In cooperation with:

Smart Energy Systems ERA-Net

Pitch presentations by Living Labs and Testbeds with validation capabilities

10:00 Intro to the session: B2Match presentation and guidance on how to use it, *Kristina Starborg, SWEA, Sweden*

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10:50 **Green Energy Lab - Benefit from our support for your RDI Project, *Lisa Wolf, Green Energy Lab, Austria***

11:00 Smart Energy Applications (SEAp) - Opportunities for CETPartnership Joint Call 2023, *Lars Quakernack, SEAp- Smart Energy Applications, Bielefeld University of Applied Sciences, Germany*

10min break

Green Energy Lab

Your stepping stone into Austria‘s green energy community

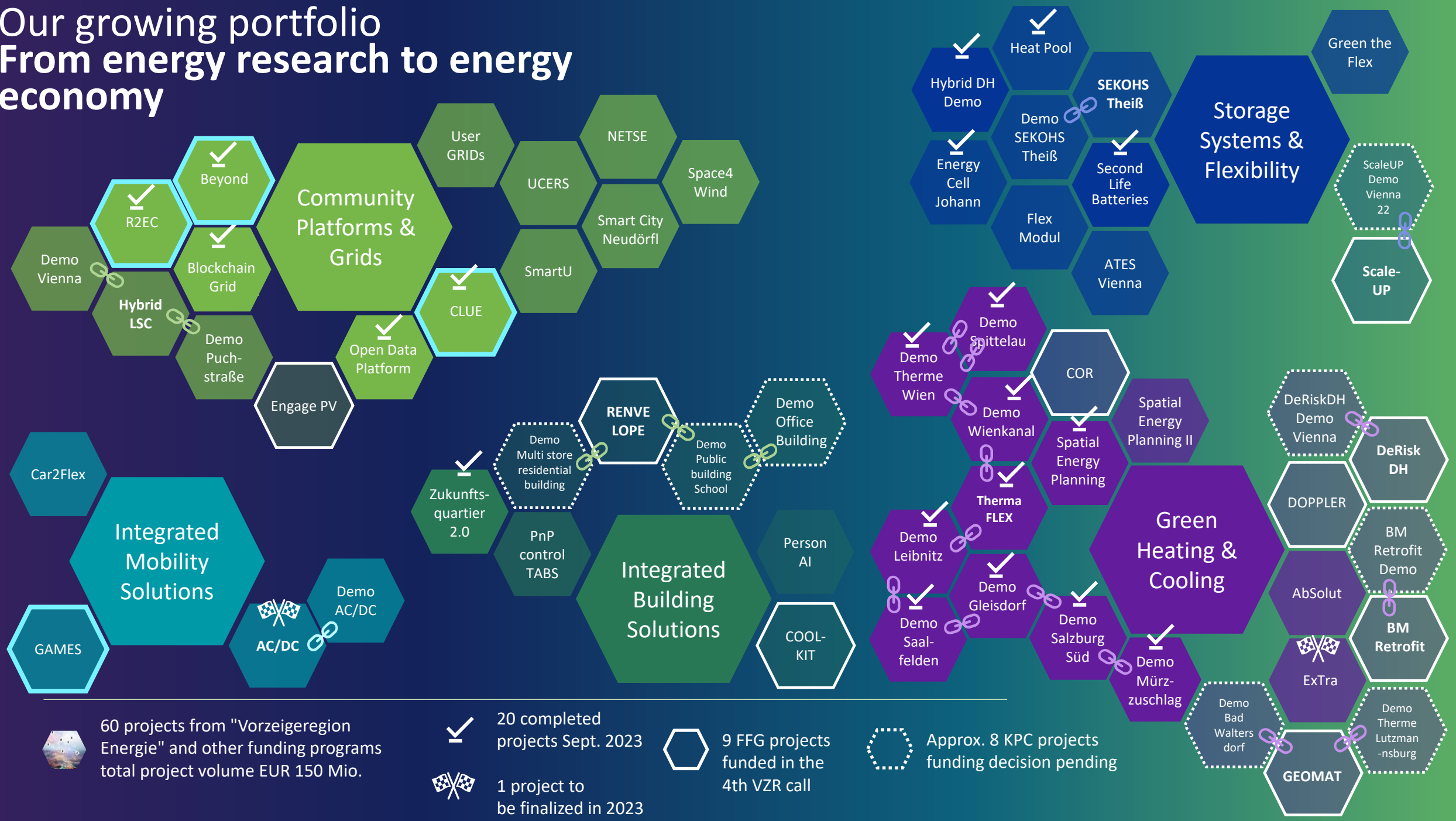
Lisa Wolf
Green Energy Lab

This project is supported with the funds from the Climate and Energy Fund and implemented in the framework of the RTI-initiative “Flagship region Energy”.

This is **Green Energy Lab**

Austria's largest innovation lab for a sustainable energy future	• Our 4 members of the board: Energie Steiermark, Wien Energie, EVN, Burgenland Energie • Our Offices: Vienna Hbf. (Spaces ICON), 11 employees • Our Brand: "Green Energy Lab" | www.greenenergylab.at | LinkedIn: > 3.000 followers
Portfolio & Partner	• More than 60 R&D projects • EUR 150 Mio investment volume
Bridging the gap between research and market	• Innovation Journey: Foresight – Ideation – Project development – Demo – Market Launch • Numerous exploitation options for stakeholders (market readiness pitches) • "Top marks" from funding agencies and the international board of experts
Our services for you	• Tailor-made along the whole innovation journey • Funding services (program screening, application check & project management) • Foresight Services (DeepViews for identifying relevant innovation fields faster) • Early-Explorer Services (early stage project support during the exploration phase)

Our growing portfolio
From energy research to energy economy



60 projects from "Vorzeigeregion Energie" and other funding programs total project volume EUR 150 Mio.

20 completed projects Sept. 2023

1 project to be finalized in 2023

9 FFG projects funded in the 4th VZR call

Approx. 8 KPC projects funding decision pending

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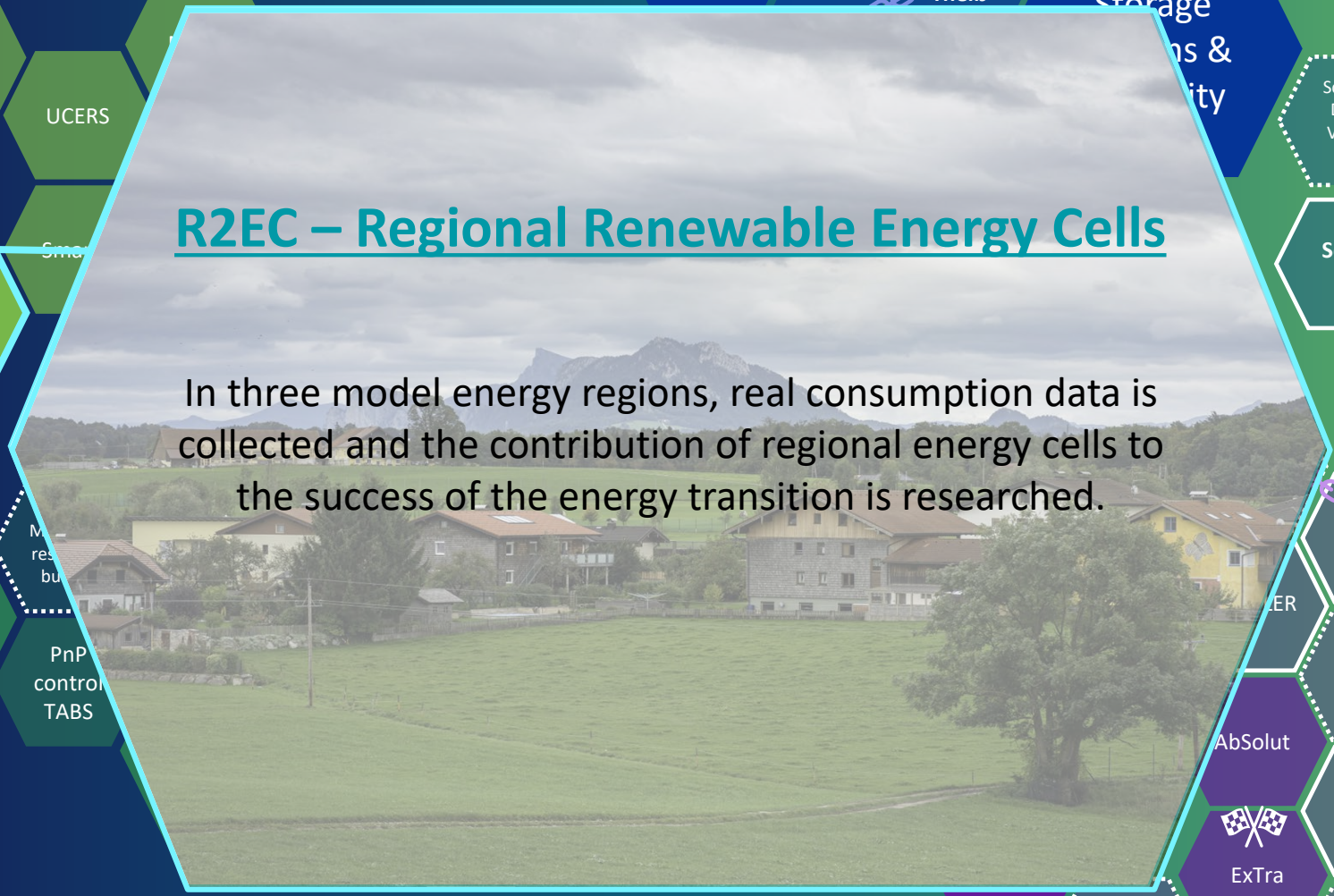

R2EC – Regional Renewable Energy Cells

In three model energy regions, real consumption data is collected and the contribution of regional energy cells to the success of the energy transition is researched.

Heat Pool
Hybrid DH Demo
SEKOHS Theiß
Green the Flex
Storage
ScaleUP Demo Vienna 22
Scale-UP
Beyond
R2EC
Community Platforms & Grids
User GRIDs
UCERS
Demo Vienna
Blockchain Grid
Hybrid LSC
CLUE
Demo Puch-straße
Open Data Platform
Engage PV
Car2Flex
Integrated Mobility Solutions
GAMES
AC/DC
Demo AC/DC
Zukunfts-quartier 2.0
PnP control TABS
DeRisk DH
BM Retrofit Demo
AbSolut
BM Retrofit
ExTra
zuschlag
Demo Bad Walters dorf
Demo Therme Lutzman-nsburg
GEOMAT

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CLUE - Energy transition through energy communities

The goal of the project is to gain practical knowledge for the future integration of renewable energy communities into the distribution grid.

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Our growing portfolio
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GAMES – Grid Aware Mobility and Energy Sharing

The GAMES project addresses the question of how digitalisation can enable e-fleets to both meet mobility needs and at the same time create new revenues through the provision of flexibility services.

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Support at Key Points along the innovation journey

Service Packages

Funding Services
Foresight Services
Early Explorer Services

Identify trends early

Develop innovative projects

Prepare solutions for market launch

Individual premium services available!

- Funding Info Sessions
- Insight Talks
- Green Energy Foresight

- Topical workshops
- Quick check and project evaluation
- Project development workshops
- Review and support with project setup and funding proposals

- Know-how transfer, networking, and synergies
- Support with model solutions
- Monitoring and impact assessment
- Target group focusing and stakeholder involvement
- Communication, PR, and dissemination
- Market Readiness Pitch

*1,5% flat-rate service charge:
FFG-Project: 1,5% of the approved total project cost
KPC-Project: € 1.500,- (plus VAT) per year and per KPC project

Our Skill Set

Foresight & Agenda-Setting

Optimizing opportunities & effective funding coordination

Network & project development

Communication & Dissemination

Our price models

Free of charge: Networking & knowledge exchange as well as development of innovation projects

Our defined service package: Defined package as subcontractor during project implementation within the innovation project.

Our premium services: Individual & tailor-made for your innovation project

Our other service packages: Funding, Foresight & Early explorer services available

Service package **„Application Check“**

Hourly fee base
⌀ 4-8 hrs

- You have a draft proposal or a completed proposal and need feedback, before you submit it to the funding agency? We help you find your potential for optimization and how you can increase your chances of being funded.
- We help identify which points are particularly important for your funding program.
- We help you shaping and sharpening your project description to ideally presented to the funding agency.

Our **Offer**

- Compilation of a customized offer for you
- Hourly rate EUR 120,- (plus VAT)
- Based on your needs tbd in a follow-up meeting
- On Average: 4 weeks up to deadline

Interested in working together?

Get in touch – **Book a meeting on b2match!**

Stay in Touch – Find us on **LinkedIn** and **Twitter**!

Any questions left? Contact us!
Karin DÖGL - Innovation Manager & Deputy Cluster Manager
T: +43 676 559 11 22
E: karin.doegl@greenenergylab.at

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10min break

HSBI

Hochschule Bielefeld

University of Applied Sciences and Arts

SEAp

Smart Energy Application Lab

Hochschule Bielefeld - University of Applied Sciences and Arts

Hochschule Bielefeld
University of Applied Sciences and Arts

WORKING GROUP GRIDS AND ENERGY SYSTEMS (AGNES)

- Working group on power Systems, part of the Institute for Technical Energy Systems (ITES)
- 2 Professors, 1 Postdoc, 8 Members
- Research topic:
  - Integration of **electric vehicles and renewable energy systems** into the electrical grid
  - Integration of smart grid and measurement technology
  - use of **AI-based systems** for grid operation

ERA NET LAB: SMART ENERGY APPLICATIONS LABORATORY (SEAp)

- **Hardware in the Loop** (HiL) test bed with Hardware components for simulation of PV, electric vehicles, loads, battery storage
  + real-time grid simulator (OPAL-RT)
- Development and validation of **intelligent algorithms** and methods for control and monitoring of electrical grids to provide **flexibilities through sector coupling**

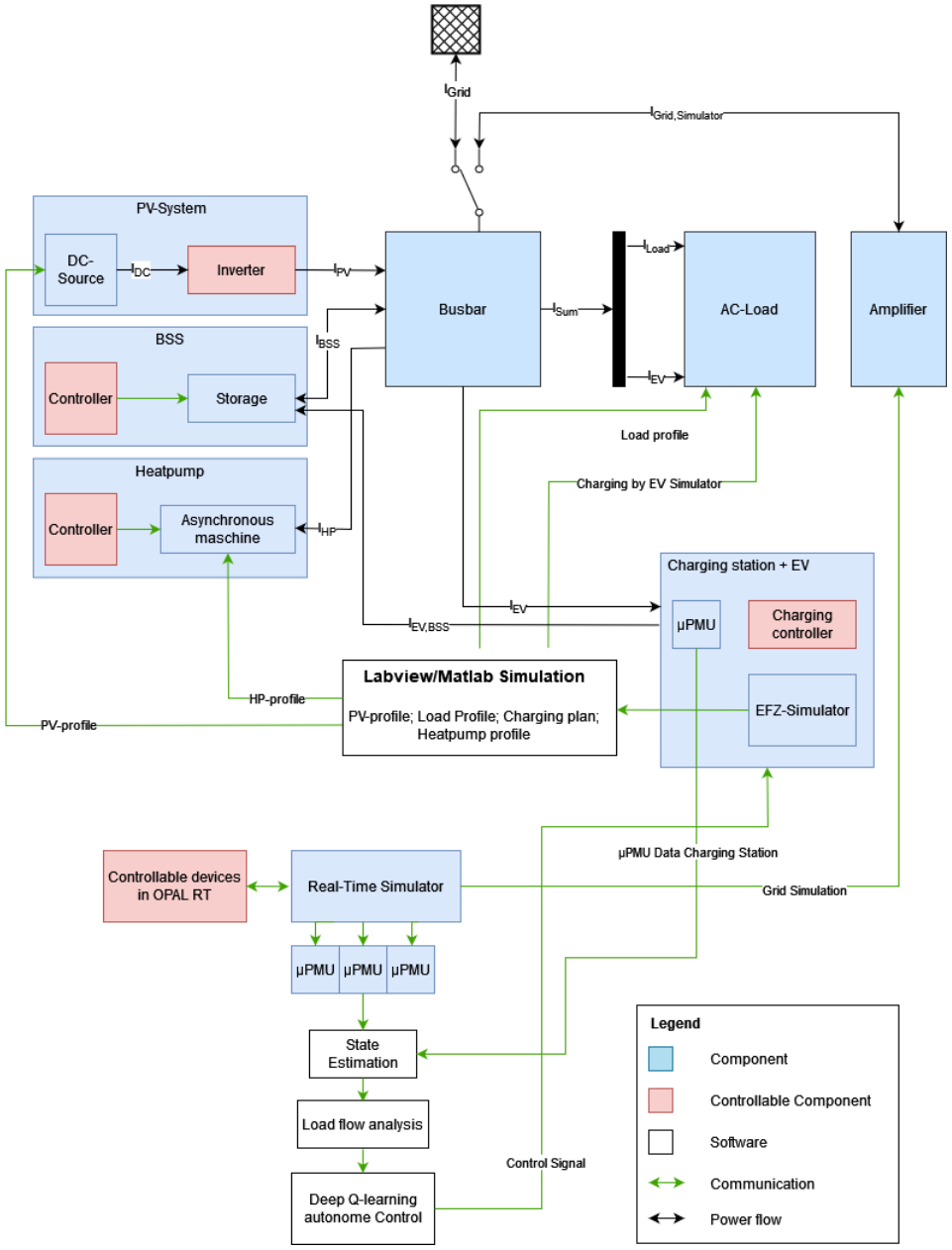
Smart Energy Systems ERA-Net

https://www.eranet-smartenergysystems.eu/ll/133/SEAp---Smart-Energy-Applications.html

AGNES itES Institut der HSBI

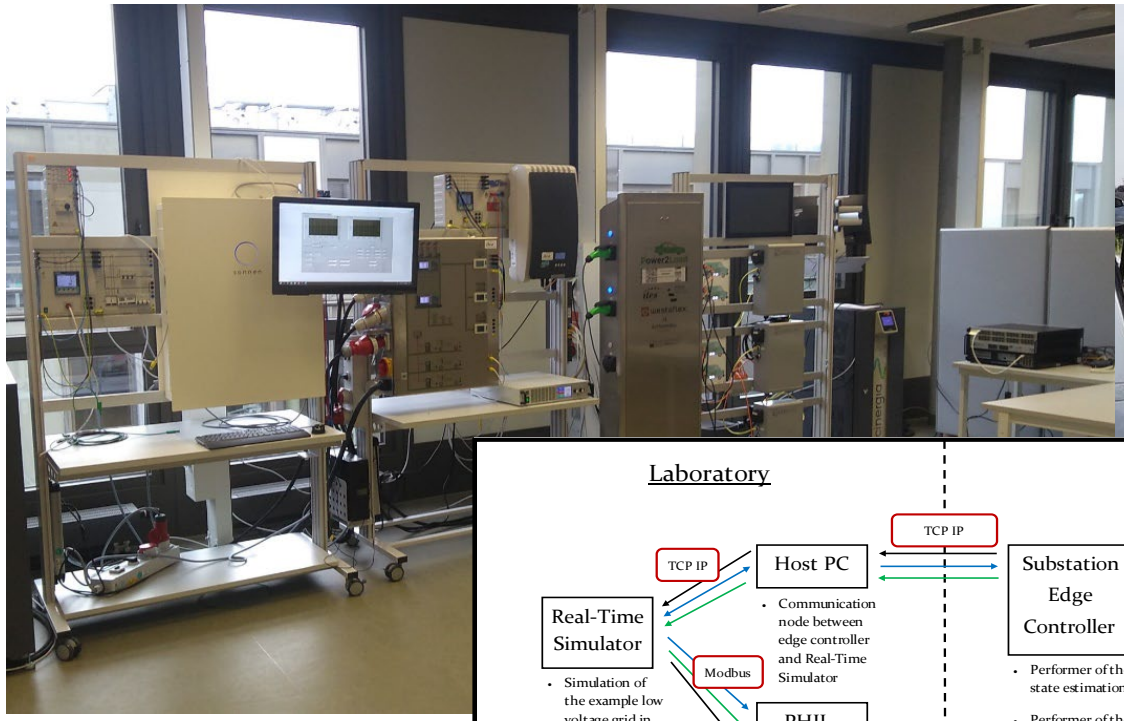
SEAP - EXAMPLE

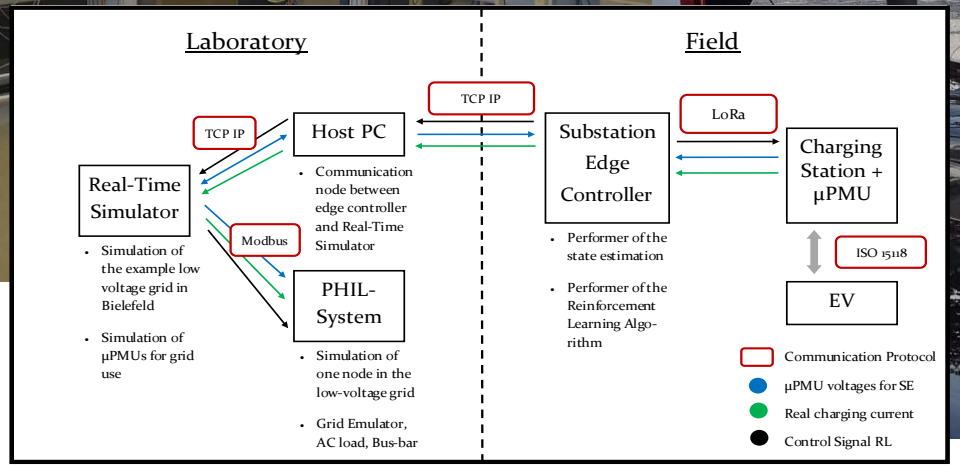
- Simulation of different Sector coupled systems (Heatpump, EVs)
- Connect load and generation components in an busbar
- Combination with Softwaresimulations like Matlab Simulink or Labview
- Training and Test of AI Methods – RL-Agents



SMART ENERGY APPLICATIONS LABORATORY (SEAp)

SEAp → Field Application





EUROPÄISCHE UNION
Investition in unsere Zukunft
Europäischer Fonds für regionale Entwicklung
EFRE.NRW
Investitionen in Wachstum und Beschäftigung
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SMART ENERGY APPLICATIONS LABORATORY (SEAp)

Field test on AI based devices

SMART ENERGY APPLICATIONS LABORATORY (SEAp)

SEAp

Industrial Partner:

STADTWERKE BAD SALZUFLEN

Stadtwerke Bielefeld

westaflex Verbindungen die sich auszahlen®

Netzgesellschaft Gütersloh

WW Netz Westfalen Weser

COMUNA metall BLOCKHEIZKRAFTWERKE

Atos Worldgrid

AIT AUSTRIAN INSTITUTE OF TECHNOLOGY

VOLTARIS WISSEN WAS ZÄHLT

EFRE.NRW Investitionen in Wachstum und Beschäftigung

Bundesministerium für Bildung und Forschung

HORIZONTE GROUP

Ministerium für Wirtschaft, Innovation, Digitalisierung und Energie des Landes Nordrhein-Westfalen

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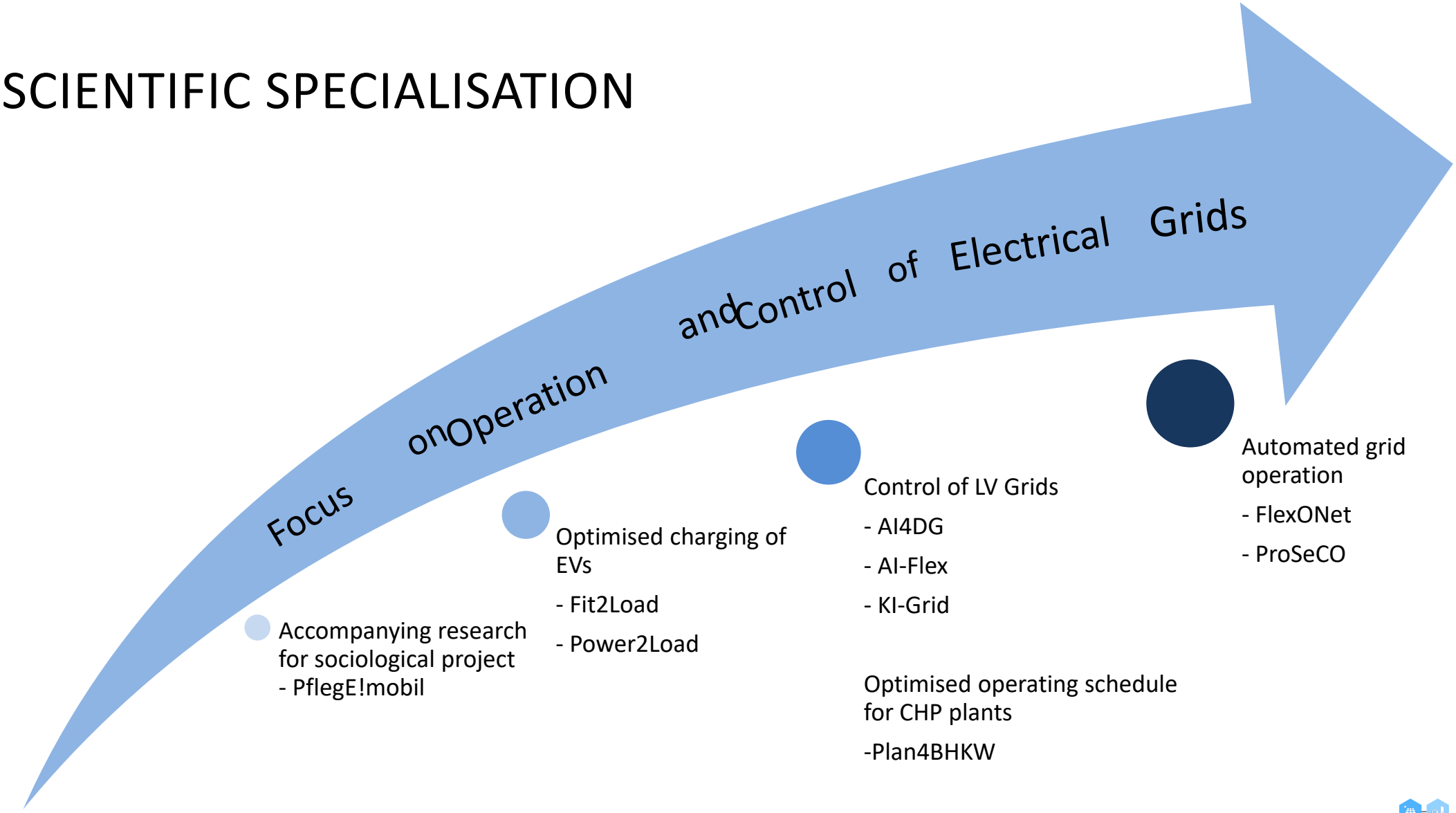
SCIENTIFIC SPECIALISATION



RESEARCH PROJECTS, NATIONAL:

Previous:

- **Power2load**: Intelligent charging control for the expansion of charging points for electric vehicles
- **KI-Grid**: AI-based system for autonomous control of smart cellular grids
- **VR-Netzleitwarte**: VR grid control center for learning the operation management of real electrical grids
- **PLAN4BHKW**: Optimized operation management for combined heat and power plants

Current:

- **SAIL**: SustAInable Life-cycle of Intelligent Socio-Technical Systems
- **InCams@BI**: Innovation Campus for Sustainable Solutions
- **FlexONet**: Flexible virtual replication of OT networks in energy supply

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RESEARCH PROJECTS, INTERNATIONAL:

- **AI4DG**: AI-on-the-edge for secure and autonomous distribution grid control with a high share of renewable energies (BMBF and France Ministry)

  International Partners: Université Grenoble Alpes (France)
  ATOS Worldgrid (France)

- **AI-flex**: Autonomous AI for cellular energy systems to increase flexibilities provided by sector coupling and distributed storages (ERA-Net)

  International Partners: TU Vienna (Austria)
  Austrian Institut of Technology AIT (Austria)

- **IRI4SGC**: Joint research infrastructure for sustainable control of grid cells (BMBF)

  International Partners: Universidad Mayor de San Andrés de Bolivia (Bolivia)
  Graz University of Technology (Austria)
  Universidade Federal do Amazonas (Brasilia)
  Universidad Tecnológica La Salle ULSA (Nicaragua)

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University of Applied Sciences and Arts

Thank you!

Contact:

Lars Quakernack
lars.quakernack@hsbi.de

https://www.hsbi.de/ium/forschung/arbeitsgruppen/agnes/seap

10min break

Presentations by existing projects with next-stage development plans

11:20 Hierarchical Local Flexibility Markets for Harvesting Prosumers Flexibility (LoC-Flex),
Saeed Teimourzadeh, EPRA Electric Energy Co., Turkey
Immediate feedback, comments or questions

11:30 Virtual Power Plant Clusters for Industry and District Decarbonisation,
Paul Tuohy, University of Strathclyde, Scotland UK
Immediate feedback, comments or questions

11:40 Smart Scalable Off-Grid PV/H2 System,
Cristian Beceanu, BEIA PVH2SYSTEM, Romania
Immediate feedback, comments or questions

11:50 Different Energy Vector Integration for Storage of Energy,
Vishal Kumar IITR, India
Immediate feedback, comments or questions