Shape the future of energy and infrastructure with us

Innovation is a joint effort – together with corporate partners, we build *Europe’s leading Energy and Infrastructure platform.*

VXA engages with the worlds best startups to foster the development of *innovative technologies and new business models* in the energy and infrastructure industry.
Your VXA Project Team

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Program Management
✓ 6 innovative search fields
✓ Over 300 startup applications
✓ 43 countries and 6 continents
✓ +100 participants at the Innovation Camp
✓ 6 projects in the proof-of-concept phase
VXA Success Story - Recap 2021

✓ 10 innovative search fields
✓ 14 corporate partners (use-case & community)
✓ Over 400 startup applications
✓ From 46 countries
✓ 13 promising projects in the proof-of-concept phase
✓ 9 initiatives successfully qualified for long term collaboration
VXA Success Story - Recap 2022

✓ 7 innovative search fields
✓ 9 corporate partners (use-case & community)
✓ Over 190 startup applications
✓ From 30 countries
✓ 7 promising projects in the proof-of-concept phase
✓ 7 initiatives successfully qualified for long term collaboration
What’s New - VXA 2023/24

Two separate batches allow for a more flexible and targeted approach, while continuous exchange through regular partner events will ensure networking and learning.

Integration of CVC stream into existing program to exploit synergies in scouting and acceleration.

Strong focus on co-creation between use case partners to leverage synergies and foster cross-corporate collaboration.

Geographical expansion to other areas (i.e. Spain and Germany) to develop into largest European co-creation platform in the area of energy.

Creation and involvement of VXA alumni community to benefit from mentoring and networking with senior management and innovation sponsors.

Well-structured strategic scouting process and assessment based on predetermined scouting criteria will lead to fast and efficient results.

<table>
<thead>
<tr>
<th>Batch 4</th>
<th>Batch 5</th>
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<tbody>
<tr>
<td>Q2</td>
<td>Q2</td>
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<tr>
<td>Q3</td>
<td>Q3</td>
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<tr>
<td>Q4</td>
<td>Q4</td>
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<tr>
<td>Q1</td>
<td>Q1</td>
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<tr>
<td>VXA Summit</td>
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</tbody>
</table>

**Use Cases, Scouting, Selection**

**Acceleration**
# Roadmap – Batch 4

**VXA 2023**

## Engagement phase

- Engagement and onboarding of use case partners
- Co-creation workshops to define and select high potential (common) search fields

**Kick-off batch 1:**
- July 11th, 2023

## Scouting

- Identifying and addressing top global startups
- Community outreach
- Constant exchange with the use case steering units

**End of scouting:**
- September 1st, 2023

## Selection

- Facilitated selection process during the selection process
- Selection workshop to select (max.) top 5 startups from shortlist
- Remote startup pitches and final selection
- Alignment calls for teams

**Preselection meetings:**
- September 4th – 8th, 2023
- Remote pitches:
  - September 11th – 15th, 2023

## Innovation Camp

- 2-day Innovation Camp during Energy Conference in Fuschl, Salzburg
- Pitches and networking
- Constant exchange with the use case steering units

**Innovation Camp:**
- 27th – 29th of September 2023

## Acceleration

- Support in the legal coordination
- Setting up and conducting individual proof-of-concept roadmaps based on the specific project needs for each team
- Coaches for on-going support and pace-making for your team
- Facilitated and structured decision-making process for each use case
- Community Demo Day

**Workshop 1:**
- November 9th, 2023
**Workshop 2:**
- December 5th, 2023
**Demo Day:**
- January 17th, 2024

## Onboarding to promising search fields

- Shortlist of top startups for each search field
- Selection of best fitting startups
- 360° view on use cases and roadmap for acceleration phase
- Proof-of-concept and pilot projects for each use case

**Partner Engagement** (ongoing communication, key events, etc.)
Partner Overview - VXA 2023/24

Use Case & VC Partners – Batch 4

- MAGNA
- ELEVATOR LAB
- Speedinvest
- ELEVATOR VENTURES

Use Case Partners – Batch 5

- MAGNA
- ANDRITZ
- Wienerberger

Community Partners

- OMV
- AIT
- OBAG
- Microsoft

Ongoing talks, not confirmed
## Overview – Batch 4 Innovation Camp Outcome

<table>
<thead>
<tr>
<th>Accelerator search fields</th>
<th>Ventures search fields</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1</strong> Generative AI – Corporate Knowledge Management</td>
<td><strong>4</strong> New business models around EV charging</td>
</tr>
<tr>
<td>Verbund, cortecs, INTERGATOR</td>
<td>Verbund (\times) ELEVATOR VENTURES, Speedinvest, fronyx</td>
</tr>
<tr>
<td><strong>2</strong> AI - Energy Market Intelligence</td>
<td><strong>5</strong> Energy efficiency management in buildings</td>
</tr>
<tr>
<td>Verbund, MAGNA, YUKKALAB</td>
<td>Verbund (\times) ELEVATOR VENTURES, Speedinvest, Zählerfreunde</td>
</tr>
<tr>
<td><strong>3</strong> Vehicle 2 Grid</td>
<td></td>
</tr>
<tr>
<td>Verbund, MAGNA, ambibox, em</td>
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</tbody>
</table>
Innovation Camp Overview

Day 1
13:00-18:00 Working sessions

Day 2
09:00-13:00 Working sessions
14:00-18:00 Pitch prep & dry run

Day 3
10:00-11:00 Pitches at Summit stage
11:00-13:00 Decision & next steps

INNOVATION CAMP
Next Steps – Acceleration Phase

Carry out pilot projects together with the startups and use case partners, validate the concept and be able to achieve a clear go / no-go decision for future collaboration.

**SEPTEMBER**
- Innovation Camp
  - Go/No-Go Decision for PoC

**OCTOBER**
- Mid-term workshop

**NOVEMBER**
- Wrap-up workshop

**DECEMBER**
- Demo Day
  - Presentation of PoC results and decision for long-term collaboration

**JANUARY**
- V2G
- AI Energy Market Intelligence
- Generative AI - Corporate Knowledge Management
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VXA engages with the world’s best startups to foster the development of innovative technologies and new business models in the energy and infrastructure industry.
Appendix
# Roadmap – Batch 5

## VX A 2023

<table>
<thead>
<tr>
<th>Q3</th>
<th>2023</th>
<th>Q4</th>
<th>Selection</th>
<th>Innovation Camp</th>
<th>Acceleration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engagement phase</td>
<td>✓ Engagement and onboarding of use case partners</td>
<td>✓ Identifying and addressing top global startups</td>
<td>✓ Facilitated selection process during the selection process</td>
<td>✓ 2-day Innovation Camp</td>
<td>✓ Support in the legal coordination</td>
</tr>
<tr>
<td>✓ Co-creation workshops to define and select high potential (common) search fields</td>
<td>✓ Community outreach</td>
<td>✓ Selection workshop to select (max.) top 5 startups from shortlist</td>
<td>✓ Pitches and networking</td>
<td>✓ Setting up and conducting individual proof-of-concept roadmaps based on the specific project needs for each team</td>
<td></td>
</tr>
<tr>
<td>Kick-off batch 5: October 5th, 4-6pm @HX space</td>
<td>✓ Constant exchange with the use case steering units</td>
<td>✓ Remote startup pitches and final selection</td>
<td>✓ Constant exchange with the use case steering units</td>
<td>✓ Coaches for on-going support and pace-making for your team</td>
<td></td>
</tr>
<tr>
<td>End of scouting: November 17th, 2023</td>
<td>✓ Alignment calls for teams</td>
<td>Innovation Camp: 15th – 17th of January 2024</td>
<td>✓ Facilitated and structured decision-making process for each use case</td>
<td>✓ Community Demo Day</td>
<td></td>
</tr>
<tr>
<td>✓ Workshop 3: April 25th, 2024</td>
<td>✓ Demo Day: April 25th, 2024</td>
<td>✓ Community Demo Day</td>
<td>✓ Demo Day: April 25th, 2024</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- **Onboarding to promising search fields**
- **Shortlist of top startups for each search field**
- **Selection of best fitting startups**
- **360° view on use cases and roadmap for acceleration phase**
- **Proof-of-concept and pilot projects for each use case**

**Partner Engagement** (ongoing communication, key events, etc.)
Overview search fields – Batch 5

Accelerator search fields

6. Alternative forms of renewable energy generation

7. Predictive maintenance for wind turbines

8. Recycling of wind turbine blades

9. Drone systems for object/perimeter protection

10. Energy Management

Potential interest, still to be discussed
The Austrian Post and the Wienerberger Group both currently operate an extensive network of hundreds of locations (logistics sites, production sites) and are actively expanding their electric vehicle (EV) fleets and electrifying their production lines. To ensure that operations align with the companies’ sustainability goals, the Austrian Post is committed to powering their locations with renewable energy generated on-site. Similarly, Wienerberger has already invested in its own energy generation plants and will continue to expand them.

The companies are looking for alternative and innovative solutions for renewable energy generation that go beyond conventional photovoltaic (PV) systems.

The aim is to secure a sustainable energy supply for both their facilities and the expanding electric vehicle (EV) fleet. These alternative solutions encompass a wide array of possibilities, such as energy-generating window or facade foils, harnessing wind energy, innovative roofing tiles, and similar groundbreaking technologies, also based on gravity or hydropower.
7. Predictive maintenance for wind turbines

Down times of wind turbines account for a significant part of operation and maintenance costs. Hence, in order to economically optimize the operation of wind turbines, down time reduction is crucial for a successful operation and maintenance strategy. Currently, this strategy mainly focuses on the expertise of the technicians on-site, which means that a significant part of operation and maintenance actions are performed as a reaction to turbine failures.

Predictive, data-driven maintenance strategies possess the potential of reducing down times (e.g. faster fault detection, predictive procurement of rare spare parts, higher resource planning accuracy) and thereby can contribute to significantly improve the performance of wind turbines. Furthermore, such data-driven approaches are able to support operation and maintenance teams in planning maintenances and repairs more efficiently. Moreover, technical evaluation of turbines can also be improved with advanced data analytics. Therefore, we are looking for solutions that are based on advanced analytics using SCADA and status data, additional sensorics, digital twins or machine algorithms.
8. Recycling of wind turbine blades

Wind turbines can be operated for about 2 decades and are then no longer functional. How their rotor blades made of fiberglass and synthetic resin are subsequently recycled remains a significant problem.

The reason is that the duromers used in the wind turbine blades, cannot be melted down due to the tight cross-linking of polymers, unlike other thermoplastics such as PET.

Therefore, we look for 2 types of solutions:

- **Recycling of existing rotor blades**: What happens to the rotor blades that are already there - how can we recycle them non-thermally?

- **New material development**: How / from which materials could the rotor blades be manufactured in the future to make them recyclable in the future.
The aim is to enhance security in the perimeter space, which is the area between fences and operational facilities/sites by implementing a system to monitor the area and detect any unauthorized access or trespassing by thieves or robbers in real-time.

This can be done by using swarms of autonomous drones without GPS that are equipped with image recognition capabilities. The drones must possess autonomous intelligence to recognize abnormalities, cluster themselves, and send relevant data to the server without server instructions. These images from different angles and sensor data will be collected at a central unit for analysis, where an AI-based software assembles the images into one holistic picture and determines if the abnormality is an animal or a human intruder and triggers an alert to the security center if necessary, where the staff can then alert the police. Human verification in the security center is crucial to prevent evasion by individuals wearing disguises. The drones' vulnerability is the radio signal, which can be intercepted. A countermeasure is to employ both, drone with a wired connection ("tethered drones") and drone swarms to prevent the neutralization of individual drones.
10. Energy management

The companies currently operate an extensive network of hundreds of locations (logistics sites, production sites). They are actively expanding their electric vehicle (EV) fleets, electrifying their production lines and expanding their own energy generation plants. To efficiently operate such a virtual power plant or micro grid, they recognize the need for a holistic and location-specific energy management solution.

This solution comprises systematic monitoring and forecasting of energy consumption and generation, load management, as well as planning and implementation of structural measures for the (long-term) optimization of the energy system by managing consumption, generation and storage. Moreover, it will facilitate the integration into energy markets, enabling to leverage economic benefits from flexibility and energy trading opportunities. Additionally, this solution will empower with fleet management capabilities and with electrification of production and logistic chains. The ultimate objective is to optimize both energy consumption and generation at each location capitalizing on the economic advantages presented by cross-location energy management and flexible energy trading strategies.