



## Renewable **Fuels** and **Chemicals** for Switzerland\*

# SWEET conference 2024

Christian Bach, Co-coordinator

\*reFuel.ch is a consortium sponsored by the Swiss Federal Office of Energy's SWEET programme and hosted by Empa.

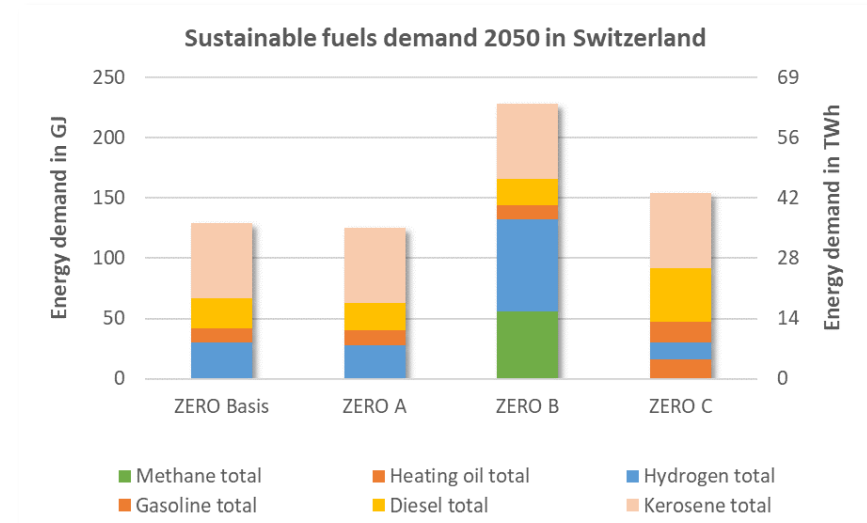
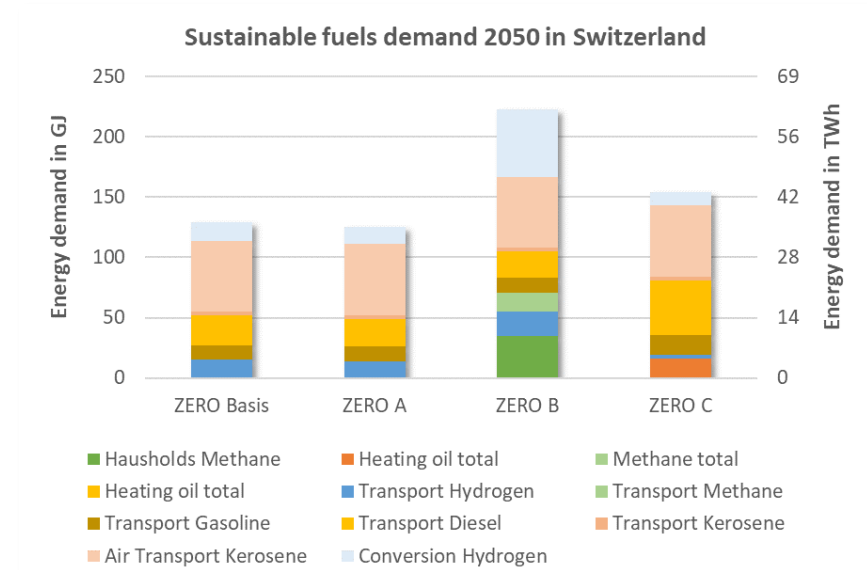


# The Call

- To develop robust pathways for the supply of sustainable fuels to Switzerland
- The demand of sustainable fuels in 2050 is estimated to **110 – 220 GJ** or **30 – 60 TWh/a**, depending on the different ZERO scenarios.
- ZERO Basis: extensive electrification
- ZERO A: more extensive electrification
- ZERO B: incl. the use of renewable gases (PtH<sub>2</sub>/PtG)
- ZERO C: incl. the use of renewable liquids (PtL)

Source: SFOE, Energy perspectives 2050+

- It is expected, that **>90%** thereof has to be imported.



# The consortium

## Management team



**Prof. Dr. Regina Betz**  
Co-coordinator  
ZHAW



**Christian Bach**  
Co-coordinator  
Empa



**Dr. Florian Kiefer**  
WP representative  
Empa



**Dr. Jörg Roth**  
KTT manager  
PSI



**Karin Lacher**  
Administration  
Empa



**Dr. Bettina Schwarzen**  
Organization  
ZHAW

## Head of work packages



**Prof. Dr. Ilaria Espa**  
WP1  
USI



**Prof. Dr. Ruth Delzeit**  
WP2  
Uni Basel



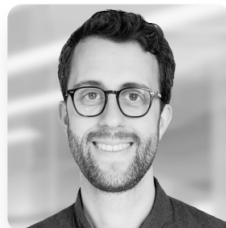
**Prof. Dr. Oliver Kröcher**  
WP7  
PSI



**Dr. Robin Mutschler**  
WP3  
Empa



**Dr. Juan Herranz**  
WP4  
PSI



**Dr. Florian Kiefer**  
WP5  
Empa



**Dr. Vanessa burg**  
WP6  
ETHZ

## Advisory committee



**Daniela Decurtins**  
Energy supplier  
VSG / Energierat



**Prof. Dr. Lino Guzzella**  
Research  
ETHZ



**Thomas Häusler**  
NGO / Climate  
WWF



**Antoinette Hunziker-Ebneter**  
Sustainable Financing  
Forma Futura

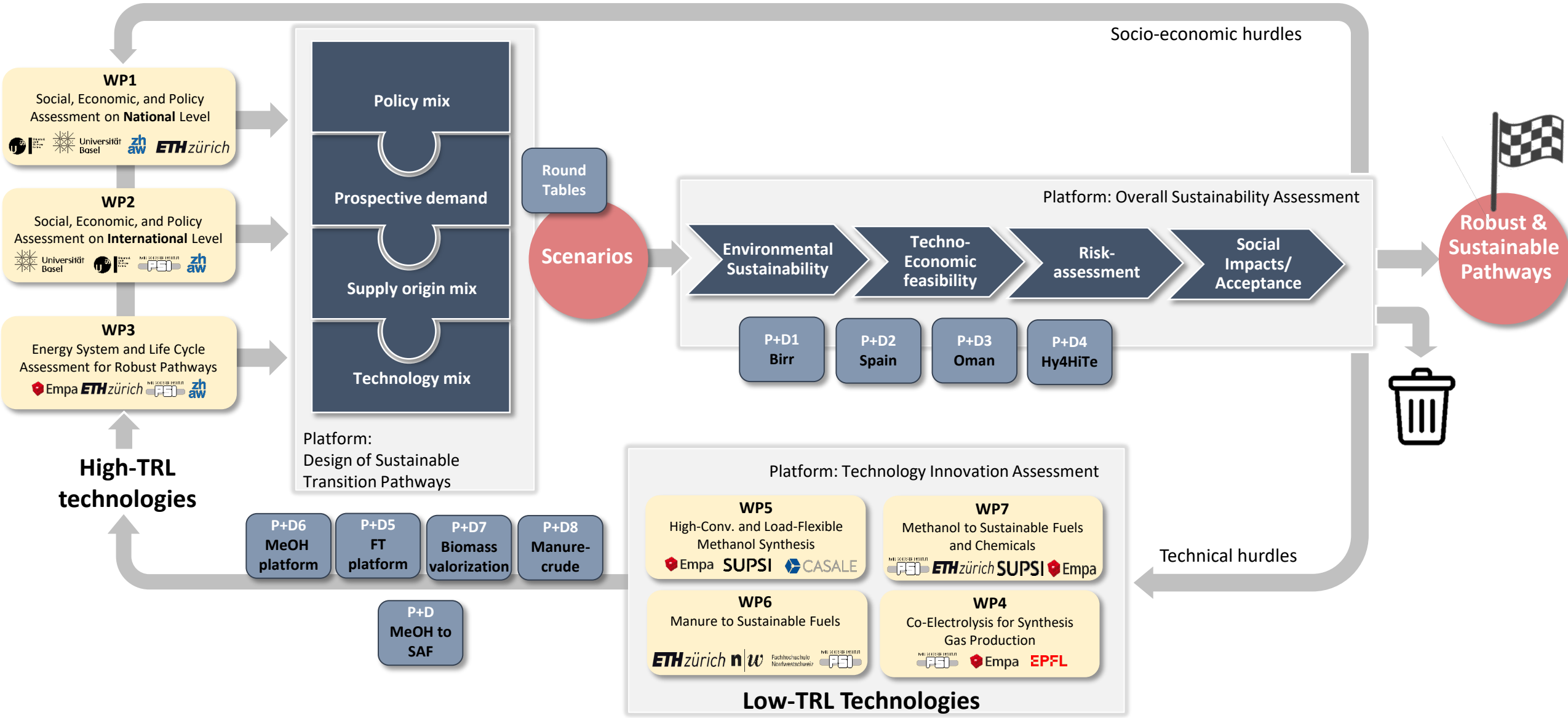


**Dr. Brigitta Kratz**  
Energy laws  
Badertscher  
Rechtsanwälte



**Roger Sonderegger**  
Industry  
Swissmem

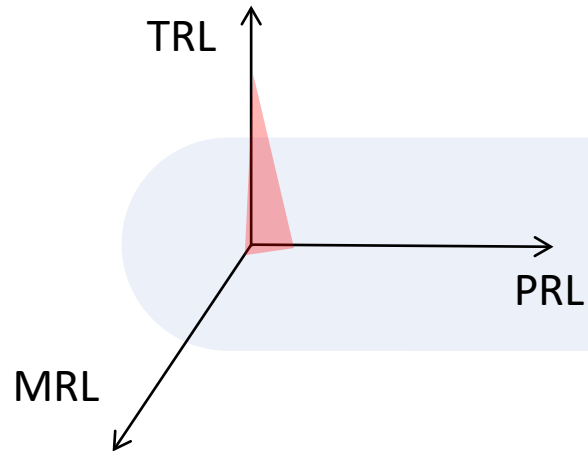
# Project structure



# Implementation oriented research

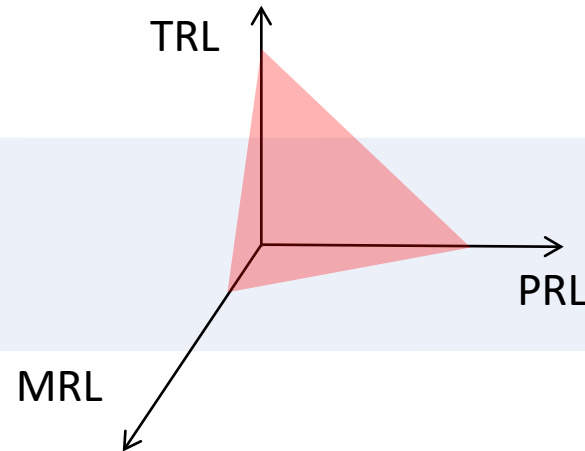
## High TRL part

### High Technology Readiness Level



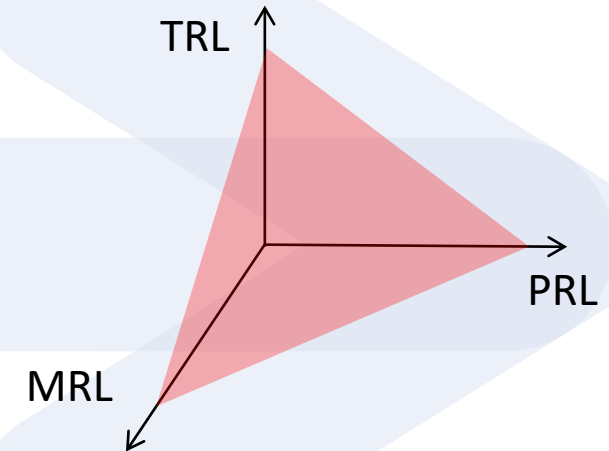
End-product is producible

### Increase Policy Readiness Level



End-product *could* be brought  
to markets

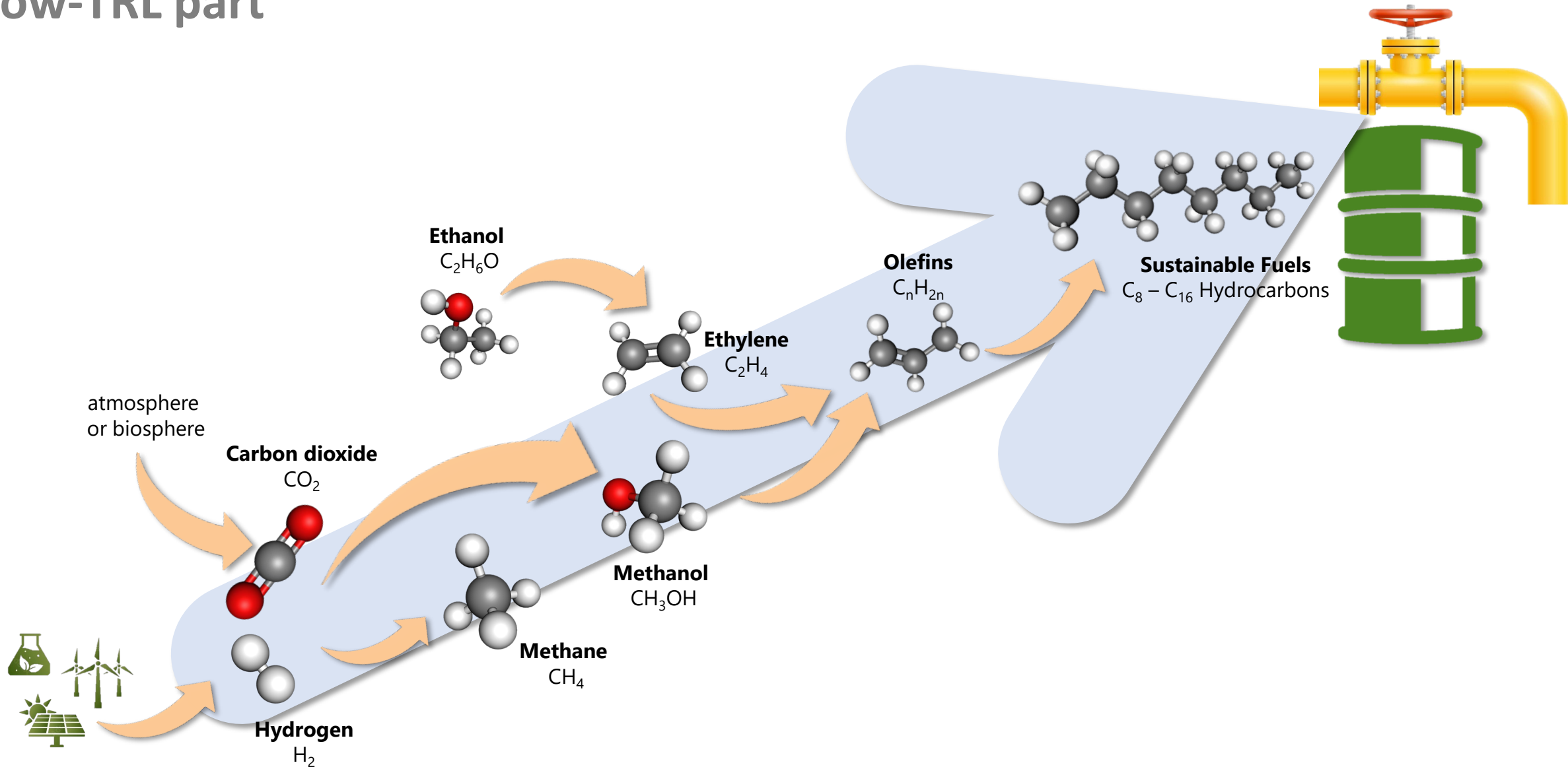
### Increase Market Readiness Level



End-product *can* be brought  
to markets

# Technology oriented research

## Low-TRL part



# Thank you for your attention

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