

It's Spring in Finland

H₂SPRINGB ARD

It's spring in Finland

— time to grow

01

The springboard model for exponential development

02

The roadmap to competitive hydrogen

03

Creating the world's most competitive H2 technology development environment in Finland

H2 Springboard is a next-generation hydrogen technology development ecosystem—the most effective way for companies with a collaborative mindset to prove the viability of the hydrogen economy and capture its full business potential.

Key facts

- The investment scope is over 150 million euros, partly supported by Business Finland
- The 1st phase will run for 5 years
- Founding partners cover the entire value chain to ensure developed solutions are market-ready
- The Springboard model aims at reducing time to implementation to a fraction and achieving an exponential curve of development
- The ecosystem is led by ABB, with the responsibility to lead joined development projects and connect them to investments

Hydrogen
enables the
world to
transition to
clean energy,
starting with
the heaviest
industries.

The race to develop and implement hydrogen technologies is entering a decisive phase. Some markets have embarked on an exponential pace of technological development, due to an accelerating cycle of more cost-effective hydrogen and investments.

Once this pace has been set, it is difficult for others to catch up.

Finland has the natural resources, industrial landscape and capabilities to embark on an exponential curve.

However, simply investing in R&D is not enough.

The amount of connection inquiries from wind and solar power projects in Finland currently stands at:

400
GW

The most production capacity added to the Finnish electricity grid in one single year was under 4 GW.

Source: [Fingrid](#)

With our
current
speed of
progress,
this would
take 100
years.

01

The Model for Exponential Development





The sequential RDI model does not deliver on the exponential curve of development we need to achieve.

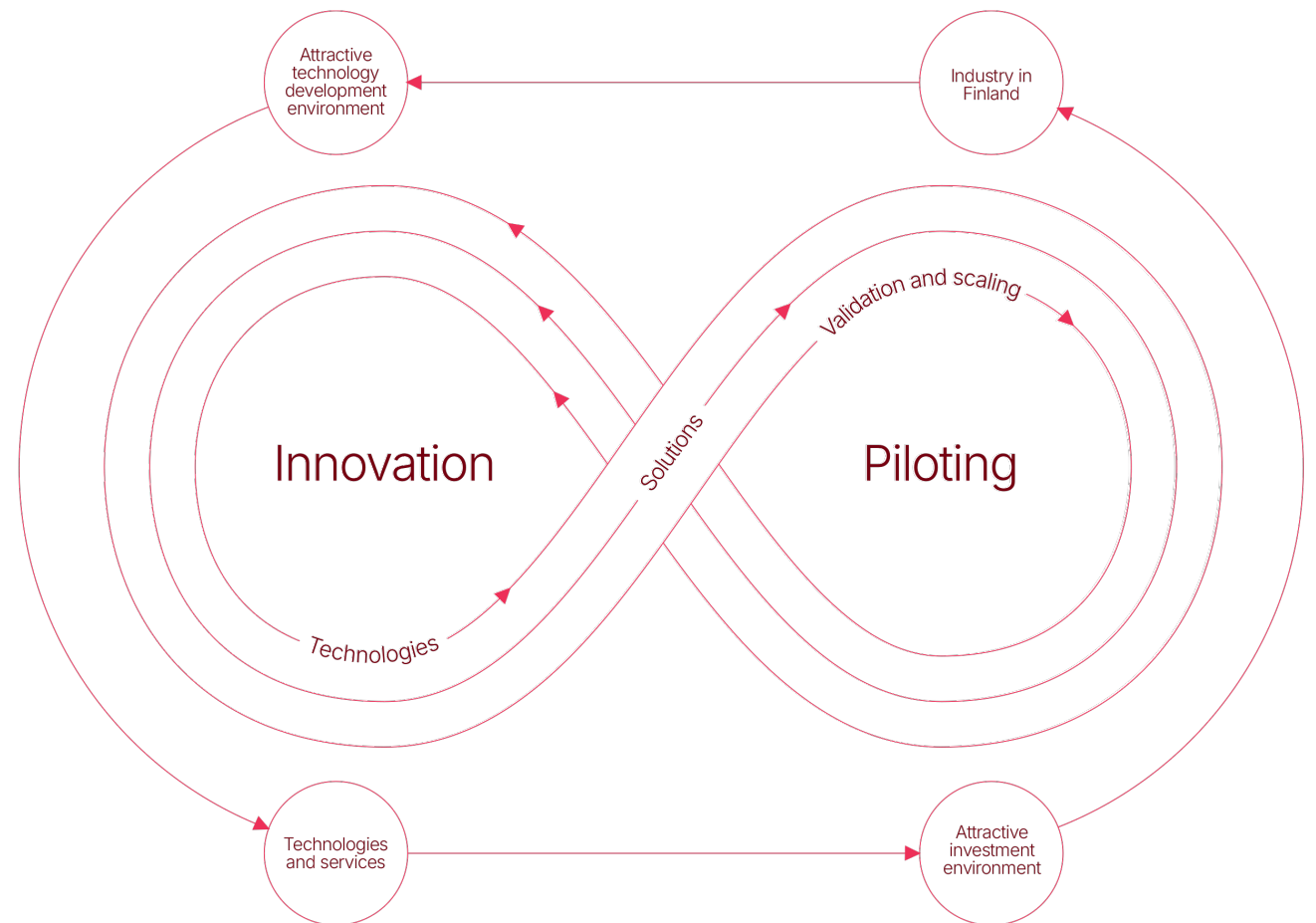
From linear RDI to lean IDR

H2 Springboard is a **lean integrated collaboration model** where technological research, solution development, validation, and piloting are run in parallel—engaging the entire value chain.

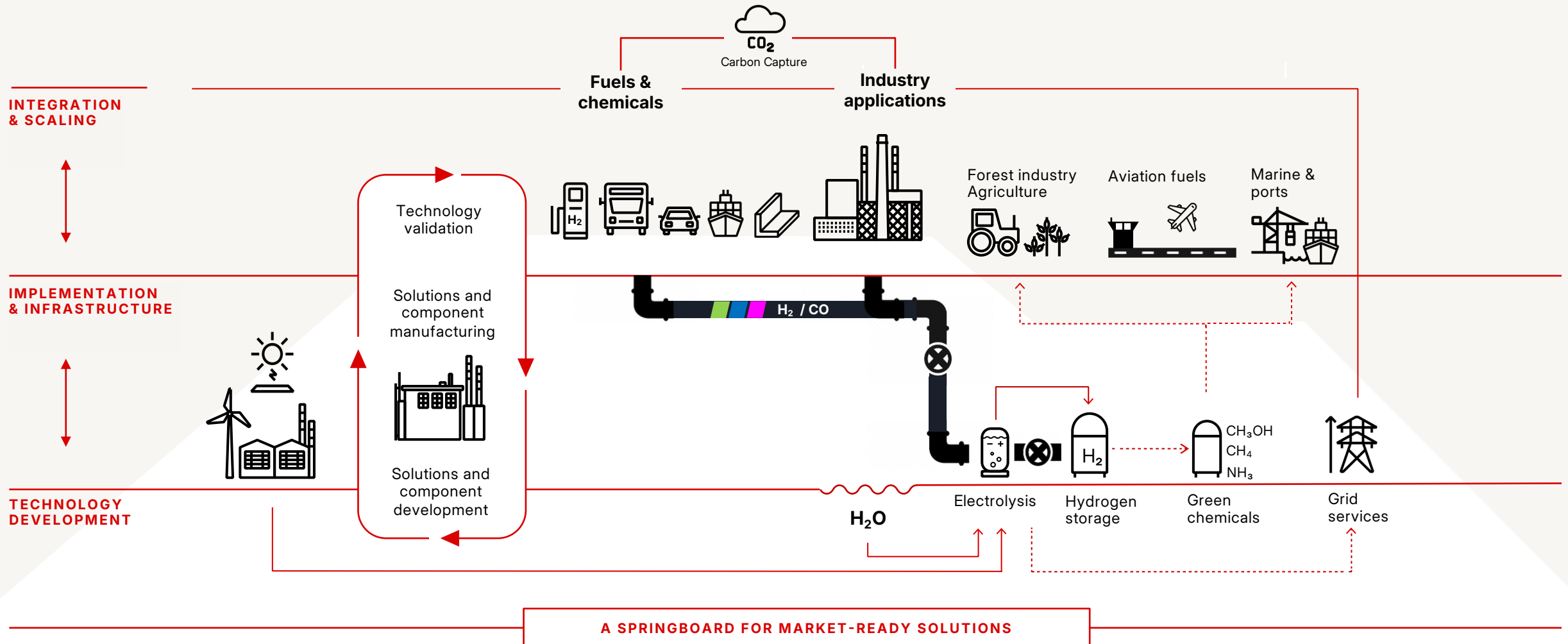
By accelerating development cycles, **time to implementation is reduced to a fraction**, enabling exponential progress in capturing the value of the hydrogen economy.

The solutions created in the ecosystem are modular, standardized, **and immediately scalable to markets**, allowing industrial companies to make high-impact investments faster and more cost-effectively than ever before.

The Springboard model for generating exponential speed in the ecosystem



New hydrogen solutions are developed and validated by the whole value chain – as close to real markets as possible



H2 Springboard aims for exponential speed in developing hydrogen technology and the hydrogen economy

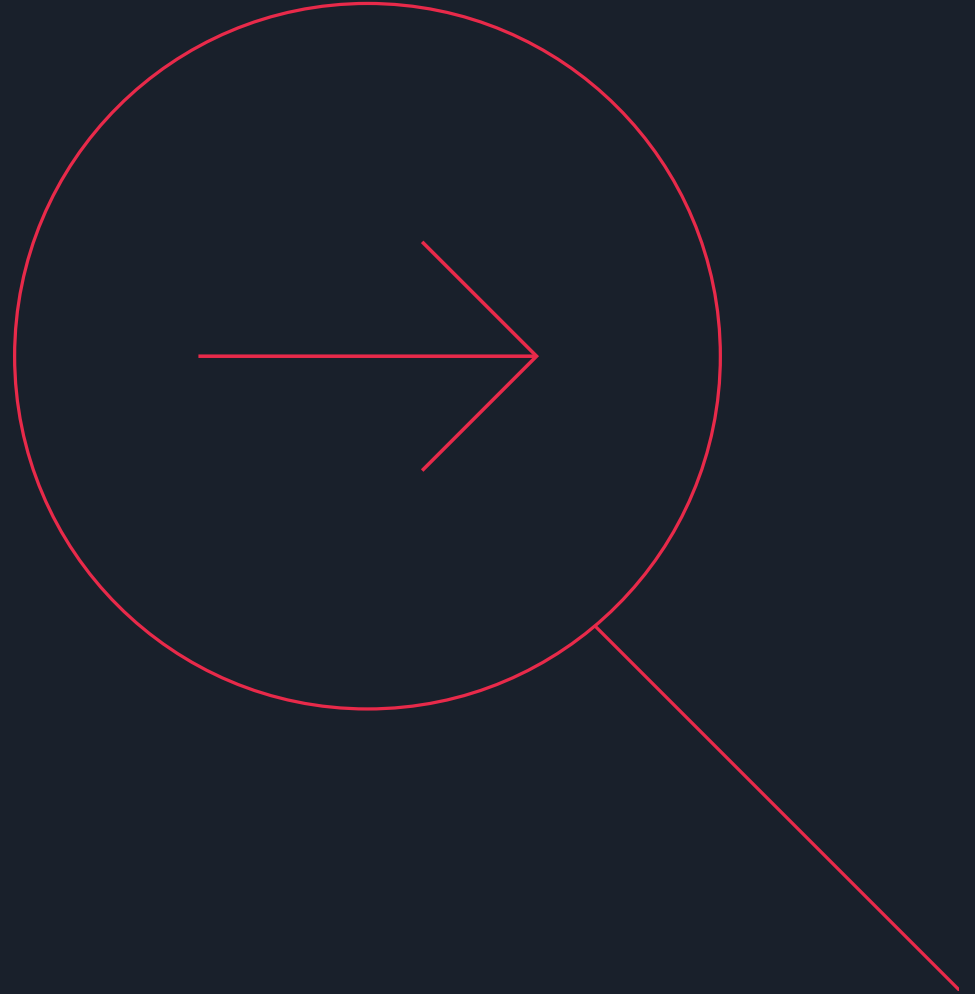
Establish Finland
as the world's most
competitive
platform for H2
technology
developers

Generate
significant growth
and opportunities
for partners

Accelerate the
clean transition,
building industrial
and societal
resilience

02

The Roadmap to Competitive Hydrogen



The Roadmap to Competitive Hydrogen

The viability of the H2 economy requires capitalizing on new approaches to cost efficiency. The roadmap of the program is developed jointly, with unique opportunities to research, develop, and market new technology solutions.

1

Flexible H2 subsystems
and technologies

2

Affordable and resilient
energy transfer across grids

3

Modular electrification for
scalable H2 economy

4

Optimized production
facilities and manufacturing

5

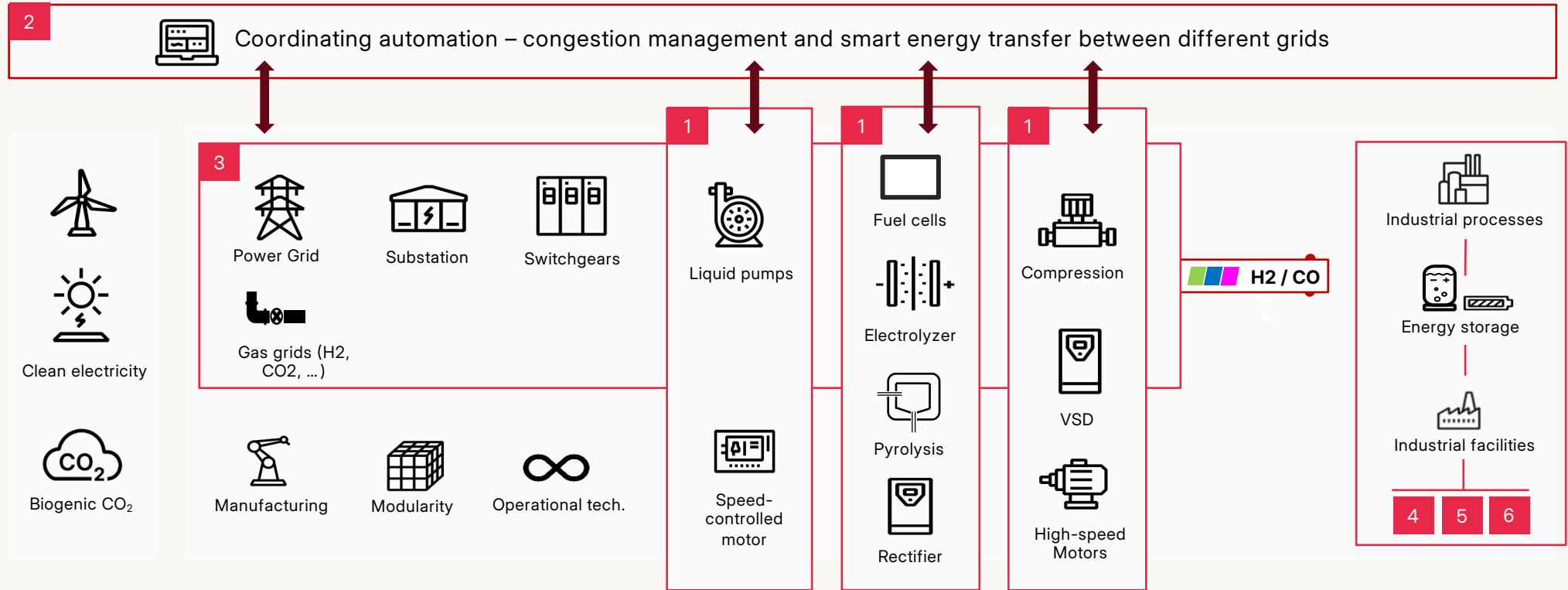
Technology disruptions
by science

6

Ecosystem pilots for
acceleration and scaling

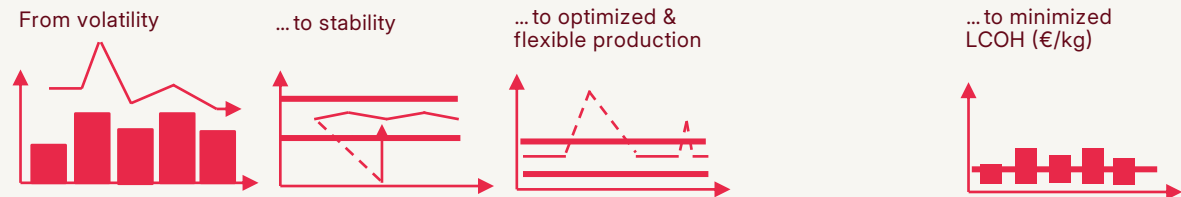
The Roadmap to Competitive Hydrogen

TARGET: MINIMIZING LEVELIZED COST OF HYDROGEN



- 1 Flexible h2 subsystems and technologies
- 2 Affordable and resilient energy transfer across grids
- 3 Modular electrification for scalable h2 economy

- 4 Optimized production facilities and manufacturing
- 5 Technology disruptions by Science
- 6 Ecosystem pilots for acceleration and scaling



1

Flexible H2 subsystems and technologies

Today, many hydrogen economy subsystems are either too expensive to manufacture, operate or maintain, or they do not align with the dynamic needs of the renewables-based energy systems.

A viable hydrogen economy requires consideration of the economics of scalable and cost-efficient technology architectures for hydrogen production, storage, and transport systems.

Building active, flexible, and intelligent subsystems help balance the overall energy system when it is most needed—both at the request of grid operators and with entirely new economic models for operators.



Affordable and resilient energy transfer in grids

Expanding the clean energy system solely by increasing electricity grid capacity carries the risk of costly overinvestments in energy transfer infrastructure. Therefore, strategic consideration of all energy transfer mediums is pivotal to driving down the costs of hydrogen and its derivatives.

Affordable hydrogen (~\$2/kg) requires an entire energy system built on orchestrated coordination between different grids (electricity, H₂, and CO₂) to minimize capital investments in energy transfer. Cost-effective designs are being developed, to ensure the grids actively balance each other.



Modular electrification for scalable H2 economy

Currently, most systems needed for the hydrogen economy are tailor-made with minimal regard for standardization. Achieving extreme cost-efficiency warrants collaboration—enabled by H2 Springboard—to develop standardized, modular blocks that can be combined to cost-effectively build large-scale hydrogen production and use systems.

Modular solutions can significantly shorten the lead time of investment projects and reduce costs compared to traditional RDI.

4

Optimized production facilities and manufacturing

A viable hydrogen economy is built on intelligent production, storage, and transport systems that enable the economics of flexibility, system resilience, and critical safety.

The focus lies on implementing advanced production plant concepts that optimize energy use and integration. Additionally, new manufacturing models and concepts are being explored.



Technology disruptions by science

New and disruptive initiatives are needed to address the profitability challenges related to the hydrogen economy.

Guided by the Roadmap to Competitive Hydrogen Economy, the H2 Springboard Ecosystem collaborates with leading scientific institutions and startups to identify new solutions for reducing the levelized cost of hydrogen.

The initial project pipeline is planned during the early phases of the ecosystem—the technologies to be used in the future must be developed today.



Ecosystem pilots for acceleration and scaling

Many hydrogen economy technologies and concepts are still in their nascent phases. Practical applications must be tested, piloted, and validated—not just theorized in the lab.

H2 Springboard actively engages with partner projects to scale new concepts to industrial levels. The production-scale projects serve as testbeds for new technologies and studies.

The H2 Springboard partners explore opportunities to apply for suitable funding instruments, such as the Innovation Fund, to scale these solutions to industrial capacity.

03

Creating the world's
most competitive H2
technology development
environment in Finland

Our Partners dare to think differently

Led by ABB, H2 Springboard enables grid operators (electricity, H2, CO2), industrial end-users, system integrators, technology developers, investors, and research institutions to collaborate on an unprecedented scale.



The overall volume of H2 Springboard's project portfolio runs at

€150M+

Investments by leading partner ABB:

€50M

Investments by ecosystem partners:

€50–100M

€50M

support for ecosystem partners from Business Finland. Funding decisions are made on the estimated impact of the innovation and how it fits the shared roadmap. Business Finland also supports ABB's investment with **€20M**.

H2 Springboard is the most effective way for companies to capitalize on the full business potential of the hydrogen economy and its role in the clean transition.

Technology developers and **researchers** become part of a dynamic ecosystem with networks, funding, validation environments, and a fast track to market for hydrogen innovations.

Industrial companies can validate and implement high-impact investments in a risk-controlled environment faster and more cost-effectively than ever before.

Investors get access to some of the most compelling clean transition technologies, while the co-creation model swiftly validates the potential of emerging solutions, reducing investment risks and accelerating market readiness.

Finland is uniquely positioned to be the world's most competitive platform for hydrogen technology developers.



Finland has every reason to accelerate the H2 economy

The national commitment to reach carbon neutrality by 2035 is only possible by adopting carbon capture and hydrogen technologies.

What's more, hydrogen has the power to add value across the entire Finnish industrial landscape: steel, chemicals, paper and maritime must decarbonize quickly to stay competitive.

100k+ €34B+

new jobs by 2035
(240k by 2045)

added value to the economy by 2035, of which €20B is attributed to technology and services. (€69B by 2045)

*Source: [H2 Cluster Finland](#)

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— time to grow

Led by ABB, H2 Springboard facilitates joint projects between technology developers, implementors and investors.

Read more at H2Springboard.com

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