

**B I O**  
INNOVATION  
HEALTH TECH CENTER



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PRESENTATION GUIDE

THE HUB  
TO ACCELERATE YOUR PROJECTS!

WELCOME TO BESANÇON, THE PLACE OF SCIENCE, INNOVATION & DEEP TECH



# TEMIS

SANTÉ  
LIFE SCIENCE PARK

# 1. AN ECOSYSTEM STIMULATING INNOVATION

*In Bourgogne Franche-Comté and particularly in Besançon, from microsurgery to implants, 250 companies participate in the growth of biomedical production worldwide. A true cluster bringing together specific training, research centers, dynamic business environment and technological platforms dedicated to the medicine of tomorrow.*

“

*BIO INNOVATION is a place, where practitioners and students in engineering, health and life sciences can meet with micro-technology professionals to discuss their needs & consider collaborative projects.*”

Bruno Favier,  
TEMIS Technopole Director.

Together with the Besançon University Hospital, the University Franche-Comté Health Department of Research and Training, Inserm and medical research facilities, TEMIS Santé park is a technopole of 17 hectares reserved for companies and laboratories working in the fields of health, biomedical, biotechnology, medical and surgical equipment and devices.

The creation of the BIO INNOVATION development center at the heart of the technopole illustrates a political will to provide players in the “health” sector with **a unifying place, a real platform for projects and services enabling translational research and a vector for innovation.**

Research teams, start-ups, and clinical trial promoters will find in BIO INNOVATION a privileged point of contact to facilitate access to the technological, scientific, clinical and industrial resources and expertise that are essential to their projects, from the academic world to patients.

- Companies
- Education
- Research and transfer
- Services
- Ongoing projects
- Tramway

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## 2. BIO INNOVATION, A RESOURCE CENTER TO ACCELERATE INNOVATION IN HEALTHCARE

*BIO INNOVATION promotes closer ties between hospitals and industrial fabric to accelerate and optimize the transfer of technological innovations to patients. Medical devices and biotherapy are supported in their development.*

As a gateway to the **Medtech-Biotech**, BIO INNOVATION aims to foster transdisciplinary collaborative practices to accelerate clinical and technological developments, secure the regulatory phases of manufacturing and introduction to the market.

Its support offer can be adapted to the needs; **hosting projects combines access to platforms, scientific and technological support, and support for entrepreneurship and innovation.**

Within it, projects have access to **a range of services, expertise, resources and equipment that will structure the development and pre-manufacturing of health technologies.**

**“** *BIO INNOVATION accelerates the transition of these projects from research to the clinical word as close as possible to the patient and is positioned in the areas where multidisciplinary (engineering sciences, life sciences, micro-technology...) is a key success factor for their introduction to the market.* **”**

## 3. A SPECIFICITY CENTERED ON BLOOD

*At the heart of an integrated ecosystem, **BIO INNOVATION** brings together the resources and know-how in genetic engineering stem cells, biotherapy, in particular immunotherapy (transplantation, inflammation, cancer) and biomonitoring, enabling projects to be carried out from the very early stages to the production of advanced therapy medicinal products (ATMPs).*

Guided by a scientific council, BIO INNOVATION relies on a group of laboratories and technical platforms for the elaboration, development and production for the new therapeutics based on molecular, cell and tissue biology.

**Located in close proximity to the Besançon University Hospital and the EFS, the Bio INNOVATION center facilitates access for hosted projects to certain key biological resources such as cell and**

**lineage bank data, as well as non-therapeutic blood collection unit dedicated to research.**

The Center also houses a **technical platform for biology research, state-of-the-art equipment, a design, simulation and medical prototyping workshop** in direct contact with **hundreds of researchers** of the RIGHT Institute UMR 1098 "Host-Graft-Tumor Interaction - Cell and Gene Engineering" (EFS, UFC).

### A CORE TARGET OF BIOTECH, MEDTECH AND BLOOD-RELATED DIAGNOSTICS

*BIO INNOVATION is a platform for accelerating the technician and clinical development of diagnostic and therapeutic innovations relating to technologies and products associated with blood. The Center particularly supports collaborations between engineers, clinicians and entrepreneurs in this field where multidisciplinary is essential and a factor of success.*

**BIO INNOVATION OFFERS A UNIQUE MODEL OF INNOVATION, DEDICATED TO THE HEALTH OF TOMORROW.**

His fields of expertise

Stem cells, essential in regenerative medicine

Immunotherapies for cancer and inflammatory diseases



Combined, active or intelligent medical devices for which the multidisciplinary component around biology, materials, mechanics, electronics and microtechnology is strategic

Innovations associated with the field of blood



**BIO INNOVATION**  
HEALTH TECH CENTER

2,300 m<sup>2</sup> of dedicated premises

A customized rental offer adapted to the duration of your needs: offices, laboratories, layouts

4,000 m<sup>2</sup> to promote your health projects

Shared spaces

1 center for coworking

1 room for seminar

1 showroom

3D printing Prototyping

Access to 700 m<sup>2</sup> of technological platforms for R&D medical devices and drugs of innovative therapies

Technical and clinical development

Transfer & Innovation

Maturation & economic development

## IN ASSOCIATION WITH THE FRENCH BLOOD ESTABLISHMENT (EFS BFC)

On the basis of the experience obtained with blood cells and in close collaboration with its environment, the French Blood Establishment has developed, in Besançon, a European center of expertise in the service of innovative therapies. From BIO INNOVATION, the EFS is deploying its biotherapy innovation platform to meet the great national challenge of biopharmacy.

→ It provides access to cells and tissues of interest, which it is able to collect, purify and characterize, and even modify.

→ With the know-how, infrastructure and equipment, it has the **capabilities of cryobiology**.

→ Through different channels, the accredited biological resource centers allow **the creation and management of biological sample collections**.

→ Its own and joint laboratories with the University Hospital of Besançon provide the possibility of **developing characterization and/or diagnostic analyses, controlling products and carrying out test monitoring**.

→ The molecular and cell biology teams, its pharmaceutical establishment with its production platform, promote the **development of new therapeutic**

**approaches (genetically modified cells, CAR T: chimeric antigen receptor T cells) and their production** for clinical evaluation. The teams can take charge of production on behalf of third parties (CDMO: Contract Development and Manufacturing Organization, pharmaceutical subcontracting).

→ Its research teams, in collaboration with the University Hospital & its accredited clinical investigation center in biotherapy and technical innovations (Inserm CIC 1431 accredited by Inserm and the DGOS), offer **assistance in the design and conduct of clinical trials**.

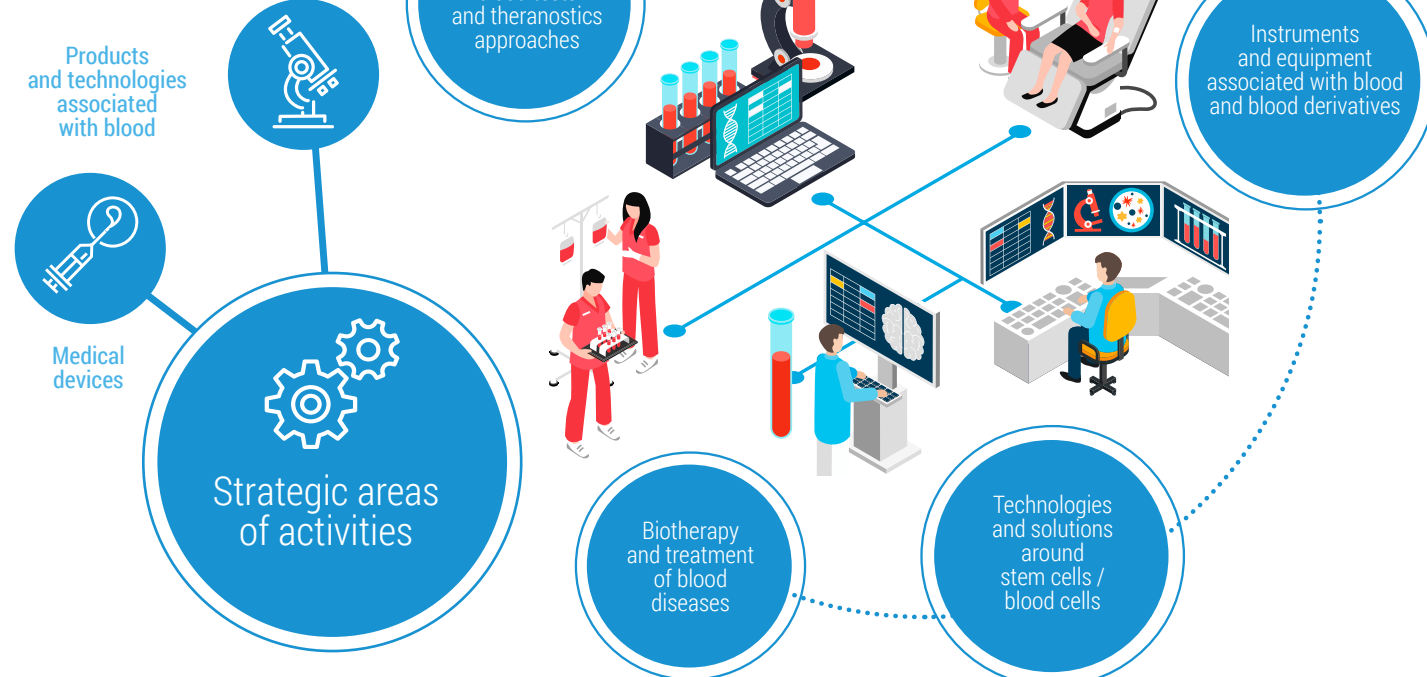
→ The EFS innovation cell, in close collaboration with the region's expertise in micro-nanotechnology, enables **the analysis of processes and their optimization**, both in

the field of blood transfusion and in the various aspects of bioproduction. **The possibility of mixing innovations to biology with technological innovation, in addition to the optimization offered, gives rise to new possibilities.**

“ Collaboration at the interface of different fields, as far apart as engineering sciences and biology for example, is a source of cross-fertilization. It is this culture of collaboration outside the framework that, in the DNA of the EFS BFC, has led to innovations and has enabled the emergence and development of start-ups over the years. ”



## BIO INNOVATION INNOVATE IN BLOOD-RELATED TECHNOLOGIES, SERVICES AND PRODUCTS.



## 4. AN INTEGRATED OFFER... À LA CARTE

### INNOVATION ENGINEERING

SERVICES	EXAMPLES OF SERVICES
FEASIBILITY STUDY	Cell culture study & quality control
	Identification & characterization of cancer cells
	Monitoring of in vitro cell models
	Measurement of cell colonization
TECHNICAL DEVELOPMENT AND PROOF OF CONCEPT (POC)	Design of the prototype
	Pre-clinical tests
	Biological formulation analysis
	Preliminary biocompatibility / functionality tests
	POC + Risk analysis and future product status
CLINICAL STRATEGY	Participation in risk analysis
CLINICAL TRIALS	Clinical state of the art
	Design and implementation
	Analysis and valuation
MARKETING	Quality management system (QSM)

BIO INNOVATION offers laboratories from 20 to 500 m<sup>2</sup>, shared equipment and ready-to-use offices in a new 4,000 m<sup>2</sup> building.

BIO INNOVATION also offers, through its partners, a complete range of services and à la carte to support projects: **training, monitoring, project set-up, space rental.**

### SCIENTIFIC AND TECHNOLOGICAL SUPPORT

#### A TECHNICAL PLATFORM OF EXCELLENCE IN BIOLOGY

BIO INNOVATION has a high-level technical platform consisting of structuring biology equipment, access to which is crucial for conducting feasibility studies: measurement of cell colonization, analysis of the activities of biological systems, analysis of the biological formulation, preliminary biocompatibility tests, etc.

#### Main equipment:

- Magnetic cell sorting (MILTENYI auto MACS)
- FACS-type cell sorting (SONY SH800)
- FACS-type cell analyzer (BD LSRFortessa™, SONY SP6800)
- Metabolic analyzer (AGILENT SEAHORSE)
- Automated MTI (CliniMACS Prodigy®)
- Confocal microscopy.

Access to shared equipment for resident companies is provided via a secure and shared reservation system. The daily management/maintenance of the equipment of the technical platform is carried out by the person in charge of the EFS/UMR RIGHT team.



## B MODULAR AND FLEXIBLE LABORATORIES TYPE L1 AND L2

Access to laboratories is provided as part of a broader service offering that allows hosted companies to start their activities in a very short time frame. BIO INNOVATION hosts 700 m<sup>2</sup> of shared technological platforms and offers for rent close to 2,300 m<sup>2</sup> of office space that can be converted (upon request).

### General purpose premises:

- Cold room
- Storage
- Centrifugation
- Microbiology
- Microscopy
- Autoclaves and laundry
- Cell culture
- Molecular biology
- Biochemistry room/ELIS
- Bacteriology area

The design of the facilities and the management of the site by the qualified staff of BIO INNOVATION make it possible to control the risks of cross-contamination and to ensure the confidentiality of each project. This contributes to the efficient and stimulating hosting of the companies and research teams present at the development center.

### Shared L2 laboratories & joint SAS

- 2 laboratories of cell culture

## C A MEDICAL DESIGN, SIMULATION AND PROTOTYPING WORKSHOP

To facilitate obtaining and validating the Proof of Concept and prepare the transition of projects to the clinical world, companies will have access to infrastructures and equipment adapted to the design, simulation and prototyping from the first room:

- **A machine shop** and basic tools for cutting, shaping and assembling
- **Three test benches** equipped with digital oscilloscopes to perform measurements and tests will complement the technical offer
- **A computer room**
- **A medical prototyping** with facilitated access to certain 3D printing technologies (on site or via strategic partnerships).

In direct contact with the BIOTIKA teams and the R&D and pre-incubation unit of the Higher Institute of Engineers of Franche-Comté (ISIFC) hosted at the Center, the health technology space supports projects in their upstream phase of definition, design and testing of the first prototype.



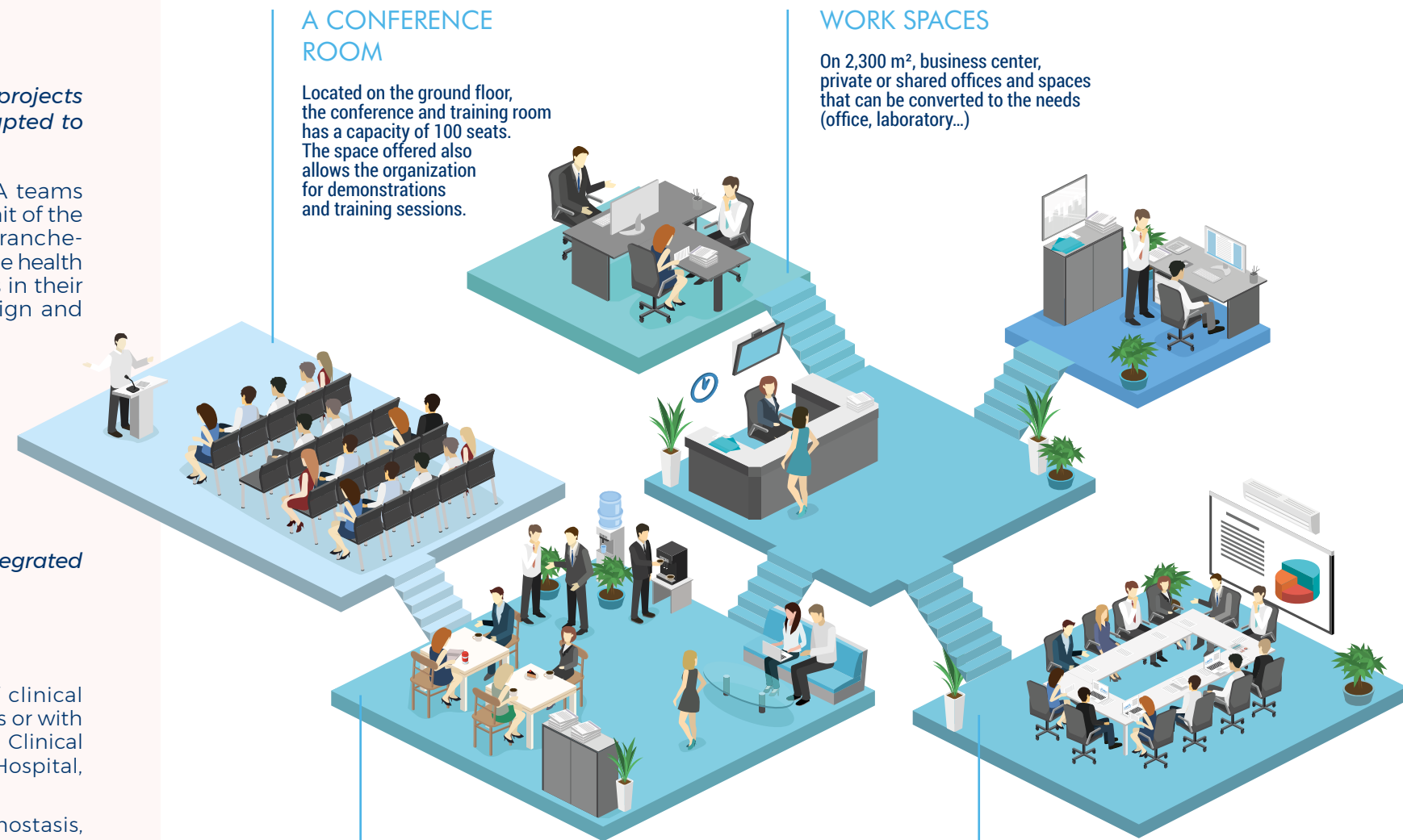
## USER-FRIENDLY SHARED SPACES

### A CONFERENCE ROOM

Located on the ground floor, the conference and training room has a capacity of 100 seats. The space offered also allows the organization for demonstrations and training sessions.

### WORK SPACES

On 2,300 m<sup>2</sup>, business center, private or shared offices and spaces that can be converted to the needs (office, laboratory...)



### LIVING SPACES

The living space located on the ground floor is a place of interaction and friendliness. An equipped lunch room. A catering service can be made available for the events. An equipped catering room is available upon reservation.

### MEETING ROOMS/ SHOWROOM

The building has meeting rooms to accommodate between 12 to 25 persons, a showroom area that can be converted in a meeting room.

## ACCESS TO BIOLOGICAL AND CLINICAL RESOURCES

BIO INNOVATION will support the dissemination of projects to the clinical world through an integrated approach and the involvement of its partners:



### A dedicated platform to the biological monitoring of clinical studies

The aim of the Biomonitoring platform is to ensure the biological follow-up of clinical studies (mainly in immunology and hematology) carried out in hospital departments or with the participation of patients at the University Hospital. It is part of the Integrated Clinical Investigation Center in Biotherapy (Inserm CIC 1431) of the Besançon University Hospital, in close collaboration with the Inserm UMR 1098 unit.

It relies on the know-how of the medical biology laboratories (in cytology, hemostasis, immunology, immunogenetics and molecular hematology/oncology) of the EFS and the RIGHT Institute (UMR Inserm 1098).

### A production center for innovative therapeutic drugs

The production platform of advanced therapy medicinal products (ATMPs) of the EFS Bourgogne Franche-Comté is one of the few national centers to have clinical batch bioprocessing capabilities. Its concept meets the requirements of good manufacturing practice (GMP).

It is composed of two white rooms, class A and B, totally independent from each other, equipped with the appropriate materials for cell culture, cell sorting and gene transduction in sterile conditions.





## A CHOICE OF PREMISES ADAPTED TO YOUR NEEDS

### A STANDARD RENTAL OFFER

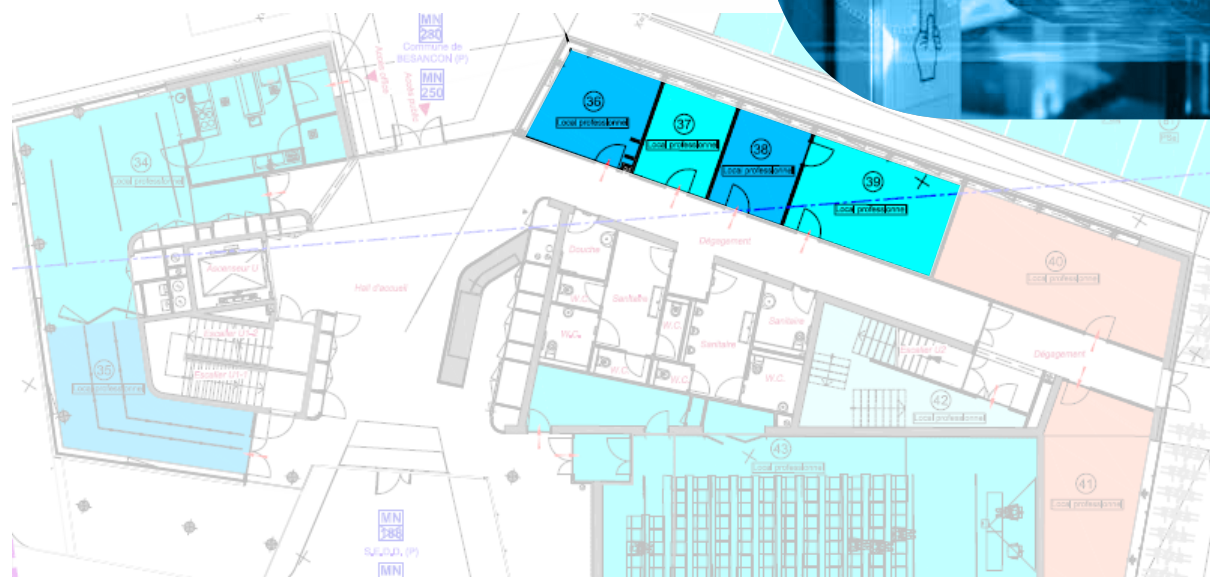
Within the rental space Aktya on R+2, R+3 or R+4 platforms

- Open platform space without intrusive supporting structure.
- Great flexibility in the configuration of possible divisions.
- 700 to 800 m<sup>2</sup> of usable area per platform.



### B GROUND FLOOR OFFICE FOR SHORT TERM RENTAL

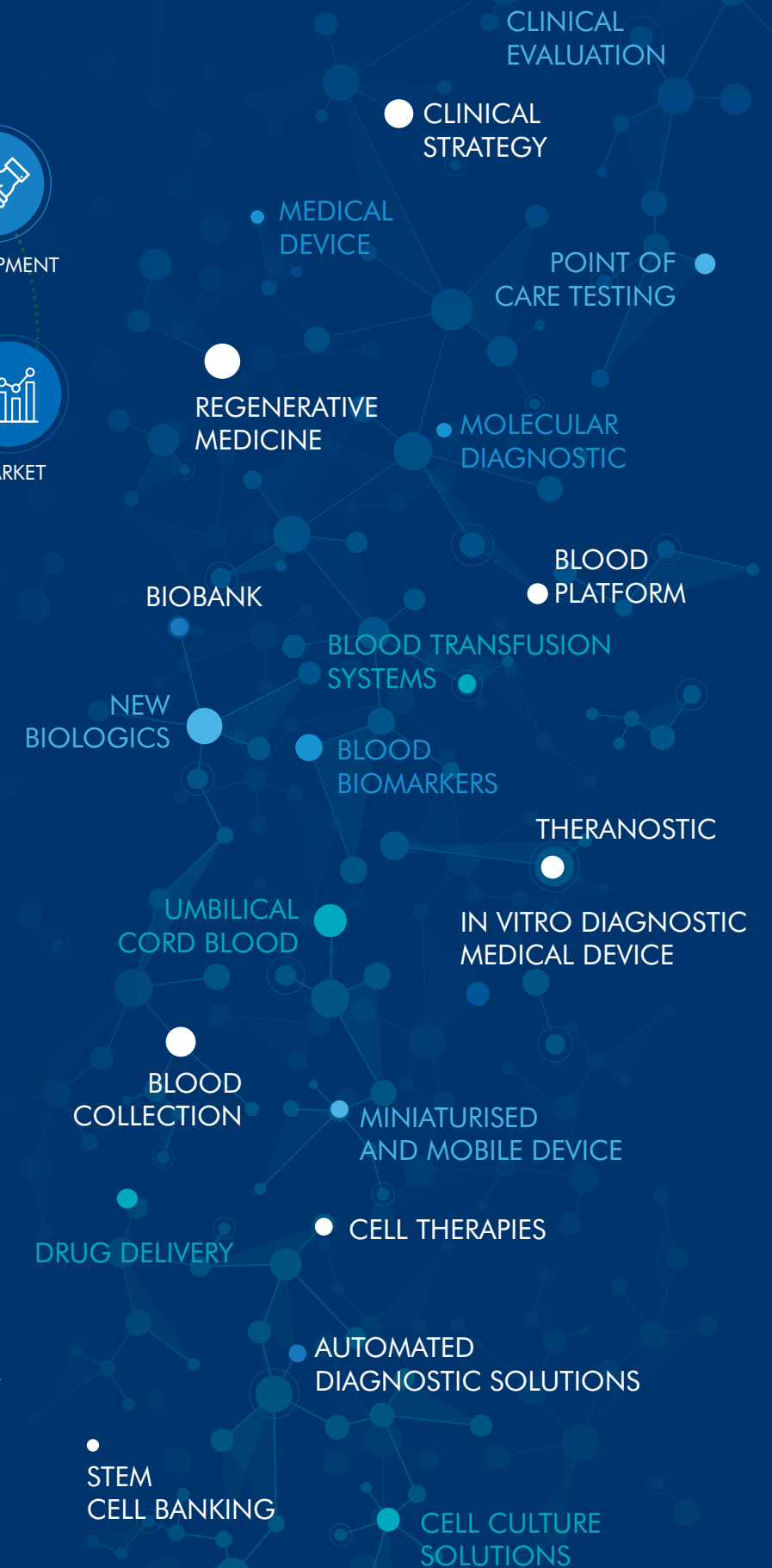
In the shared spaces offered for rent, 6 offices from 11 to 15 m<sup>2</sup>



## 5. JOIN BIO INNOVATION IN BESANÇON



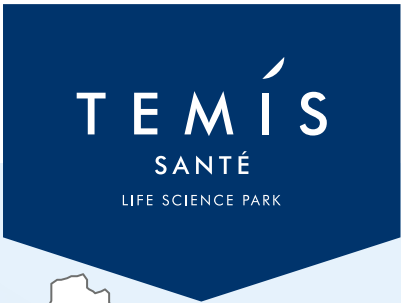
1. Be part of a multi-technology ecosystem connected to the clinic
2. Use a unique scientific and technological expertise combining microtechnology, engineering sciences and life sciences
3. Access to qualified resources (stem cells, blood cells, corneas...) and to platforms and state-of-the-art technology stations (pharmaceutical qualified bioproduction suites, micro-fabrication, micromanipulation...)
4. Benefit from technical, regulatory and clinical support from the very beginning of the project
5. Facilitating the relationship with the clinic and the deployment of trials: Fcrin (French Clinical Research Infrastructure Network), Tech4health platform (health technology assessment), Ecrin (European CRIN)
6. Pre-manufacturing in proximity thanks to a dense Medtech industrial fabric with its Cluster of competitiveness and its Cluster Innov'Health
7. Join the entrepreneurial dynamics of the French tech # Health tech network and the ProPulseur accelerator
8. Have a dedicated work environment in the heart of the scientific park Temis Santé in Besançon



# BIO

## INNOVATION

### HEALTH TECH CENTER



An "integrated" service offer

A platform of expertise, resources and services

An industry liaison unit for access to the Medtech Biotech

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