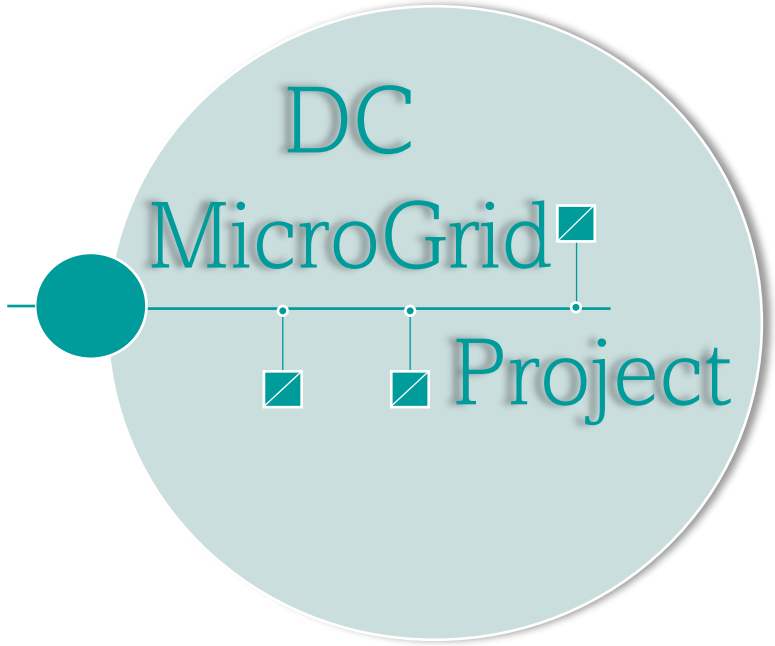
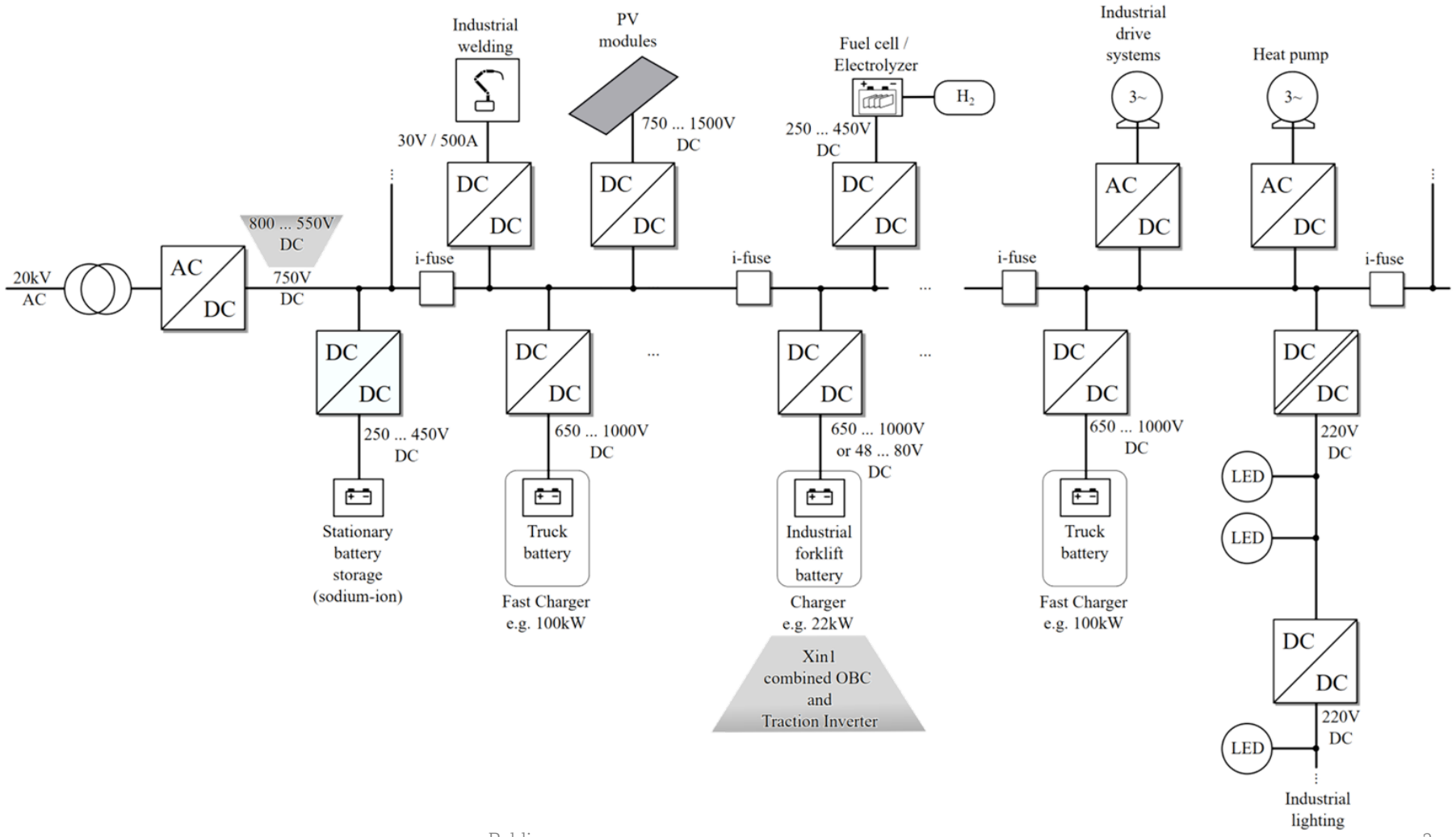


Powering Tomorrow: Revolutionizing Energy with a DC Microgrid

POWERING TOMORROW:

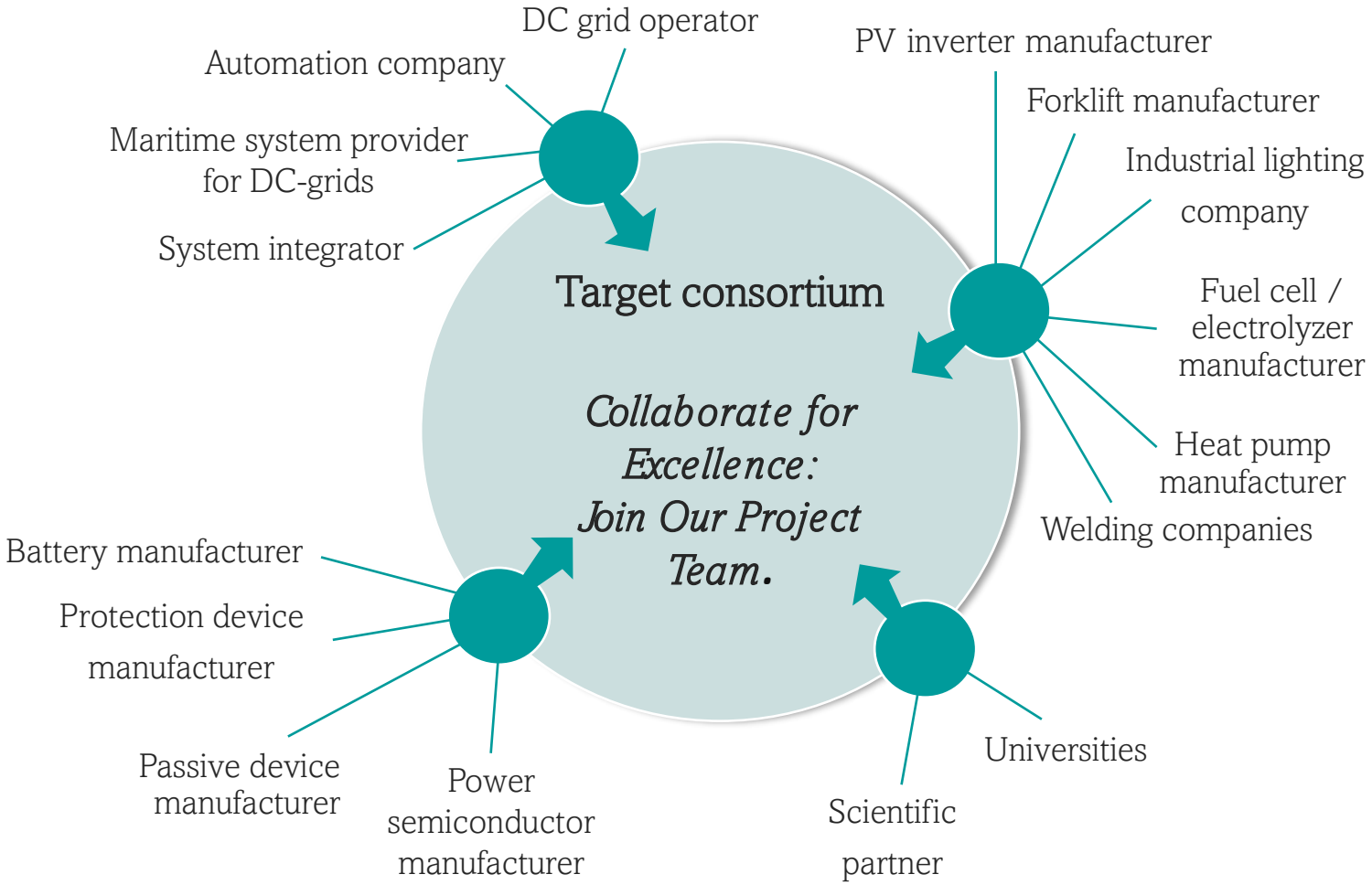
REVOLUTIONIZING ENERGY WITH A DC MICROGRID

Scope: The project focuses on efficient energy conversion, designing versatile converters, optimizing system integration for demanding applications, and studying subsystem interactions.



POWERING TOMORROW:

REVOLUTIONIZING ENERGY WITH A DC MICROGRID



We are looking for innovative and ambitious companies

all over the world.

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Name	Use Cases	AC/DC conversion	Non-isolated DC/DC converters	Isolated DC/DC converters	DC/AC conversion
Description	Definition of use cases and demonstrators	Highly efficient bidirectional energy conversion for a varying DC voltage	High performance and energy efficient DC/DC conversion for varying DC port voltage	Highly efficient isolated DC/DC converter with high system integration and high current capabilities	Highly efficient DC/AC converter (drive systems) with high integration, modularity and potentially integrated charging functionalities
Output	Specification document	Grid connected isolated AC/DC converter	PV, battery storage, fuel cell, charging converters/inverters	Industrial lighting, welding converters	Forklifts, industrial drives, heat pump inverters

Example draft. Use cases, structure and possible outputs will be detailed during consortium build.

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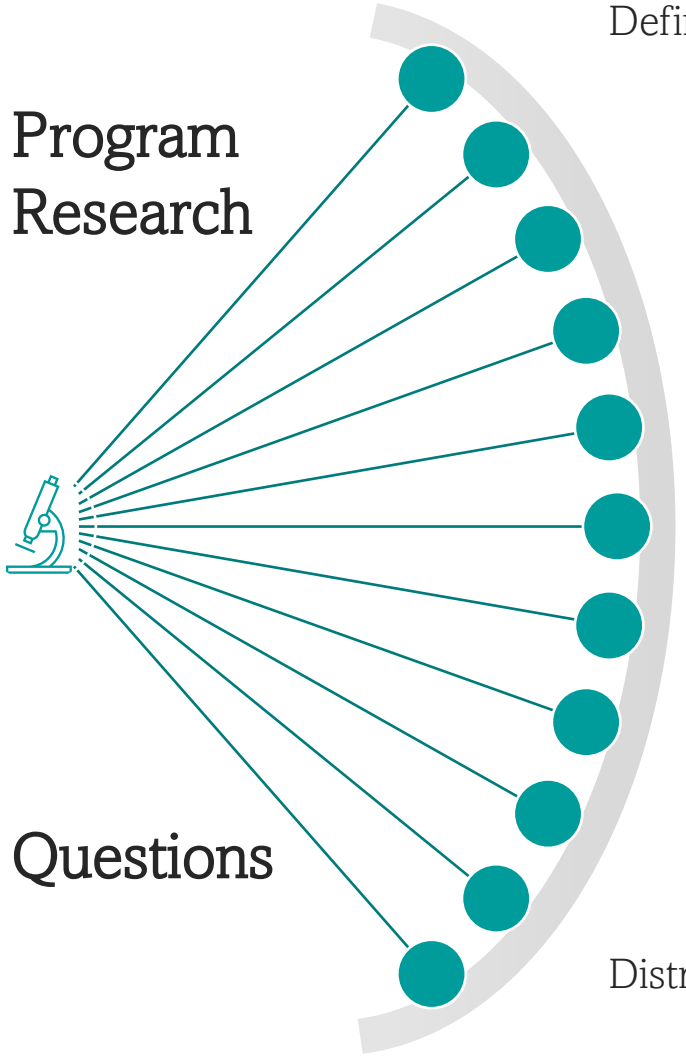
REVOLUTIONIZING ENERGY WITH A DC MICROGRID PROGRAM



Definition of challenging specifications beyond state-of-the-art

New highly efficient PV DC/DC converter concepts for high string voltages

New DC/DC or grid connected converter concepts with newest power semiconductor devices

System integration enabled by new passive device technologies and integration techniques

Magnetics design for high efficiency and/or high system integration

Improvement of protection measures/devices against arc, overcurrent and short circuits

Modular and scalable industrial fast charging converter concepts

Xin1 combined onboard and traction converter for industrial applications;
e.g., current source inverters, sodium-ion batteries, new drive designs, multilevel converters

High bandwidth DC/DC converters for stationary battery storage to enable fast and accurate DC bus voltage control

Subsystem interactions, conducted and radiated emissions, stability investigations due to e.g., shrinked converter DC-link capacitors or non-shielded cables

Distributed control and overall energy flow optimization and prediction

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REVOLUTIONIZING ENERGY WITH A DC MICROGRID PROGRAM

SAL SILICON AUSTRIA LABS

Ambition:

- International consortium comprising industrial partners along the value chain
- Target: ~ 10 Partners in the program
- 4 years project duration
- Universities and academic partners are eligible to participate (special contribution model applies)
- PhD students within project possible - supervised by academic partners

Expected economical contribution of industrial partners:

- Average cash contribution of 80k€ per year
- Minimum cash contribution of 50k€ per year

Advantages for the industry:

- Competitive advantage
  easier and quicker exploitation of upcoming products, by utilization of generated IP
- Risk mitigation
  early targeting of technical problems for an upcoming market
- Innovation
  future technologies and exploration of emerging trends
- Partnership
  cooperation in a pioneering and efficient eco-system
- Market demand
  cost optimized system through intelligent converters controlling the energy flow
- Sustainability
  providing solutions for a more efficient and ecological future

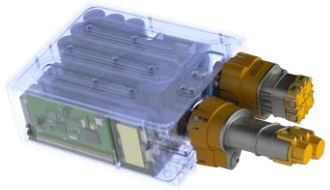
POWERING TOMORROW:

REVOLUTIONIZING ENERGY WITH A DC MICROGRID PROGRAM

OUR business model - SAL Cooperative Research

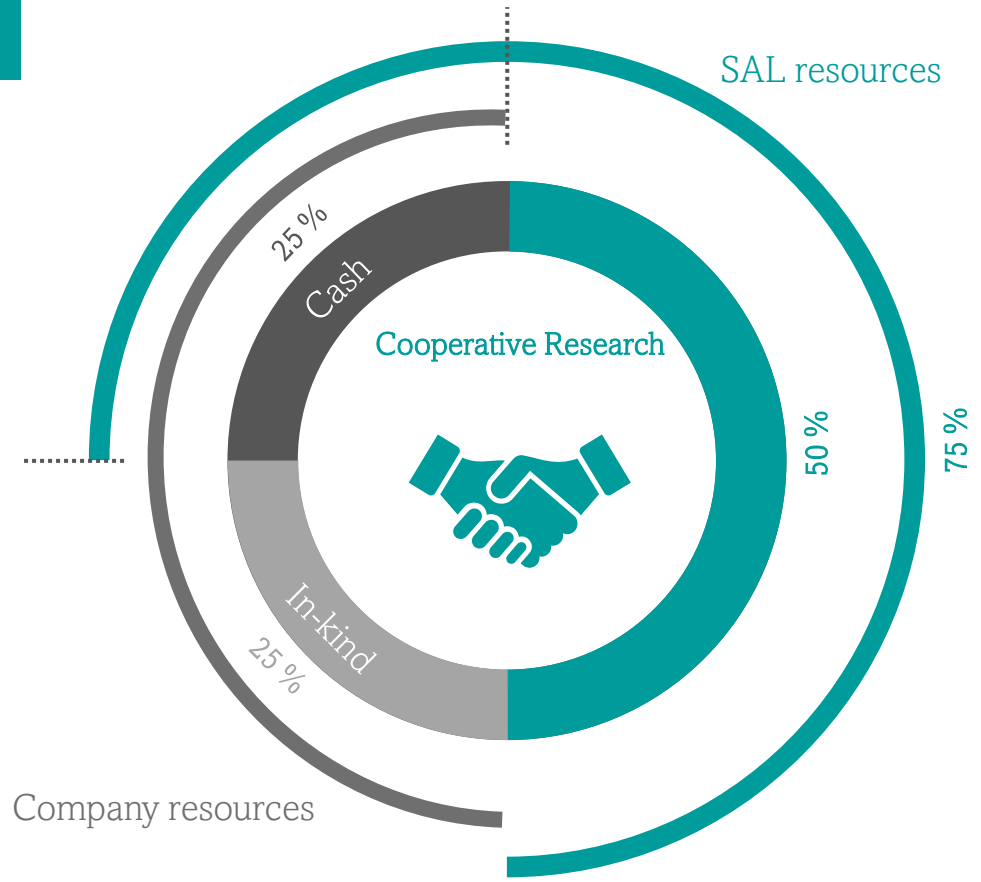
- Applied Research (TRL 3 - 6)
- Projects customized to company needs
- Optional participations of universities as scientific partners
- 50/50 co-financing
- No funding application needed, no waiting time
- IPR rules compliant to state-aid-laws

Click here for an example project:
Tiny Power Box 1



TO PUT IT IN NUMBERS*:

€	100 k	In-kind contributions by company
€	100 k	Cash by the company
€	200 k	Co-financing by SAL (in-kind contributions)
€	**400 k**	**Project Volume**



*400 k project volume as example

POWERING TOMORROW:

REVOLUTIONIZING ENERGY WITH A DC MICROGRID PROGRAM

SAL SILICON AUSTRIA LABS

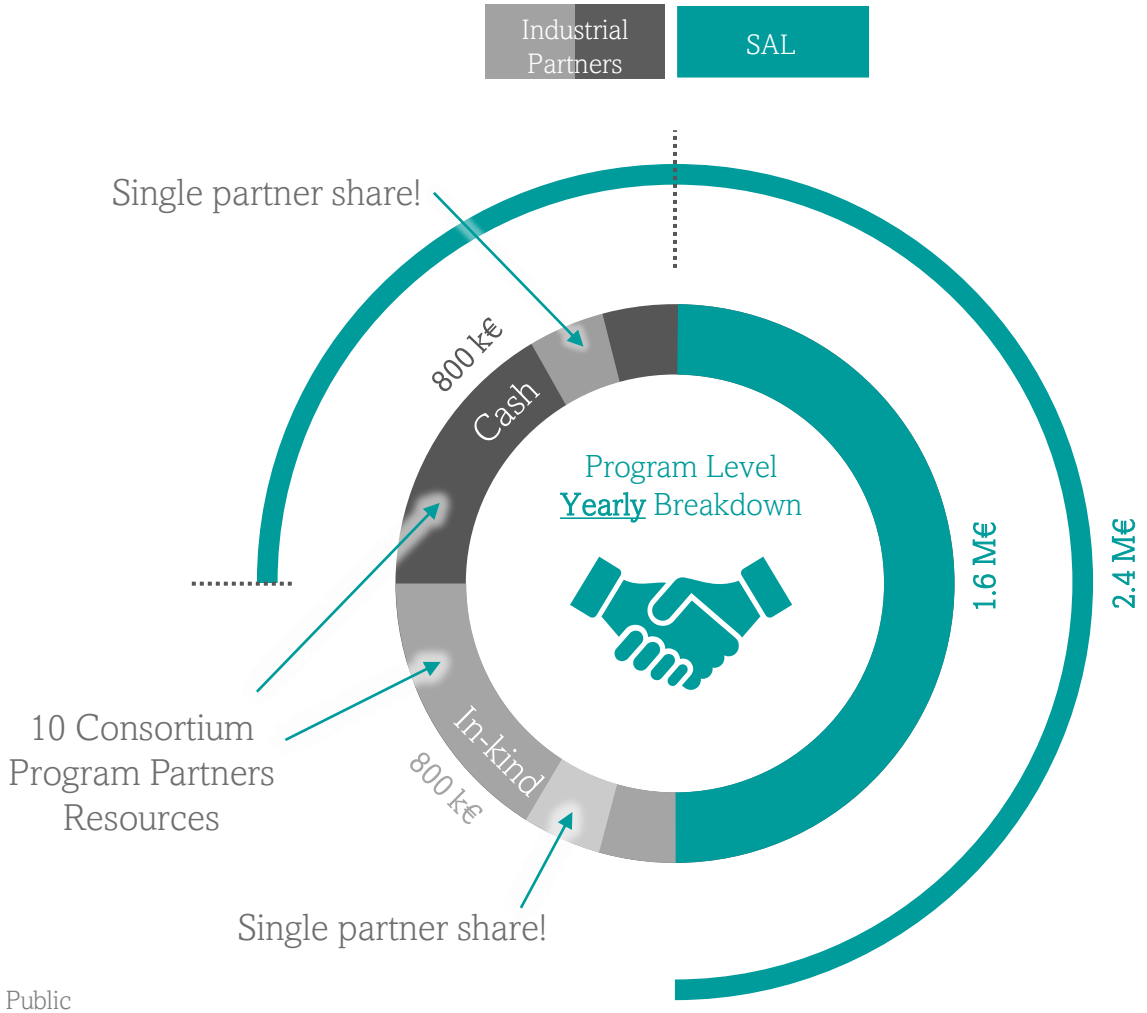
Example:

- Assumption: 10 industry partners joining the program
- Average cash contribution of 80k€ each, per year
- 4 years duration

Total Program volume:	**12.8 M€**
Total partner cash contributions:	3.2 M€
In-Kind partner contributions:	3.2 M€
Co-financing by SAL:	6.4 M€

High leveraging factor:
with 320k€ cash contribution in total - participation in 12.8M€ project

Consortium partners:



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Intellectual Property Definitions

Background (BG)

- All pre-existing knowledge and IP a partner contributes to the project
- Necessary to perform the project
- Needs to be identified, substantiated and listed in the project description and consortium agreement

Foreground (FG)

- All results obtained during the execution of the project
- Foreground is to be reported to the steering committee (i.e., project deliverables)
- Types of IPR protection: patent, copy right, trademark, trade secret

Ownership

- Each partner is and remains sole owner of own Background and Foreground IP
- Exception: co-ownership when Foreground is created by two or more parties and when it is impossible to divide and unambiguously attribute parts of the results to each partner

Access Rights During project execution

- License to Background and Foreground free of charge

For valorization after project of a Party's own Results

- Access-Rights/License to SAL´s Background (on Fair and Reasonable terms) and Foreground granted free of charge in the area of interest upon fulfillment of balance project contributions regarding tasks and financial commitments (non-exclusive license)

POWERING TOMORROW:

REVOLUTIONIZING ENERGY WITH A DC MICROGRID PROGRAM

SAL SILICON AUSTRIA LABS

Timeline

Steps towards new cooperative research project

03/2024 — Project Call

Launching Call on SAL Webseite

- Call documents available on website
- Feedback from interested parties

Information and updates posted on …

SAL Webseite

03/2024 — Interest Screening

Collect interests
Bilateral discussions

- Bilateral discussions about participation, technical content of project and potential contribution
- Commitment of industrial partners with LOIs

Express your interest and contact us. We are happy to organize a meeting with you.

28.05.2024 16:00 – 17:30

Online Program Information Event

06/2024 — Consortium build

Collect industrial partner interests & commitments

- Building up the consortium
- Project definition
- In-kind contributions

Consortium meetings

10/2024 — Contracts

Preparation of project contracts

- Contract definition
- Deliverables

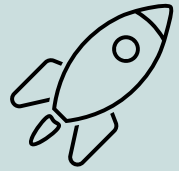
Clarification on deliverables and project work packages.

Q1/2025 — Project Start

Signed contracts for project from 2025 to 2029

- Project start
- Kick-off meeting in January 2025

Starting a collaborative success story



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Interested? Please contact us.

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