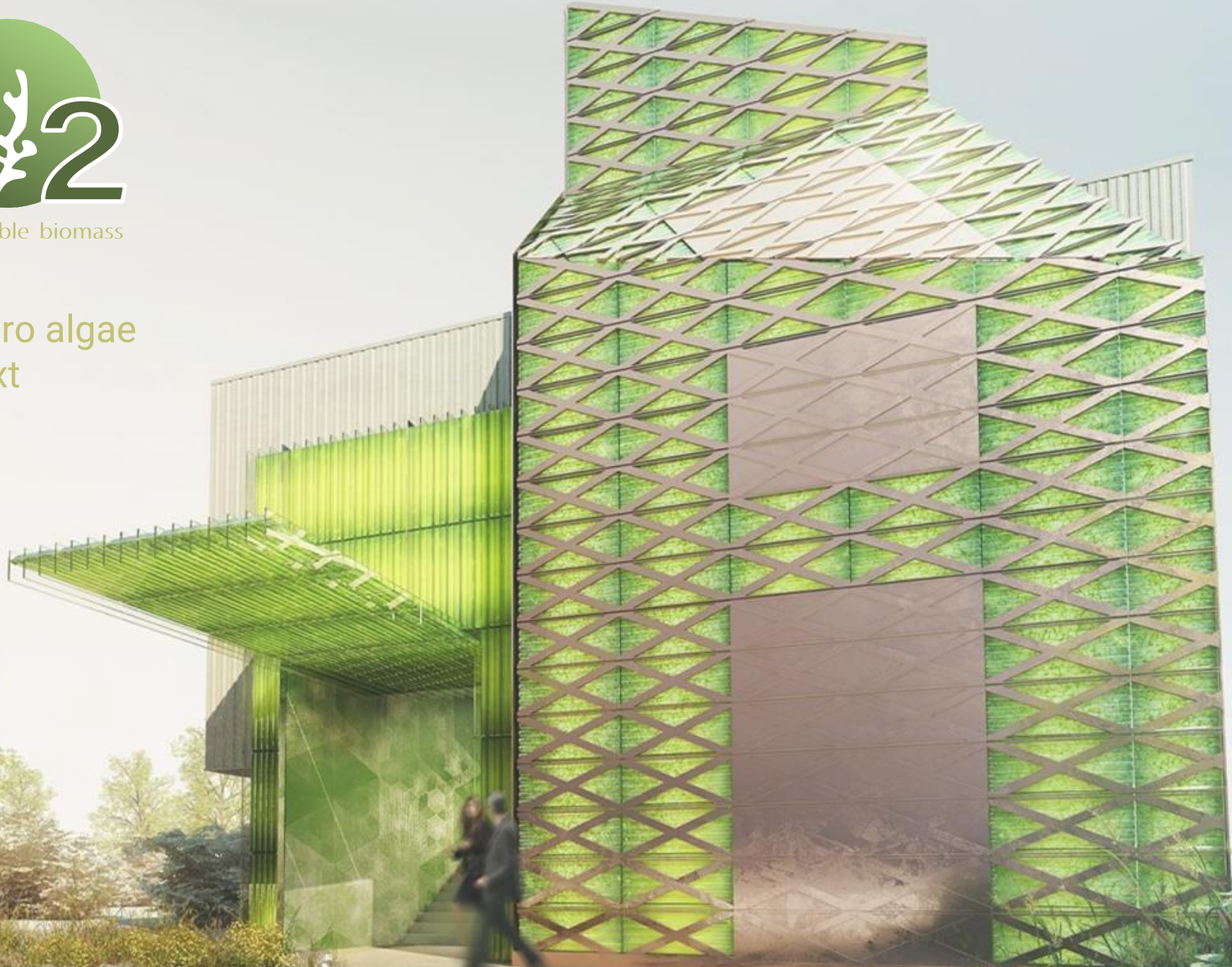


Gr^o2

Convert excessive heat into valuable biomass

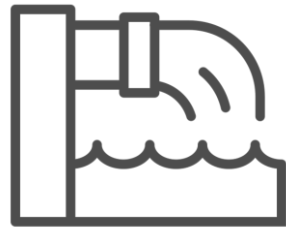
The cultivation of micro algae
in an industrial context



5 challenges that will influence production methods by 2050



Limited Resources



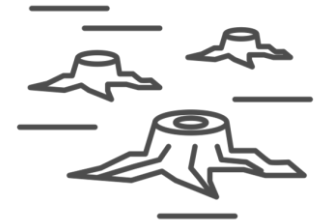
Waste Streams



Energy consumption



Water consumption



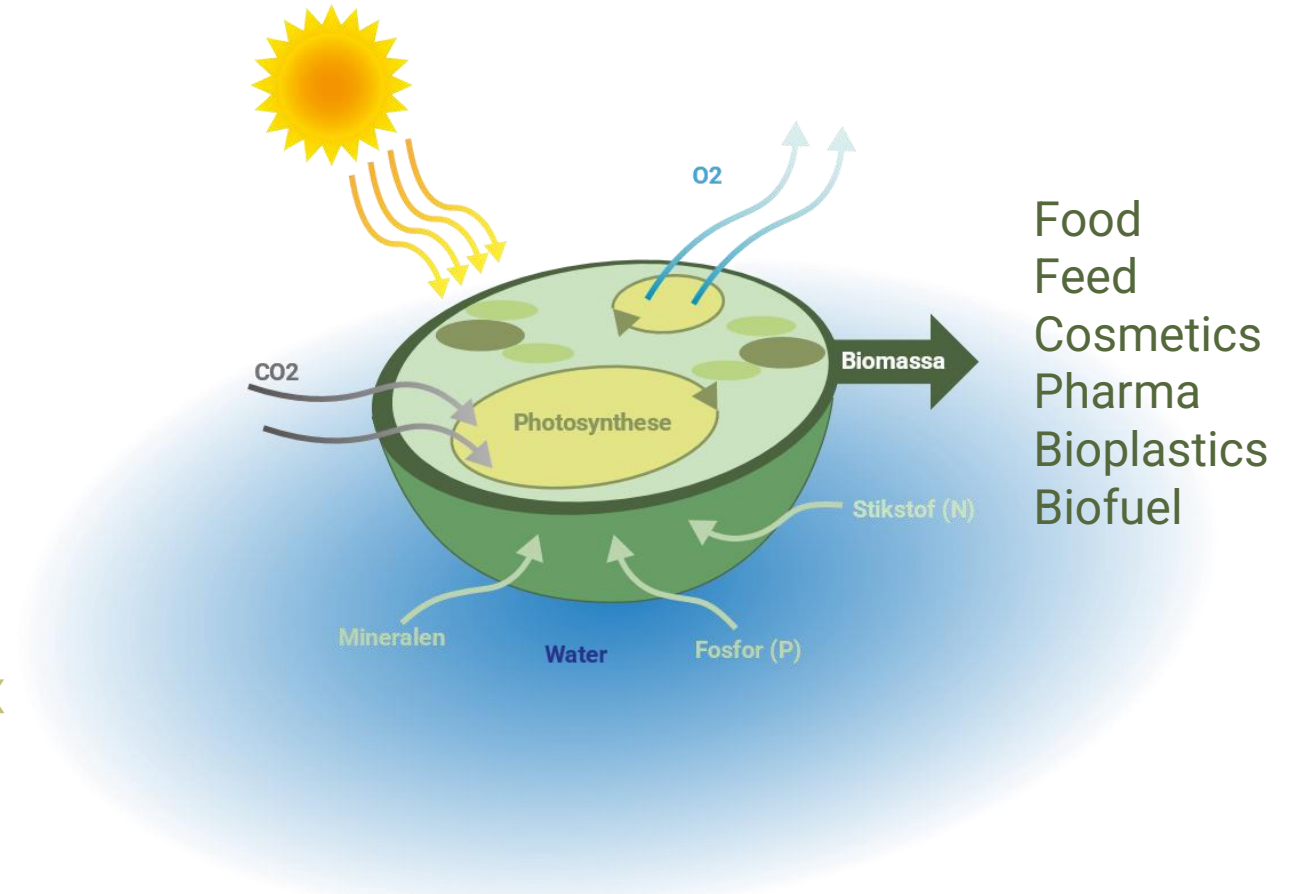
Deforestation

Gr₂ found an opportunity: Micro algae

- Micro algae biomass can replace numerous limited resources in a variety of different production processes.

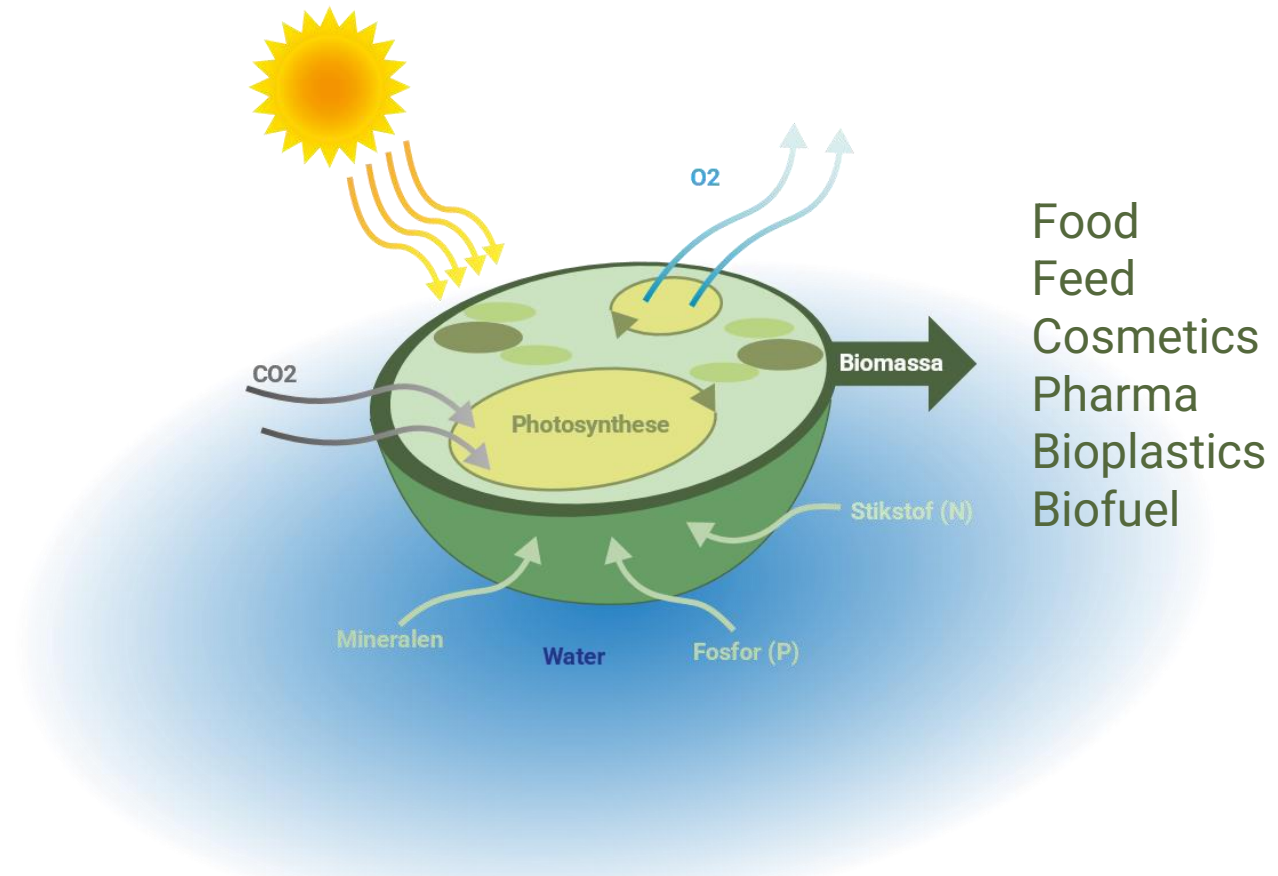
BUT

- Current cultivation systems to produce micro algae are complex and not always sustainable

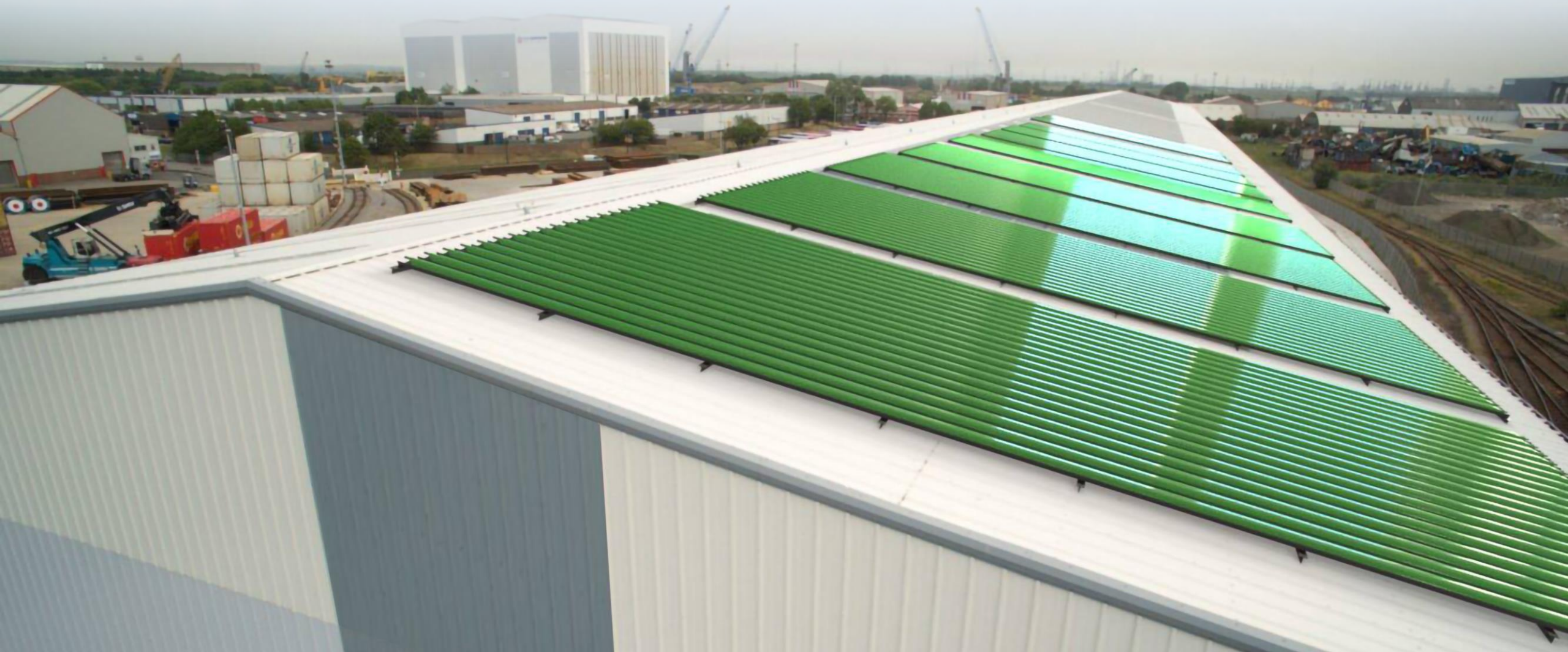


The essential factors for cultivating micro algae:

- Water
- Light
- $\pm 20^{\circ}\text{C}$ Temperature
- Carbondioxide
- Nutrients



Gr^o2 is developing a solution:



The GrO₂ Business model:

- GrO₂ offers a product service solution for companies that want to become more sustainable
 - A partnership between GrO₂ and partner X where the cost but also the revenue of the installation will be carried by both parties, ensuring a constructive relationship.
 - Both parties invest:
 - GrO₂ will operate and maintain the photobioreactor installation
 - Partner X will provide GrO₂ the required space and utilities
 - Both parties profit:
 - GrO₂ will use all residual streams of production processes from Partner X suitable for the cultivation of micro algae to reduce production cost and environmental impact
 - Partner X will receive payment in the form of micro algae (if possible) or a financial compensation

Potential industrial partners:

All companies in possession of:

- Residual heat (necessity)
- Carbondioxide emissions (optional)
- Nitrogen surplus (optional)
- Phospor surplus (optional)

All companies that want to contribute to a sustainable future.



The Gro² Rooftop reactor

The unique combination of design and businessmodel generates numerous benefits:

- Use of waste streams to produce sustainable resources
- Low energy consumption
- Low water consumption by incorporating the VITO MAF technology
- No competition with agriculture
- Low maintenance cost

The evolution of GrO₂

2020-2021

- Research subject master thesis
- OVAM Eco Design Award

2022-2023

- Founding of GrO₂ B.V.
- VLAIO Funding: Innovative Start-up Support
- VITO: VITO4Starters Support
- Realization pilot reactor

2024-2025

- Optimisation cultivation process
- Optimisation pilot reactor
- Development of a commercial photobioreactor
- Funding?