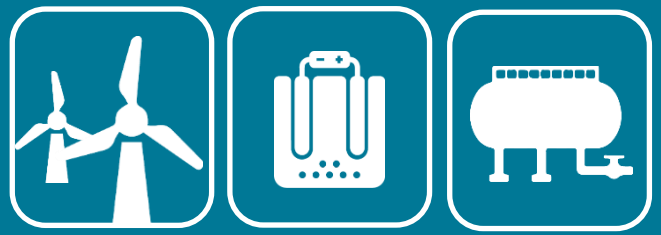
Market shaping – What is it about?

- Improvement of current market or creation of new market
- The goal is to create a favorable business environment
- Market shaping requires deep understanding of the players and the mechanisms in the market and how to cooperate and influence them
  - Operational environment
  - Key stakeholders' and value chains' needs and expectations
  - Potential resistance
- Market shaping approach helps companies and ecosystem actors to produce **a common roadmap and an implementation plan for the necessary activities**, possible and feasible to influence and develop in the markets and operational environment

GreenE²

SYSTEMIC CHALLENGE: THE ENERGY TRANSITION

H_2 PRODUCTION, INFRASTRUCTURE AND UTILISATION



DEPLOYMENT OF P2X & CCU SOLUTIONS

SECTOR INTEGRATION TECHNOLOGIES AND VALUE CHAINS

ENHANCED SYSTEM LEVEL EFFICIENCY & SECURITY

H_2 PRODUCTION, INFRASTRUCTURE AND UTILISATION

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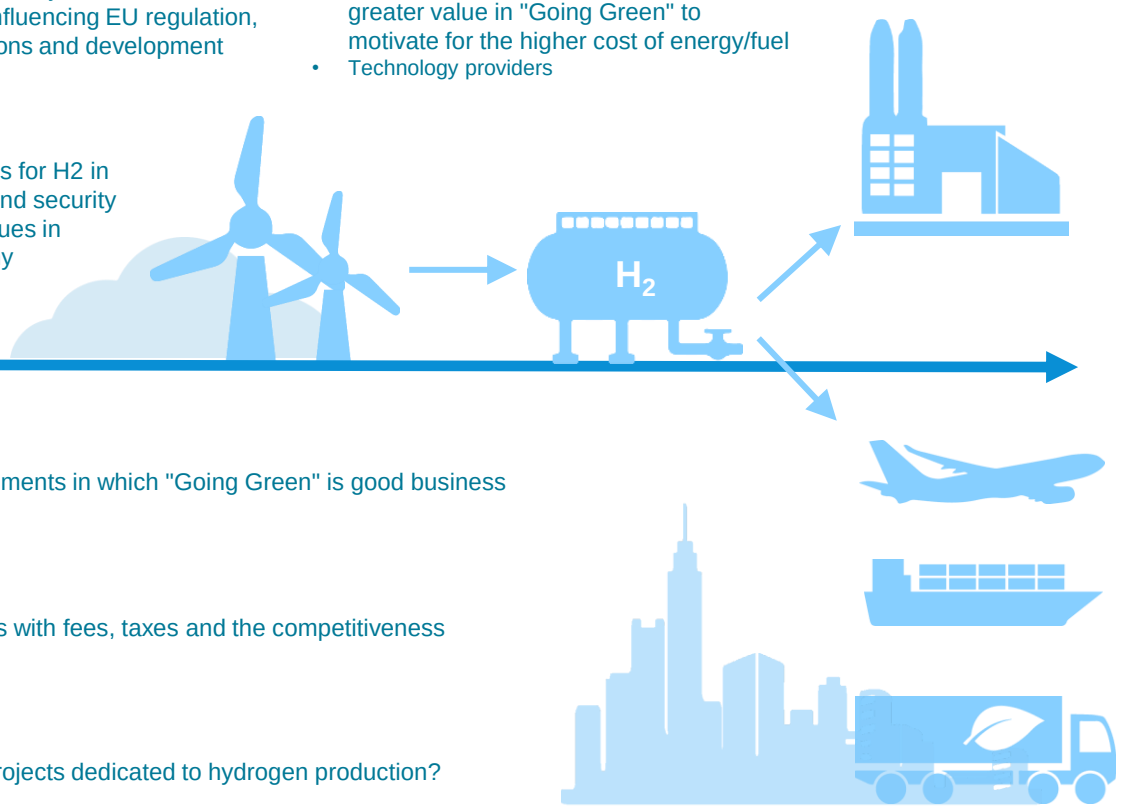
Timeline 2022	What needs to be shaped?	How?
FACILITATE DEVELOPMENT OF AN ENABLING BUSINESS ENVIRONMENT - Regulation - Technical standards - Infrastructure - Value chains & networks	**NEED 1** Create an enabling regulatory framework	**NEED 1** • Regulations on distribution of Hydrogen or similar forms and grid injection limitations across countries. Influencing EU regulation, regulatory discussions and development • In a market economy the end customer, the one who is paying have to see a greater value in "Going Green" to motivate for the higher cost of energy/fuel • Technology providers
	NEED 2 Safety and security Safe transportation, storaging and operating of hydrogen. Rules, certifications and standars needed as well as training and risk mitigation	**NEED 2** • Similar safety rules for H2 in EU level. Safety and security very important issues in hydrogen economy
ACTIVATE POSITIVE SPIRIT ON THE MARKET - Understandable terminology - Symbols for raising awareness - Active media for information sharing - Customer preferences and behaviour	**NEED 3** Fees and taxes	**NEED 3** • Identify market segments in which "Going Green" is good business
	NEED 4 Clear classification of low-carbon or green hydrogen	**NEED 4** • We need to link this with fees, taxes and the competitiveness
	NEED 5 Securing green electricity for hydrogen production	**NEED 5** • New wind power projects dedicated to hydrogen production?



DEPLOYMENT OF P2X & CCU SOLUTIONS

GreenE²

Timeline 2022	What needs to be shaped?	How?
FACILITATE DEVELOPMENT OF AN ENABLING BUSINESS ENVIRONMENT - Regulation - Technical standards - Infrastructure - Value chains & networks	**NEED 1** Create an enabling regulatory framework	**NEED 1** • Engage private sector in the preparation work of new legislation by e.g., co-producing policy recommendations and white papers with industries to support the public authorities in their work. Address key missing items or restrictions from the current regulation. • Join relevant roundtables for regulation in Europe to influence EU-level regulatory discussions and development.
	NEED 2 Create common practices for permitting	**NEED 2** • Take in best practices from international projects and create clear instruction for permitting for local authorities • Organize sharing and learning sessions with regions
	NEED 3 Create common operational & rescue practices to secure safety in hydrogen value chains	**NEED 3** • Engage industries and rescue services into co-creation and sharing of best practices • Take in learnings from international projects
ACTIVATE POSITIVE SPIRIT ON THE MARKET - Understandable terminology - Symbols for raising awareness - Active media for information sharing - Customer preferences and behaviour	**NEED 4** Create acceptance among general public	**NEED 4** • Create customer attraction methods for green solutions by utilizing e.g., advertisement & communication campaigns and also price incentives Openly disseminate co-created safety protocols for hydrogen

2025

SECTOR INTEGRATION TECHNOLOGIES AND VALUE CHAINS

GreenE²

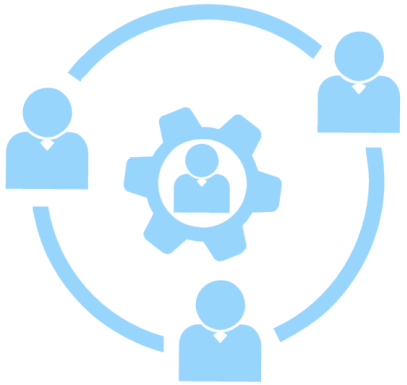
Timeline 2022	What needs to be shaped?	How?
FACILITATE DEVELOPMENT OF AN ENABLING BUSINESS ENVIRONMENT - Regulation - Technical standards - Infrastructure - Value chains & networks	**NEED 1** Value chains (many) **NEED 2** Market for very different types of energy storages **NEED 3** Digital platform, a common marketplace **NEED 4** Smart EV integration to the power System **NEED 5** Future CHP: Role, Fuels, Power grid & DHC coupling, Heat pumps **NEED 6** Financing and predictable legislation	**NEED 1** • Research organizations: Value chain analyses, e.g., side streams, waste heat utilization, etc. **NEED 2** • Aggregators between the existing actors – every stakeholder should win **NEED 3** • RDI projects, promote digitalization • IT startups based on utilization of big data, IoT, etc. **NEED 4** • Digital platform, requires RDI. • Smart EV charging as first step, V2G follows **NEED 5** • Centralized / distributed heat pumps & storage **NEED 6** • Messages to decision-makers. Big picture needed • GreenE2 Comms group + Energy industry associations
ACTIVATE POSITIVE SPIRIT ON THE MARKET - Understandable terminology - Symbols for raising awareness - Active media for information sharing - Customer preferences and behaviour	**NEED 7** Simple information to the public: Goals, simple language, repetition, use of examples **NEED 8** Reward customers for providing flexibility to the system	**NEED 7** • Easy to use products, market communication about benefits, practical examples **NEED8** • Demand-response, incentives to customers for using their premises / buildings as heat storage • EV-batteries as flexibility assets of the power grid • Local energy communities & efficient urban solutions

2025

ENHANCED SYSTEM LEVEL EFFICIENCY, RESILIENCE & SECURITY

GreenE²

Timeline 2022	What needs to be shaped?	How?
FACILITATE DEVELOPMENT OF AN ENABLING BUSINESS ENVIRONMENT - Regulation - Technical standards - Infrastructure - Value chains & networks	**NEED 1** Creating an enabling environment for data exchange	**NEED 1** • Develop standards eg. Gaia X • Identify revenue generation streams and business models
	NEED 2 Understand end user needs regarding telecom standards from energy market	**NEED 2** • Better collaboration with telecommunication researchers and energy experts
	NEED 3 Identify owners for cyber physical systems	**NEED 3** • Governance and regulations
	NEED 4 Transparency , forecasting and clear roles forenergy market	**NEED 4** • Digital twin pilots for Finnish energy ecosystem
	NEED 5 Flexibility	**NEED 5** • Platforms for integrating prosumers
	NEED 6 Data Forecasting	**NEED 6** • Usage of data for managing volatility
ACTIVATE POSITIVE SPIRIT ON THE MARKET - Understandable terminology - Symbols for raising awareness - Active media for information sharing - Customer preferences and behaviour	**NEED 7** Communication about flexibility	**NEED 7** • Create a communication plan and strategy for prosumers • Models for forecasting consumption, production and pricing



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