

Financing Renewable Energy

Addressing the Capital & Skills Gap

By:
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🔺 Part A

⇒ **The Case for Clean Energy**

⇒ The Barriers

⇒ The Clean Energy Investment Opportunity

⇒ The Capital and Skills Gap

🔺 Part B

⇒ Altaluce - Filling the Market Gap

Defining 'Clean Energy'

- 🔺 **Supply / demand side energy activities that result in reduced GHG emissions compared to a 'business as usual' case**
- 🔺 **Three business / investment models**
 - ⇒ Energy efficiency
 - ⇒ Clean Energy infrastructure
 - ⇒ Clean Technology investment
- 🔺 **Our focus is primarily on energy efficiency and Clean Energy infrastructure investments**

The Case for Clean Energy

- ❖ **Develop a sustainable energy pathway**
- ❖ **Provide access to energy* for those that do not presently have it through dispersed renewable technologies ⇒ ‘Energy for all’**
- ❖ **Diversify energy mix away from depleting conventional fossil fuels**
- ❖ **Promote energy security for regional governments**
 - ⇒ Use indigenous resources
 - ⇒ Reduce outflows of foreign exchange
- ❖ **Cleaner air ⇒ health benefits and related cost savings**
- ❖ **Prevent dangerous impact of Climate Change...**

• ADB report that 1 billion people in Asia do not have access to grid electricity – ADB’s Infrastructure Operations: Responding to Client Needs (Shawan D., Lohani. B.N., Kawai. M and Nag. R). March 2007

Climate Change

🔺 **The Science Case: Unequivocal**

- ⇒ IPCC 90% confidence that human activity contributes to climate change

🔺 **The Economic Case: Compelling**

- ⇒ IPCC estimate a -0.12% impact on GDP growth
- ⇒ The cost increases significantly if we delay action
- ⇒ The social and environmental costs are inestimable

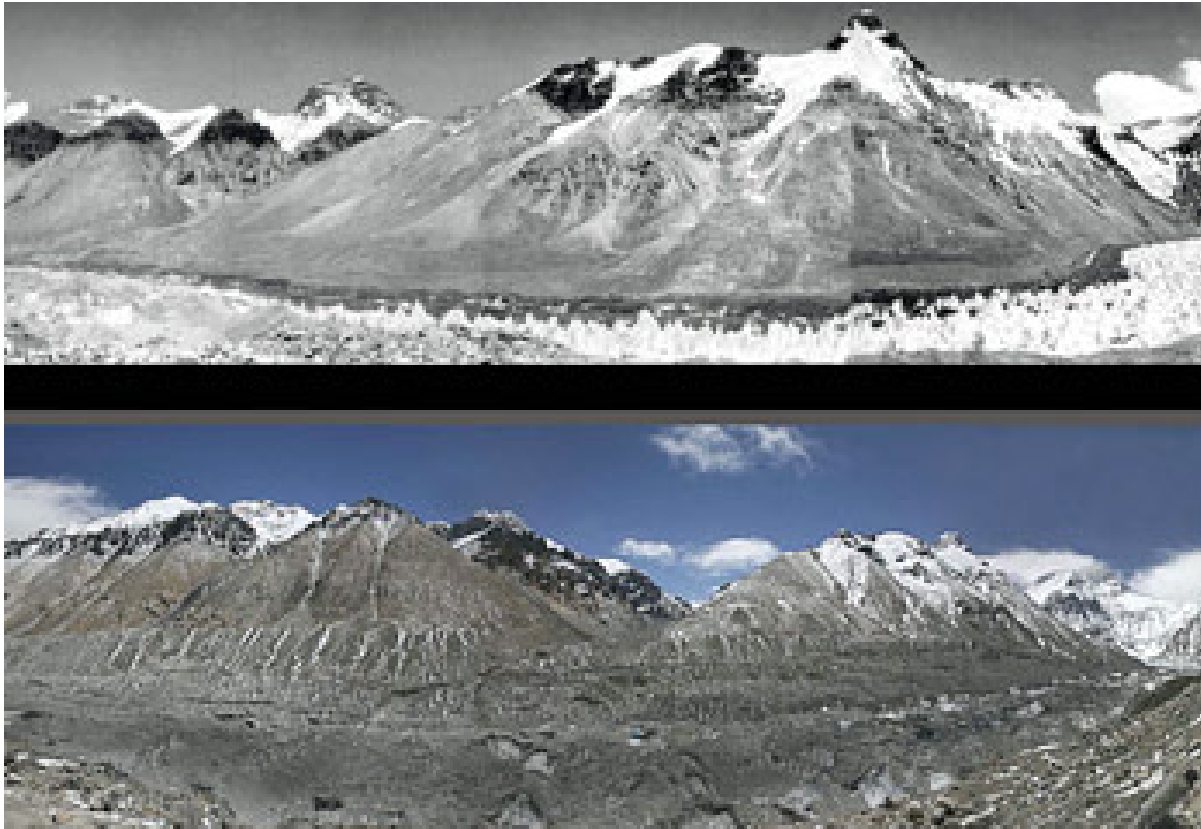
🔺 **Social Considerations: Monumental**

- ⇒ Increased vector borne disease, morbidity and mortality
- ⇒ Christian Aid estimates 1 billion people displaced to 2050
- ⇒ 1 billion people in Asia affected by reduced availability of freshwater

🔺 **The Security Case: A Threat Multiplier**

- ⇒ Increased resource scarcity, displacement of people increases instability

Climate Change: It's real...



Source: Daily Telegraph, Agence France Presse

**...and it's
happening all
around us.**

**Photos, show the
retreating
Rongbuk Glacier
of Mount Everest
on the Tibetan
plateau 1968 (top)
v. 2007 (bottom)**

Asia's New Energy Development Pathway

- ❖ **Asia energy demand growth will eclipse other regions (↑89% to 2030: IEA)**
- ❖ **A new energy development pathway needed:
⇒ A Clean Energy Pathway**
- ❖ **Creates an enormous challenge and...**
- ❖ **...potentially one of the world's largest commercial growth areas: Clean Energy**
- ❖ **But there are barriers...**

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Political / Regulatory Barriers

Political / country risk

- ⇒ Change in law
- ⇒ Legal risk
- ⇒ Foreign exchange risk
- ⇒ Expropriation / Nationalisation
- ⇒ Terrorism

Government policy / regulatory risk

- ⇒ Critical to Clean Energy given reliance on policy support

Security of the ‘franchise’

Commercial Barriers

- ❖ **Local currency finance**
 - ❖ **ROI expectations**
 - ❖ **'Carbon Price' signal**
 - ⇒ **First Commitment Period of Kyoto Protocol expires in 2012**
 - ⇒ **Can't demonstrate 'additionality' without price signal post 2012**
 - ⇒ **Regulated demand and supply**
 - ❖ **Counterparty credit risk**
 - ❖ **Technology challenges**
 - ❖ **Fuel and feedstock security (bio-energy)**
 - ❖ **Fossil fuel price risk**
 - ❖ **Grid interconnection (power generation)**
 - ❖ **Ability to exit**
-

Early-Stage Development Barriers

- 🔺 **The ‘capital gap’**
 - 🔺 **Lack of project development skill sets**
 - 🔺 **Transaction identification**
 - 🔺 **Matching projects to capital**
 - 🔺 **Small transaction size**
- ⇒ **This is the focus of the Altaluce DevCo**

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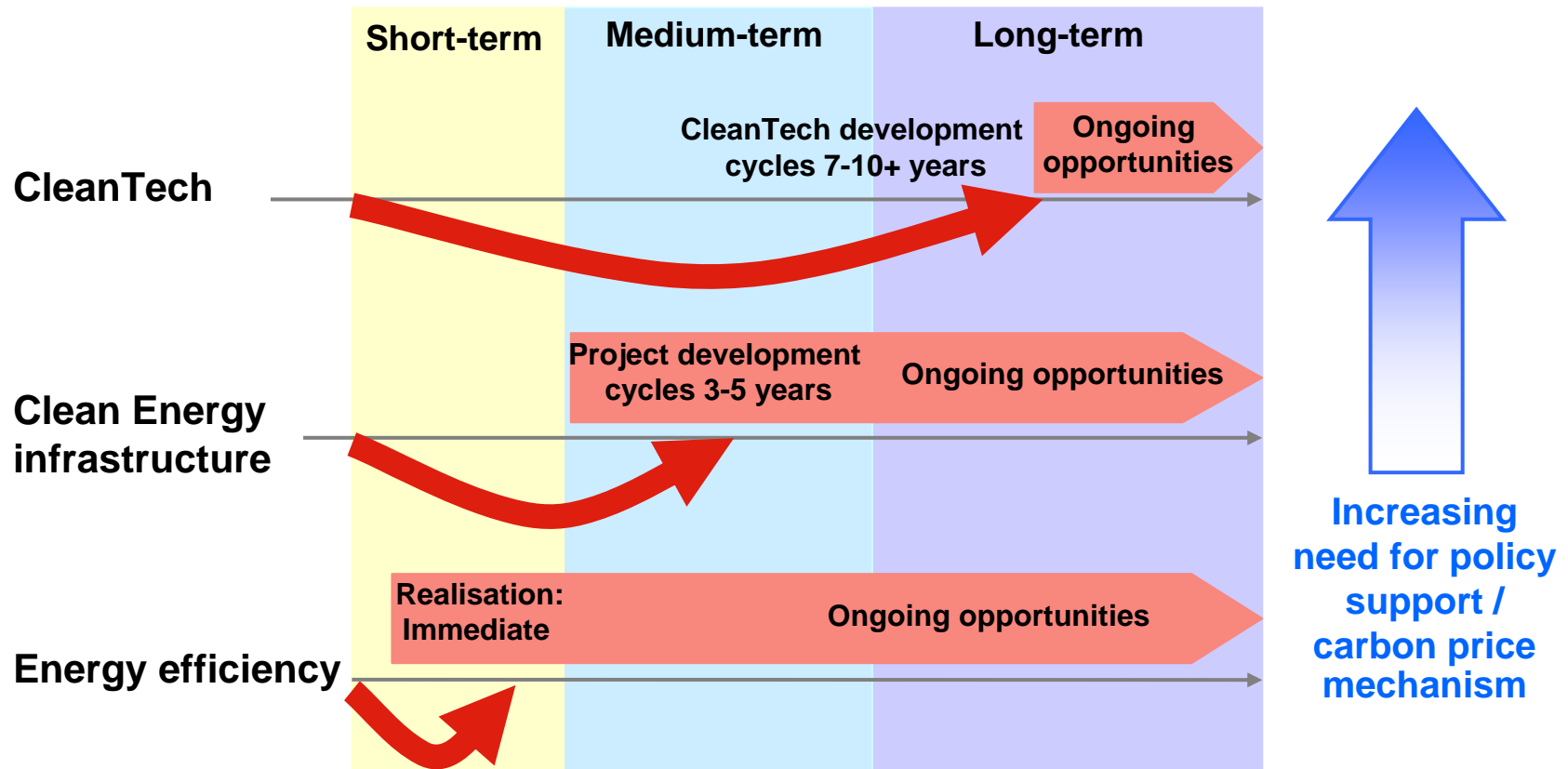
Part B

⇒ **Altaluce - Filling the Market Gap**

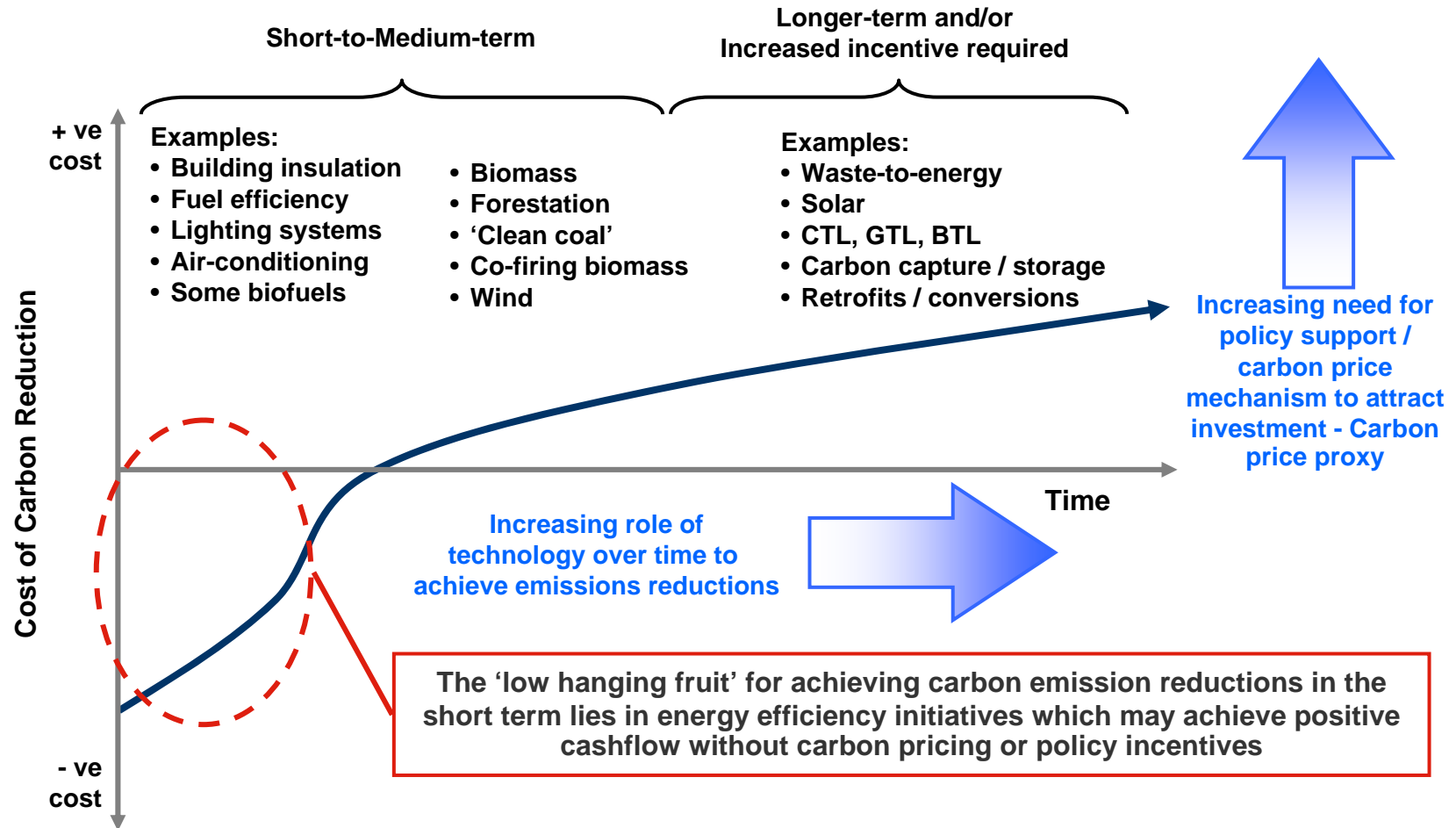
Asia's Clean Energy Opportunity

- ❖ **Approximately US\$5.8 trillion investment required for Asia energy sector by 2030 on a 'Clean Energy pathway'**
 - ⇒ **Approximately 40% of this to 2020 will need to be spent on Clean Energy investment if Asia adopts the EU '20 by 20' target**
 - ⇒ **i.e. C. US\$1.0 trillion on Renewable Energy by 2030**
or C. US\$37 billion annualized
- ❖ **Three divergent business models...**

Three Clean Energy Business Models



Need for Policy / Carbon Price Support



The Upshot

- ❖ **Technology will play an important role in reducing GHG emissions in the future ...and stabilising GHG levels**
- ❖ **...BUT it's not all about technology - there is significant emissions reduction **action that can be (and needs to be) taken today:****

 - ⇒ Investments in energy efficiency (will provide 80% of carbon reduction: IEA)
 - ⇒ Investment in Clean Energy infrastructure...
 - ⇒ ...supported by policy initiatives to encourage Clean Energy investment

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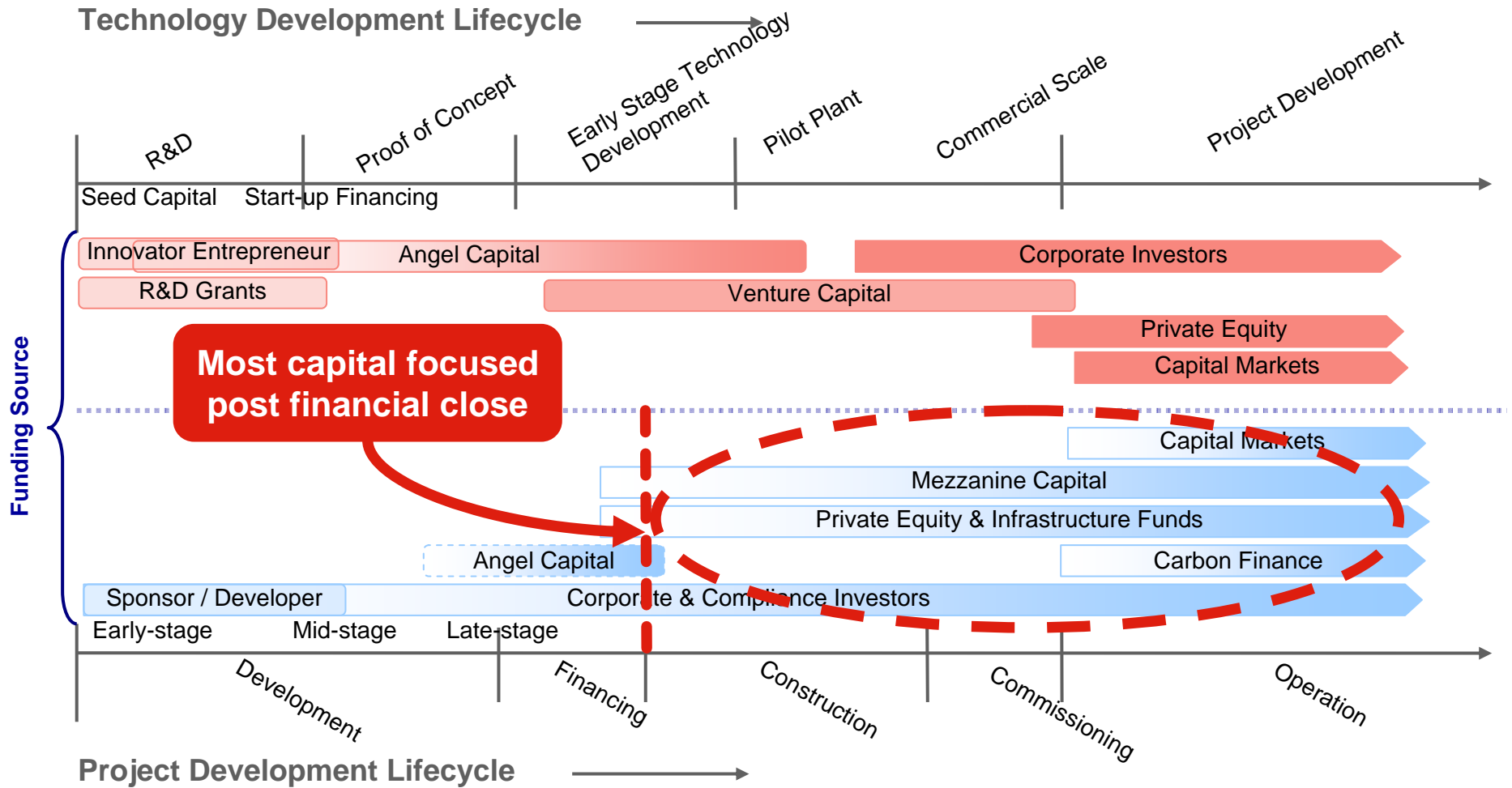
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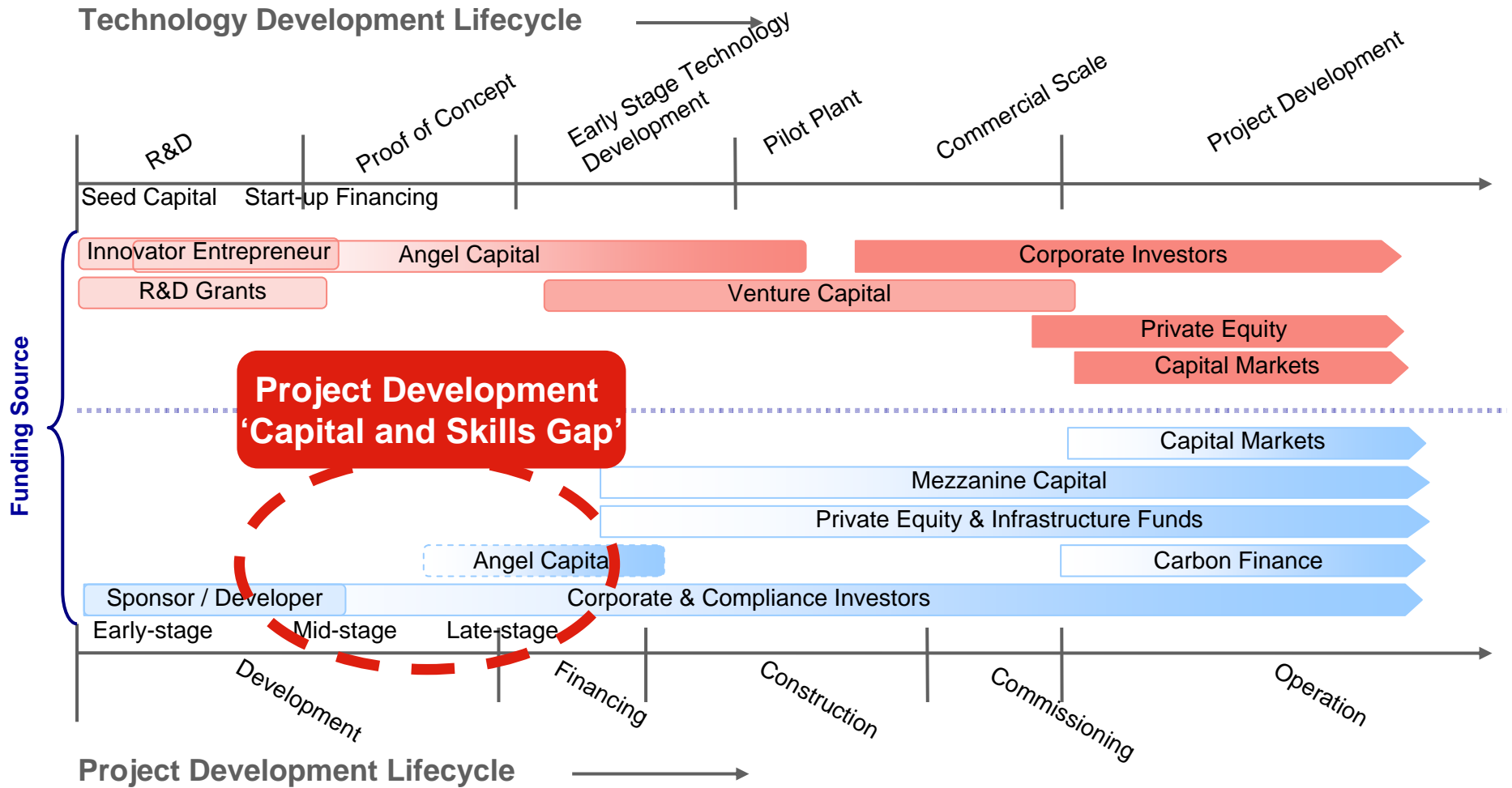
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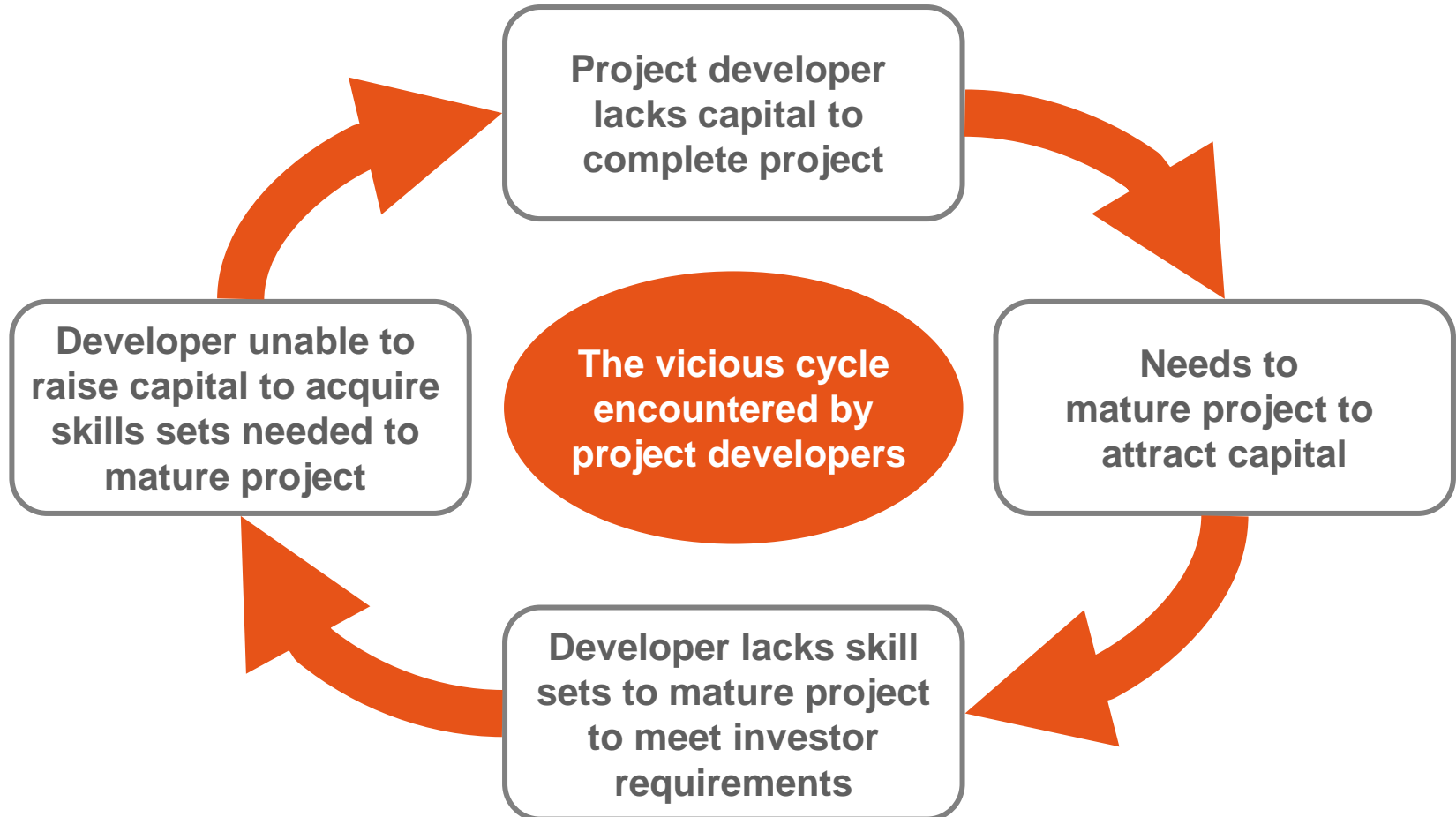
Where the Capital Is Focused



Where the Capital Is Not Focused



Typical Project Development Situation



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Altaluce DevCo Concept

Altaluce Goals

- 🔥 Provide expert development support to projects
- 🔥 Mature Clean Energy projects to receive late stage capital

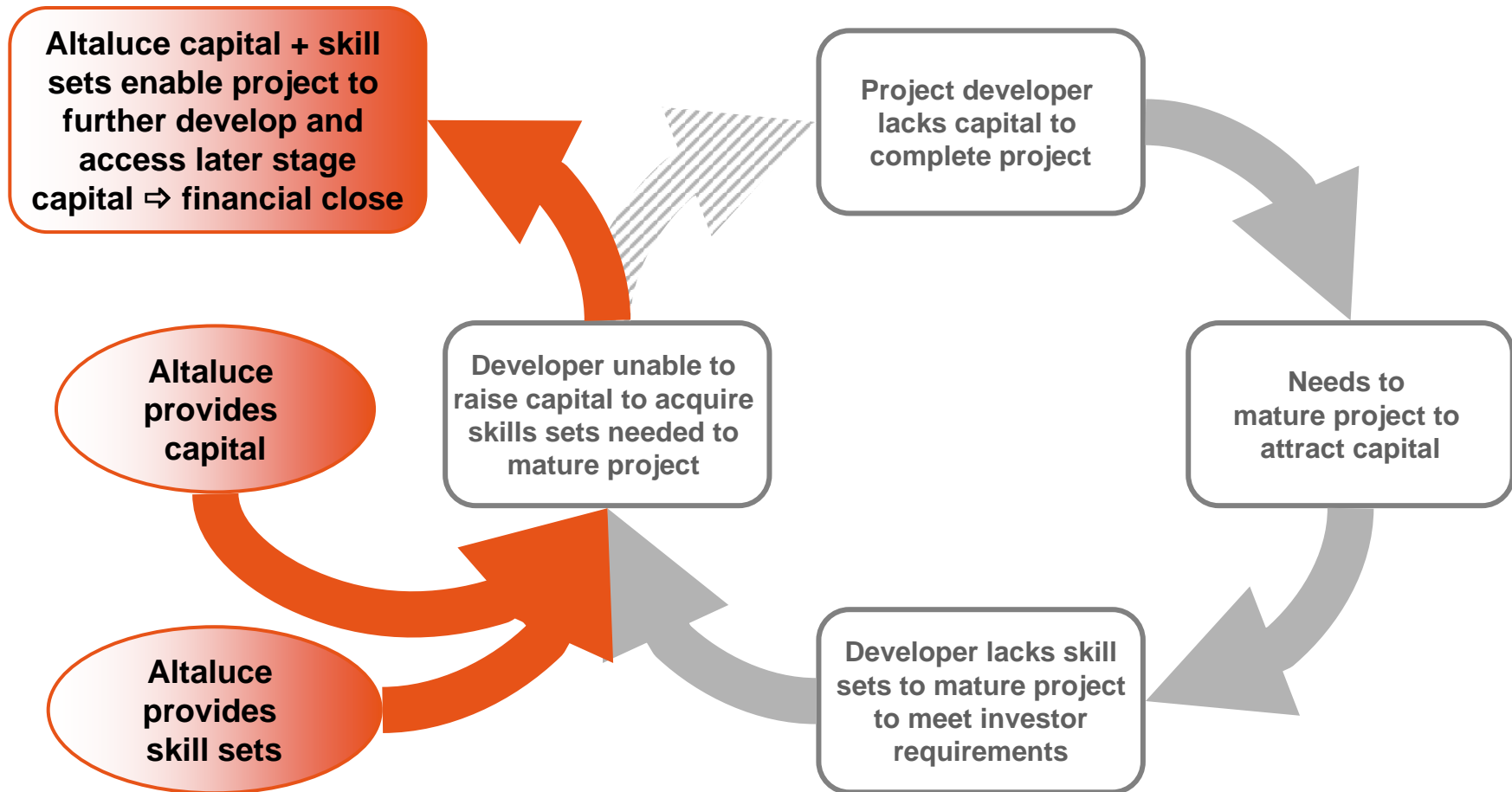
Altaluce Resources

- 🔥 Altaluce will have the unique capability to bring tailored solutions:
 - ⇒ **SKILLS:** Skill sets and experience in project development – commercial structuring, financial, in-house legal
 - ⇒ **RISK CAPITAL:** Capital to out-source skill sets in specific areas (e.g. technical, legal, environmental and CDM) and meet project development costs

Altaluce Reward

- 🔥 Altaluce will receive equity and/or quasi-equity instruments in the project company
 - ⇒ Altaluce funding participants will have an option for co-investment in the mature, late stage transaction pipeline
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Breaking the Vicious Cycle

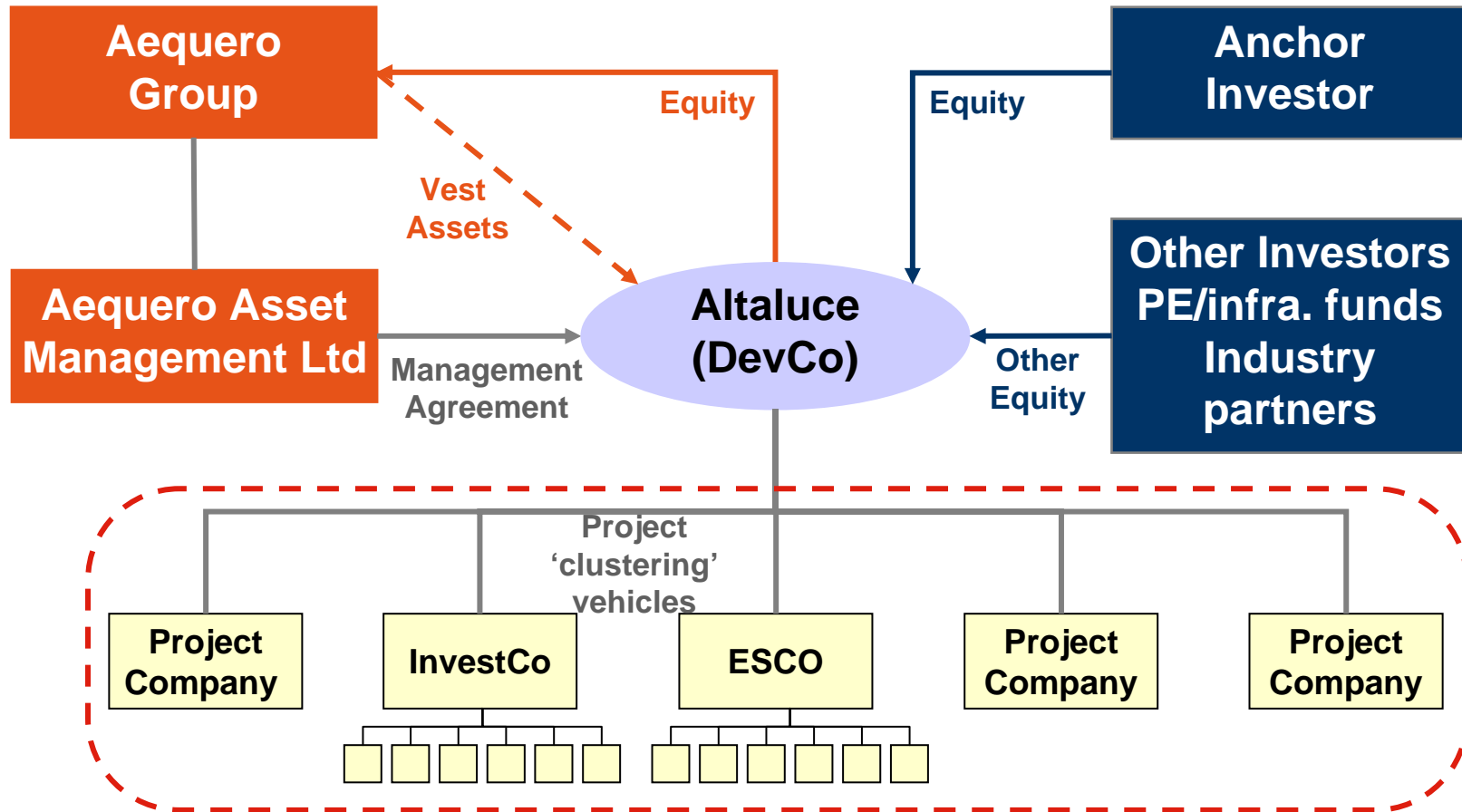


Early-Stage Development Barriers

Altaluce will address identified early stage development barriers:

Barrier	Addressed by:
The 'capital gap'	Provision of risk capital
Lack of project development skill sets	Provision of project development skill sets
Transaction identification	Provide impetus to project identification and development
Matching projects to capital	Provide project development / utilise industry & market contacts of AAML
Small transaction size	Use project 'clustering' vehicles – InvestCos and ESCOs

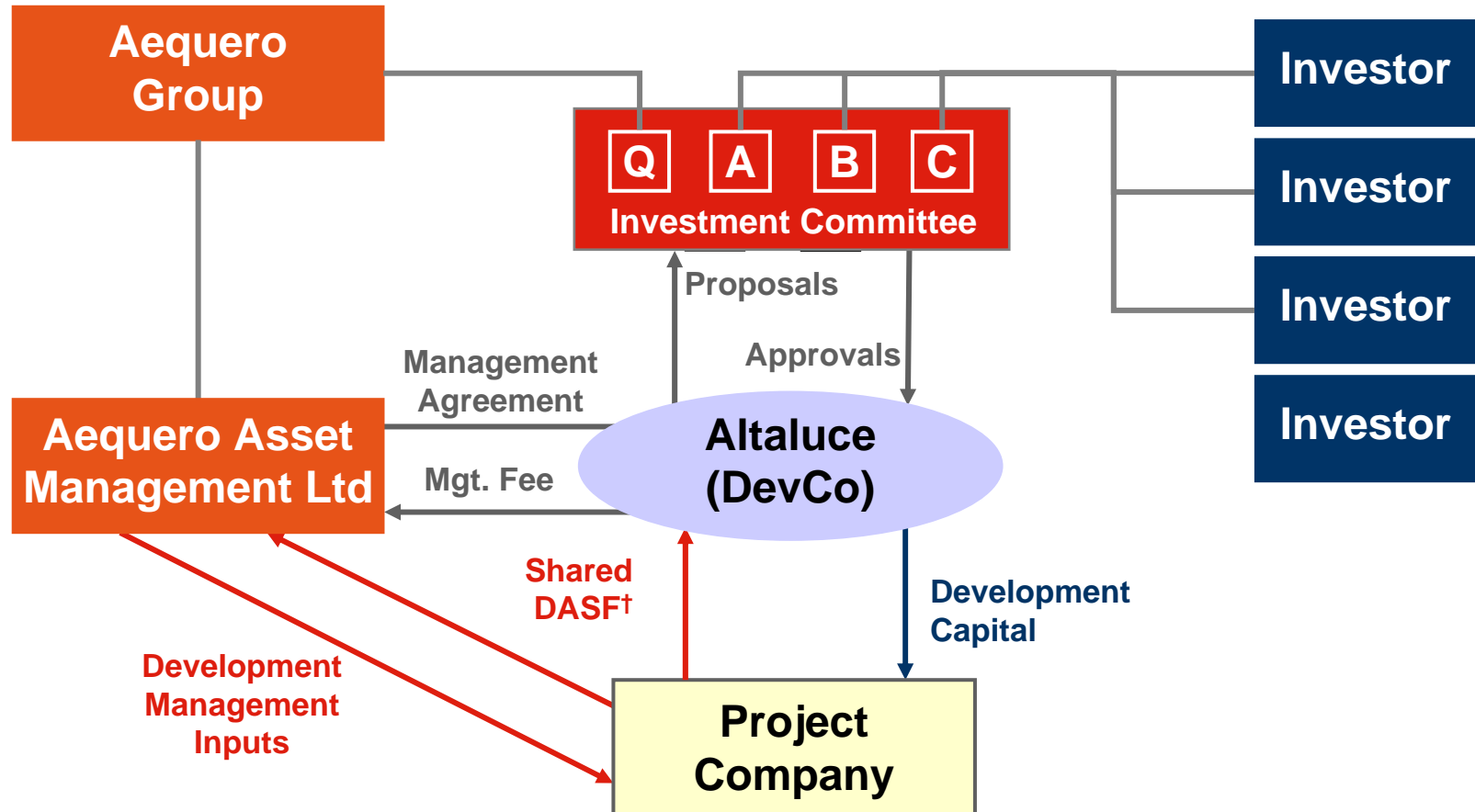
Altaluce DevCo Structure



Application of Capital

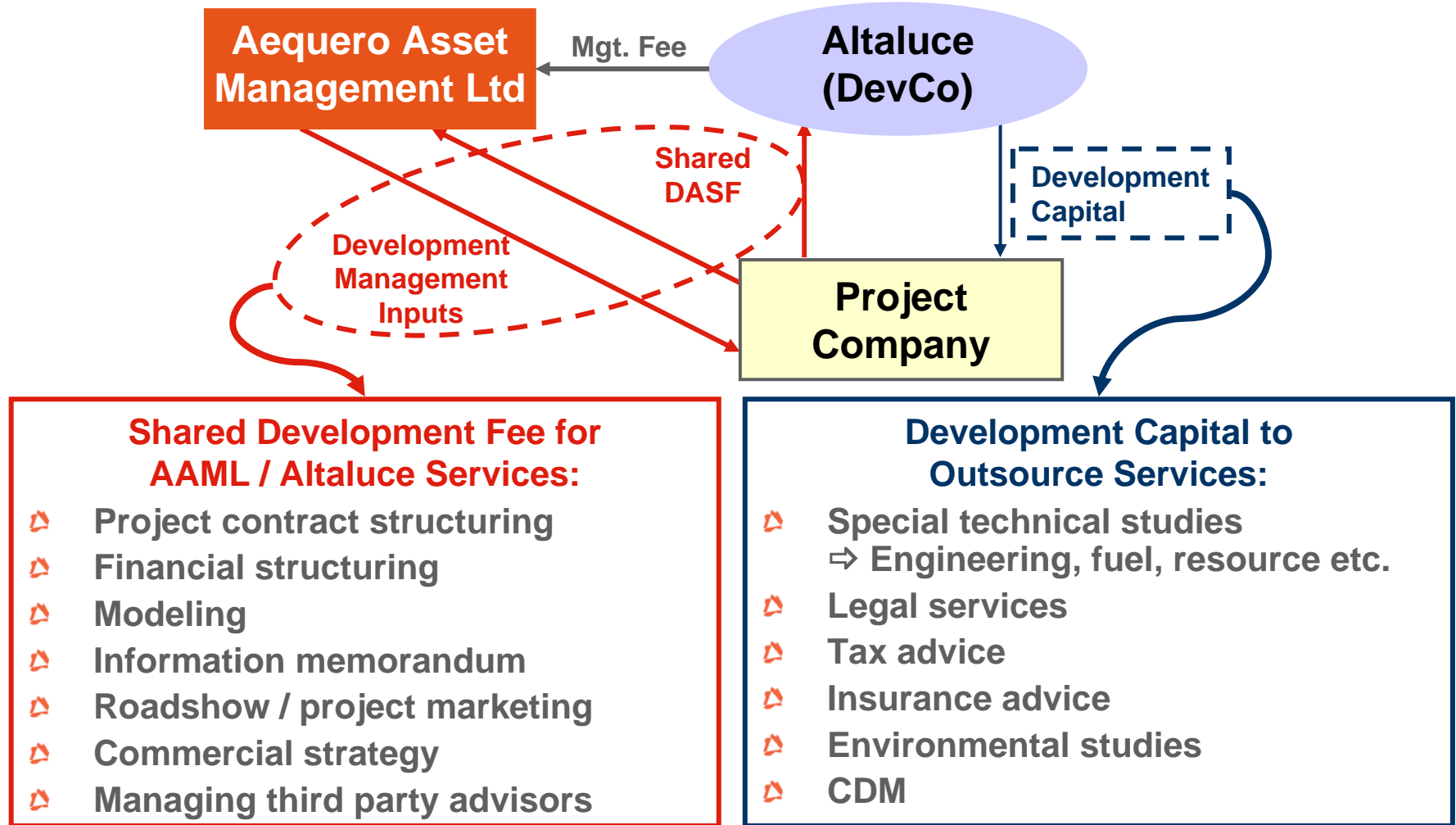
- 🔺 **Target capital raising C. US\$80 million**
- 🔺 **Individual projects expected to require US\$1-5 million**
- 🔺 **Third party costs only to be met from Altaluce capital**
- 🔺 **Exclusive focus on Clean Energy and carbon reducing investments**
- 🔺 **Altaluce may invest in project ‘clustering’ vehicles**
 - ⇒ e.g. InvestCos and ESCOs
- 🔺 **Objective to mature investee companies to access later stage investors**
 - ⇒ Direct participation of strategic and financial investors, industry partners
 - ⇒ Aequero to leverage contacts in energy and infrastructure sectors

Management & Operation



† DASF = Development Advisory Service Fee

Development capital and DASF



Exit Opportunities

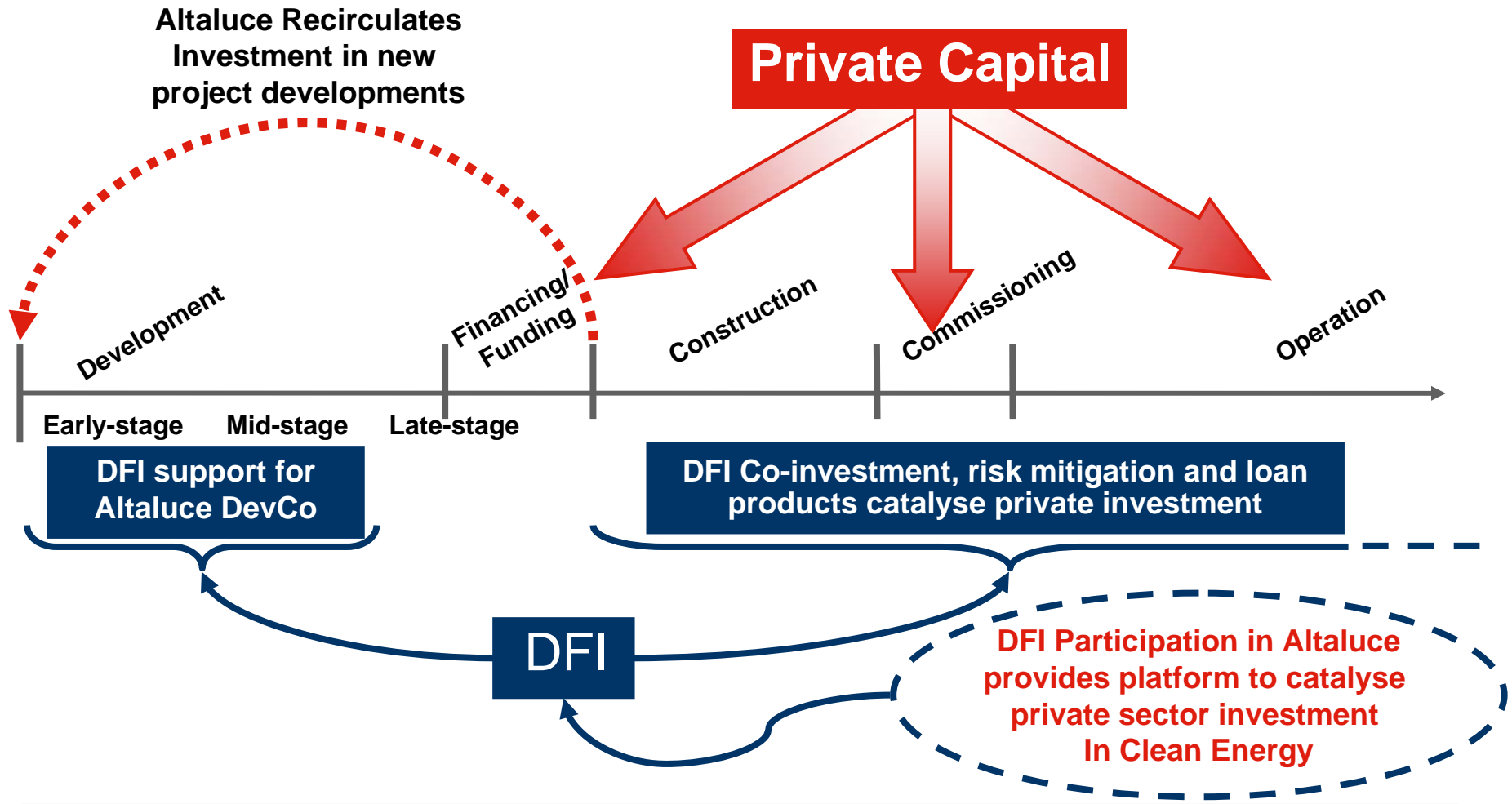
Project Exits

- ⇒ **Initial capital to be recycled through project exits**
- ⇒ **Project exits targeted at:**
 - Corporate and compliance investors, utilities, IPPs
 - Private equity and infrastructure funds

Altaluce Exits

- ⇒ **Short-term objective: ‘mainstream’ Altaluce by placing equity with private market**
- ⇒ **Medium term objective: list Altaluce on a public exchange to provide:**
 - Avenue to access portfolio investment
 - Exit for initial investor group

DFI Role: Catalysing Private Capital



Rationale for DFI Involvement

- 🔺 **DFIs help to overcome early stage barriers specific to Clean Energy sector:**
 - ⇒ Facilitate project identification and development
 - ⇒ Fill market need for risk capital at early stage of project development
 - ⇒ Fill market need for project development skill sets
- 🔺 **Catalyse private sector investment in Clean Energy**
 - ⇒ Each US\$1 of risk capital invested in Altaluce will catalyse US\$20-50 of private sector funding†
- 🔺 **Lead the initiative to reduce carbon emissions in Asia**

† Equity and debt

Contacts



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