



RENEWABLE FUELS AND BIOENERGY FOR A  
LOW-CARBON EUROPE -  
ACCELERATING THE IMPLEMENTATION OF  
THE SET-PLAN ACTION 8

## SET4BIO - a framework to accelerate bioenergy and biofuels solutions across Europe and beyond

EUBCE, Session 3BO.15.4

6/6/2023

Patrik Klintbom, RISE, Coordinator SET4BIO, Chair ETIP Bioenergy Steering Committee



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement no. 884524

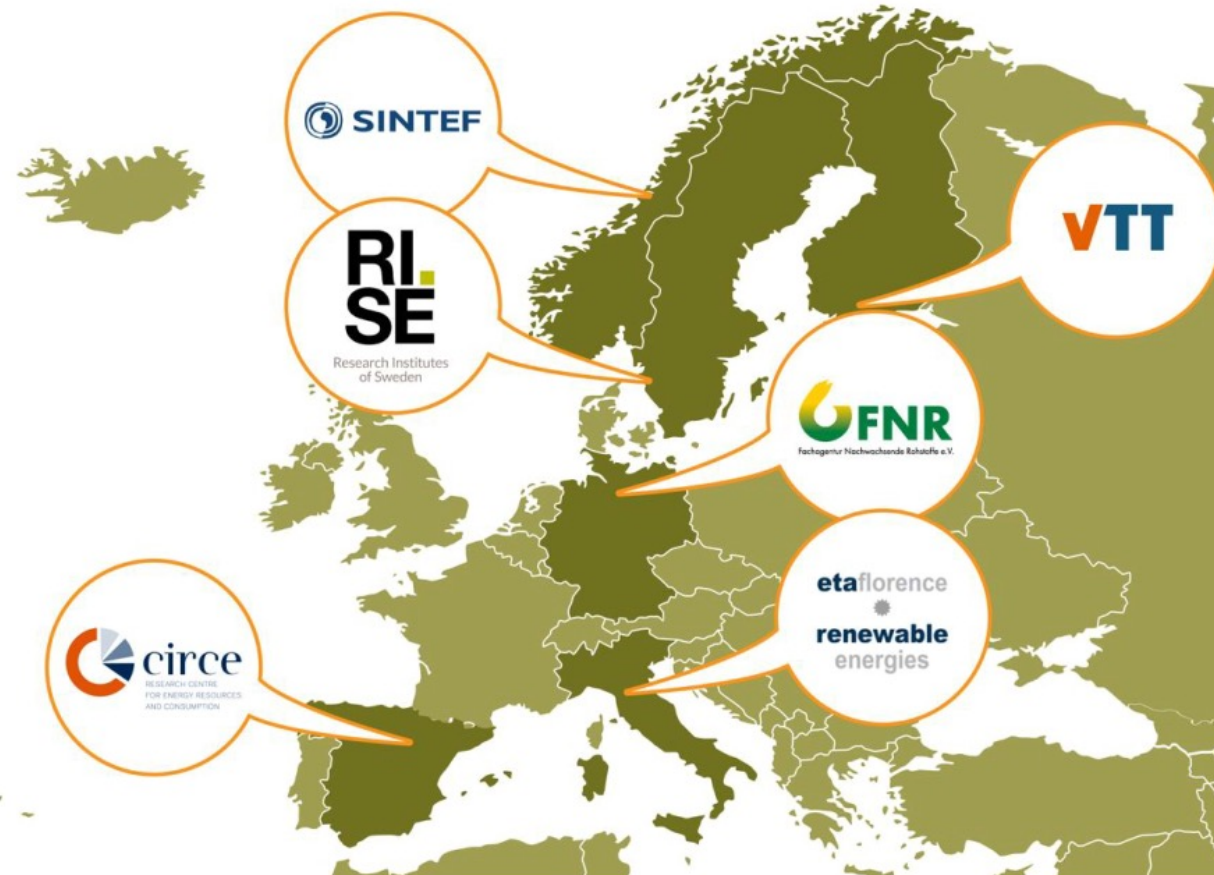
[www.set4bio.eu](http://www.set4bio.eu)

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## Mobilizing resources and enabling policies for the scale up and deployment of emerging technologies

*Six partners from six countries*





## SET4BIO - Renewable Fuels and Bioenergy for a Low-Carbon Europe - accelerating the implementation of the SET Plan Action 8

### THE OBJECTIVE

To support the full execution of the Implementation Plan of Action 8 (IP8), *Bioenergy and Renewable Fuels for Sustainable Transport*, i.e., both for research and innovation lines and large-scale projects, **acting as competence centre for the Implementation Working Group (IWG8)** and proposing solutions and pathways to overcome the essential barriers associated to IP8.

Start	1.3.2020
End	31.8.2023
Funding	Horizon 2020
Call	LC-SC3-JA-2-2019 Support to the realisation of the Implementation Plans of the SET Plan
Total budget	1 M€

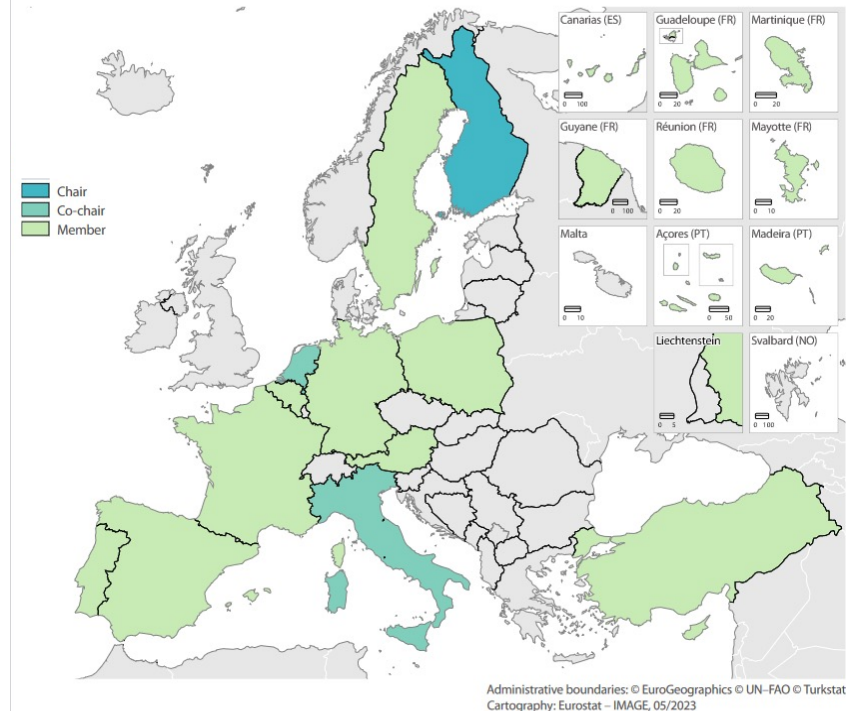


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## SET Plan and Implementation Plan 8 on Renewable fuels and bioenergy

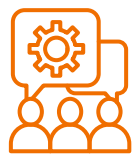
- Temporary Working Group established in 2017 to define strategic targets, R&I activities, and the Implementation Plan
- Implementation Working Group 8 established in 2019 with the mission to implement the Plan
- Strategic areas:
  - Advanced biofuels
  - Other renewable and gaseous fuels
  - Renewable hydrogen
  - Bioenergy
  - Intermediate bioenergy carriers
- Strategic targets for 2030:
  1. Improving the performance of renewable fuels and bioenergy production in terms of yield and efficiency
  2. Reducing the GHG emissions along the value chain
  3. Reducing the costs of processes and products
- Member countries: Austria, Belgium, Cyprus, Finland (chair), France, Germany, Italy (co-chair), Poland, Portugal, Spain, Sweden, the Netherlands (co-chair), and Turkey

Members of Implementation Working Group 8



## SET4BIO approach and the "implementation toolbox"

### SET4BIO STRATEGY



Activating the stakeholders - direct involvement of both industrial stakeholders and the Member States representatives



Mobilizing resources - outlining a roadmap to fund and finance the bioenergy and renewable fuels projects



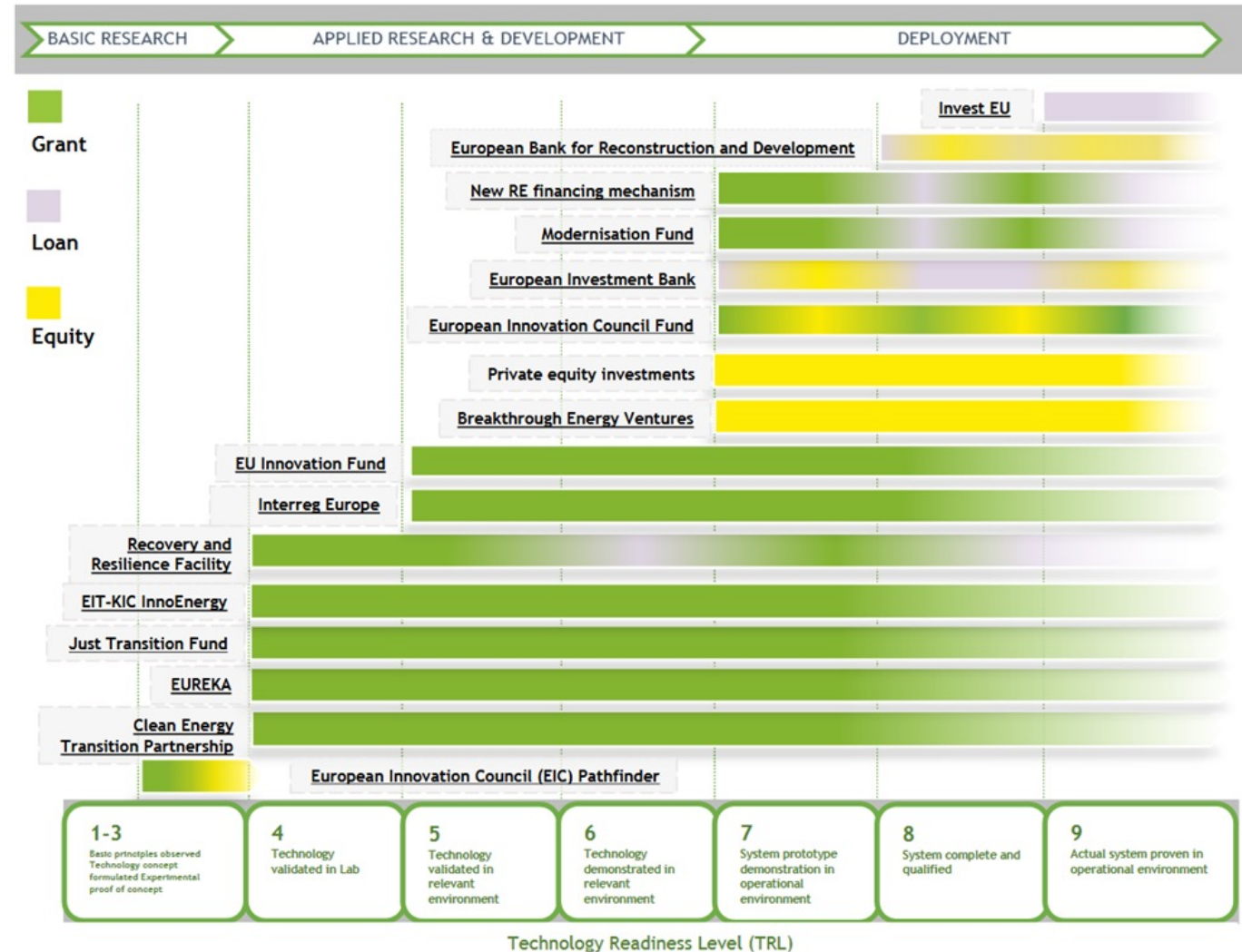
Stimulating innovation - launching Innovation Challenges for getting hold of new business models, technologies and processes





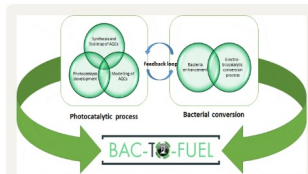
## Funding and financing roadmaps to trigger new initiatives and investment structures

- Mapping national and EU funded projects
  - 317 national projects
  - 39 EU projects
- Identifying and analyzing public funding opportunities on national and EU level
- Providing information of private financing opportunities for project developers



# Innovation Challenges to stimulate development

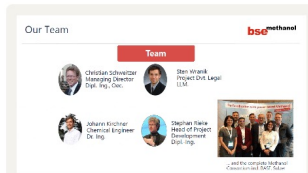
- Innovation Challenge ran as a one-year process in 2021 with seven participating teams
- Next Challenge in June 2023



**BAC-TO-FUEL**  
Ethanol production  
Supporting the challenge of reducing GHG emissions: Ethanol production from renewable H2 and CO2  
[Read more](#)



**BiOCORE**  
Biogas  
The game changer for the energy transition and future net-zero energy systems by unlocking the full potential of biogas  
[Read more](#)

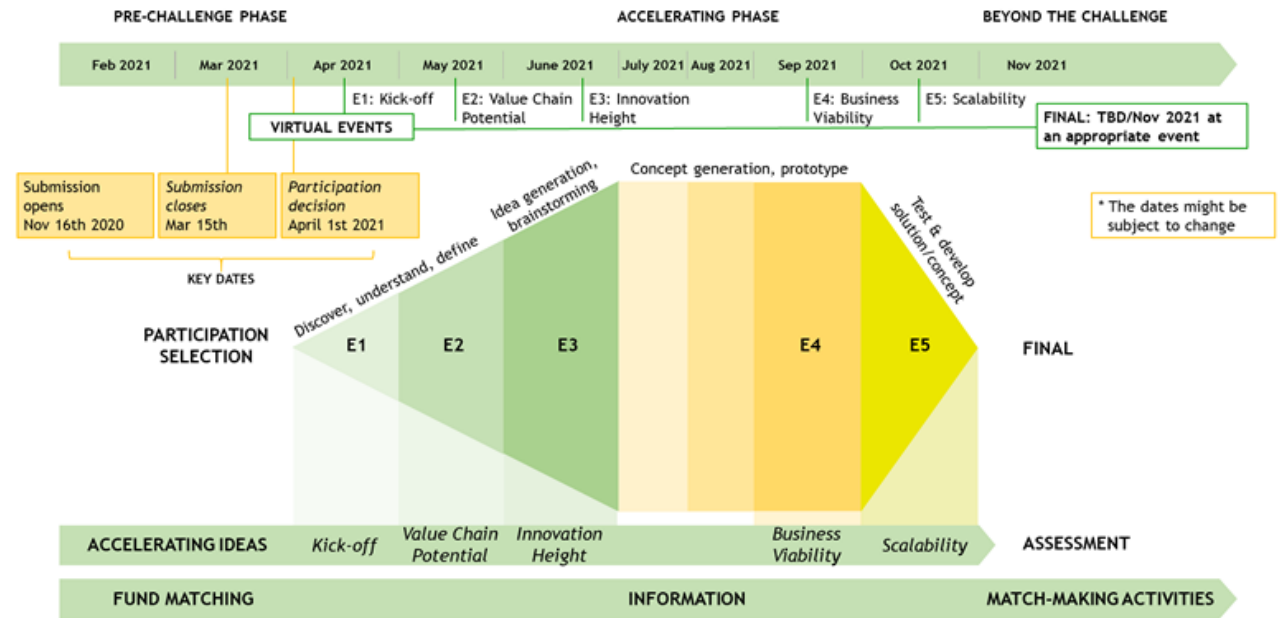


**FlexMethanol**  
Methanol synthesis  
Less emissions, more solutions  
[Read more](#)



**Fuel and Combustion Laboratory (FCL)**  
Biomass combustion  
Pay attention, tar-rich gasification is not the problem anymore!  
[Read more](#)

## THE CHALLENGE PROCESS

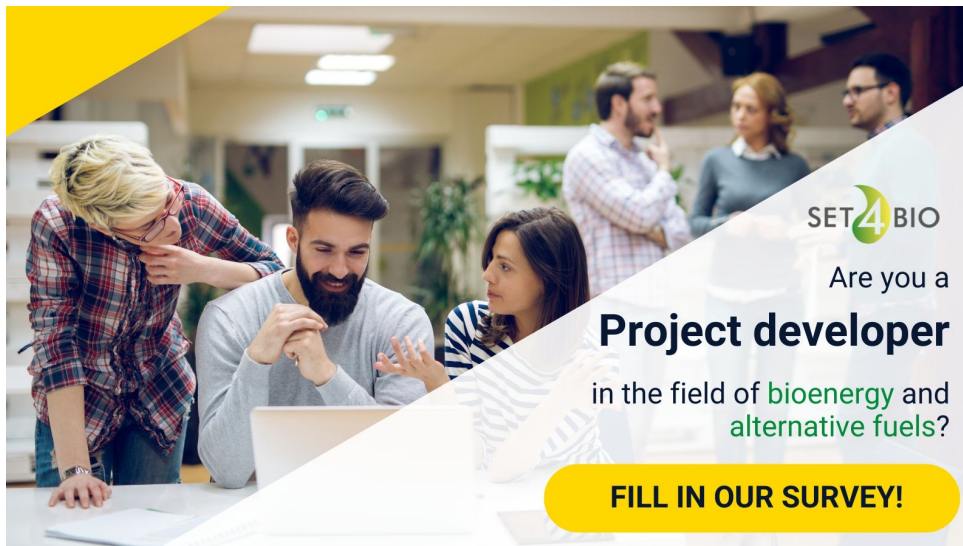






## Support for project developers to realize project ideas

- Brokerage events to match project developers with funding opportunities
- Guide for project implementation support programs



## Industry priorities and funding opportunities for bioenergy and biofuels

27<sup>th</sup> June 2022

12:30 - 17:15

Venue: Silversquare Europe, room The Parliament, Square de Meeûs 35, - 1000 Brussels - Belgium

Registration link

[SET4BIO stakeholder workshop and brokerage event \(trippus.se\)](https://trippus.se)



# **SET4BIO Policy recommendations**

**Part of results**



## SET4BIO Policy recommendations

### 1. Align RDI strategies and funding programs on national and EU level and with industry

- Alignment of national and European RDI strategies as well as SET-Plan, while keeping the national interests
- Consistency in funding of high TRL solutions
- Information exchange and coordination between national funding strategies and agencies
- Alignment of research and industry funding priorities

## SET4BIO Policy recommendations

### 2. Harmonize data collection to facilitate monitoring and assessment of RDI contribution to targets

- Countries record and store data differently, making monitoring of IP8 progress challenging
- Develop SET Plan wide taxonomy and make use of existing databases
- Important to:
  - Create transparency in progress monitoring of energy technologies and facilitate corrective actions in research policies
  - Improve monitoring and coordination between the Member States
  - Support coordination between Implementation Plans, especially related to cross-cutting topics (e.g., hydrogen)
  - Increase visibility and usability of data, e.g., best practices of funding mechanisms

## SET4BIO Policy recommendations

### 3. Support innovation actions throughout the TRL scale

- Support programs can help bridging the gaps between different TRL levels, especially needed at high TRL to support scale-up and commercialization
- In addition to funding and financing, support programs can be based on technical, regulatory, and market knowledge and validation support
  - Develop support programs at national level, align with funding opportunities
  - Make existing programs visible at national and EU level
- A strong open innovation community is needed to foster innovation and collaboration at higher level.

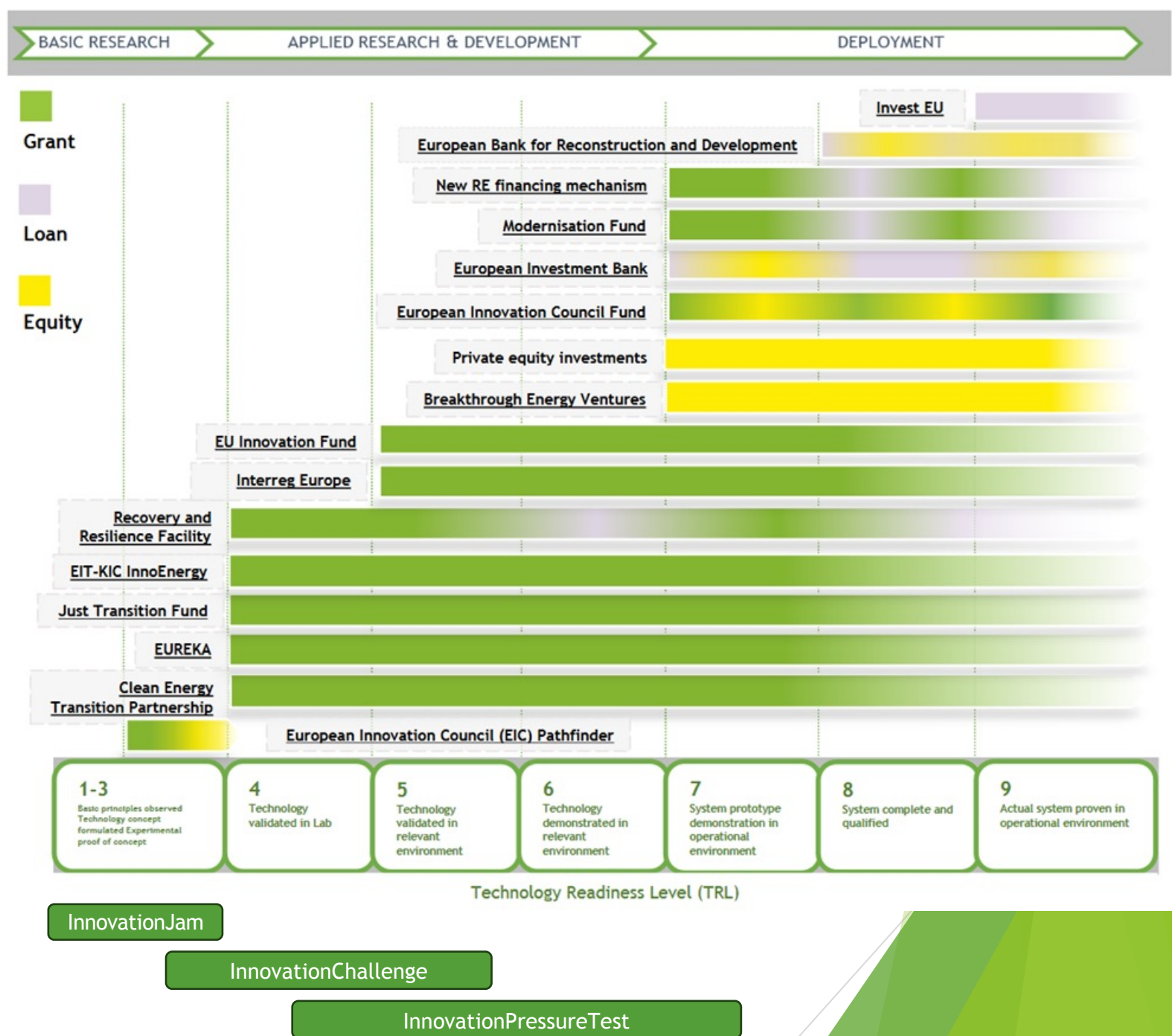




## SET4BIO proposes three contest schemes to catalyze innovations throughout the TRL scale:

- InnovationJam: a scheme to rapidly source and stimulate innovative concepts (TRL1-3)
- InnovationChallenge: a scheme to accelerate innovative concepts to prototypes (TRL3-5)
- InnovationPressureTest: a scheme to check the relevance and reliability of the evolving technology - from prototype to solution (TRL4-7)

## Contest schemes



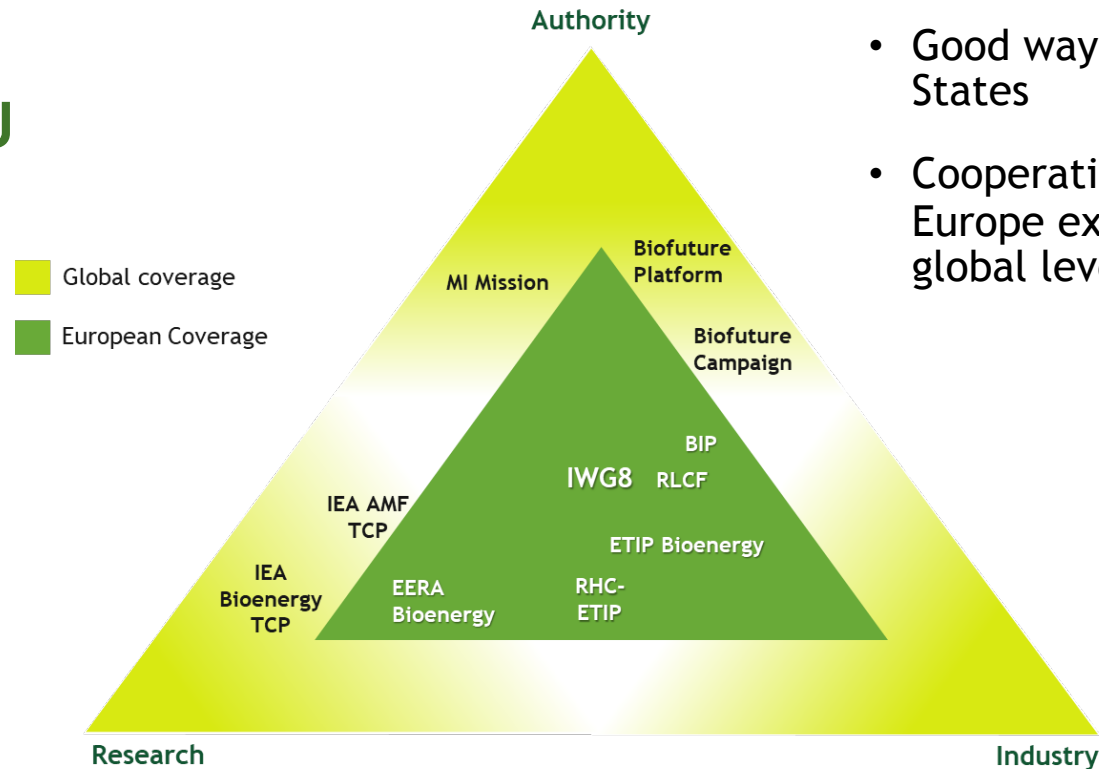
## SET4BIO Policy recommendations

### 4. Clear, stable and predictable framework to guarantee the market pull

- Recommended to analyze the **combined effect of all the policies concerning renewable fuels and bioenergy** and possible side effects
  - Make sure that market actors can grasp the combined effect
  - Risk of delayed investments if not understood or seen as too complicated
- Coordinated and informed processes for implementation of directives throughout Member States
- Focus so far on TRL - consider also e.g., Commercial Readiness Index (CRI) and Societal Readiness Level (SRL) as crucial elements for market uptake

## SET4BIO Policy recommendations

### 5. Enhance complementary collaboration at EU and global level



- Many platforms and initiatives with different geographical focuses, scopes (value chains, end-use sectors), dialog levels, and stakeholders exist
- Good way to engage the Member States
- Cooperation between platforms in Europe exists - strengthen also on global level



## SET4BIO Innovation Challenge Light

- 27 June 2023 / 13:00 - 17:30 (CET)
- Online event
- More information at:  
<https://www.etipbioenergy.eu/set4bio/innovation-challenge>

### Draft Agenda

- 🕒 13:00- 18:00 Plenum and possibility for 1:1
  - 🕒 13:00 - 14:00 Welcome and Introduction to Innovation Challenge
    - Foresight Bioenergy and Biofuels 2050  
Johan Granberg, RISE Research Institutes of Sweden
    - Key Policy Recommendations from SET4BIO for Bioenergy and Biofuels  
Elina Mäki, VTT
    - Industry Needs  
TBD
  - 10 minutes break*
  - 🕒 14:10 - 15:10 Pitch sessions
  - 🕒 15:10 - 15:55 Interactive workshop in Industry needs
  - 5 minutes break*
  - 🕒 16:00 - 17:00 Feedback session
  - 🕒 17:00 - 18:00 Optional 1:1 meetings with our experts



Thank you!

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Do not miss tomorrow!  
“Best practices and recommendations  
for project implementation support  
programmes” on 7 June 11:30-12:00 at  
Live Stage at EU project area at EUBCE

Project Partners



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