

# ACCELERATING DEVELOPMENT FROM BIOSCIENCES TO BIOPRODUCTION



**twb**  
BIOSCIENCES & BIOPRODUCTION

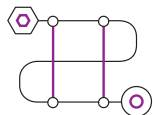
EFFECTIVE AND RESPONSIBLE

# ONE AMBITION: INNOVATION

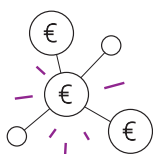
TWB contributes to developing new sustainable production methods through alternative biological solutions that are both innovative and economically effective. Expert in managing collaborative scientific projects, TWB draws on collective intelligence and creates new connections between researchers, industry, investors and entrepreneurs, to accelerate the transition towards environmentally responsible industry.

*With its strong and unique ecosystem, TWB is an important player in biosciences and bioproduction, acting as a hub for research and development and startup projects.*

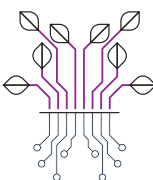
## OBJECTIVES



**Facilitate the public research and industry interface**



**Create economic value**



**Respond to climate challenges and issues**

TWB (Toulouse White Biotechnology) is a Mixed Service Unit (Unité Mixte de Service – UMS) under the joint administrative control of INRA/INSA/CNRS (UMS INRA 1337, UMS CNRS 3582), endorsed by the Carnot Institute 3BCAR, managed by INRA.



Certified  
Management  
System

Winner in March 2011 of the call for projects made by Investissements d'Avenir "Health and Biotechnology – Preindustrial Demonstrators", TWB receives state aid, managed by the National Research Agency (ANR-10-DPBS-02-01).



AGENCE NATIONALE DE LA RECHERCHE  
**ANR**





## SIMPLIFYING PROCEDURES

# ORGANISING AND RUNNING R&D PROJECTS

**A real interface between the academic and industrial worlds, TWB creates conditions that lead research and development projects to success. New ways of collaborating that are simple and effective make projects easy to organise and launch.**

### **Quickly and intelligently, TWB:**

- identifies company needs,
- mobilises experts from the best public labs,
- manages contracts based on predefined intellectual property rules,
- offers leading edge technology and equipment.

## PROJECT TYPES

### **> Industrial contracts (R&D, service)**

TWB resolves particular problems in complete confidentiality.

### **> Public research projects**

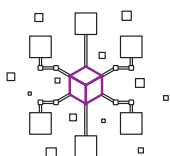
TWB finances innovative projects to encourage scientific creativity.

### **> Co-financed projects**

Together with industrial companies and academics, TWB participates in national and European programmes.

## DIVERSE APPLICATIONS

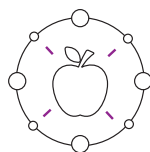
### CHEMISTRY MATERIALS



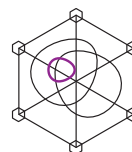
### HEALTH COSMETICS



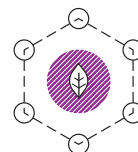
### FOOD & FEED



### ENERGY



### ENVIRONMENT





## A STIMULATING ENVIRONMENT

# SUPPORTING STARTUPS

**From the moment they are created and to accelerate their launch and development, TWB supports startups by hosting them and providing workspace and a range of services.**

- > Strategic and financial advice
- > Scientific and technological support
- > Access to leading edge equipment
- > Administrative support
- > Introductions to a wide range of contacts

## TESTIMONIALS

“Our incubation with TWB has had a truly positive impact on EnobraQ's early days. We became operational very quickly thanks to TWB's scientific environment and technological teams, and to being put in contact with their far-reaching social and economic network.”

**CHRISTOPHE DARDEL**  
General Director – EnobraQ

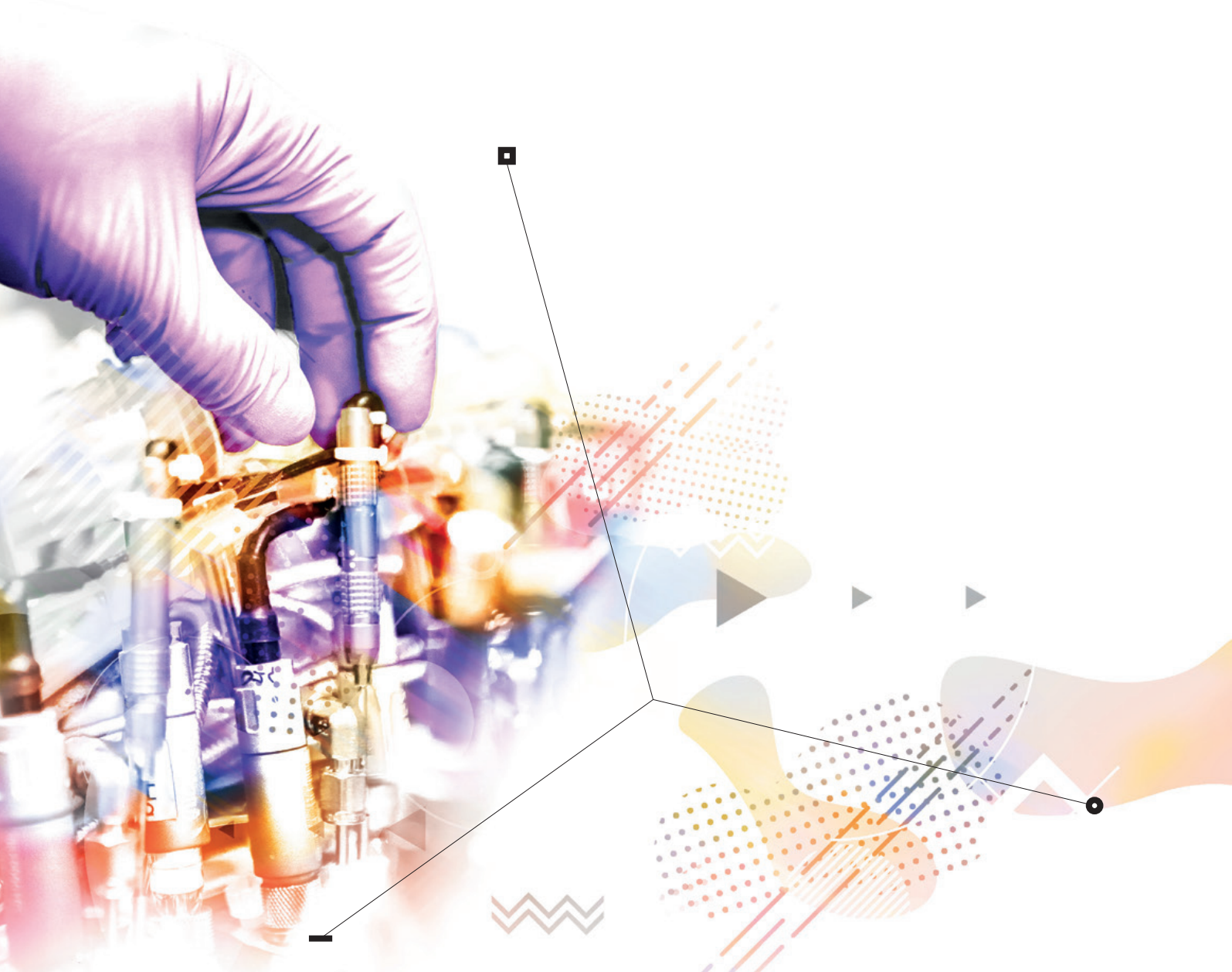
“TWB is a skill hub, a discussion platform and an innovation catalyser in industrial biotechnology, unique in France. TWB spotlights disruptive innovation projects that correspond perfectly to our investment strategy. And their expertise is an important factor in our analysis and involvement.”

**DENIS LUCQUIN**  
Managing Partner – Sofinnova Partners

“TWB first helped us in structuring our business project. Today, we fully take advantage of an exceptional and vast scientific environment, from automated strain screening to routine production in 20L fermenters. We're able to accelerate our development and move closer to industrialisation.”

**JÉRÉMIE BLACHE**  
President – PILI





DYNAMIC AND OPEN

# A NETWORK OF INVOLVED EXPERTS

One of TWB's strengths resides in its ability to make wide-ranging sets of interests between different players converge. Connections, trust and fruitful collaborations grow between all.

## PUBLIC-PRIVATE CONSORTIUM

Over 50 private and public partners are involved in TWB: major industrial groups, small and medium-size companies, startups, investors, research bodies, public structures, local authorities.

## WITH MULTIPLE INTERACTIONS

Competitive clusters and associations, public institutions, regional, national and international social and economic stakeholders.

## PUBLIC RESEARCH

- > Labs at the height of current research.
- > Network of technological platforms.

## MAJOR PARTNERS

- > **LISBP** (Laboratory of Biological Systems and Processes Engineering – UMR INSA/INRA/CNRS).
- > **CRITT Bio-Industries** (Regional Centre of Innovation and Technology Transfer – INSA, University of Toulouse).





ADVANCED TECHNOLOGY AND INDUSTRIAL VISION

# INTEGRATED TECHNICAL PLATFORMS

TWB ensures a full continuum of expertise, from the gene to the product, and from laboratory development to a pre-industrial pilot. To reduce the time required for development, TWB has designed its own, original, highly automated equipment.

## SPECIALISED PLATFORMS

> **Strain engineering:** molecular biology, synthetic biology, picking and screening, bio-bank production.

> **Biotransformation & culture:** cell culture, optimising microbial and enzymatic processes, evolution in situ, population characterisation, kinetic analysis.

> **Process development:** scaling up, upstream & downstream processing, process transfer, robustness study, batch supply.

## SUPPORT PLATFORMS

> **Analytical.**

> **Bio-informatics.**

## IN ADDITION

> **Environmental evaluation.**

> **Ethical and societal analysis**  
(with the Graduate School of Science Ethics in Toulouse).



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Under the joint administration of:



**twb**  
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