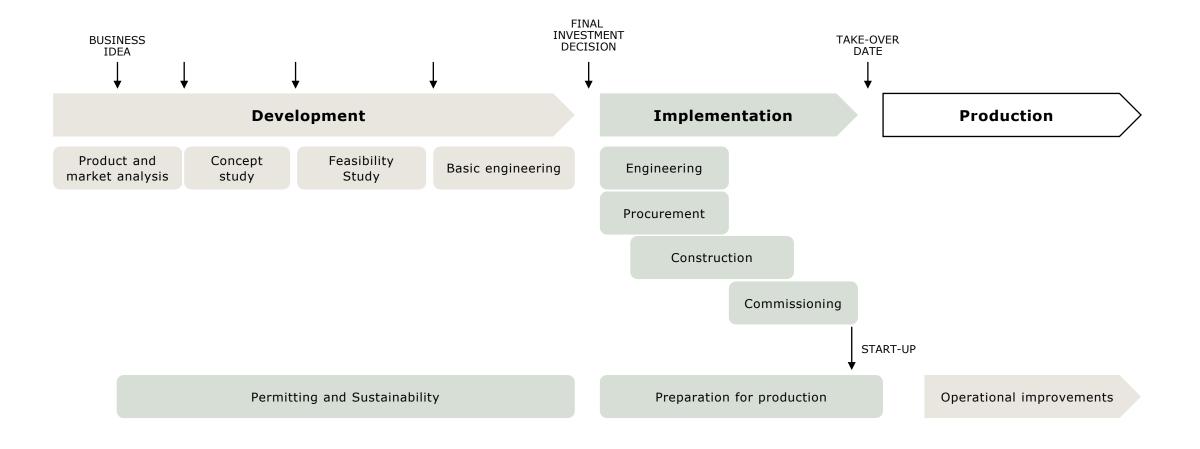
Projektikehityksen avaimet menestykseen

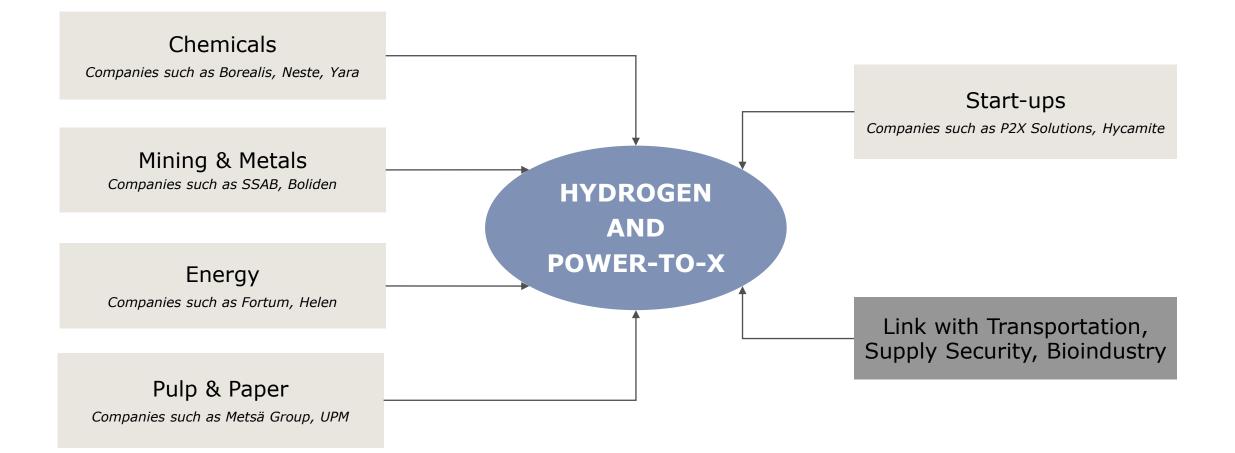


From Development to Start-up





Traditional Industries and Start-ups in Hydrogen Sector







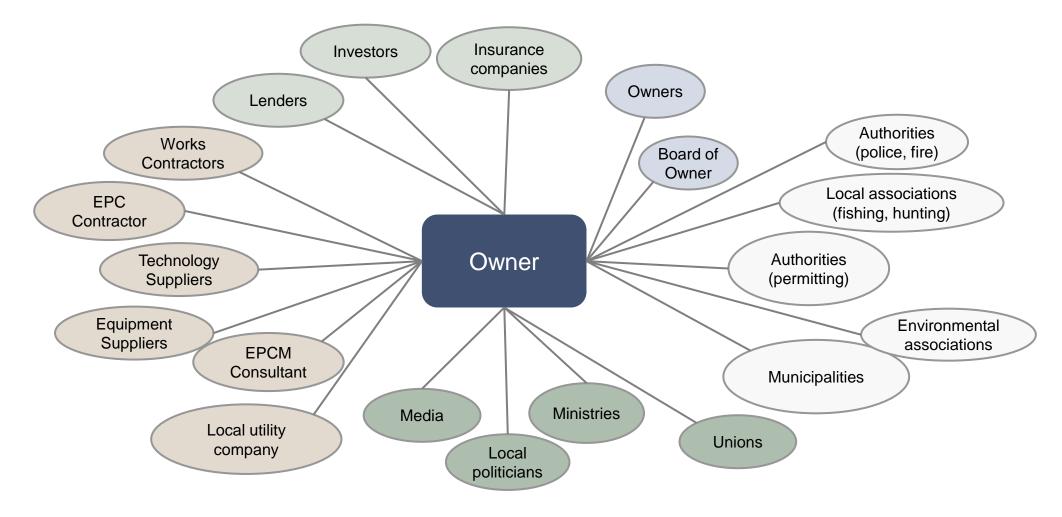
Every Project is the Same – But Unique

MAIN PROJECT FUNCTIONS

Project supervision Project management Engineering Procurement Construction Commissioning Project control Quality assurance Security management Project supervision Propert management Properation for operation Health, safety and environment Permitting

SAFETY - COST - SCHEDULE - QUALITY

Aligning with Various Project Stakeholders



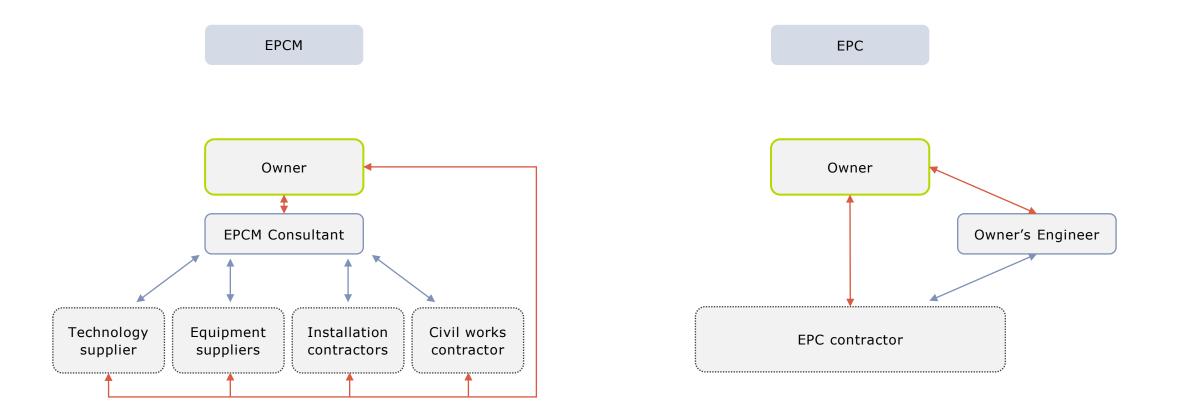


Selecting the Project Implementation and Contractual Method

ESS	= Extended Scope of Supply				
EPS	= Engineering	-Procurement	-Supply		
EPCM	= Engineering	-Procurement	-Construction M	anagement	
EPC	= Engineering	-Procurement	-Construction		
BOO	= Build	-Own	-Operate		
BOOT	= Build	-Own	-Operate	-Transfer	
BOT	= Build	-Own	-Transfer		
DB	= Design	-Build			
DBO	= Design	-Build	-Operate		
DBFO	= Design	-Build	-Finance	-Operate	
FBO	= Finance	-Build	-Operate		
FBOM	= Finance	-Build	-Operate	-Maintain	

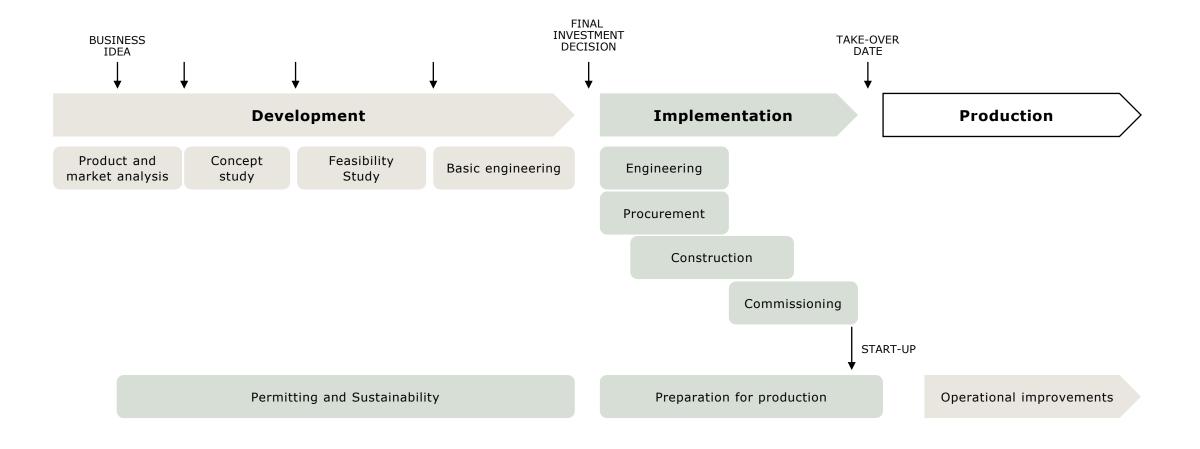


... for example Contractual Set-up in EPCM and EPC



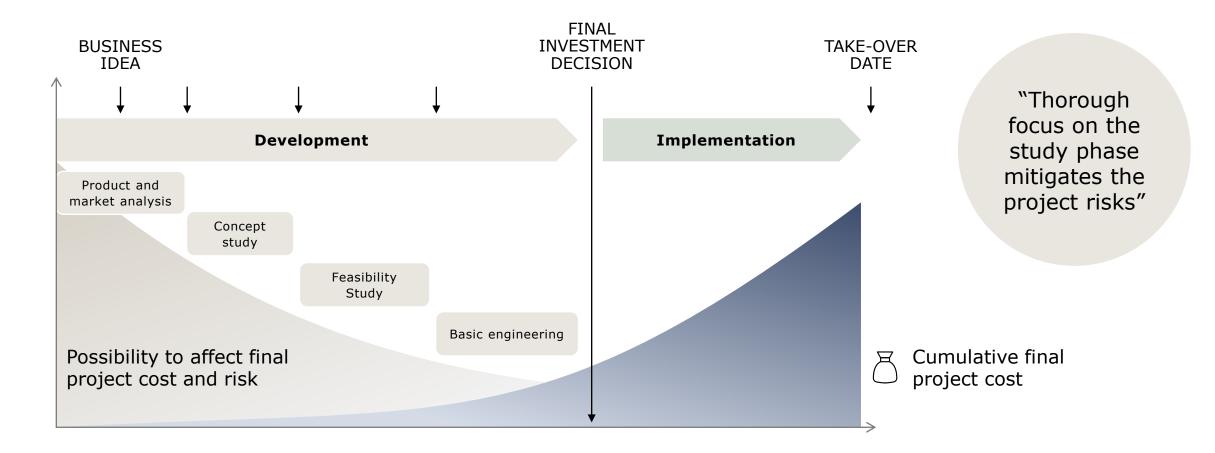


From Development to Start-up



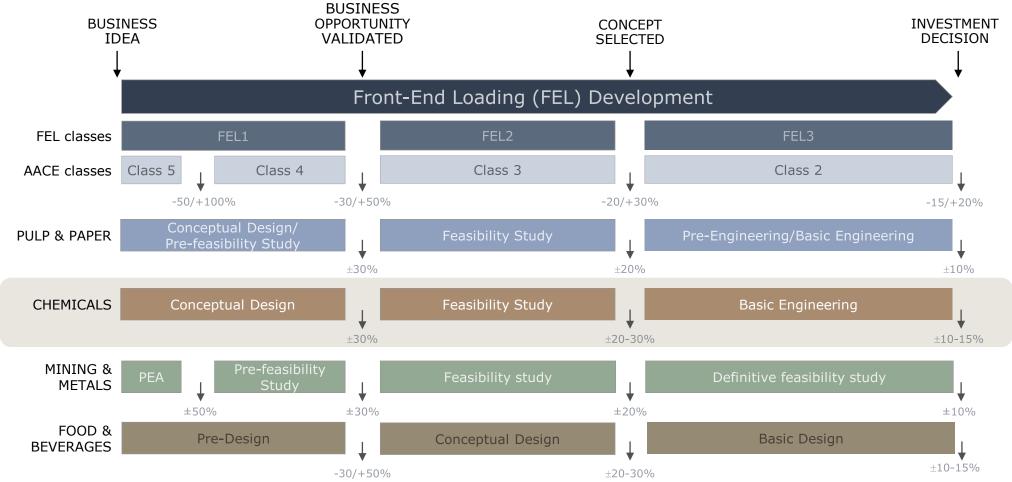


Focus on Development Phases





Various Terminologies for Study Phases





Elements of a Successful Project

SUFFICIENT AND	TRAINED AND QUALIFIED O&M ORGANIZATION		
Project development	Project implementation		Operation
Pre- and basic engineering	Detail engineering		Maintenance planning and performance improvement
Scheduling and budgeting	Procurement		Environmental and social responsibilities are in order
Selection of technologies	Scheduling and forecasting	SUCCESSFUL	Operation costs as planned
Defining and freezing the scope	Budget and cash flow follow-up	PROJECT	Capacity, quality and efficiency as planned
Standards and instructions	Construction and installation		Learning curve and availability as planned
Implementation plan	Capacity, quality, maintainability and performance		Good maintainability
Information management plan	ET / IT / OT coordination		Single source of truth for data
Safety in engineerin	g and implementation		Safety during operation



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