



# Action plan for the hydrogen economy ecosystem in North Ostrobothnia

Janne Anttila (University of Oulu), Ville Viertola (University of Oulu), Pekka Tervonen (University of Oulu), Seppo Kaikkonen (BusinessOulu), Janne Hietaniemi (BusinessOulu), Emilia Myllyoja (OSAO)

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# Background and material of the action plan

**North Ostrobothnia has strong prerequisites for the development of the hydrogen economy.** However, the hydrogen economy does not move forward on the basis of individual actors or investments but requires simultaneous progress in different parts of the value chain. **Development is created by how ecosystem actors work together to put the plans into practice. This, in turn, requires coordinated progress across the ecosystem.**

This ecosystem action plan is linked to the **hydrogen economy roadmap in North Ostrobothnia** and makes its implementation more concrete. The work has been carried out in close cooperation with the key actors in the area. The preparation of the plan has been supported by **Spinverse Oy**.

The work has been carried out as part of the JTF-funded [Oulu GH2 project](#)

## Material for building an action plan:

### Workshops:

- Innovation ecosystem needs and offerings, February 2025, 22 participants
- Trade and cash flow from the hydrogen economy 1, June 2025, 31 participants
- Trade and cash flow from the hydrogen economy 2, October 2025, 33 participants

### Surveys:

- Ecosystem needs and functions, 43 responses

### Interviews:

- Leading companies and investors, 10 interviews
- SMEs, 8 interviews
- RDI actors, 7 interviews

# Ecosystem and hub – structure and implementation

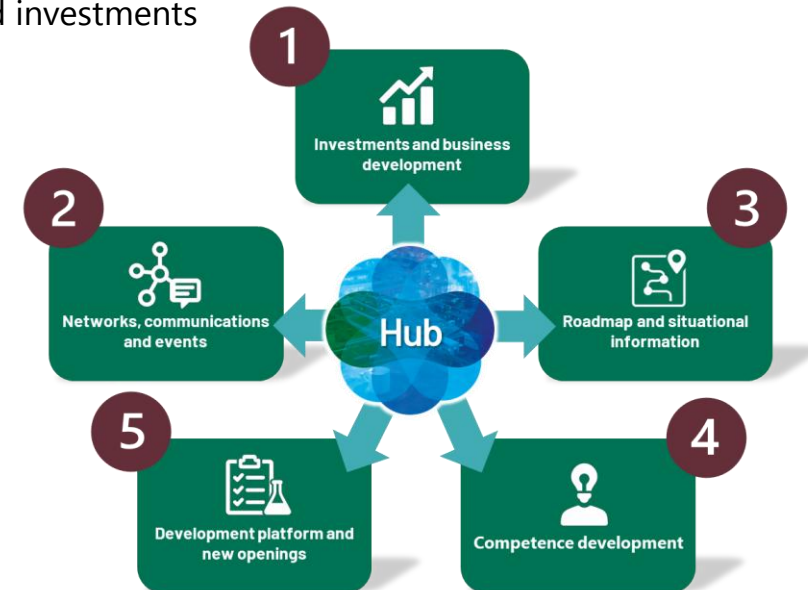
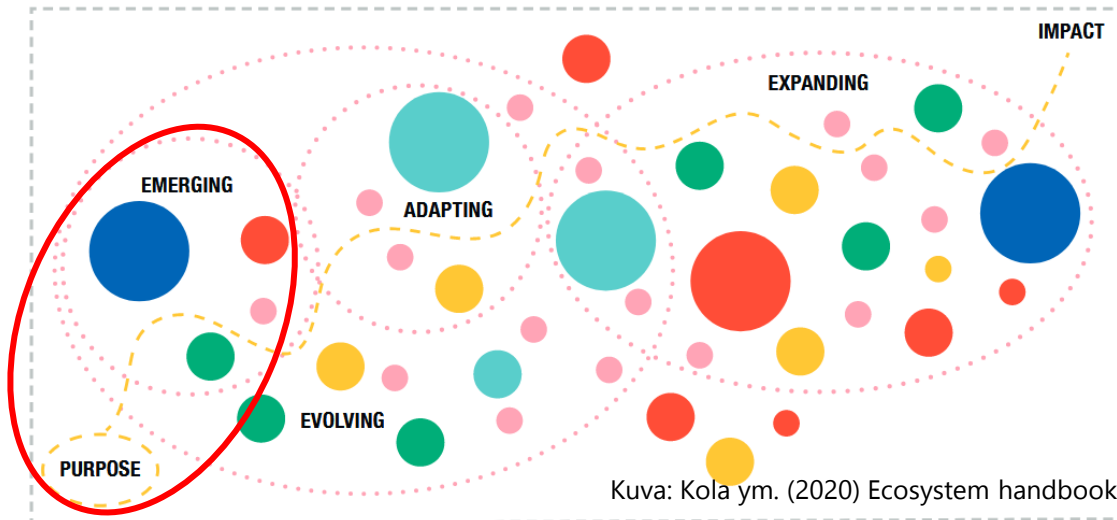
## The ecosystem creates a structure and a playing field

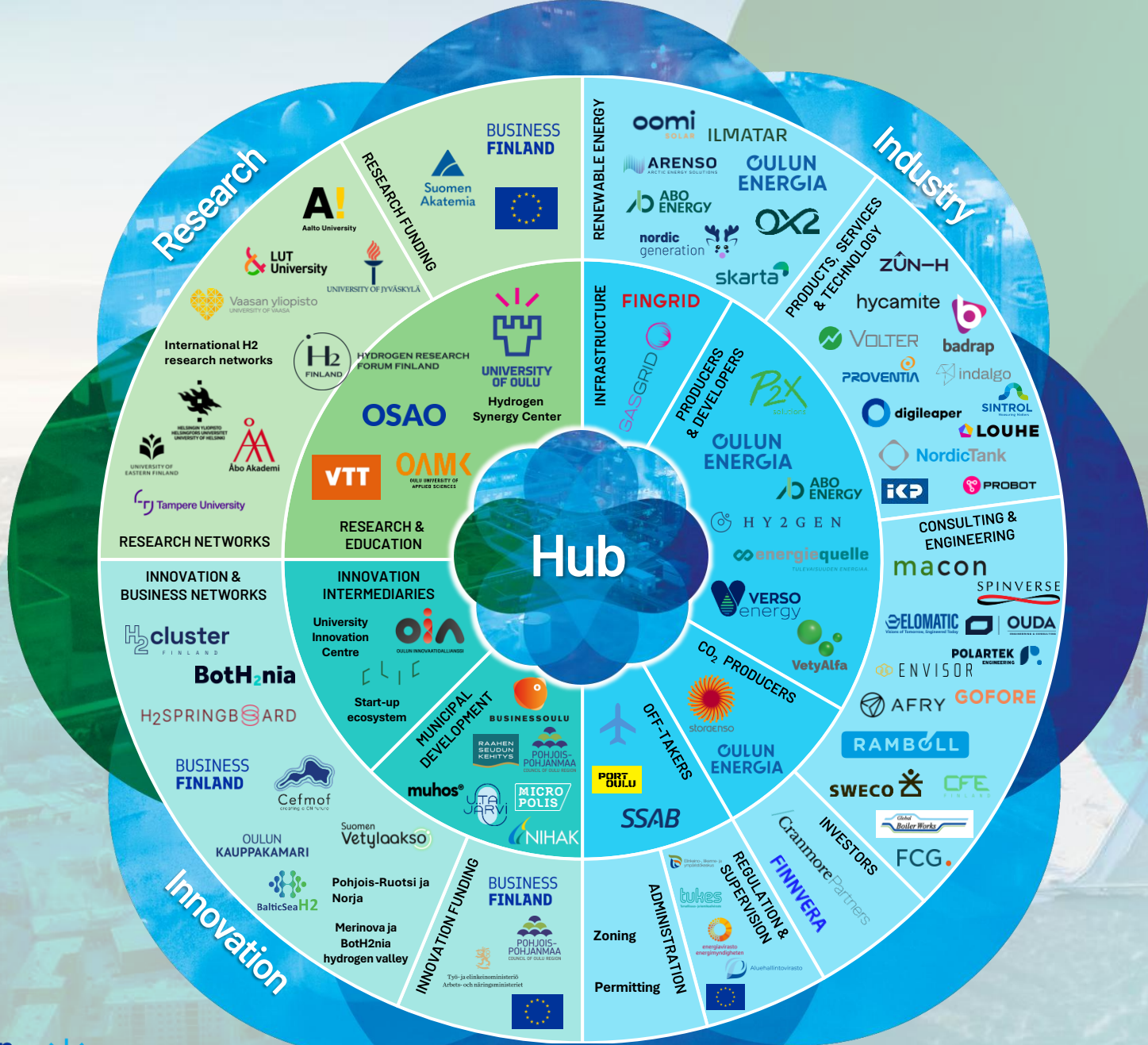
- Roadmap for the hydrogen economy defines the direction and stages of development
- Implementation requires an extensive, coordinated network of actors
- The ecosystem is in emerging phase where the key actors are committed, the field of actors has been mapped, and a common target and roadmap have been defined
- The ecosystem brings together the different stages of the value chain, as well as companies, research and the public sector



## The Hub serves as the engine for the development of the ecosystem

- The Hub is not a single organization, but an operating model based on the roles of the actors
- Brings together actors and actively manages cooperation
- Combines knowledge, resources and development activities
- Synchronizes the development of interdependent parts of the value chain
- Resolves bottlenecks and puts cooperation into practice into projects, pilots and investments





# The Hub brings actors together and guides cooperation

- The purpose of the Hub is to bring together the different actors in the hydrogen value chain and create **structures for dialogue between companies, researchers and the public sector**
- The Hub acts as a **centralized user interface** for innovation activities, providing clear access to key resources – information, actors and networks – and supporting collaboration in concrete development activities.
- The Hub promotes the **construction of new value chains and the development of practical solutions** and helps to remove obstacles to the advancement of the hydrogen economy as part of a national entity.
- The core of the Hub is built from the **actors of the Oulu Innovation Alliance and key companies**. Stakeholders are involved in ecosystem activities in five operational lines of action

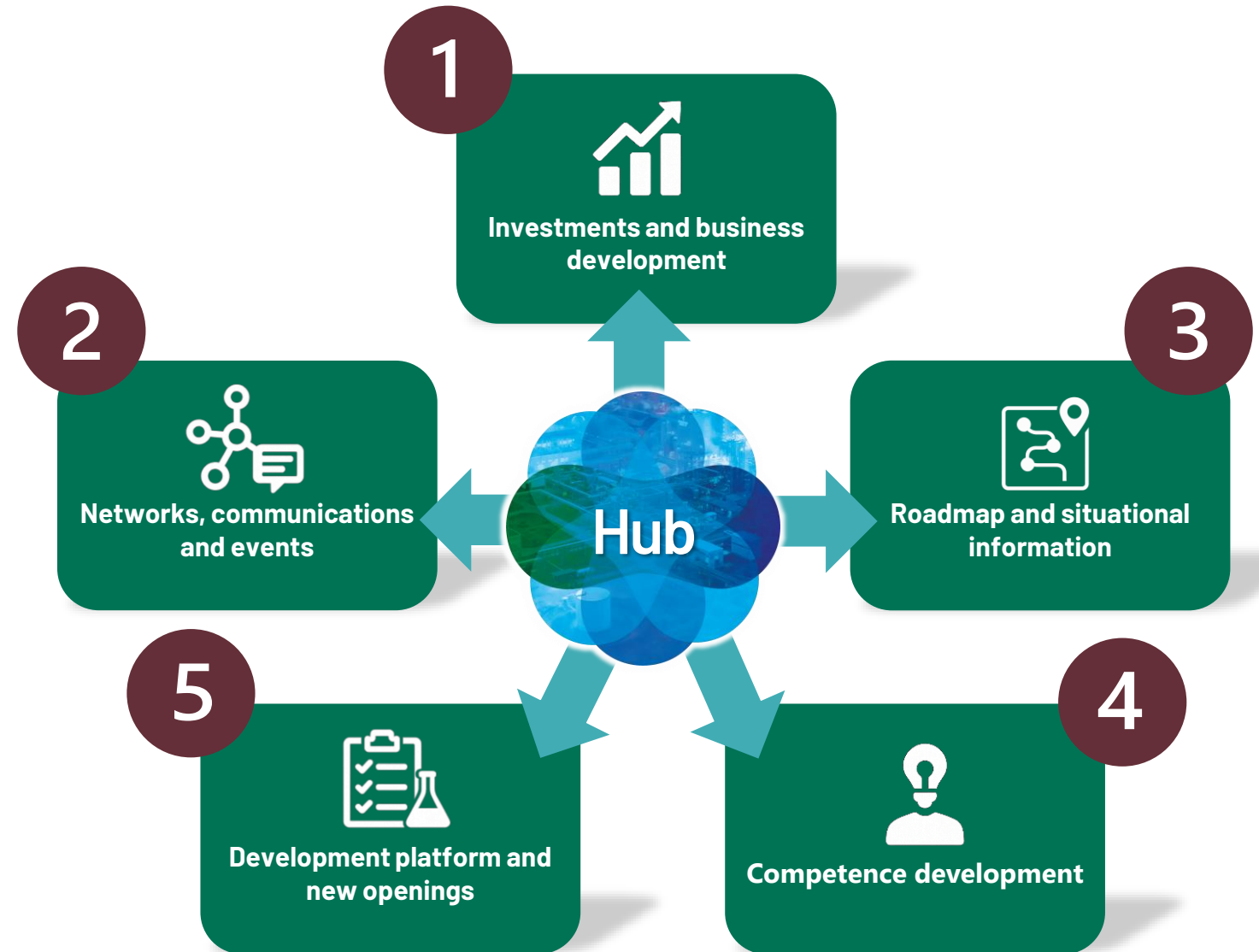
## Objectives:

- **Launching a hydrogen economy in the region**
- **The most attractive location** for new hydrogen business
- Long-term **jobs**
- **Benefits** for all parties
- Refining and **high value-added solutions** in the region



# Operating model and work lines

- **The Hub operating model is embodied in five work lines**, in which stakeholders work in coordinated cooperation.
- **The Oulu Innovation Alliance partners** act as the functional core
  - Responsible for the management, coordination and continuity of work lines
- **Key companies and networks** are closely involved in development activities
  - Cooperation is directly linked to value chain building and investments
- The work lines support the **phased implementation of the hydrogen economy roadmap**



# 1. Investments and business development



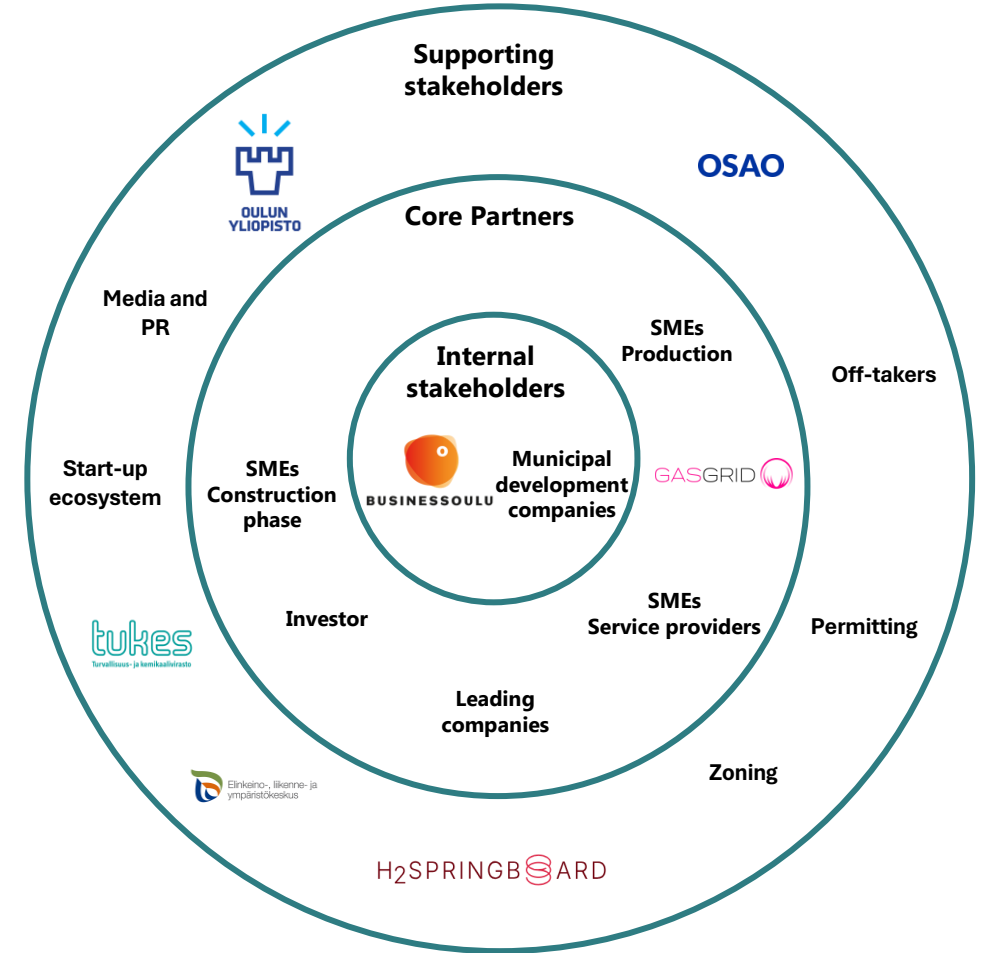
The aim of the work line is to accelerate the **growth of hydrogen economy-related business**, the **launch of investments**, and the **integration of SMEs into the developing value chain** in the region. The work package **supports the readiness** of hydrogen economy investment actors considering locating in the region and those already in the preparation phase to **move towards investment decisions**. The work package identifies and **solves commercial and operational bottlenecks that slow down the progress of investments** (e.g. regulatory, safety, market and value chain requirements) in cooperation with companies and public actors. At the same time, a **model is being built to systematically involve SMEs in the region** in large investment and infrastructure projects. The work package strengthens the business and delivery capabilities of SMEs and supports and guides companies to develop their products and services to meet the market needs of the hydrogen economy. The goal is to ensure that **SMEs in the region are able to meet the requirements of the value chain and take advantage of the new market opportunities opened up by the transition.**

### Actions:

- Stakeholder engagement and coordination between the public sector and production and infrastructure investments
- Identifying bottlenecks that slow down the progress of investments and preparing solutions in cooperation with key actors
- Building an operating model that systematically involves SMEs in large investment and infrastructure projects

### Work line leader:

BusinessOulu





# 2. Networks, communications and events



The aim of the work line is to strengthen the position of the Oulu region and the whole of Northern Ostrobothnia as part of national and international hydrogen economy networks and to ensure that the networks of the partners of the Innovation Alliance (OIA) **operate in a coordinated manner and complement each other**. At the same time, **active and goal-oriented participation in key national networks** (e.g. Both2nia, H2Springboard, BusinessFinland) is ensured. Special emphasis will be placed on **cross-border cooperation with actors in northern Sweden and Norway** to ensure coordinated development of hydrogen economy investments, value chains and infrastructure projects in the Arctic region. The work line acts as a **two-way information exchange platform**: it brings national and international development, financing and regulatory information to the municipalities of North Ostrobothnia and communicates the region's investment potential and business expertise to external networks.

### Actions:

- Introducing a one-stop shop approach to hydrogen economy actors, resources and networks in the region
- Mapping of OIA partners' hydrogen networks and the added value derived from them
- Coordinated participation in key national and international hydrogen economy networks
- Strengthening cross-border cooperation, especially with actors in northern Sweden and Norway
- Building digital communication channels and active communication, e.g. LinkedIn, newsletters and direct contact. Utilizing partners' communication channels
- Organizing networking events, workshops and events to facilitate collaboration and support the objectives of other work packages

**Work line leader:** BusinessOulu



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# 3. Roadmap and situational awareness



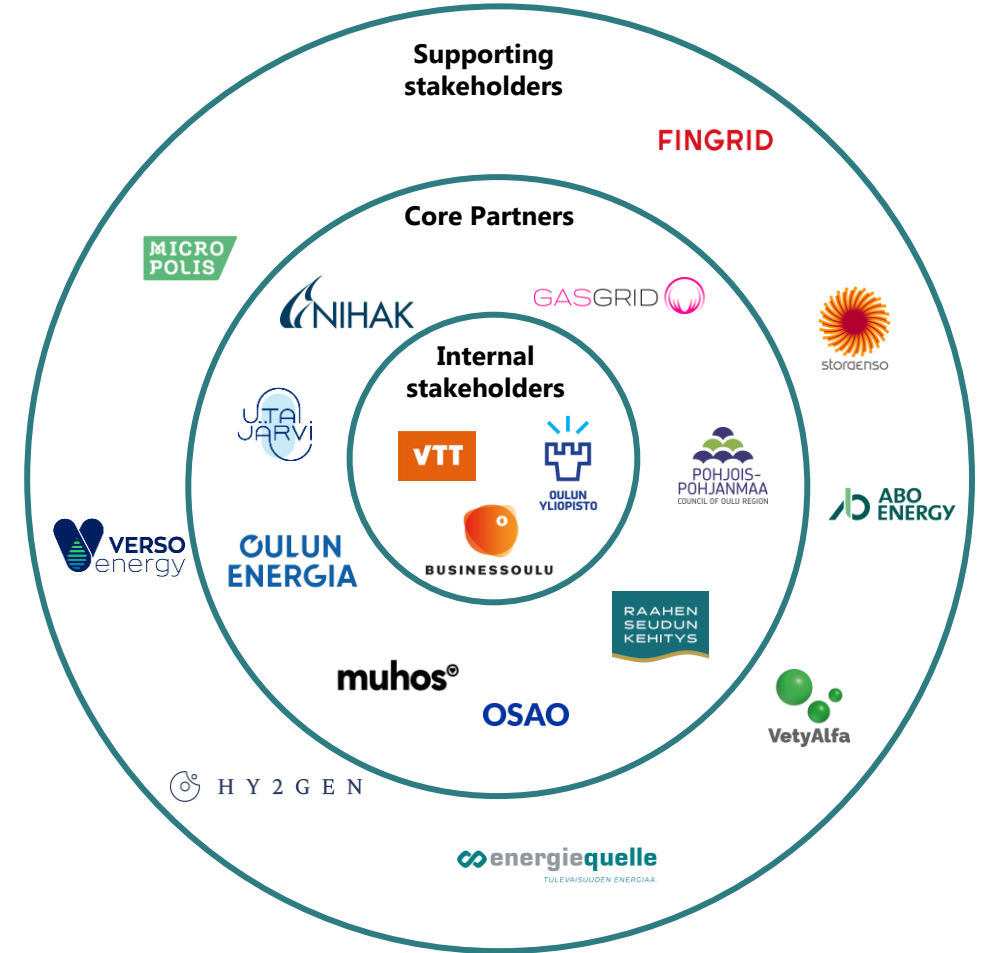
The goal of the work line is to **continuously maintain an up-to-date and proactive situational picture of the development of the region's hydrogen economy**. It compiles and analyses information on regulatory developments, planned investments, gas infrastructure and other critical infrastructure, availability of energy networks and resources, products and volumes, as well as national, Arctic Hydrogen Valley and EU-level developments. The work package **identifies bottlenecks in the hydrogen economy, defines realistic development paths for the value chain** together with key actors and strengthens regional coordination, for example through dialogue with Gasgrid and Oulu and Oulu Southern infrastructure planning.

### Actions:

- Maintaining a regional situational picture through information sharing and data collection, relating it to national, Arctic and EU developments
- Understanding and impact of regulatory developments
- Updating the regional strategy and roadmap in different scenarios and time frames
- Identifying and facilitating new market niches (e.g. security of supply and resilience)
- Workshop activities, surveys and interviews to achieve goals

### Work line leader:

VTT and University of Oulu



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# 4. Development platform and new openings

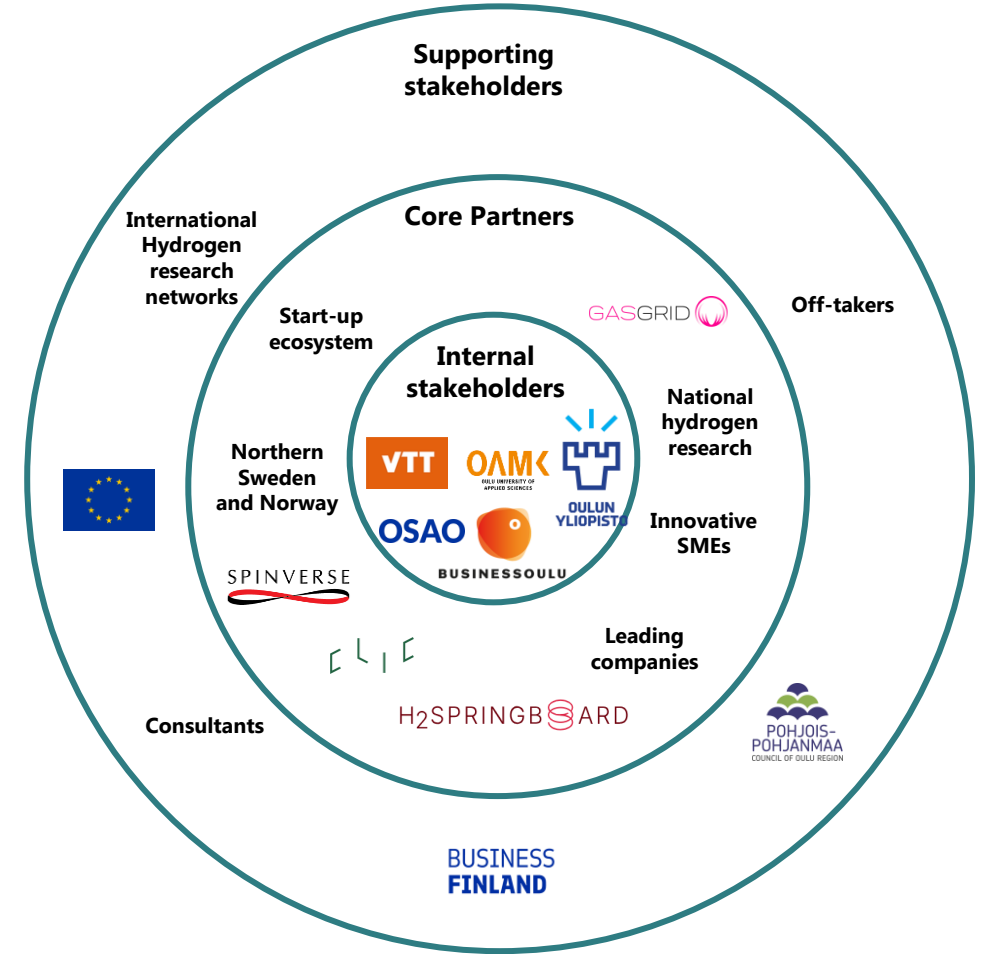


The task of the work line is to strengthen the Oulu region's hydrogen economy development platform by **bringing together the region's actors, research and piloting environments, and development activities already underway** (including new spearhead initiatives identified as critical and development projects already in implementation). The whole acts as a **platform where new ideas and existing expertise are refined towards practical implementation** – from idea to demonstration and investment readiness, utilizing the entire ecosystem's operational network. **In addition to large development projects, the goal is to identify and support the emergence of scalable technologies.** Special attention is paid to entities in which OIA partners, SMEs, leading companies and research organizations combine their resources and produce solutions that individual actors would not be able to implement alone. The work line also **promotes connections to national and international hydrogen valleys.** The key task is to make the region's research, testing and piloting infrastructures visible and to maintain an OIA-level hydrogen economy RDI portfolio.

### Actions:

- Promoting key initiatives for the hydrogen economy in the region towards practical implementation
- Maintaining and developing the RDI portfolio of the regional hydrogen economy
- Gathering the research, testing and piloting environments of OIA operators into a visible entity and supporting their utilization
- Identifying the needs, capabilities and opportunities for participation of actors
- Strengthening ecosystem cooperation

**Work line leader:** Oulu University of Applied Sciences and University of Oulu





# 5. Competence development

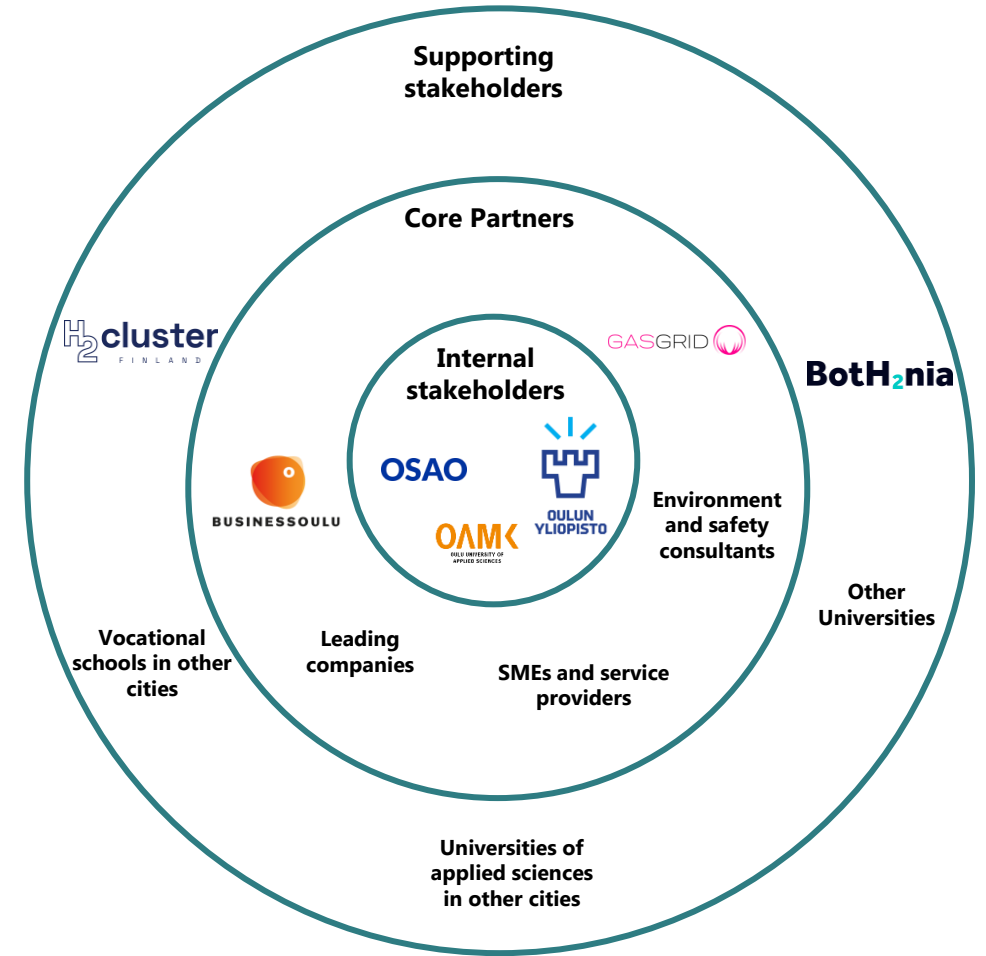


The aim of the work line is to support the development of the hydrogen economy knowledge base in the region by gathering existing information on **knowledge needs, education and learning environments**, and to support **cooperation between educational organizations and companies** on the topic. The work package utilizes existing competence needs analyses (e.g. OSAO, Oamk and other regional projects) and uses them to create a **situational picture of the key competence needs of the hydrogen economy**. This is complemented through business cooperation and networking. In addition, the work package brings together educational offerings related to the hydrogen economy at different levels of education and maps the learning and development environments in the region. The goal is to **outline educational paths and highlight them** (e.g. by participating in events). At the same time, it is ensured that the competence perspective is taken into account in other development work in the ecosystem..

### Actions:

- Bringing the perspective of competence development to the development of the ecosystem.
- Collect and analyze existing competence needs analyses related to the hydrogen economy and form a common regional situational picture from them.
- We will compile educational offerings related to the hydrogen economy at different levels of education and participate in industry networks, such as the Bot2nia hydrogen network.
- Mapping the region's learning and development environments related to the hydrogen economy and identifying their opportunities for business collaboration or the implementation of student projects.
- Describe the existing key hydrogen economy education paths OSAO–Oamk–University of Oulu

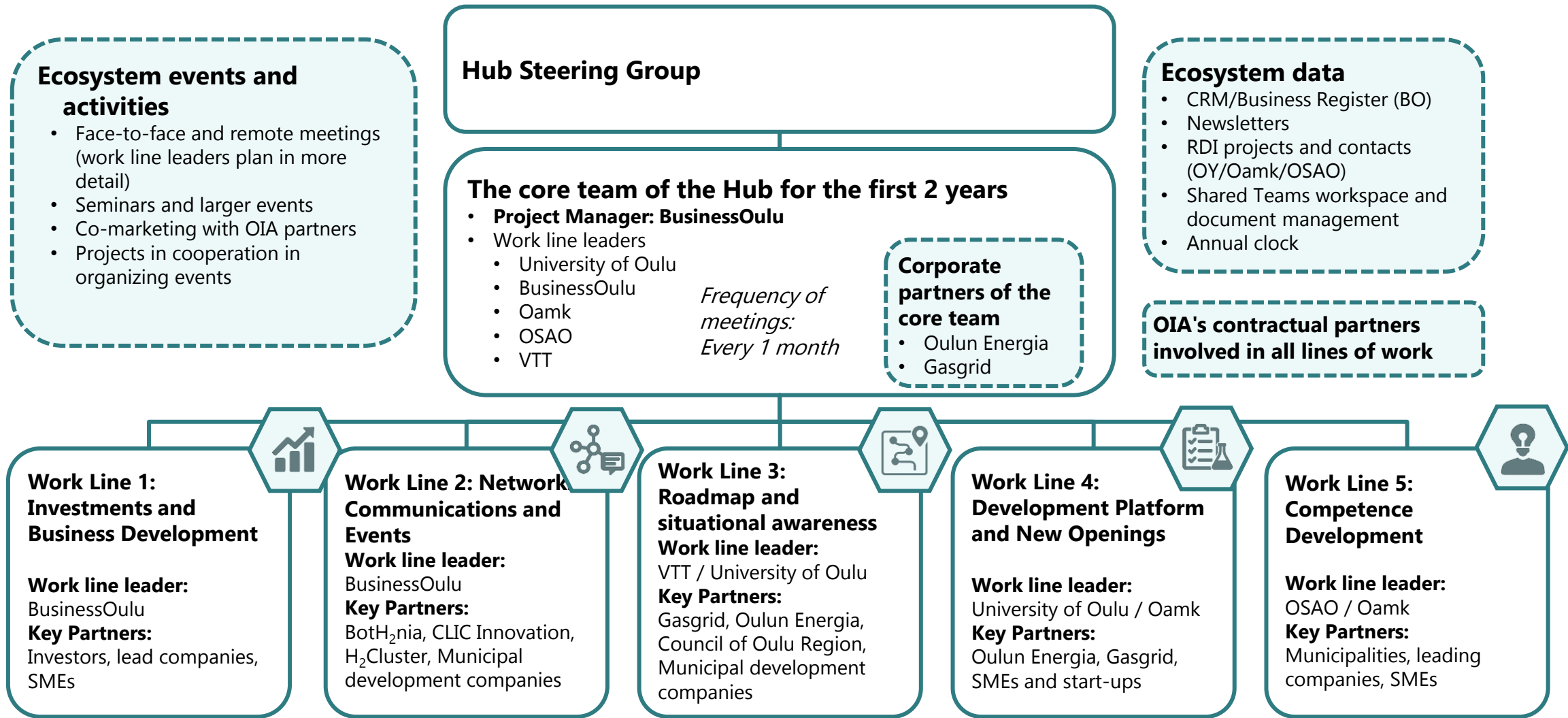
**Work line leader:** OSAO



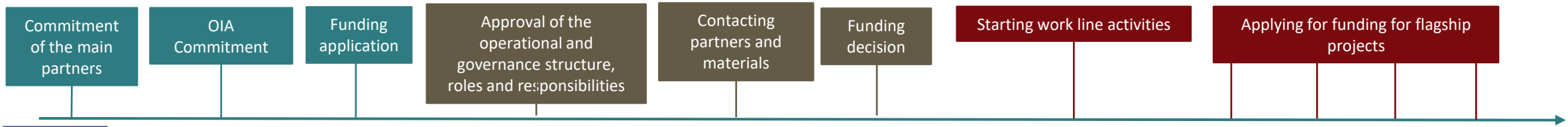
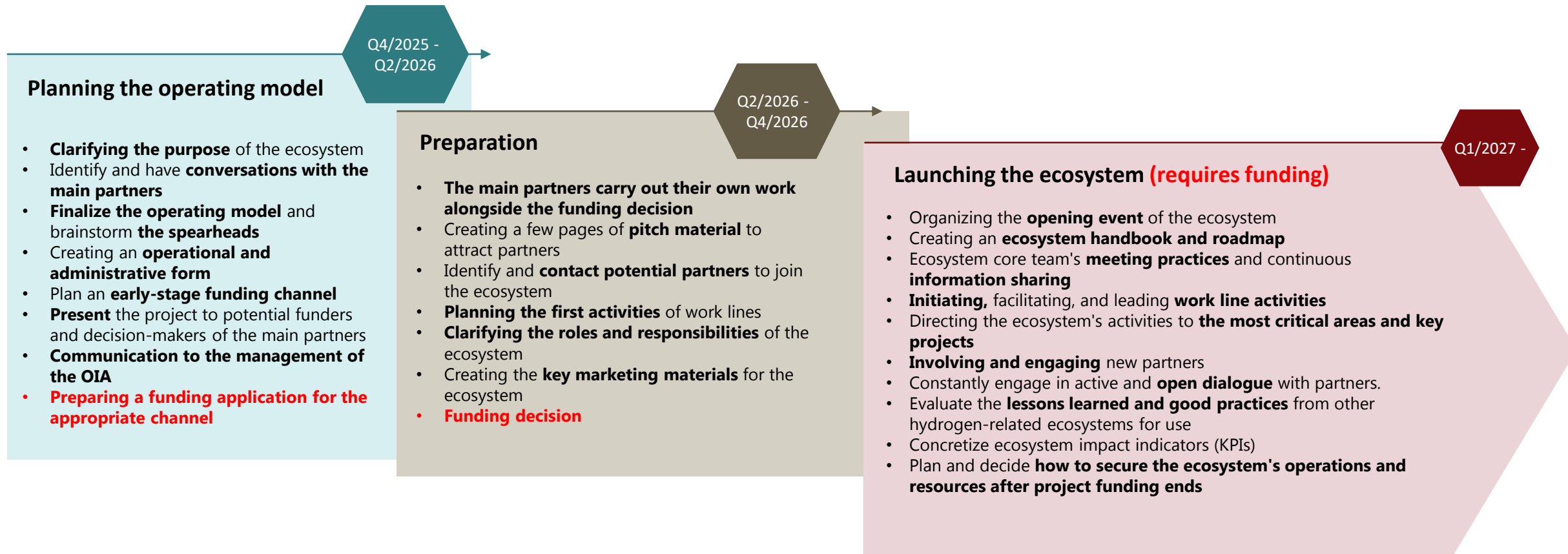
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# Hub operation and management model



# The main stages of starting ecosystem work



# Contact information



**University of Oulu**  
**Janne Anttila**

Oulu GH2 Project Manager  
janne.anttila@oulu.fi



**University of Oulu**  
**Pekka Tervonen**

Research Director  
pekka.tervonen@oulu.fi



**BusinessOulu**  
**Seppo Kaikkonen**

Invest in Project Manager  
seppo.kaikkonen@businessoulu.com



**BusinessOulu**  
**Janne Hietaniemi**

Key Account Director, Cleantech and Industry  
janne.hietaniemi@businessoulu.com



**OSAO**  
**Emilia Myllyoja**

Project Specialist  
emilia.myllyoja@osao.fi