



ENERGY  
INVESTMENT  
MANAGEMENT

# FINANCING TOOLS FOR THE ISLAND ENERGY TRANSITION

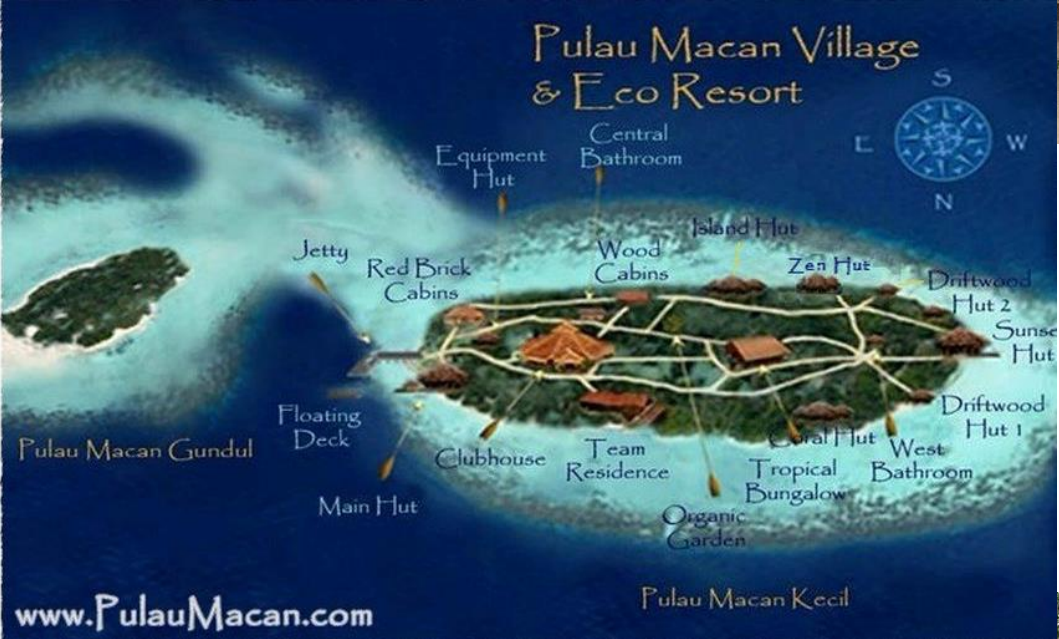
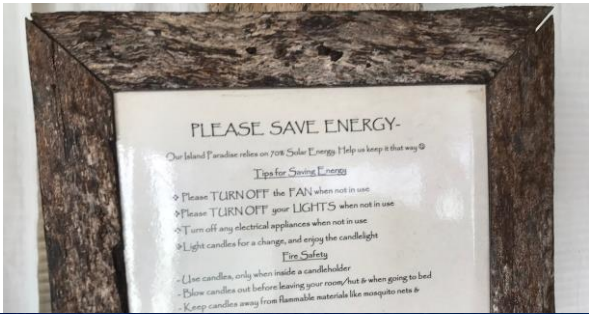
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- Sustainable Transition
- Sustainable Energy
- Sustainable Business Models
- Project life cycle
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- Q & A

# Sustainable Jakarta ...



# Sustainable Island Pulau Macan ...



# Sustainable Islands Program



Clean Energy  
for EU Islands



Site Visits  
Sustainable  
Islands

Research  
SBM ITB

Sustainable Islands

Research  
TU-Delft

EU SEW

Cooperation  
Delft – Athens –  
Jakarta


Enlit  
Asia

Multi Media  
Sustainable  
Islands





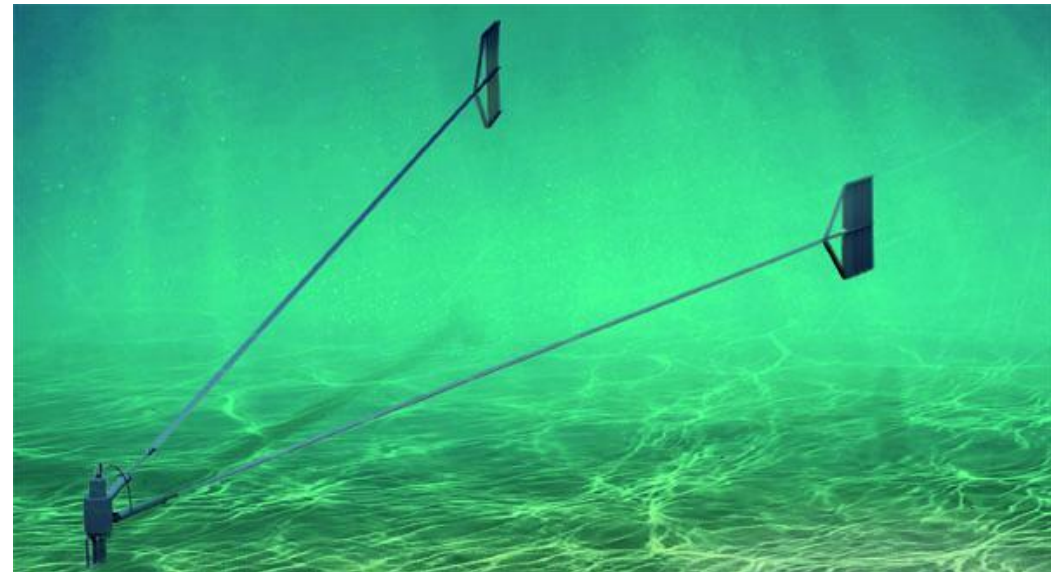
Which phase of your clean energy project is for you the most challenging to finance?

- 1 Orientation phase
  - 2 Project development phase
  - 3 Project realization phase
  - 4 Operational phase
- 

What is for you the most challenging to arrange for the business case of your project?

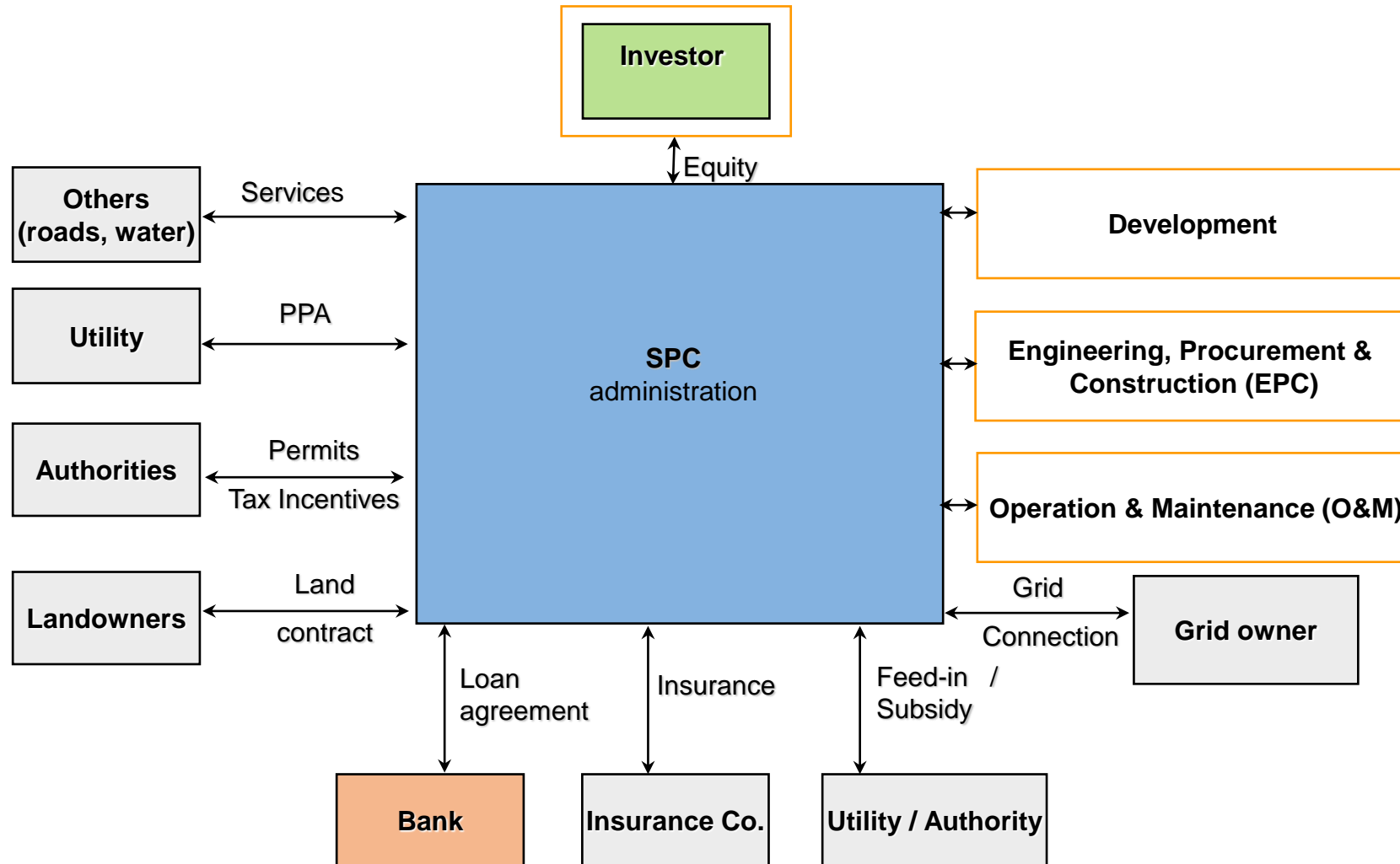
- 1 Subsidy
- 2 Investors/Equity
- 3 Junior debt/Mezzanine
- 4 Senior debt
- 5 Other

# Energy Asset Classes

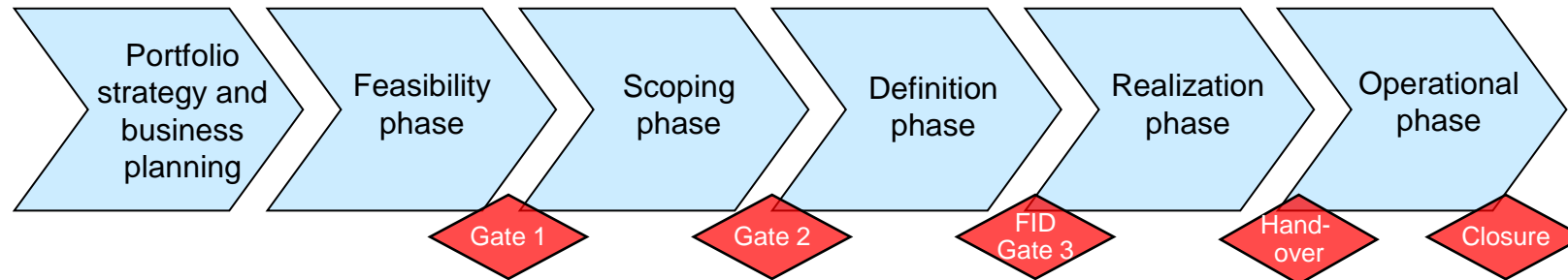




# Structuring of an energy asset in a SPC



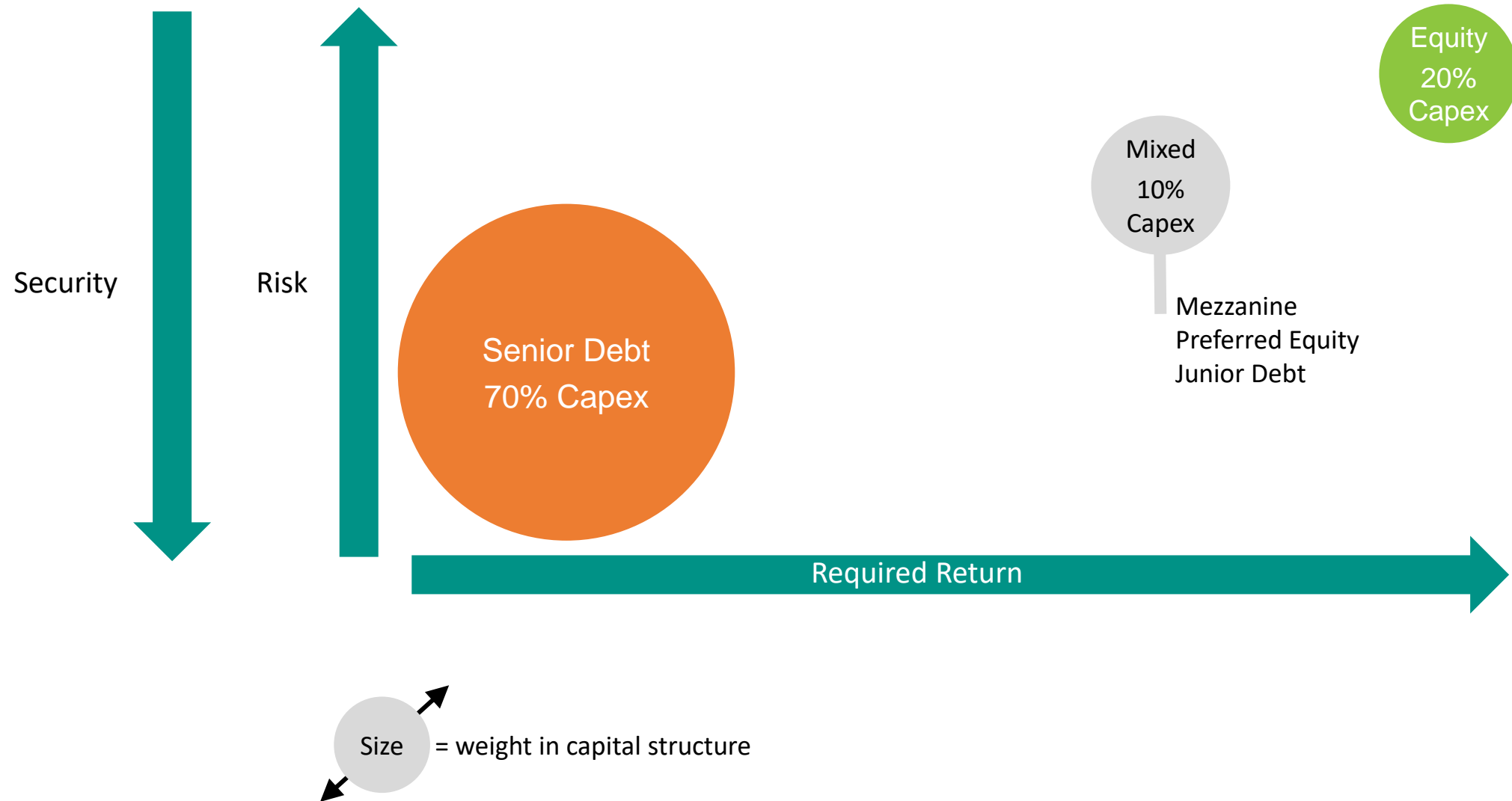
# Project lifecycle – overview



Six phases can be distinguished in the project lifecycle:

- |  |   |
|--|---|
| Portfolio strategy and Business Planning | : Select relevant activities for organization based on the long term strategy and scope |
| Feasibility                              | : Assess leads on their feasibility (identify show-stoppers)                            |
| Scoping                                  | : Select and optimize business opportunities  |
| Definition                               | : Define, negotiate and finalize contracts  |
| Realization                              | : Realization of the project (including commissioning)                                  |
| Operational                              | : Operational management of asset   |

# Capital layers in project finance structure



# Financiers count only the project revenues



Challenges of financiers:

project generates insufficient cash-flow during project life cycle:

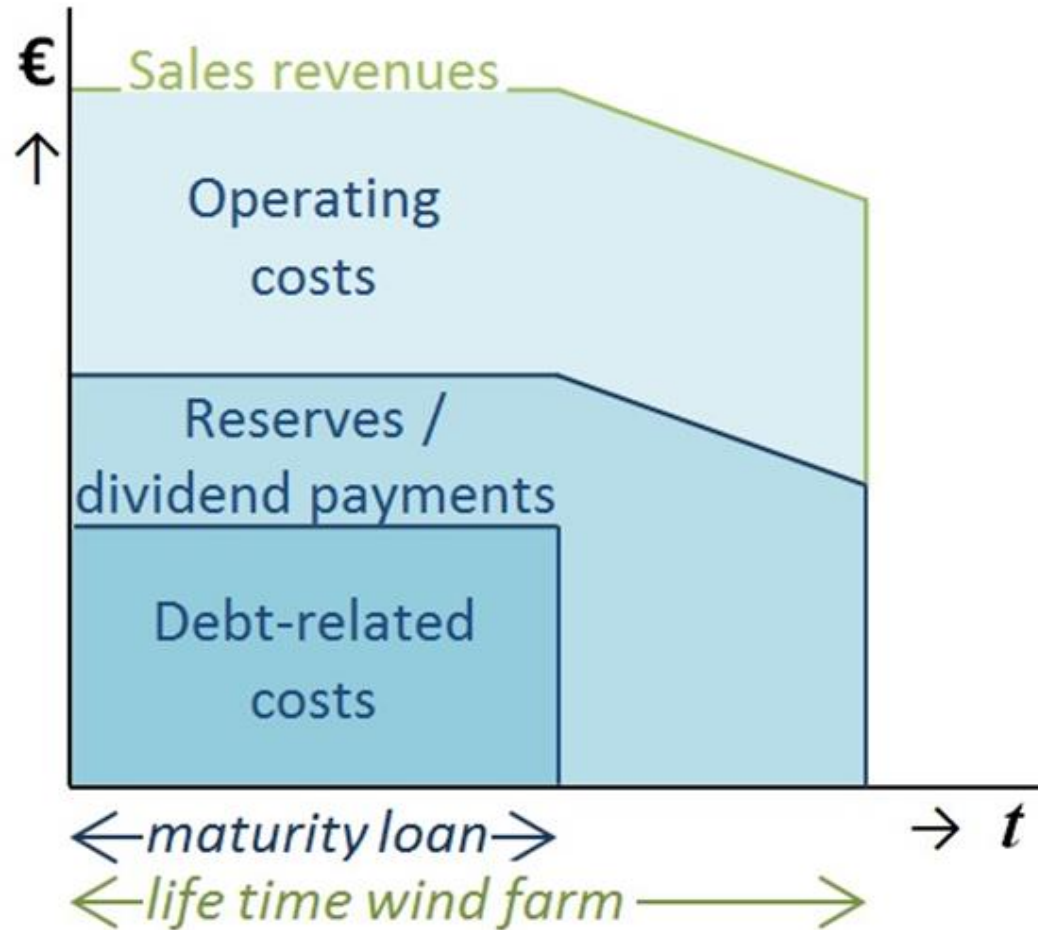
- Project cost for development, realization and operations
- Cash flow available for debt service (interest, debt repayment)
- Return on equity



Give confidence:

Insights in mitigation measures for risks that limit project revenues!

# Different financiers, different requirements



## Debt providers

- Requirements: project revenues  $>$  Interest + Debt repayment
- Main criteria: a minimum level of '*Debt Service Cover Ratio*' (DSCR): operational cash flow available / interest + debt repayment

## Equity providers

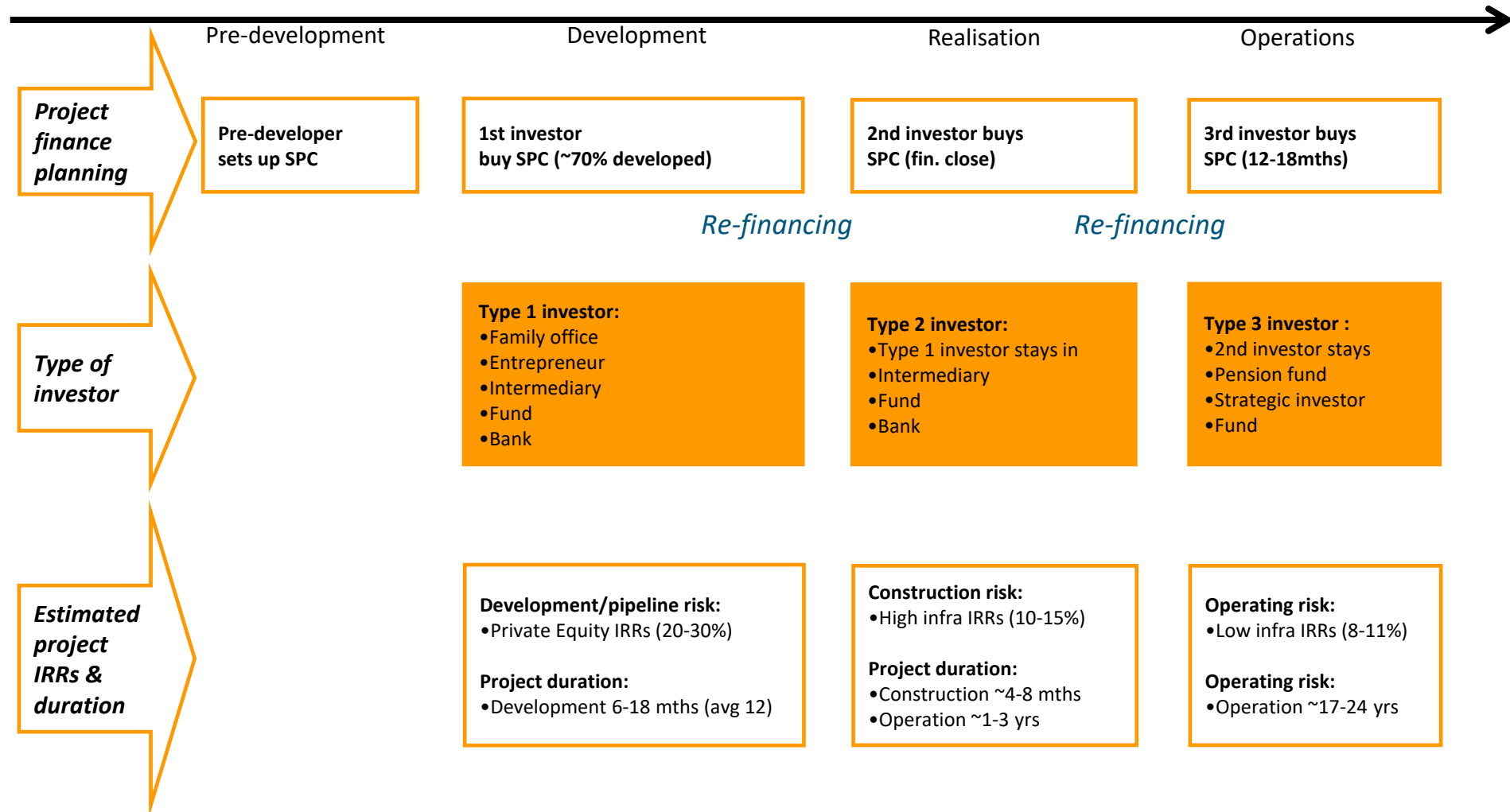
- Requirements: Project life time  $>$  Loan life time ('tail')
- Main criteria: Internal Rate of Return (IRR) on equity

# Investors, banks, funds and credit agencies



**Different financiers** may target **different positions at different stages** in the capital structure of a renewable energy project dependent on their experience and risk appetite

# Different project stages – different financiers



Q & A





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