
Guidelines to create strategy for Power-to-X projects

The current energy crisis has accelerated the need to produce, store and distribute green energy. Power-to-X solutions are developing at an incredible speed, which creates unique possibilities for renewable energy. The speed and the technical complexity of Power-to-X give rise to many strategic challenges e.g., attracting external funding and bringing different stakeholders together to ensure the right mix of competencies and resources.

In collaboration with Hydrogen Valley, Strategic Management Lab works with several companies to identify the strategic challenges companies face and to support the development of strategic plans when making Power-to-X solutions. The collaborating companies are from various industries and share the ambition to create better and more sustainable energy solutions. In this process, the companies are experiencing some common (strategic) challenges:

- Developing and prototyping Power-to-X solutions require significant capital investments from either external funding or investors which can be difficult to obtain due to the experimental stage of the technology
- Transforming the technological knowledge into customer value requires a focus on commercialization which is often overlooked in highly specialized technology development
- Risk assessment is necessary to ensure continuous evaluation of the project and the consequences of the strategic choices
- Power-to-X requires collaboration between several partners and for this to succeed the partners must be open and share knowledge which is often a challenge in technology-based companies
- The value chain of Power-to-X solutions requires multiple stakeholders who are specialized in one part of the value chain while also maintaining a holistic view of the process as a whole

These challenges must be addressed through the strategic competencies which are often limited in small- and medium-sized technology-driven companies. The challenges can be addressed by working strategically with the following guidelines:

- Develop a business case where the economic potential is clarified and the need for financial resources is explicated
- Build scenarios to identify uncertainties and establish strategic awareness
- Outline a business model that communicates both the technical aspects and the value for customers and external stakeholders
- Map out the necessary partners and external stakeholders that are required for the solution
- Identify potential gaps in internal competencies and create an organizational structure for the project

If you need help in your strategic work with Power-to-X, you are welcome to contact Strategic Management Lab, AAU Business School

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