



# TWB Precompetitive projects

**Call for pre-competitive research projects dedicated to the promotion of innovation in the field of industrial biotechnology**

## **Raison d'être**



### **Objective**

Create new tools, methods, biobricks or processes necessary for the development of industrial biotechnologies, and which are of interest to industry and the socio-economic world.



### **Specifics**

Co-financed by the TWB Consortium, which will have priority access to the generated results.

## **Transforming ideas into proofs of concept actionable by industry partners\***

- Fund early stage risky projects that would not be funded through classical national calls
- Share costs and risks with industry partners to address scientific & technologic bottlenecks
- Share industry needs with academic scientific teams
- Identify and promote young high potential scientists
- Generate value with new business opportunities leveraging pre-competitive results

*\*TWB consortium members*

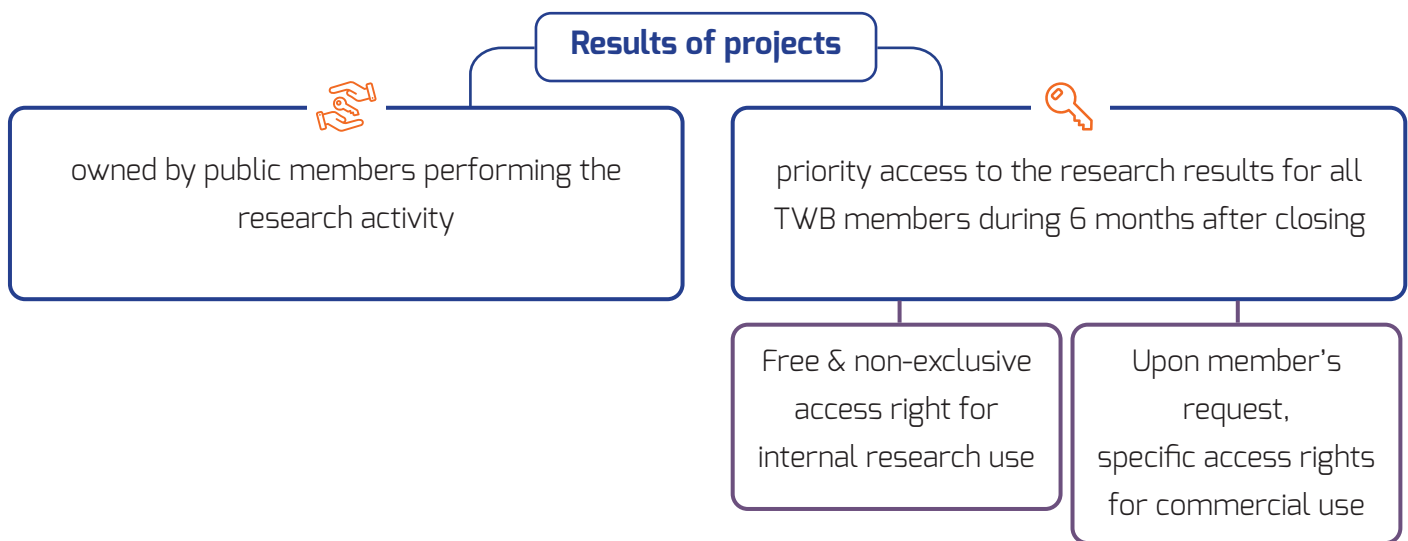
## Objectives of precompetitive projects?

Identify disruptive industrial biotechnology projects that accelerate and derisk the development of generic solutions.

Foster translational research in biotech (explore interface between fields of application).

Mature technologies and scientific bricks for an integration within TWB offer.

## Win-win partnership between academics and TWB



Possibility to **create a start-up** at the end of the precompetitive project :

- vote of TWB voting members upon the recommendation of TWB executive committee
- a license of the results will be granted by the owners of the start-up
- TWB members will have access to the results through the start-up

Possibility to **set up** a "competitive" research projects financed 100% by the industrial sector.

### Benefits for academic labs

Nurture scientific research.

Develop new partnerships through the access to complementary laboratories to work at interface / frontiers and the possibility to set-up industrial projects with TWB members at the end of the project

Access to significant funding via a high rate of selection (30 % to 40%)

Support innovation development and valorization

Support patent portfolio consolidation: cover patent filling & maintenance costs

### Benefits to all TWB members

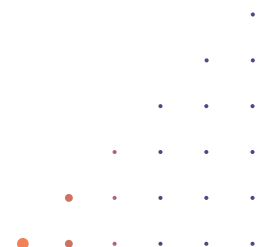
Stimulate process & biological tools developement

Share risks & cost between private and public stakeholders

Translate innovation into economic dynamics

Promote scientific excellence

Source innovation



## How precompetitive projects work?

### Two year projects funded by TWB

High-risk, high gain, disruptive projects

Financial, technical and administrative assistance as well as industrial support to help transform an original and innovative idea into a proof of concept

Funding: around 2 x 100 k€ per project over 2 x 1 year (including salaries of non-permanent staff, consumables, service provision or subcontracting, Access to TWB Platforms at marginal cost)



Start : 3 to 8 months after final selection

Involvement of TWB members in steering committee

Go / No Go decision after one year by the steering committee

IP 100% owned by research organisms

Scientific and valorization support of TWB all along the project

During their implementation deadline, the precompetitive projects must lead to well-characterised proofs of concept that can be associated with a decision to acquire intellectual property, in particular by filling a patent application.

This annual call for projects is **open to all national academic research teams of INRAE, INSA Toulouse and CNRS research units**. However, if laboratories outside the mentioned research units want to submit a project, please contact TWB to check the eligibility.



# Access to TWB technological platforms

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**Precompetitive project leaders can request TWB technological platforms to carry out a development stage of their project.**

## Bioprocess platform

### Activity

Service offer for the design or the optimization of microbial culture processes with full analytical support. Fermentation process • Consulting, support, batch production • Evolution of strains • Analytical services and cell sorting by flow cytometry.

### Equipment

Platform with equipment for the implementation and monitoring of microorganism cultures at several volume ranges :

- Automated culture stations
- Mini-bioreactors running in parallel
- Liquid and gaz chromatography park
- Online and offline mass spectrometry for metabolite analysis
- Cell analysis and sorting by flow cytometry
- Automated devices for natural strain evolution

## Strain engineering platform

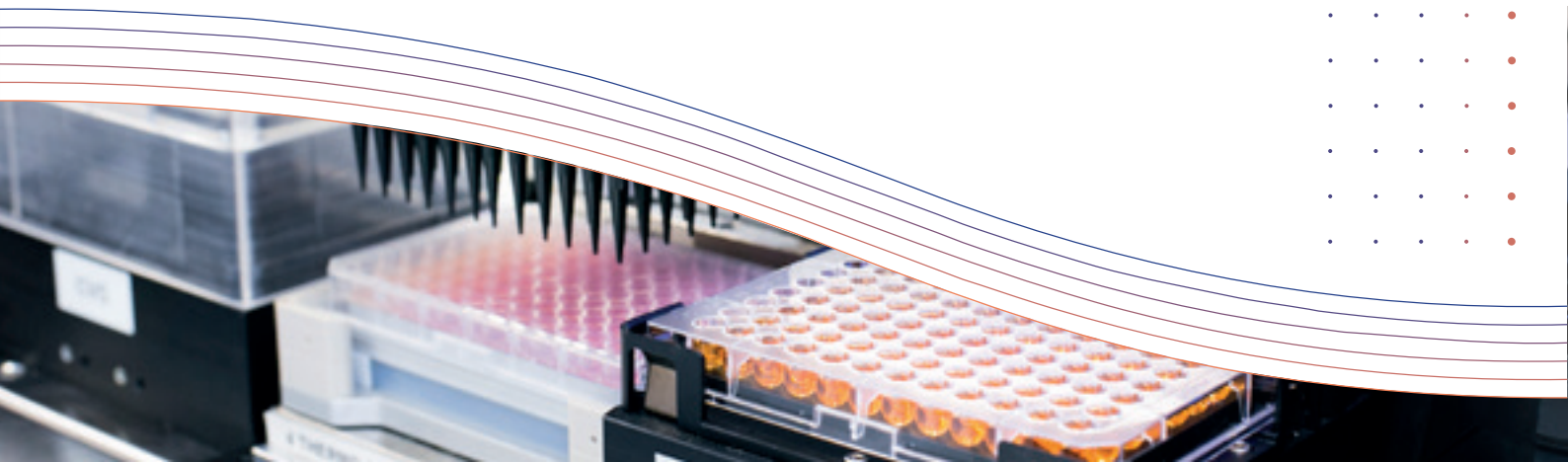
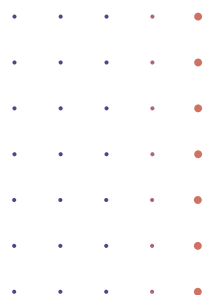
### Activity

Service offer for synthetic biology and microbial strain engineering. Consulting, support and expertise for the construction of engineered microorganisms, mutants, genomic and plasmid libraries.

### Equipment

Platform equipped with automats ensuring the realization of various unitary operations :

- Nucleic acids preparation
- Cloning and transformation station
- Automated colony picker
- High throughput analysers of nucleic acids and proteins



# 3 steps to apply for TWB precompetitive projects

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## Generic call

**Thematic call with selected strategic scientific topics** in the field of Industrial biotechnologies (synthetic biology, microbial physiology, innovative processes, enzymatic engineering, fermentation techniques, modelling...).

### Step 1 | Letter of intent submission

*1-page based on a template : project description, expected results, innovative character and potential impact*

Submission before the middle of June\*

Feedback on the end of June\*

First evaluation & selection phase

### Step 2 | Full-proposal submission

*6-page based on a template*

Submission before the end of September\*

Scientific support by TWB experts

Scientific & operational supports to mature your projects (financial, IP landscape etc)

### Step 3 | Presentation to TWB members and TWB's Scientific Advisory Board

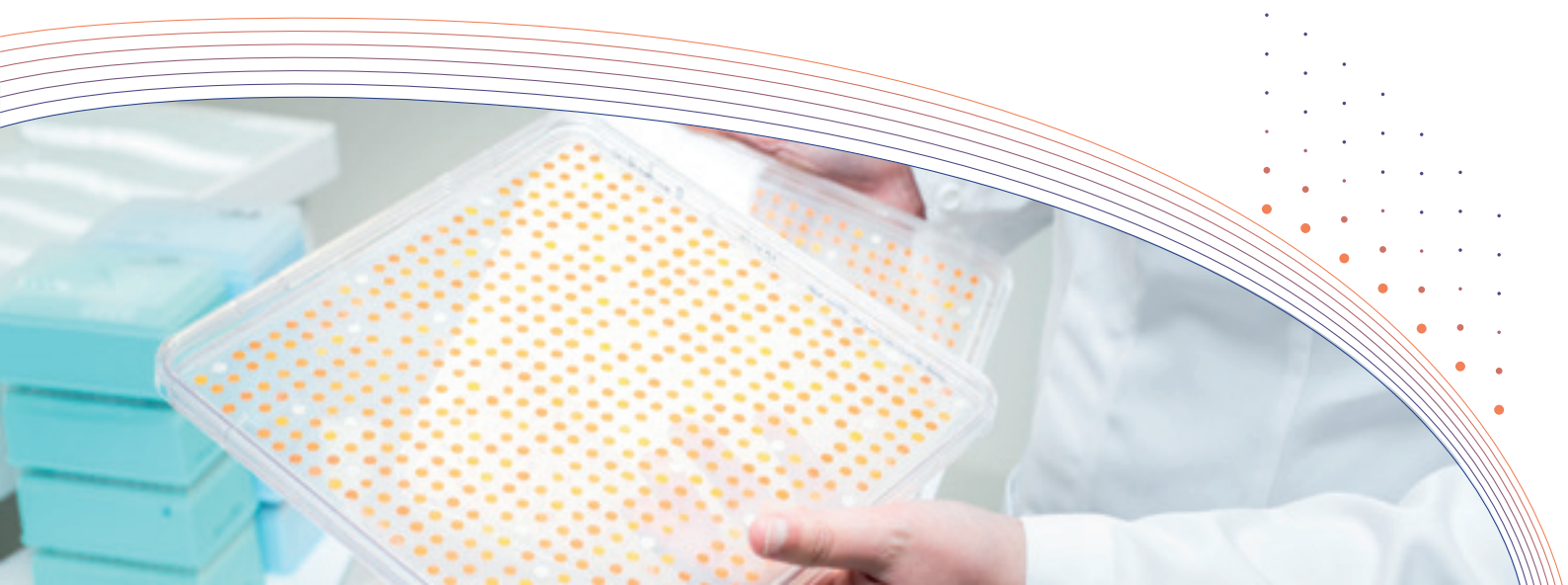
Presentation during the Strategic Steering Committee (SSC) at the end of November

Vote from TWB members (50% private / 50% public) & results within 3 days

## Evaluation criteria

- Originality, creativity and positioning versus state-of-the-art
- Scientific strategy (risk, mitigation, probability of success)
- Impact: project results vs. existing solutions
- Recognition of risks
- Potential impact for TWB: valorisation

*\*The actual dates are indicated when the Call for Proposals is launched.*



## Key figures between 2012 & 2022



**9M€ invested:** 8.6 M€ on precompetitive projects + 0.4 M€ for patent portfolio



**6 technologies** transferred and implemented onto partners and TWB platforms



**1 start-up created** (2 ongoing)



**75 job creations** (direct & indirect)

**117** submitted selected projects covered:  
**45** selected covering mainly tools  
and development of biology systems



**1 software** deposited



**2 industry members** attracted to the TWB consortium



**8 competitive projects** from precompetitive projects



**12 patents generated** from precompetitive projects



**21 publications generated** from precompetitive projects

## A framework that evolves over time

- 2012** Launch of the first call – dedicated only to TBI research teams
- 2013** Opening to specific external research teams through collaboration with TBI or TWB
- 2015** Opening to any external academic labs through collaboration with TBI or TWB
- 2018** Expansion to any external academic labs independently from TBI or TWB
- 2019** First thematic call
- 2021** Reinforced organisation on project management and scientific support

*TWB was created in 2012 in the form of a Unité Mixte de Service (UMS : joint service unit) INRAE/INSA/CNRS with a unique public/private consortium of 28 members (49 in 2023).*

Any questions about the conditions and guidelines of the precompetitive projects call?

Would like to apply? Feel free to write at [twb-precomp@inrae.fr](mailto:twb-precomp@inrae.fr)