



# GREEN ELECTRIFICATION AND HYDROGEN ECONOMY ECOSYSTEM PROJECT

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Green electrification ecosystem (GEE) -project

# **AGENDA**

- >> Project introduction
  - >> Project Objective and targets
  - >> Stakeholders and deliverables
  - >> Organization
- >> How did it get started and what is coming next
- >> Mapping related projects and ecosystems



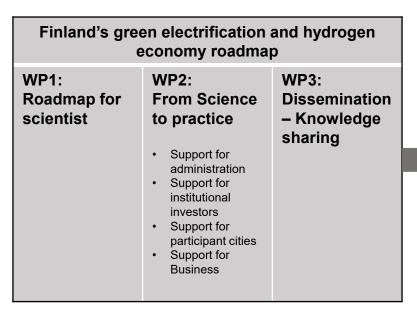


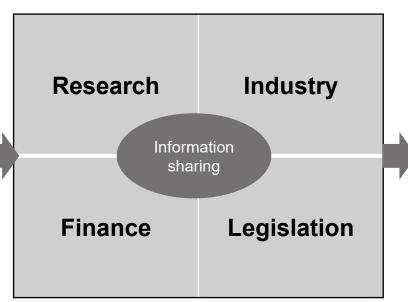


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# PROJECT OBJECTIVE AND TARGETS





Reduces the risk of investment and speeds up the development of green electrification and thus improves the competitiveness of Finland

Q1/2023	Q2/2023	Q3/2023	Q4/2023	Q1/2024	Q2/2024	Q3/2024	Q4/2024



# PROJECT STAKEHOLDERS AND DELIVERABLES

WP1- roadmap for scientist

WP2- from science to practice

> WP3-Dissemination

STAKEHOLDERS

# Participant cities

# Innocities in steering committee:

Lappeenranta, Vaasa Raahe, Kokkola, Jyväskylä, Joensuu, Oulu

#### Other cities:

Kouvola, Kotka, Hamina, Lahti, (Ahvenanmaa)

#### Administration

EU commission Ministry of Economic affairs and employment Business Finland

### Institutional investors

Varma Ilmarinen, LähiTapiola, Osuuspankki, Nordea, Elo, Keva,

**SEB** 

#### Industry:

CLIC Innovation (LUT as a partner)
Hydrogen Cluster: Neste, ABB; Elomatic, UPM, P2X
Solutions, ST1, Fortum, Flexens, Borealis, EPV, Hitachi,
Hycamite, Linde, Helen, Parker, Woikoski, Danfoss, Tecoil,
Hydac, Tapro, Auris, TVO, Finnish Wind Power
association, Hyöty Tuuli, Agco Power, Energiequelle, Pori
Energia, Gasgrid.

#### Possible other companies:

Wärtsilä, Valmet, Stalatube, Outokumpu, SSAB, Stora Enso, Ovako, Ilmatar, Lappeenrannan energia, ABO Wind, Fingrid, Rengas, Finnsementti

# Universities and other research institutes

Member of the Hydrogen research forum: Oulu university, LUT-University, Aalto Yliopisto, VTT, Turun yliopisto, Tampereen yliopisto, Jyväskylän yliopisto, Vaasa Yliopisto, Åbo Akademi

Other universities: UEF (CCEEL)

International Universities:
NTNU . DTU. SDU.

Chalmers, Luleå

Defining the spearhead projects and documentation of the participant cities Overview of existing and future regulations related to the energy system and P2X processes at the EU level

Investor criteria and uncertainties

Demand diffusion:
Customer demand and market

Supply diffusion and related technology requirements

Green electrification and hydrogen economy (P2X) research, research infrastructure and research spearheads in Finland

Final report: P2X Diffusion – Finland's green electrification and hydrogen economy roadmap work

**DISSEMINATION - KNOWLEDGE SHARING** 

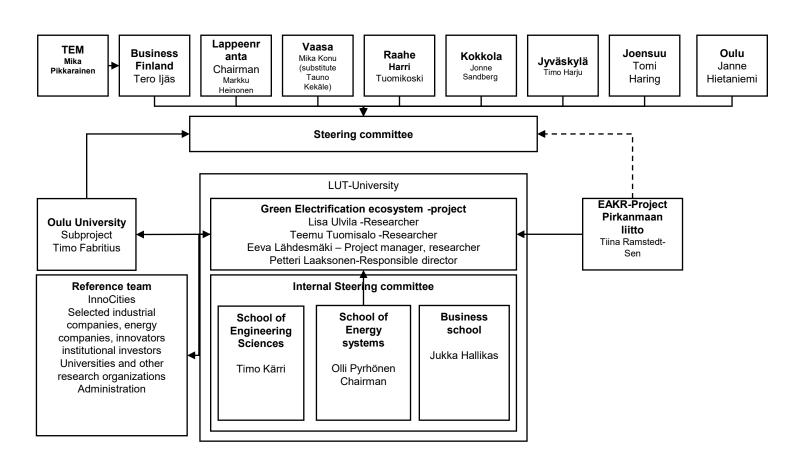
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# PROJECT ORGANIZATION



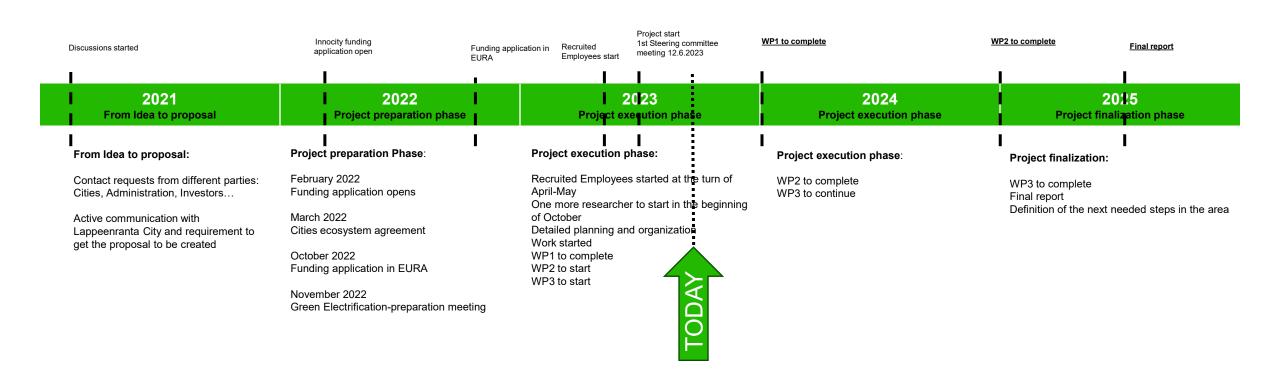






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# HOW DID IT GET STARTED AND WHAT IS COMING NEXT?







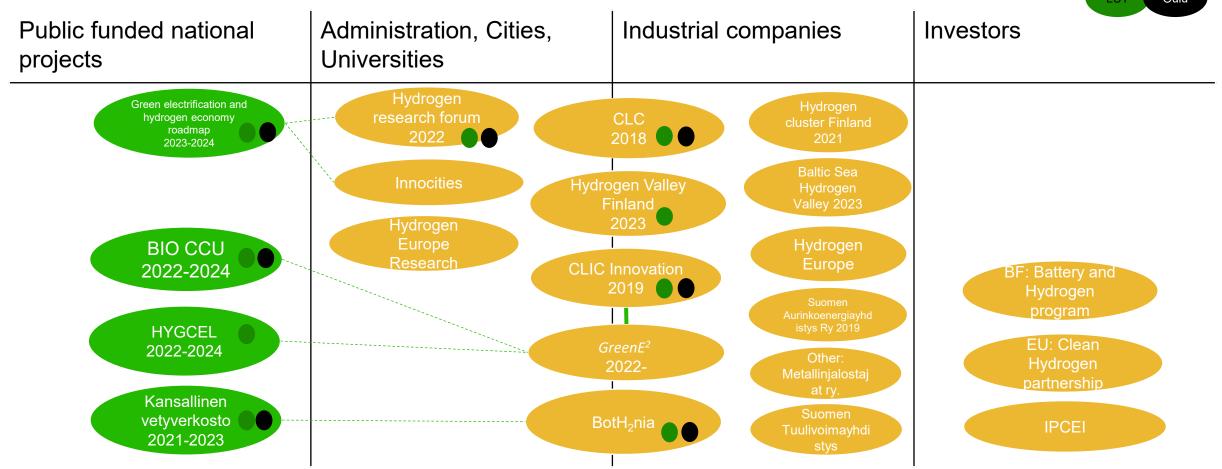
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Project

Ecosystem

## LUT Oulu

# **RELATED PROJECTS AND ECOSYSTEMS**







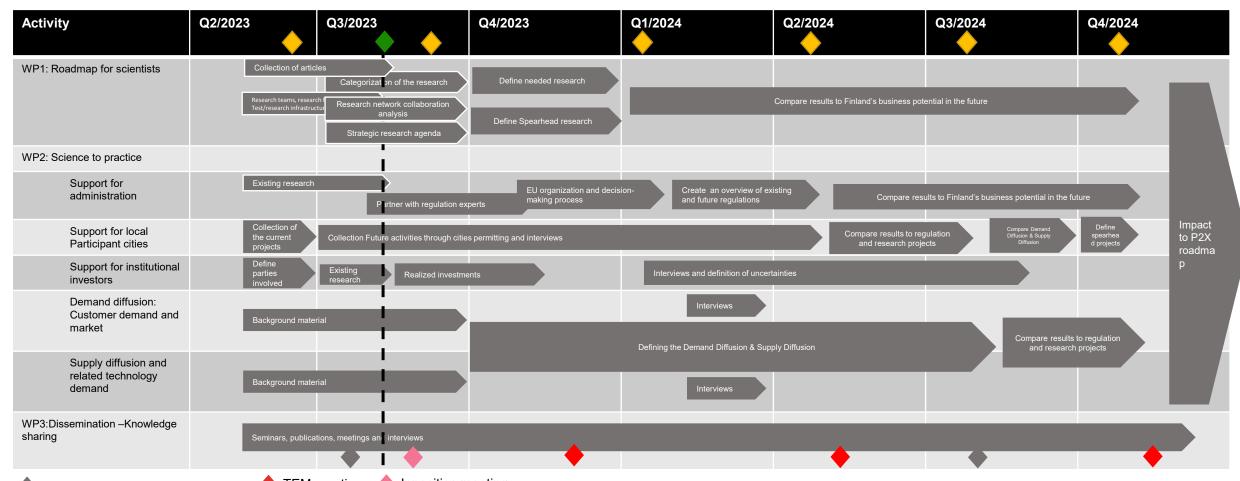
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# **SCHEDULE AND MILESTONES**

Where are we

Steering committee meetings













Euroopan unionin

osarahoittama



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# PROJECT PRACTICALITIES

Meeting	Chairman	Responsibilities	Schedule	Invitations	Participants
Steering committee meeting	Markku Heinonen	Guidance and follow up on the project scope, schedule and budget Involvement and engagement of the stakeholders and guidance on project operational execution	Twice a year	Eeva Lähdesmäki	Petteri Laaksonen, Eeva Lähdesmäki, Teemu Tuomisalo, Lisa Ulvila+ Steering committee members
Internal steering committee meeting	Olli Pyrhönen	Involvement and engagement of LUT faculties and guidance on project operational execution	Quarterly meeting	Eeva Lähdesmäki	Olli Pyrhönen (Chairman), Timo Kärri, Jukka Hallikas, Petteri Laaksonen, Eeva Lähdesmäki, Teemu Tuomisalo, Lisa Ulvila
Team meeting	Eeva Lähdesmäki	Knowledge sharing, scheduling and prioritization of weekly tasks	Once a week	Eeva Lähdesmäki	Petteri Laaksonen, Eeva Lähdesmäki, Teemu Tuomisalo, Lisa Ulvila
LUT - OULU Project meeting	Eeva Lähdesmäki	Knowledge sharing between the projects, task management	Once a month	Eeva Lähdesmäki	Teemu Tuomisalo, Timo Fabritius, Petri Sulasalmi, Samuli Urpelainen Petteri Laaksonen, Eeva Lähdesmäki, Teemu Tuomisalo, Lisa Ulvial
TEM	Petteri Laaksonen	Knowledge sharing	Twice a year	Eeva Lähdesmäki	LUT & Oulu project teams, TEM