resources (final component packaging).


The new clean room houses €13 million of equipment, previously located at two separate sites. It is a major asset for FEMTO-ST researchers, as well as the businesses that will have access to the facilities. It also represents an opportunity for both start-ups and SMEs to use the types of resource that they would otherwise be unable to access.

The total cost of the extension project, managed by Franche-Comté Regional Council, will eventually be in the region of €4 million.

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P2  
New site for  
VIBRASENS



P2  
Sustained growth  
for ERDIL

## LISTENING, UNDERSTANDING AND ANALYSING TO DEVELOP CUSTOMER LOYALTY

■ Erdil joined Temis 10 years ago. The company analyses and interprets information that major companies receive from their customers. Erdil boasts both linguistic and computing expertise, developing custom-made, innovative and scalable solutions. It also has an intuitive understanding of customer satisfaction. Under the leadership of Séverine Vienney, Erdil works with major French companies such as Leroy Merlin, Orange, SFR, LCL, PSA Peugeot Citroën, Allianz and GDF Suez.

### Sustained growth

In 2013, the company posted a 20% increase in turnover for the second year running. *"In order to prepare for the future growth of our business, we began employing new staff in the final quarter of 2013. We've already added three new members to our team, and are constantly looking for new linguists to develop multi-lingual versions of our solutions,"* explains Séverine Vienney, CEO of Erdil. She is delighted that the company has also brought two new clients on board. *"As well as continuing to work with our existing client base, we also have two new clients. Groupama and Cofinoga now use our services to analyse messages from their customers."*



Erdil analyses more than 5 million customer responses each year

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## NEW SITE FOR VIBRASENS

■ VIBRASENS manufactures electronic vibration sensors for surveillance applications. The company moved into its new premises at the technology park at the start of January this year.

Ange Brunner, a graduate of ENSMM, founded VIBRASENS in 2003 after spending several years working in the vibration sensor industry in both Switzerland and the United States.

*"Our sensors are suited to all types of rotating machine, such as wind turbines, turbines, pumps and fans,"* he explains. *"They are capable of detecting the slightest abnormal vibration, as well as sending information about the condition of parts or maintenance requirements to technical control centres. Around 80% of the items we produce are currently exported."*

Having posted growth of more than 30% for three years running, VIBRASENS has now taken the decision to move into a brand new production facility. *"Our new building covers just over 700 square metres. To begin with, we plan to occupy 450 square metres and rent out the rest of the space."*

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## SONAXIS CONTINUES TO GROW

■ Sonaxis manufactures ultrasound probes to detect welding defects in nuclear power stations, aircraft parts and oil platforms.

*"We produce our probes using proprietary technology. They are capable of detecting defects measuring just 200 microns,"* explains Guillaume Pierre, the company's director.

*"We manufacture up to 500 probes a year."*

Sonaxis is located at Temis and turns over €2 million per year. It employs 15 people and has plans to recruit a further four staff to support its growing business.

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Net-Iki, France's first rural Fab Lab founded in 2012. Founder Pascal Minguet explains the art of producing everything, or almost everything, close to his home.

## REPORT ON THE SECOND "INNOVATION DAY" EVENT

**BGE Franche-Comté and TEMIS technology park reveal the secrets of innovation and the people involved.**

### Production laboratory

The one-day event was attended by around 200 students on a variety of different courses. The students had the chance to meet key players in the innovation sector and took a tour of the Fab Lab, specially created for the occasion at TEMIS Innovation Maison des Microtechniques. They were divided into teams to work on their own innovative project – an "infernal machine" – in conjunction with the "digital production laboratory".

"This event gave students the opportunity to address future object design technologies in a fun way, yet with a serious side too," explains André Aurière, Director of BGE Franche-Comté.

### The many faces of innovation

As a major player in innovation (although not technology per se), the ESF also lent its support to the event. The ESF funds a wide range of projects designed to develop new responses to new needs or existing needs that are not met. All of these projects have a common theme: to provide creative solutions to social change and transformation within our society.

The event featured 13 micro-projects in the Franche-Comté region that have received ESF support, including the interactive network and virtual studio project managed by Villages FM (Morteau) and the medicinal plant educational garden project proposed by Les Plantes Compagnes (Montgesoye).



## GAIA PROBE LAUNCH A SUCCESS

At 10:12 am on Thursday 19 December, researchers from the UTINAM Institute in Besançon and the Observatoire des Sciences de l'Univers THETA Franche-Comté Bourgogne watched the live launch of the Gaia space probe. After working on the mission with the European Space Agency for several years, the researchers from Besançon witnessed the space telescope take off on board the Soyuz rocket, on the first leg of its journey to observe and map the Milky Way. Over the next five years, it will "photograph" more than a billion stars and other celestial objects, sending more than five gigabytes of data back to Earth each day.

## AN EXCELLENT TEACHING HOSPITAL FEDERATION

■ **InCREASE** – which stands for Integrated Center for Research in inflammatory deseASEs – is one of two excellent Teaching Hospital Federations (Fédération Hospitalo-Universitaire - FHU) that received accreditation, last autumn, from the CHUs, the Université de Bourgogne, the Université de Franche-Comté, the Etablissement Français du Sang (French blood agency) and the Dijon regional cancer research centre, along with the French National Alliance for Life Sciences and Health (Aviesan). **InCREASE focuses its efforts on inflammatory and auto-immune diseases**, with the aim of improving research, training and patient care.

**Macha Woronoff-Lemsi, Vice-President Research, CHRU Besançon**, explains the process in detail:

"The FHU combines the expertise and resources of 16 clinical departments, 6 laboratories, 2 clinical investigation centres and 4 technology platforms, delivering an integrated approach to research programmes. It is able to draw on expertise in immunology, technology, microbiology, physiology and biostatistics, across a broad spectrum of medical disciplines. This **cross-disciplinary** approach allows the FHU to develop **synergies** and drive progress. It is a strategy that perfectly reflects our multi-disciplinary clinical research policy. We work closely with our partners to develop research programmes in three priority areas: **biotherapy** with CIC BT, INSERM and EFS, **innovative technologies** with CIC IT and FEMTO-ST, and **risk and vulnerability** with CNRS and Chrono-Environnement."



The FHU currently has a workforce of 200 staff, clinicians, researchers and teachers, and is managed and coordinated by **Professor Didier Ducloux**, university professor and clinical practitioner:

"**InCREASE** has a number of organisational and scientific challenges to overcome. However, it is backed by outstanding skills and expertise, as well as a network of biotherapy and innovative technology specialists that has been developed over several years. It also relies on the enthusiasm and commitment of its participants.

We have already taken a number of important steps, including setting our priority areas, namely microbiome research, innovative health technologies and the relationship between inflammatory diseases and psychiatric illness.

We are involved in a number of research programmes, including cryotherapy and rheumatoid arthritis, the

clinical development of biotherapies, MICI and myocardial infarction, and the impact of blood transfusion conditions (in partnership with EFS). We are also building partnerships with other organisations outside the federation (UMR866 [L. Lagrost - Dijon] and cancer research). The federation has also appointed a research manager (Dr Émilie Gaiffe, PhD). We are currently preparing a new training programme on innovative therapies and organising a cross-disciplinary seminar. We also hope to be included in the next round of healthcare body accreditation, and are determined to undergo independent external assessment. An international monitoring committee has been created for this purpose. **InCREASE's role is to prepare the medical profession for the future, yet remain mindful of the fact that the future is already here.**"

# in brief

## TEMIS Santé: Caisse des Dépôts commits funding to improve healthcare provision

Caisse des Dépôts and the Centre Hospitalier Régional Universitaire (CHRU) have signed two loan agreements. The first covers the construction of the Institut Régional Fédératif du Cancer (regional cancer research institute), while the second will fund work required to bring Jean Minjot in line with standards. The total value of the loan agreements stands at €44 million.

The Institut Régional Fédératif du Cancer is a health research cooperation consortium comprising cancer treatment teams from both public and private institutions, covering both medical oncology and radiotherapy. It will be housed in a building covering 19,000 square metres on the Jean Minjot site in Besançon. The project, costing a total of €65.7 million, will receive €54 million from the CHRU of which €22.5 million will come from a loan secured against savings.

In recognition of its role in boosting regional healthcare provision, local authorities are expected to provide €10 million of funding for the project in the form of grants.

The Ligue Contre le Cancer (French league against cancer) will also provide €1 million of funding in the form of kit and equipment. The project is also supported by the ARS Franche-Comté (Franche-Comté regional health board), through outsourcing support loans totalling €31.5 million.

Jean Minjot hospital, which opened in 1983, is in need of renovation work and currently falls short of applicable technical standards. The associated work was launched in 2010 and will continue until 2018. The total cost of the work will come to around €92 million. The restructuring work, performed on an occupied site, will ensure that the hospital complies with all relevant fire safety and disabled access standards, as well as involving the removal of all asbestos from the building. The total cost of the 2013-2017 phase of the renovation project stands at €43 million. It is funded by the CHRU, which has received a €21.5 million loan from Caisse des Dépôts, secured against savings. A further €24 million of funding is coming from the ARS Franche-Comté.

CHRU Besançon • Valérie Lagier  
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Jean-Pierre Jouyet, Managing Director of Caisse des Dépôts, was in Besançon on 29 November 2013 to sign the two loan agreements, secured against savings and totalling €44 million.

\_diary

## MEDTEC France 2014

9-10 April 2014 - Lyon

Leading French meeting place for medical devices, combining conferences and exhibition, MEDTEC France encompasses all the technologies and skills in the medical device sector.

**New in 2014:** the MEDTEC Entrepreneur & Start-up Forum, to be held on 9 April. The day, dedicated to start-ups and new entrepreneurs in medical devices, is organised around a series of roundtable sessions to discuss challenges and share experiences covering finance, intellectual property, regulations or marketing.

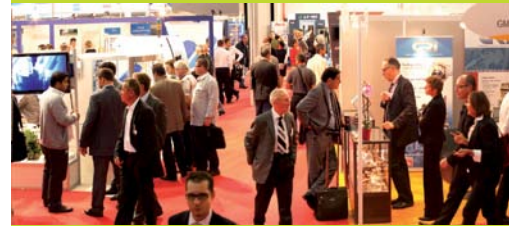
TEMIS is taking part in MEDTEC France with the Franche-Comté stand organised by Franche-Comté CCIR.

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## MICRONORA 2014

23-26 september 2014 - Besançon



MICRONORA is the benchmark European show for the micro-technologies sector. More than 800 direct exhibitors and represented brands, including a third from overseas, will take part in the 2014 show.

Included in the 2014 show: the 9th European Micro & Nanotechnologies Technological Encounters, Zoom and Microns d'Or.

Find out more: [www.micronora.com](http://www.micronora.com)

## \_dining

### New restaurant at the technology park

The "Le Maestro" bar/restaurant is open Monday to Friday from 7am and 7pm, and on Thursday and Friday evenings from 5pm to 11pm for after-work refreshments and dining.

17D rue Alain Savary - 25000 Besançon  
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## LEARN, SHARE AND INNOVATE...

Key events held at TEMIS technology park

### OPEN NETWORKING EVENT: Networking and expert event

On 11 December, the 20 businesses operating at the park had an opportunity to meet an expert from BPIFrance and discuss the financial support available to help them grow their businesses and become more competitive.

■ **Technology Park management:**  
[contact@temis.org](mailto:contact@temis.org)

### "MADE IN TEMIS": An exclusive opportunity for businesses at the park to learn more about TEMIS' technologies, products and expertise

The first event involved a tour of Worldplas, a company that designs and manufactures complex injected, over-moulded and bi-injection thermoplastic parts. The company currently specialises in the automotive sector, supplying clients such as PSA and Porsche, and is now looking to expand its business into other sectors.



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