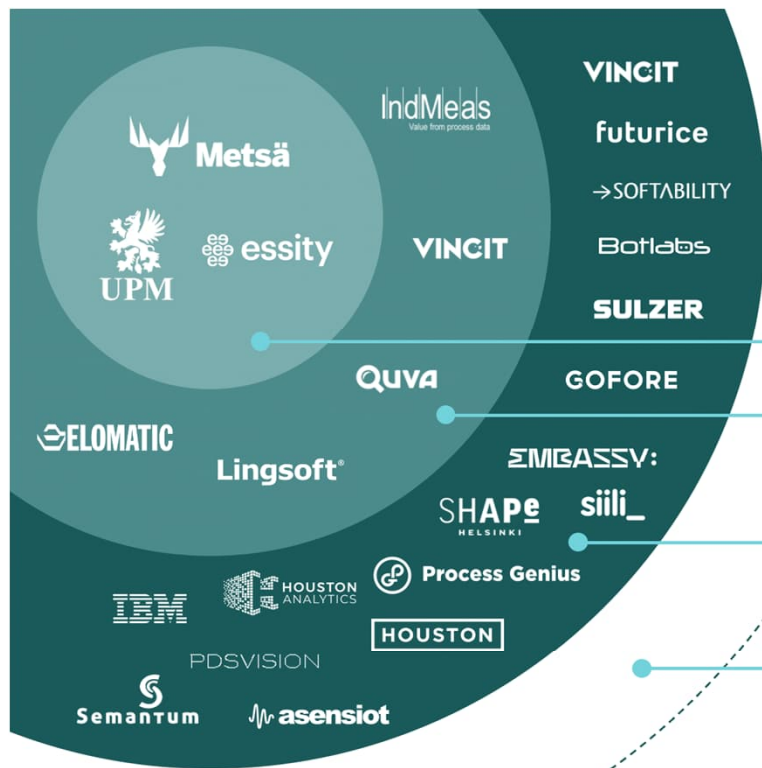




**Towards SEED Forest ecosystem
Collaboration platform
for holistic sustainability development**

seed FOREST

SEED ecosystem for forest industry digitalisation



WINNING TOGETHER

World-class forest industry companies

Leading Finnish digital - companies

Use-case companies

Solvers
with own projects
= Developers

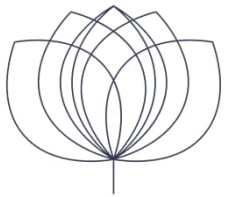
Solvers
with own work
= Catalyzers

Catalyser candidate
scouting to fill
competence gaps

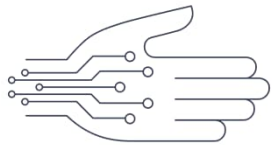


SEEDForest

Sustainability / Twin transformation in the core



We take bold steps for **twin transformation** in process industry.



We build positive sustainable impact with **holistic innovations** based on research, new collaboration synergies and smart use of digitalization.

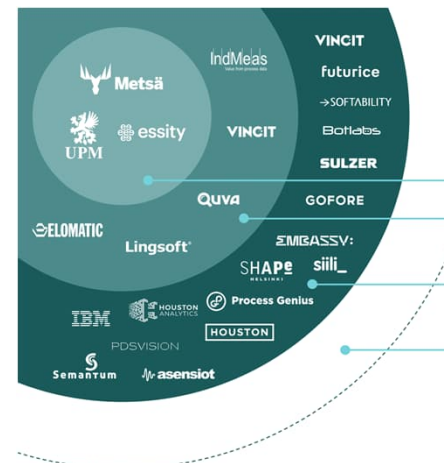


We build **close collaboration** between industry and research. We share together the vision, targets and roadmaps.

SEEDForest focus: forest, chemical + new bioproduct industry

Phase 1 (SEED) ended 28.2.22

Phase 2 building going on



The 1st peek at possible and evolving partner map



seed FOREST

Kestävän kehityksen nyrkki -Think tank for sustainability

Brings together actors with a passion for enhancing sustainable development in industry.

Catalyzes the operation of SEEDForest.

A common think tank between companies and research that identifies critical challenges for industry in developing sustainability and creates a common vision of how to move forward - together. Company members host the meetings.

Launch at the VTT seminar Strong, stronger, responsible at the seminar 19.10.

Nyrkki get-together meeting 24.11.

The logo for SEED FOREST, featuring the word 'seed' in a lowercase, blue, sans-serif font with a small dot above the 'e', followed by 'FOREST' in a smaller, uppercase, blue, sans-serif font. The background of the slide features several overlapping, semi-transparent circles in shades of blue, green, and purple, creating a modern, abstract design.

seed FOREST

We have capability to model and implement systemic sustainability in process industry value network

SEEDForest themes

Adaptive asset management

Plan & control for sustainability

Speed up scale-up for sustainability

Human-Technology co-agency

Energy for sustainable industry

Data quality and operations

Development elements

- Value creation
- Holistic sustainability KPIs
- Business models
- Production chains
- Design, plan and control
- Roles
- Sensing

Digital tools

Assets

Process

Product

Human

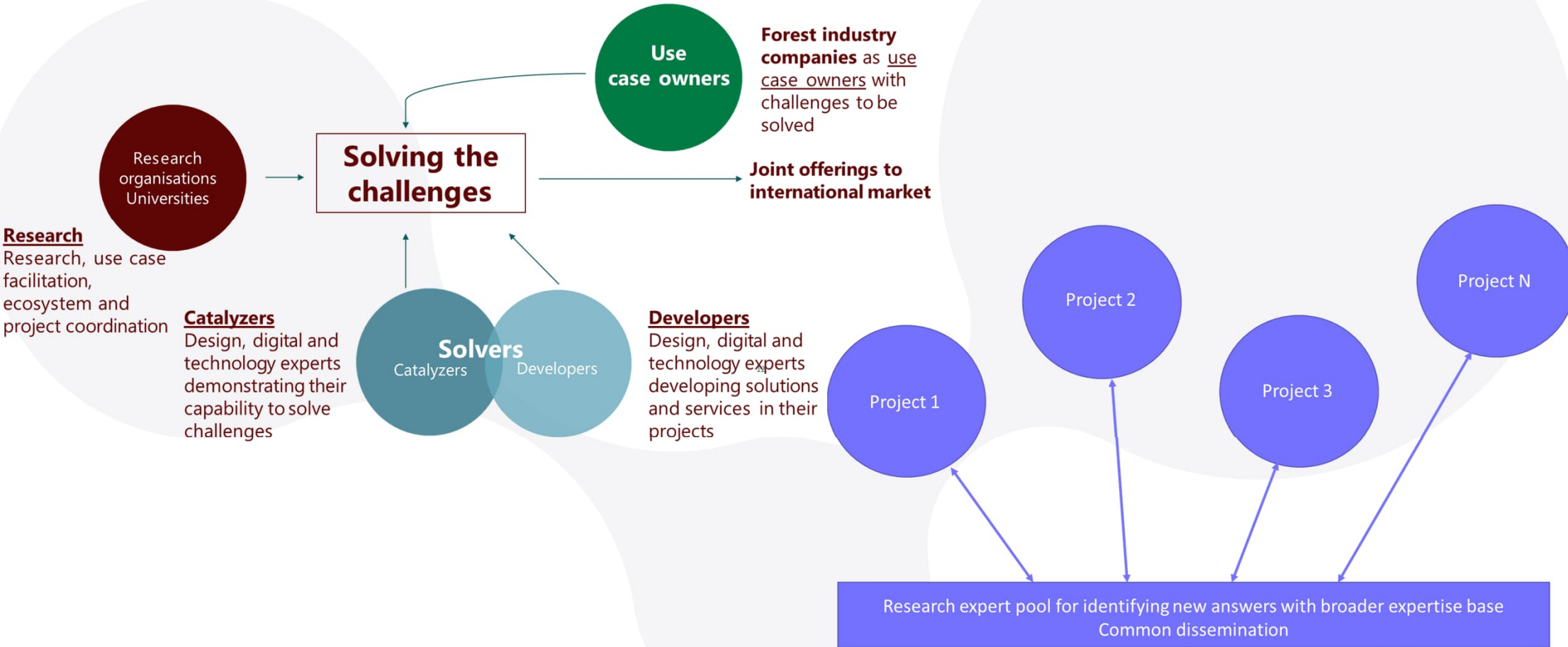
Target:

Systemic sustainability modelling and implementation

SUSTAINABILITY DIGITAL TWIN



Purpose of the platform activities



Project portfolio 2022

On-going projects:

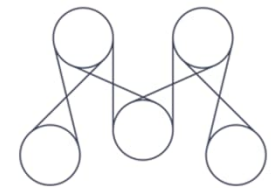
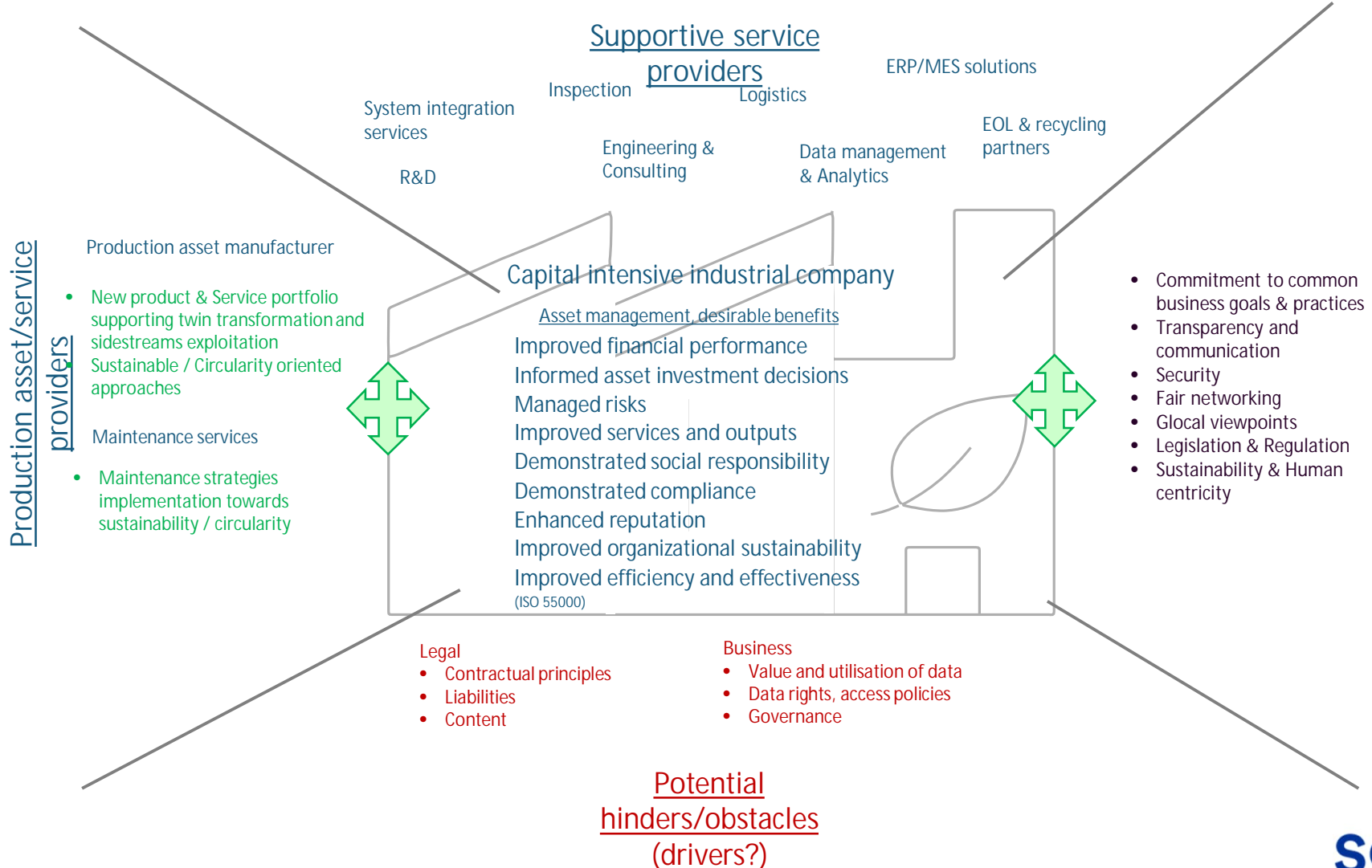
1. **COACH - Human technology co-agency in process control – positive funding decision by BF in June**
2. **OPTIMI Prestudy - started in wk 25**
3. **REFOLUTION: Refinery integration, scale-up and certification for aviation and marine biofuels production – EU project, positive funding decision in July**
4. **Kilpailukykyä datasta – SITRA's ongoing project**

In preparations:

1. **COLIFE - Collaborative business models for lifecycle asset mgmt: discussions going well – the next preparation WS September 7th (Metsä, SAP, VTT, LUT)**
2. **OPTIMI - Optimization for extended requirements – planning starts in the prestudy work**
3. **Agile model factory: more and new focusing is needed, AI engineering will be added in the scope**
4. **Low heat utilizing heat pumps: the plan presented to BF, one more company needed to join the consortium**

Collaborative business models for Adaptive Sustainable Asset Lifecycle Management

- Existing Mills?
- Future Production?
- Implementation of new production technologies?



Results from SEED project:
Available at <https://seedecosystem.fi/at-spotlight/>

Thank you!

jutta.nyblom@vtt.fi

pasi.valkokari@vtt.fi

nina.wessberg@vtt.fi

sari.laitinen@lut.fi

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