

An isometric illustration of a hydrogen valley facility. The scene includes wind turbines, solar panels, industrial buildings, a ship, a train, and various vehicles. A large white cloud is in the top left. A colorful dotted line forms a circular shape around the 'Clean Hydrogen Partnership' text. The background is a deep blue gradient.

Clean Hydrogen
Partnership

Setting up Hydrogen Valley project organizations

Hydrogen Valley Facility

2025

Roland
Berger

The H2V Facility delivers dedicated support to hydrogen practitioners via PDA services, the H2V Knowledge Centre and the H2V Platform

The Hydrogen Valleys Facility

h2v.eu

Dedicated support via the **Hydrogen Valleys Facility** by



1 Project Development Assistance

Provision of dedicated Project Development Assistance (PDA) for Hydrogen Valleys projects towards Final Investment Decision



2 H2V Knowledge Centre

Sharing & dissemination of knowledge and provision of capacity building for the broader hydrogen community

3

H2V Platform



Maintenance & extension of the Hydrogen Valley Platform to enhance its positioning as the global one-stop-shop for hydrogen flagship projects

Delivery partners

Roland Berger 

 worley

 Inycom

Aspirational target

2030

50

Hydrogen Valleys
operational/under
construction

within the EU 

This document is part of the H2V Knowledge Centre that offers hydrogen practitioners knowledge material in written and interactive formats

The H2V Knowledge Centre



Structure and scope of the H2V Knowledge Centre

Self-service Knowledge Material

Commercial



Technical



Regulatory



Valley governance



- Knowledge material specifically developed as part of the H2V Facility project
- Links and information to other third-party resources and material

Interactive Formats

- Webinars with content experts (Roland Berger, Worley and external speakers)
- Project Development Assistance experience sessions with Hydrogen Valley practitioners

Target audience



Hydrogen Valleys



Project developers



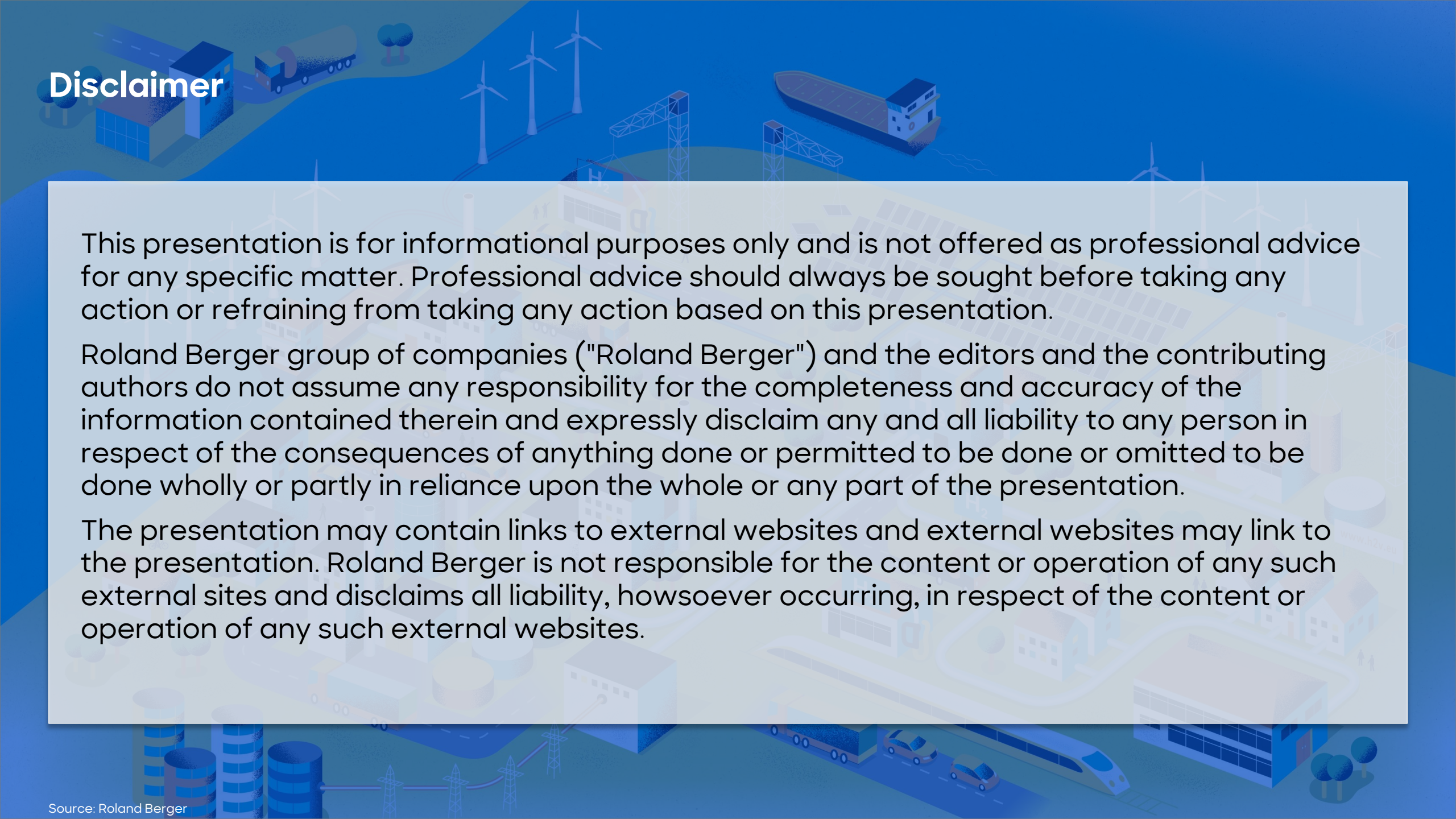
National, regional and local authorities



Investors



Other hydrogen practitioners



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This document aims to provide hydrogen practitioners with an understanding of key organizational principles of pre-FID project organizations

Key objectives and content of this document

Key objectives



Get to know **pre-FID
organizational
principles** for
Hydrogen Valley project
organizations

Key content



Key organizational principles, capabilities and activities for pre-FID hydrogen project organization



Set-up of pre-FID project organizations

Contents

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An isometric illustration of a clean hydrogen ecosystem. It features a network of blue pipes connecting various facilities. On the left, there are wind turbines and a large white cloud. In the center, there are industrial buildings, storage tanks, and a parking lot with cars. On the right, there are residential houses, a bus, and a train. A large ship is docked at a pier. The text 'A. Organizational principles for the set-up of project organizations' is overlaid in the center. The background is a deep blue gradient.

A. Organizational principles for the set-up of project organizations

Clean Hydrogen
Partnership

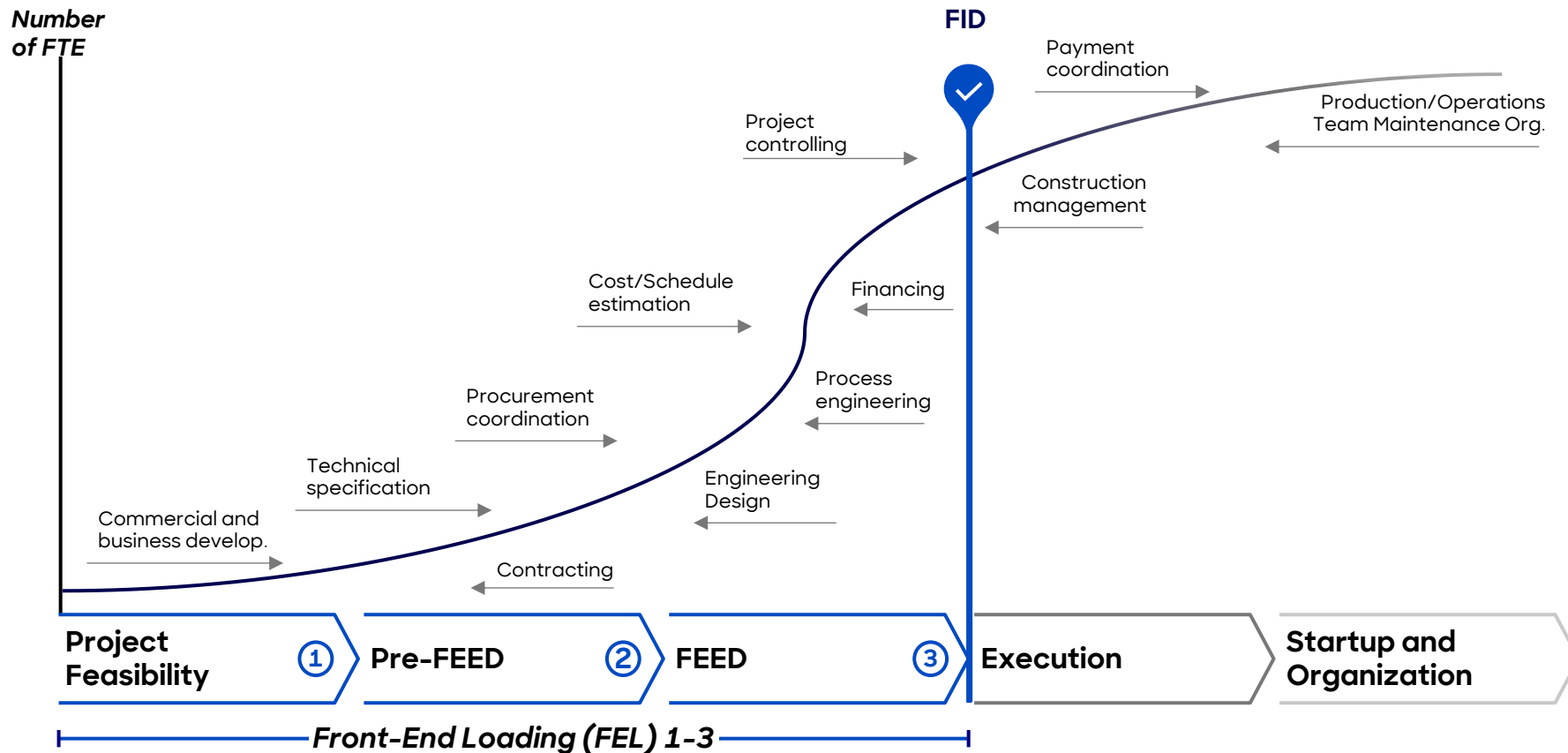
The set-up and development of pre-FID Hydrogen Valley project organizations can be enabled by seven key factors

Key principles for pre-FID project organizations

- | | | | | | |
|----------|--|---|----------|---|--|
| 1 | Early ramp-up of core owner team | Develop core owner team as soon as there is reasonable chance that a project will develop to ensure technical input for decision makers from the earliest point forward | 5 | Task force structures | Develop a task force structure for teamwork of different workstreams adapting team over project lifecycle |
| 2 | Clear responsibilities and roles | Define clear roles and responsibilities of key personnel that take into account the activities of the respective project phases of Hydrogen Valley development | 6 | Prominent reflection of key activities | Prioritize mission critical tasks (e.g., permitting, political alignment) also in the design of the organization, e.g., through creation of dedicated workstreams |
| 3 | Appropriate team sizing & fitting | Ensure that the core team is equipped with sufficient resources. Make sure the organization size fits the required tasks of different project phases | 7 | Maximum limitation of corporate steering | Prevent corporate steering of the project by shareholders as they have different targets and drivers – Breaking off direct links contributes to a smooth project execution |
| 4 | Maximum team continuity | Maintain team continuity, esp. in the leadership team to make sure knowledge and experience is retained in the organization | | | |

Typically, pre-FID project teams are temporary and dynamic as different project phases have different demands in terms of capabilities and activity focus

Evolution of project activities over time

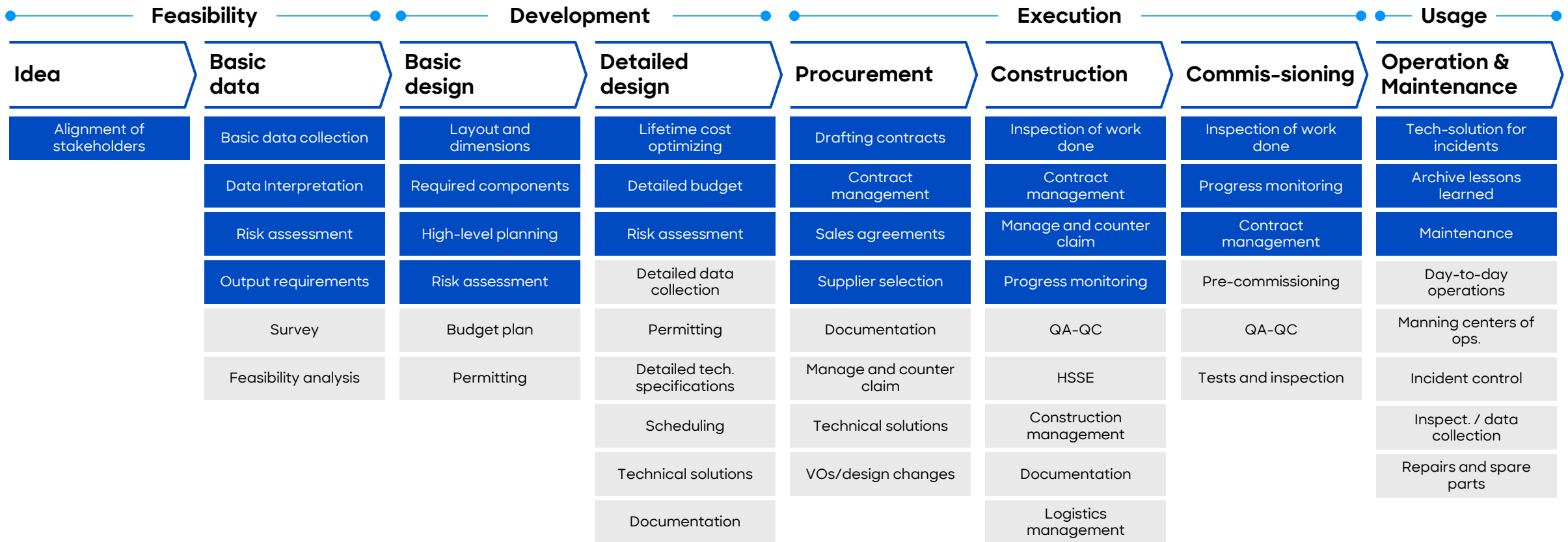


> Comments

- Project teams are typically temporary and dynamic and should be gradually ramped up and sized down according to the project activities in scope
- Generally, team formation starts in FEL-1 and remains small to be gradually ramped up until FID
- The exact team size and set-up highly depends on the project scope and activities – There is no "one size fits all" solution

Along the hydrogen project lifecycle, a number of core activities are typically performed inhouse by the project developer/owner

Activities along the project lifecycle^{1), 2)}



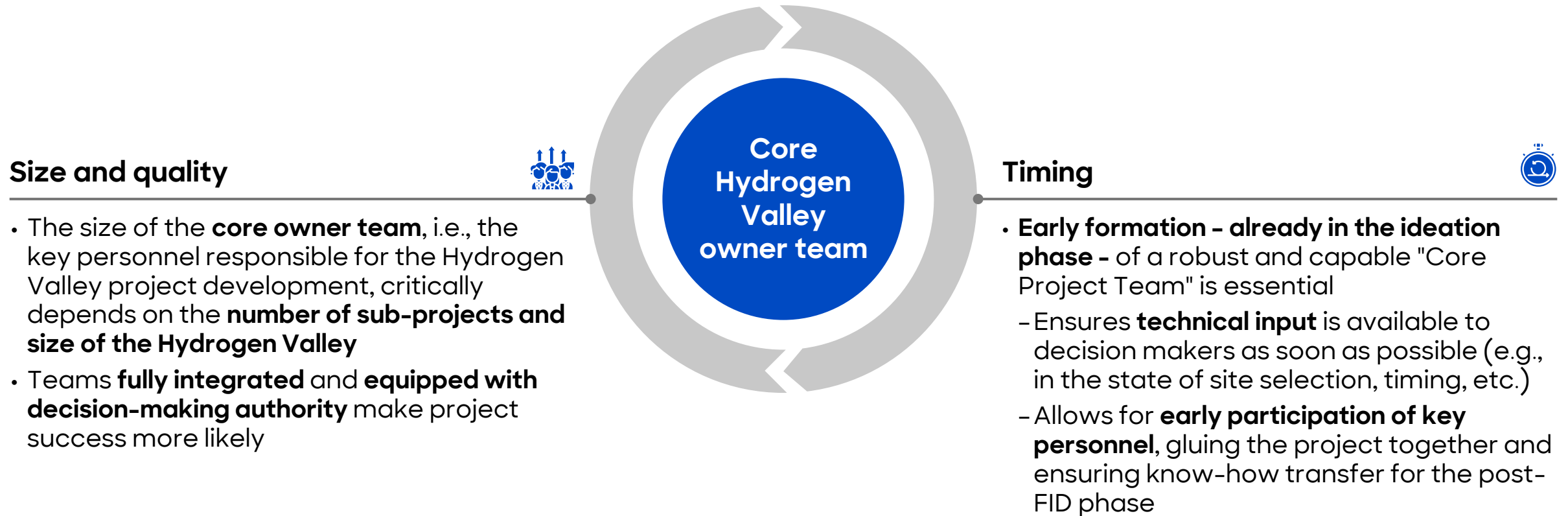
■ To be typically performed inhouse ■ To be considered for outsourcing

1) Excluding back-office support such as HR, communication, IT etc.

2) Activities can be listed multiple times

The core owner team of the Hydrogen Valley project should be formed early on to ensure the advancement of key activities along the project lifecycle

Timing of team formation and team size of core owner team



An isometric illustration of a clean hydrogen ecosystem. It features a network of blue pipes connecting various components: wind turbines, solar panels, industrial buildings, residential houses, and vehicles. Hydrogen stations are marked with 'H₂' and a fuel pump icon. A large white cloud is in the top left, and a sign with 'www.h2v.eu' is near the houses. The background is a gradient of blue and green.

B. Set-up of pre-FID project organizations

A logo consisting of a semi-circle of colorful dots in yellow, orange, and red.

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Hydrogen Valleys can set up a pre-FID project organization by defining – based on the FID work plan – required capabilities and a corresponding organization

Methodology for designing pre-FID project organizations

For guidance on how to define a work plan until FID, please refer to [the document "Milestone Planning until FID"](#) within the governance section of the H2V Knowledge Centre



1
Definition of **work plan** towards FID

Key question

Which milestones need to be reached to take an FID?

2
Required **capabilities** to perform work plan until FID

Key question

Which capabilities are required to reach the milestones towards FID?

3
Required **project organization**, roles and functions

Key question

What does that mean for the organization, roles and functions?

Focus of this chapter

There are three options to acquire the capabilities for the owner team - An inhouse owner team is crucial for Hydrogen Valley project development

Options to acquire required capabilities for owner team

	Internal build-up of capabilities	Independent consultant (ICs)	Project man. consultancy (PMC)
	Build-up of an inhouse owner team by hiring experienced professionals	Temporary insourcing of specialized capabilities by hiring of independent consultants	Outsourcing of (most of) the owner team activities by hiring of an external team
Speed Time needed to recruit and contract FTE	●○○	●●●	●●●
Sustainability Creation of long-term capabilities internally	●●●	●●○	●○○
Cost efficiency Total contracting costs given skill levels	●●●	●○○	●○○
	↓	↓	↓
Overall assessment	+ Full alignment with objectives, build-up of long-term capabilities, low cost - Difficulties to find suitable skills, time invest needed to build up team	Highly qualified personnel, fast build-up of selected capabilities Lack of continuity, potential conflicts of interest (principal-agent problem)	Fast build up of exhaustive and highly skilled capabilities Organizational complexity, high costs, no long-term capability build-up

○○○ n/a ●○○ low ●●○ medium ●●● high

Depending on the specific scope of the Hydrogen Valley project a broad variety of capabilities is required in the five key workstreams towards FID

Required capabilities to reach FID

Capabilities strongly depend on specific scope of Hydrogen Valley!

	Commercial	Technical	Polit., reg. & permitting	Finance	Project management
 Typical milestones to FID	- Offtake agreements signed - Other relevant agreements along the value chain signed - Business case approved	- FEED results validated - Construction tender(s) advanced - Surveys conducted	Major permits advanced or already received	- Financing plan approved - Bankability validated	- Consortium partners onboarded - Post-FID execution plan in place - Legal structure established
 Required capabilities	- Deep understanding of gas and H₂ market dynamics - Market analysis expertise - Experience in designing business models - Relationship building competence - Commercial negotiation experience - Financial modelling skills - Cross-functional capabilities for close collaboration w/ technical	- Technical project management experience - Contractor management experience (e.g., for FEED study) - Various engineering disciplines incl. process, mechanical, electrical, civil, safety and environmental - Scheduling expertise to prepare construction - Procurement expertise to tender and award engineering, EPC, services	- Deep regulatory understanding - Preferably an existing network to key stakeholders - Relationship building competence - Communication skills with public authorities - Permitting expertise	- Strong financial understanding - Public funding expertise - Deep understanding of equity and debt financing structures - Experience in investor identification, discussion, and JV creation - Project finance experience	- Project management excellence - Track record of project development - Outstanding leadership capabilities - Strategic thinking - Stakeholder management experience - Relationship building capabilities - Solid cross-functional understanding of all other workstream disciplines

The core owner team of a Hydrogen Valley can focus on three key roles, complemented by support functions

Typical roles and responsibilities of a core owner team

Commercial and Finance Manager	Governmental Affairs and Permitting Specialist	Technical and Engineering Specialist	Support functions
• Develop the overall commercial concept • Conduct market analysis • Identify and engage with key hydrogen offtakers • Develop and negotiate offtake and other agreements • Conduct business case modelling • Build and maintain strong relationships with Hydrogen Valley partners, equity investors and other capital providers • Originate, structure and execute project finance	• Identify and engage with local, regional, and national government representatives on a continuous basis • Manage external advisors • Develop a permitting strategy • Identify relevant permits and prepare permit application process • Manage and cooperate with legal advisors on relevant national and international (permitting) requirements, regulations, and compliance • Identify public funding opportunities	• Manage all technical activities, incl. engineering, QA/QC • Oversee the technical planning and development of the project, ensuring alignment with regulatory requirements and industry standards • Identify potential technical risks and develop mitigation plans • Manage the development activities with FEED contractors • Structure and coordinate tenders and awarding of contracts (engineering studies, services)	• Support functions as in every project company, incl. – Human resources – Accounting and Controlling – Communications & PR – Legal services for corporate and employment law

There are three main personnel sourcing options to form the core owner team of a Hydrogen Valley – High-profile experts, project nomads or local personnel

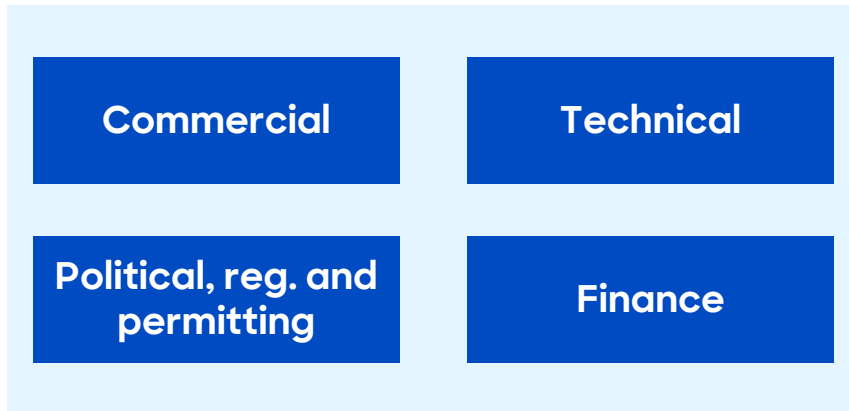
Personnel sourcing for the core owner team

	International high-profile experts	International project nomads	Local high-skilled project personnel
Description 	• Highly qualified project manager can bring required experience and competences to the project • However, few people can carry out this position and are expensive to hire	• Engineers and contractors with experience in comparable projects can carry out critical functions • Sourcing is easier due to project-based working relations of said group	• Skilled local staff can effectively and efficiently work in the workstreams • Recruiting from local labor market and national universities
Exemplary Roles 	• C-level roles (commercial, technical, finance, external affairs) • Senior Commercial Developer	• Key engineering personnel • Key commercial personnel • Key finance personnel • Governmental affairs	• Engineering experts • Commercial experts • Permitting specialists

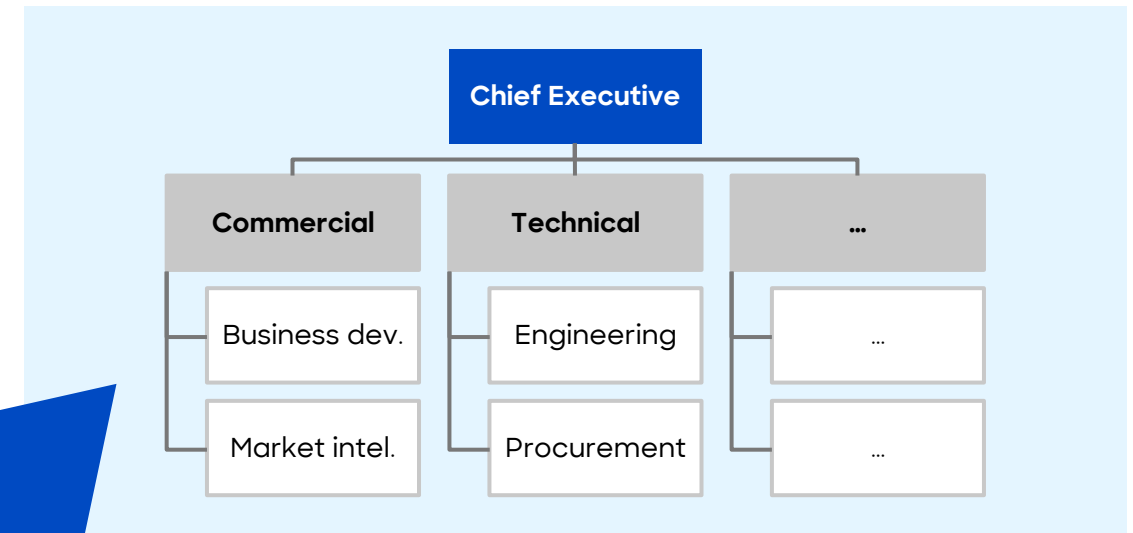
Based on the core owner team, a pre-FID organization can be developed and grown to the team capacity required to mature the project to FID

Gradual ramp-up of organization

1. Build-up core Hydrogen Valley team



2. Grow pre-FID organisation



Depending on the scope of the Hydrogen Valley project, different functions in the pre-FID organization might be relevant

Typical pre-FID organization functions

Project Management

- Project Manager
- Interface Management Coordinator(s)
- Project Controller

Commercial

- Commercial Expert
- Senior Business Developer
- Market Analyst
- Bid Manager

Finance

- Project Finance Manager
- Financial Analyst
- Compliance Officer
- Financial Advisors

Gov. affairs & permitting

- Government / Authorities Relations Manager
- Regulatory Affairs Manager
- Permitting Specialist

Technical & procurement

- Technical Manager
- Lead Engineer
- QA/QC Engineer
- Survey Engineer
- Procurement Manager

Support Services

- HR Manager
- Legal Counsel
- Accounting & Controlling Specialist

