

A photograph showing a group of people in business attire gathered around a table. One person is pointing at a tablet displaying a pie chart and bar graphs. Another person is holding a pen over a notebook. The scene is brightly lit, suggesting an outdoor or well-lit indoor setting.

Enable projects, make sustainable investments

PROJECT FINANCE

GREEN HYDROGEN

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November 2023



01

Financing Objectives:
Project Development, Capex, Competitiveness

02

Project Development Funding

03

Project Financing Methanol: issues and options

04

Project Finance as a mechanism

05

Take Aways



01 FINANCING OBJECTIVES

- Project Development Funding: From Concept to Bankability
- Investment Funding: the big game
- Competitiveness: low cost funding

PROJECT DEVELOPMENT FUNDING

02 Project Development Funding



The Valley of Death

The typical project development process can take 1 to 3 years and require 5% to 10% of Total Investment Cost

Project Development Process

Conceptual Phase

- Business case
- Basic concept:
 - Technical
 - Economic
 - Financial
- Developer(s)
- Main Stakeholders
- Development roadmap

Pre-feasibility and detailed feasibility analysis

- Red-flag and fatal flaw analysis

Iterative process – from rough to detailed

- Resource assessment
- Site assessment
- Techno-economic concept
- Operation and Maintenance concept
- Production yield
- Offtake contract
- Financial yield
- EPC cost estimate
- Permitting roadmap

Project / Site qualification

- Geotechnical
- Topography
- Environmental & Social impact Assessment (ESIA)
- Permitting process
- Contract negotiations
 - Offtake
 - Feedstock
 - EPC
 - Land agreement

Equity:

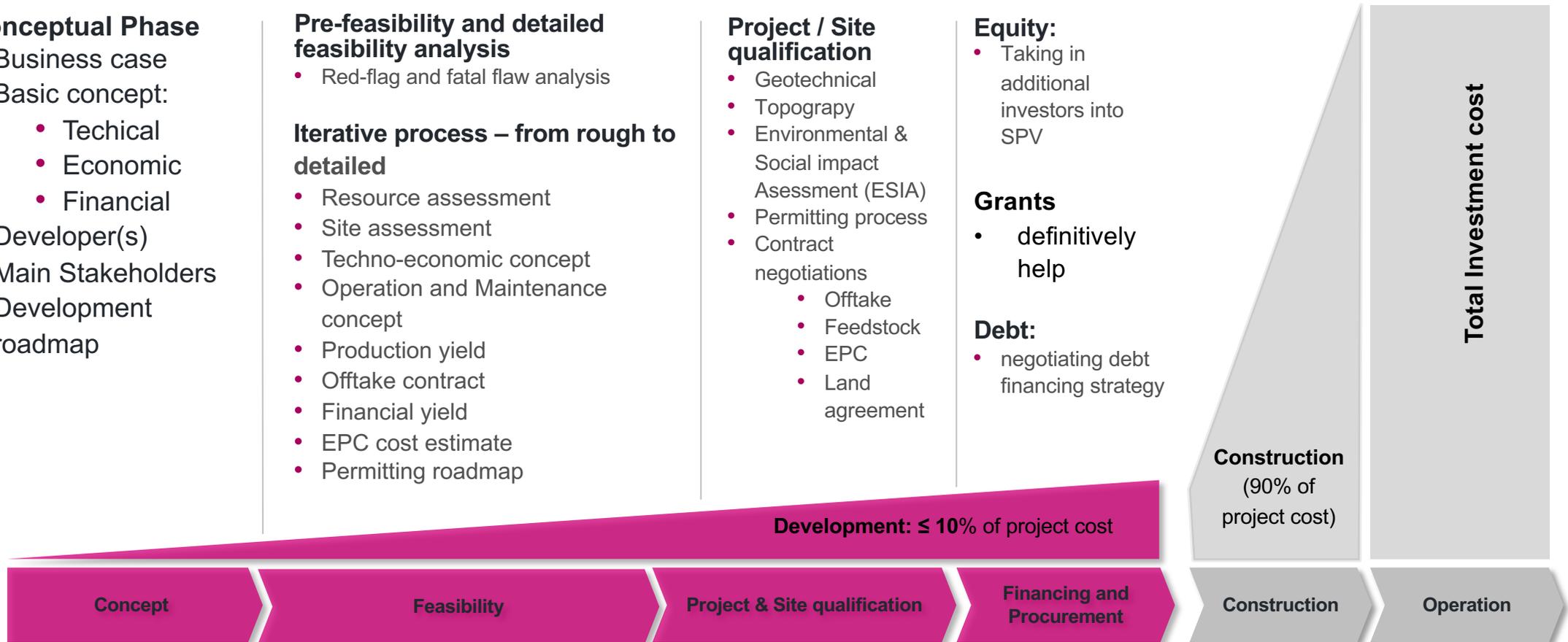
- Taking in additional investors into SPV

Grants

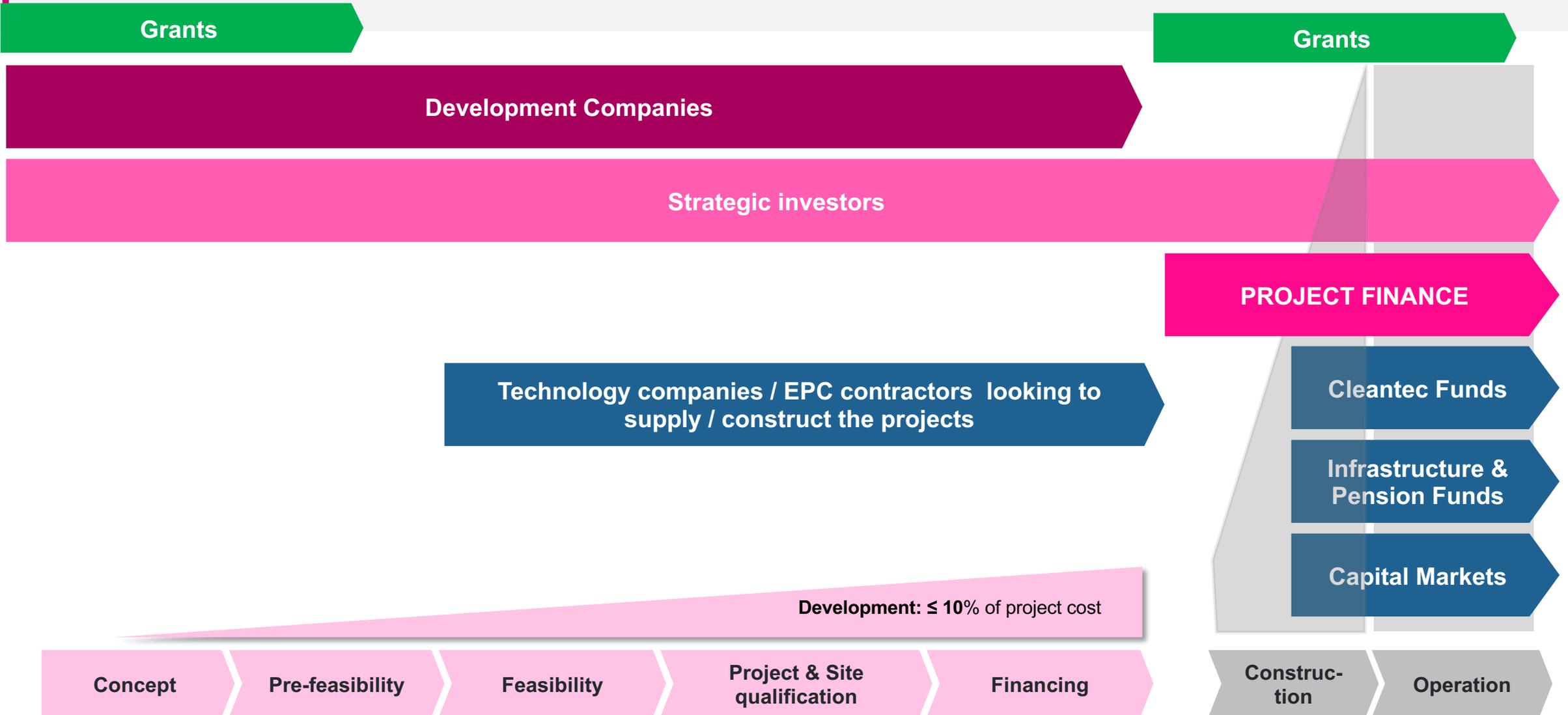
- definitively help

Debt:

- negotiating debt financing strategy



Project Development Phases & Financial Sources





Project Financing Methanol: Issues and Options

Photo by [Amadej](#)
[Tausas](#) on [Unsplash](#)



PROJECT FINANCE – Green Methanol

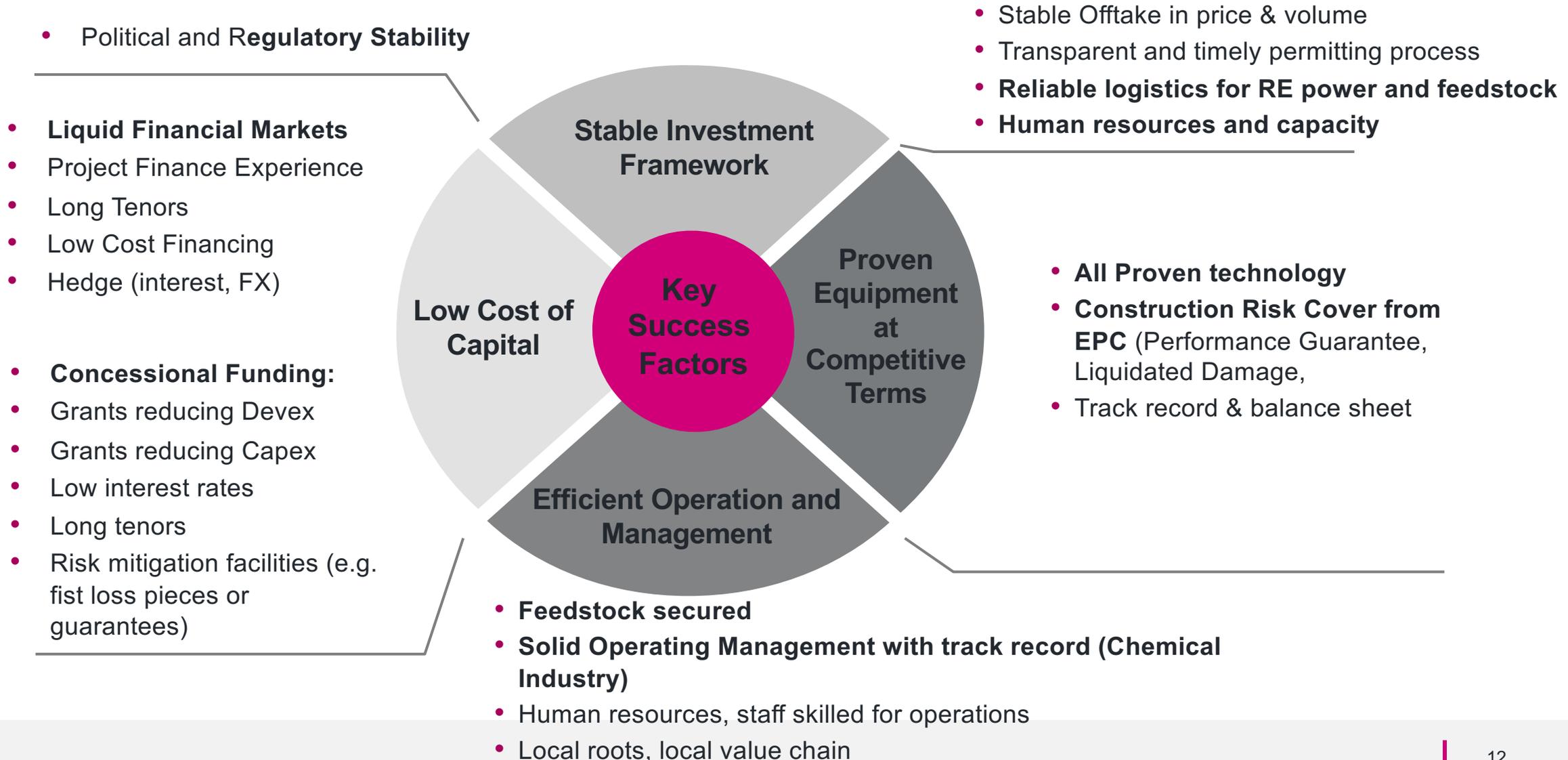
Why Project Finance?

- Mobilize large amounts of **debt**
- Obtain **long tenors** to increase competitiveness for solar energy
- **Leverage** investor's equity returns
- Economize **liquidity**
- Share investment **risk**
- Maintain certain **structural discipline** for project developers and sponsors

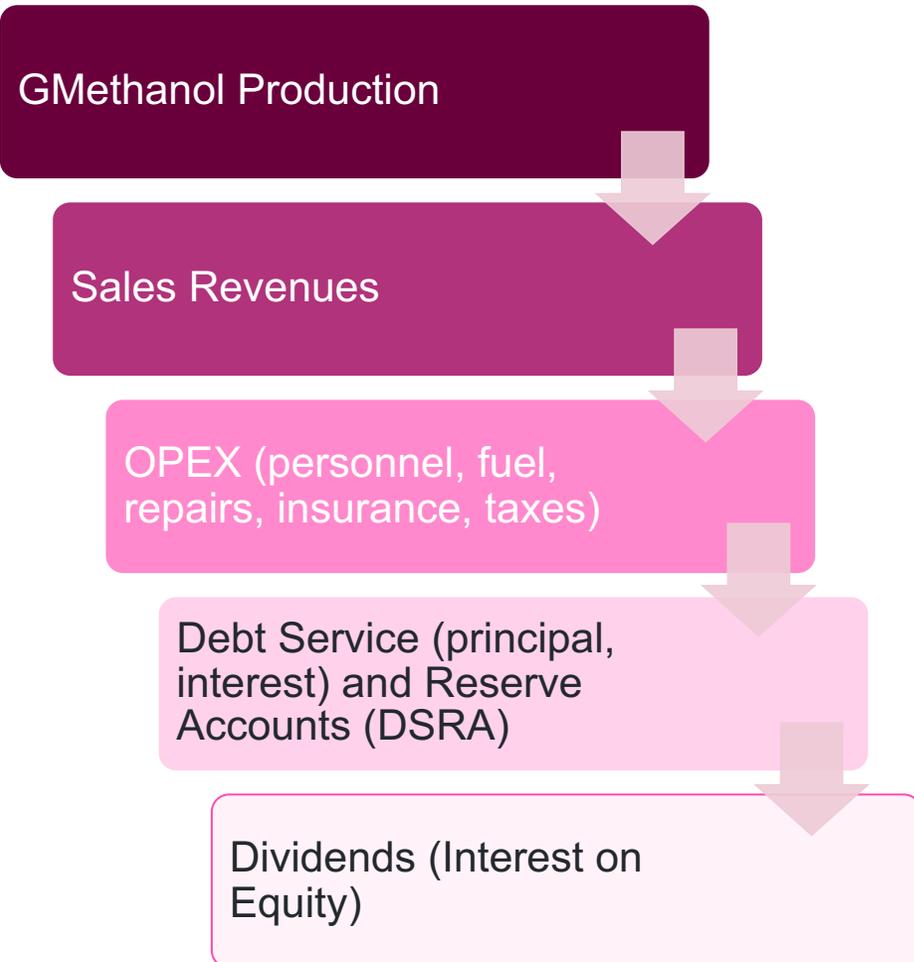


Project Finance enables medium and large Synfuel projects to scale up and make investments sustainable on a large scale

Green Methanol will need concessional financing to take off



Financial Modelling guides all the way through the Project Development and Financing Process



Some key figures and indicators:

Project IRR: Internal Rate of Return, without Debt

Equity IRR: Rate of Return for Investors

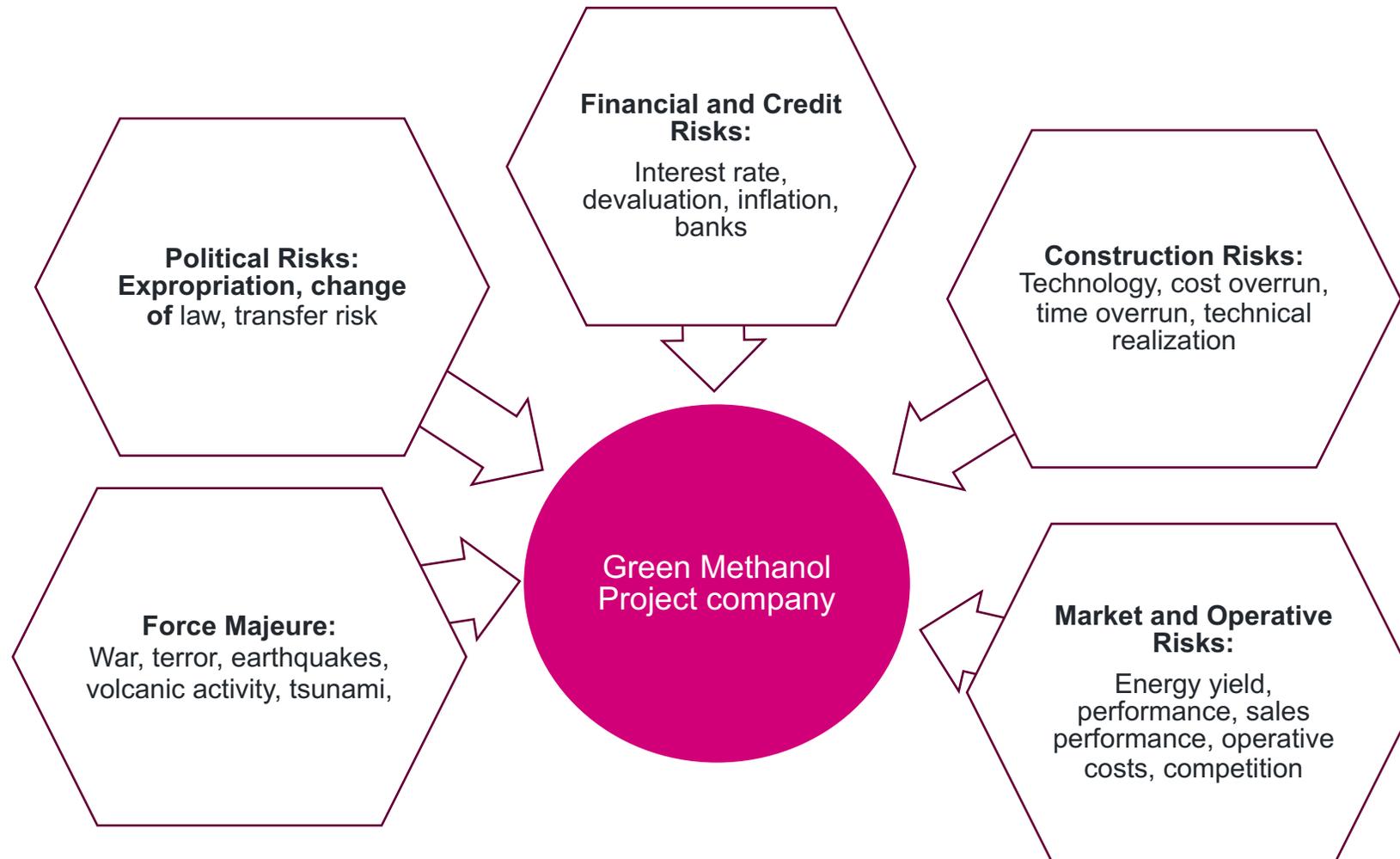
D:E Ratio (also gearing or leverage) it indicates **how much debt** is used to finance the project relative to the value of shareholders' equity

DSCR **Debt Service Coverage Ratio:** is the relation of cash available for debt service (principal and interests) and debt service

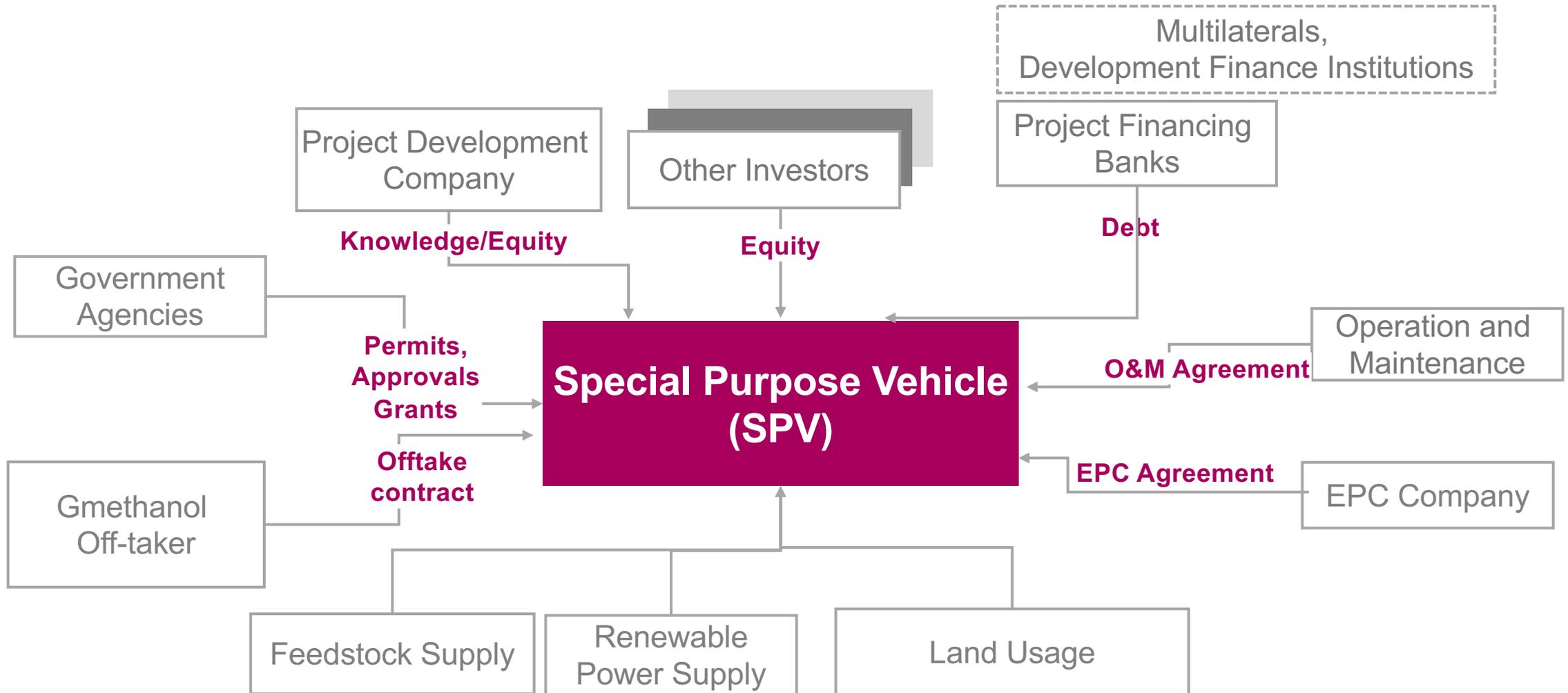
CFADS **Cash Flow available for Debt Service**

Cost of Product **Key indicator of competitiveness, e.g. USD/GJ or USD/to of green Methanol**

..and the various risks of the specific context of the renewable energy project...



Bankability: Each Risk allocated to a Party best able to handle it



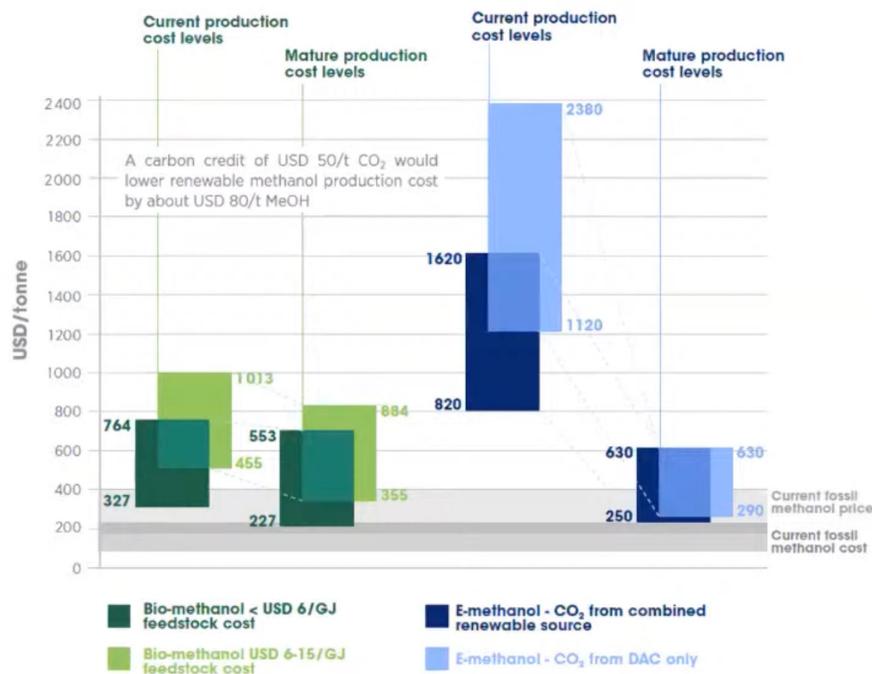
The Offtake Contract: Key bankability elements

- Offtaker creditworthiness
- Price fixed or tied/calculable over long tenor, e.g., 10 years, or enhancement structures (e.g. CFD)
- Volumes of green methanol fixed over contract time or calculable
- Certification as green methanol
- Risk mitigation: what happens if: risks 1), 2), 3)
- What if the project supplies the market?
 - Market risk
 - Cash cost plus as a minimum price -> lenders will evaluate long term minimum market cost for their revenues



The more competitive the product, the more reliable Project Cash Flows

Renewable methanol cost competitiveness



Source: IRENA and MI (2021) Innovation Outlook: Renewable Methanol

Fuel type	Price (USD/GJ)	
Fossil methanol	10.1-20.1	
Bio-methanol (current)	< USD 6/GJ feedstock cost	16.4-38.4
	USD 6-15/GJ feedstock cost	22.9-50.9
Bio-methanol (mature process 2030-2050) cost	< USD 6/GJ feedstock cost	11.4-27.8
	USD 6-15/GJ feedstock cost	17.8-42.4
E-methanol (current) cost	From combined renewable source	41.2-81.4
	From DAC only	67.8-119.6
E-methanol (mature process 2030-2050) cost	From combined renewable source	12.6-31.7
	From DAC only	14.5-31.7



TAKEAWAYS: KEY ELEMENTS FOR FINANCING GREEN METHANOL

1. Project Development Finance: prepped for the Valley
2. Financial Model: a GPS for the Walk in the Valley
3. Cost Competitiveness: essential for long term viability
4. Secure low cost, clean power supply, tailored to plant
5. Project Finance: mobilizing big money, sharing risks, low cost of capital
6. Key Contracts for bankability:
 - ❑ Long term, price defined Offtake
 - ❑ Feedstock supply
 - ❑ EPC
 - ❑ O&M
7. Financial facilities to further de-risk are catalytic – especially for first of its kind investments





VENTURE THE IMPOSSIBLE
TO ATTAIN THE BEST...

PROF. CLAUDE DORNIER