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Challenges, opportunities, good practises and lessons learned from climate technology financing

TEC Thematic dialogue on climate technology financing

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Bonn, Germany

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E3G – Third Generation Environmentalism

Agenda



1. Challenges of climate technology investment and financing
2. Role of public and private finance and financial instruments
3. Learning from experiences: the Clean Technology Fund / Mexico's Renewable Energy Programme
4. Criteria for shaping good practise on climate technology finance
5. Concluding Remarks

Scale of Climate Technology Investment to 2030



- <2C requires \$10 trillion in additional energy investment to 2030
- Shifting \$26 trillion from high to low carbon energy investment
- \$145 trillion in infrastructure investment to 2030 needs to be made low carbon and climate resilient
- Planning investments under uncertainty of the costs of adaptation – integrate climate risks to make all economic sectors and infrastructure resilient
- Investment in major economies mainly low carbon from 2020

Requires transformational changes – align public policy and public finance in all countries and a specific role of climate finance to support developing countries

Challenges of climate technology investment and financing

Conditions required for mobilising climate technology investment:

- 1 Existence of market opportunities
- 2 Reasonable return on investment
- 3 Limited or acceptable level of risk

Need for understanding of the specific **challenges and risks** to climate technology investments

Technology risks

Market risks

Capacity constraints

Policy and regulatory risks

Financial challenges

Scale of Investment Challenges

Specific financial challenges within developing country context

Scarce availability of capital for public investment

Poor credit-worthiness and lack of guarantees

Lack of access to appropriate forms of credit

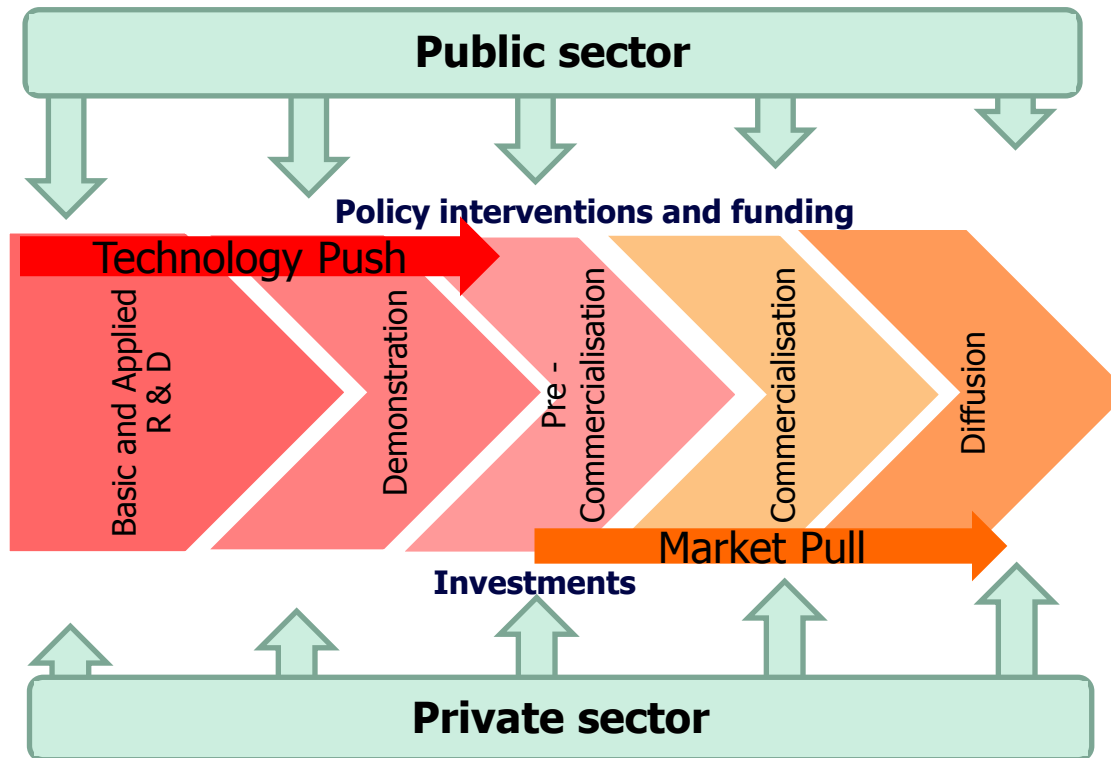
Financing Climate Technology



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Successful innovation requires a balance between 'push' and 'pull' factors along the innovation chain, with varying levels of public-private finance and policy interventions at different stages.

System-wide capacity building to improve internal innovation and absorption systems



Overcoming challenges of new technology and market risks

Addressing the challenges

Opportunities for the public sector



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The public sector can offer incentives to mitigate risks for private sector investors – important to understand technology specific barriers and real and perceived risks of investors to determine the appropriate mix of public incentives

Policy incentives and regulations

- Renewable energy support mechanisms
- Tax credits
- Carbon offsets
-

Public sector financial instruments

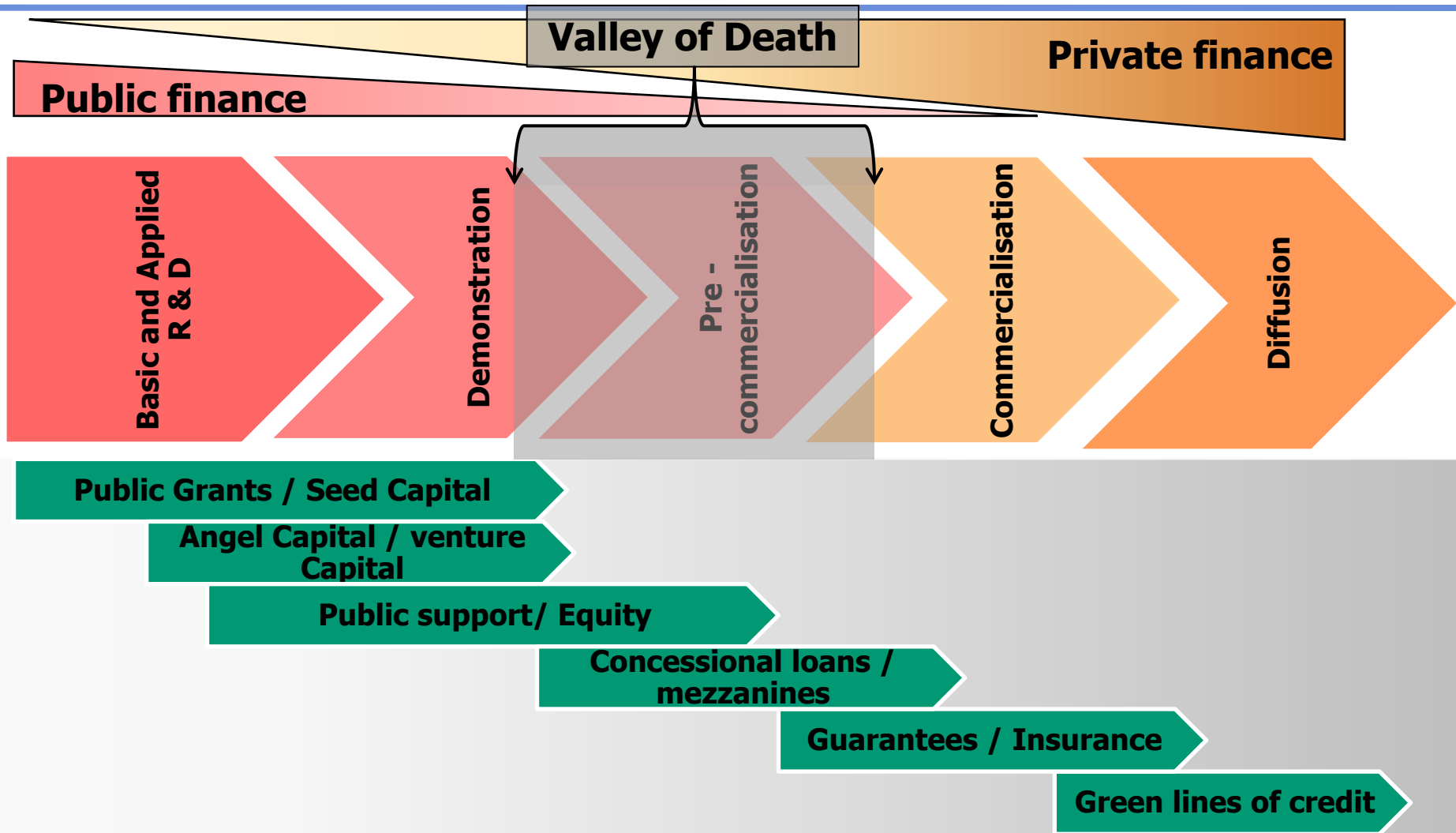
- Public loans
- Guarantees
- Political risk insurance
- ...

There is no single way of designing a successful incentive scheme or financial instrument, the use of public resources should be designed to ensure the most appropriate allocation of risk between actors

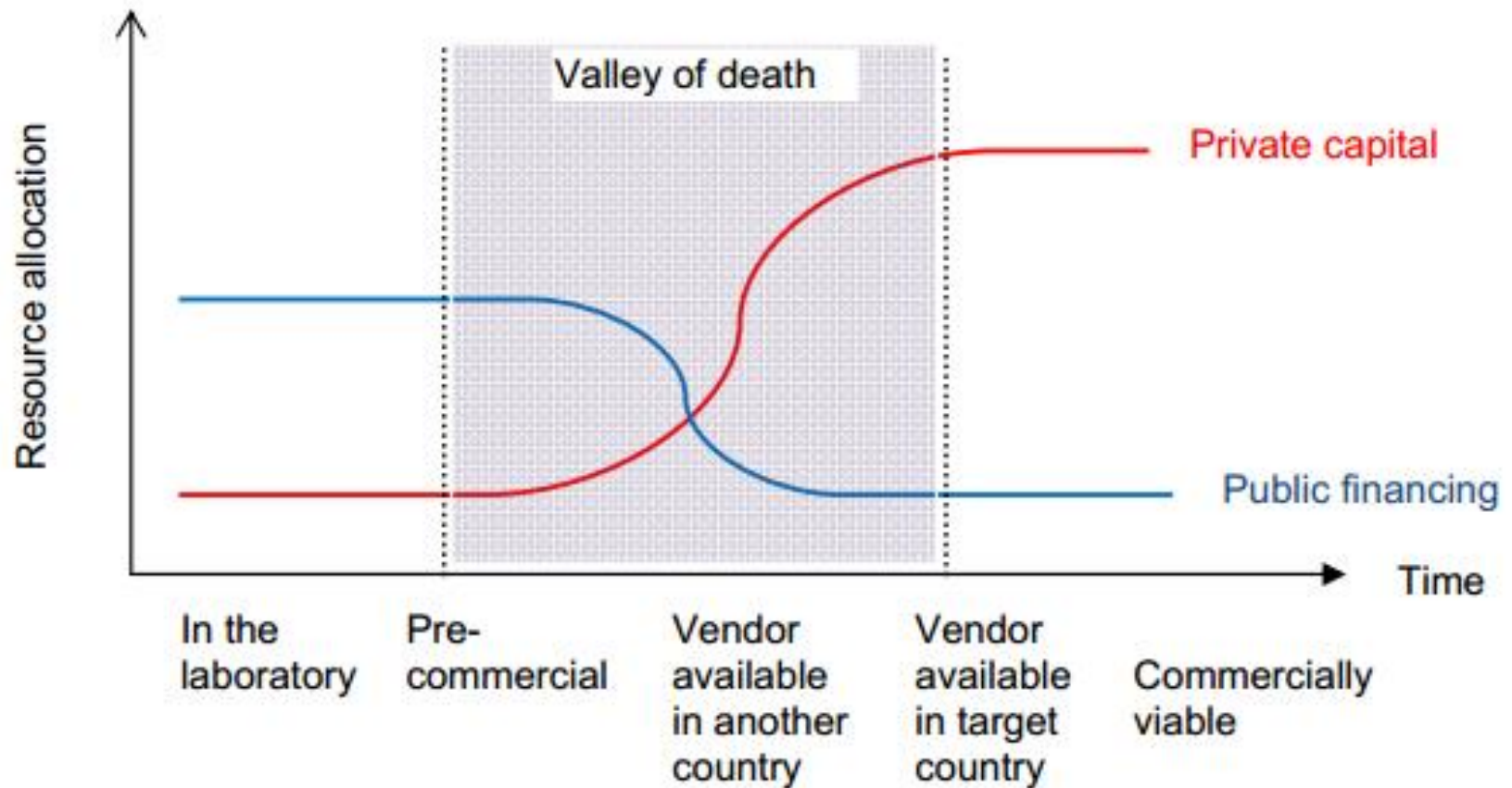


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Financing Climate Technology



Valley of death between public and private financing



Source: World Bank

Learning from experiences

The Clean Technology Fund (CTF)



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Overview

- One of two multi-donor Trust Funds within the **Climate Investment Funds** (CIFs), and presently the largest multilateral mitigation fund
- Disbursed via multilateral development banks, the CTF uses a **blend of financial instruments**, mainly concessional loans, but also grants, and guarantees to attract both public and private sector investors
- The CTF is now also experimenting with **performance based finance** as a means to foster innovation

Activities supported by the CTF



Renewable energy and technologies to reduce carbon intensity



Efficiency and modal shifts



Buildings, industry, and agriculture

Learning from experiences

The Clean Technology Fund (CTF)



Lessons learned

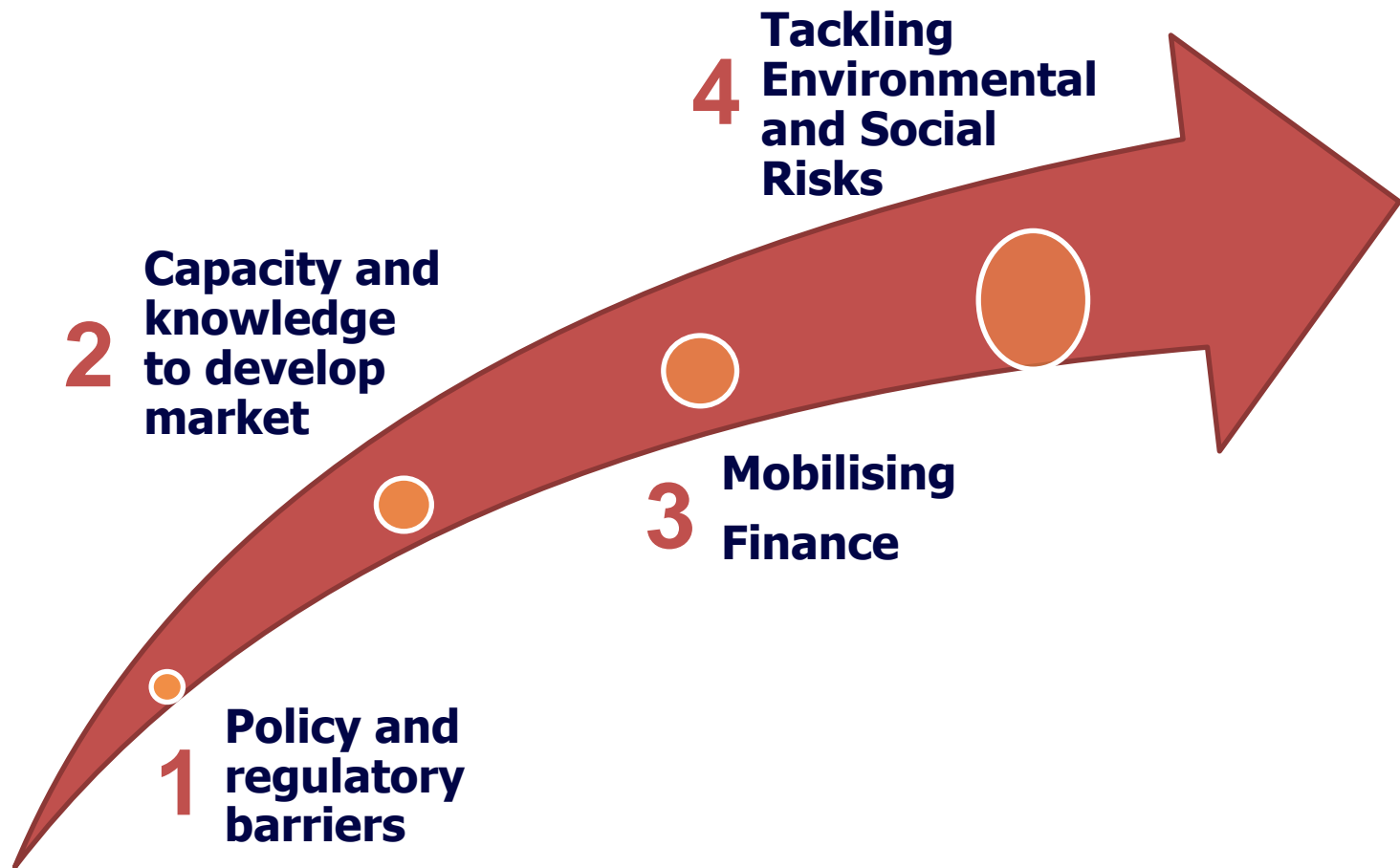
- While the CTF has not prioritised support for technology innovative its experience emphasises the importance of working with **national institutions who can champion and foster necessary innovation.**
- CTF experiences reinforce the importance of embedding programs in **country contexts** and attention to **institutional capacity and preparedness.**
- Importance of robust processes to **engage diverse stakeholders** and for ensuring strong **country ownership and domestic implementation capacity**
- There is a case for strengthening **recipient country capacity to ensure coordination between different sources of funding and support**
- But the **current dynamic of competition for resources between international climate and/or technology funds** can impede such operational collaborations.

CTF Case study

Mexico Renewable Energy Programme



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CTF Case study

Mexico Renewable Energy Programme

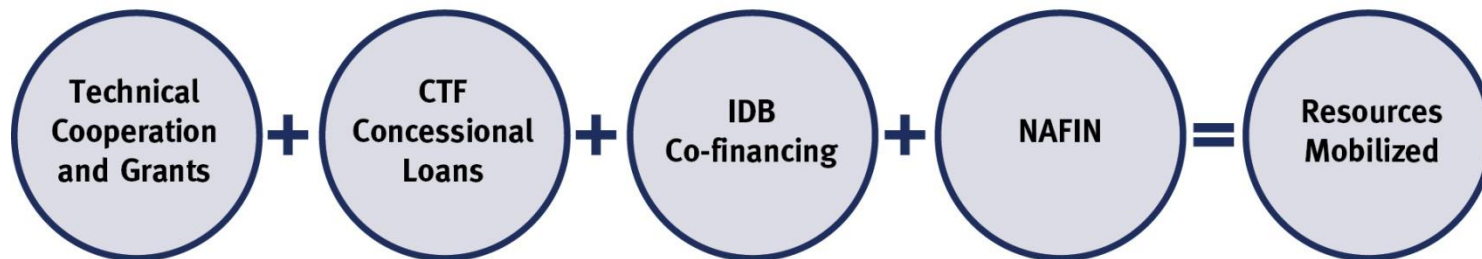


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Catalyzing public financing through national development banks (NDB)



Debt and Private Equity

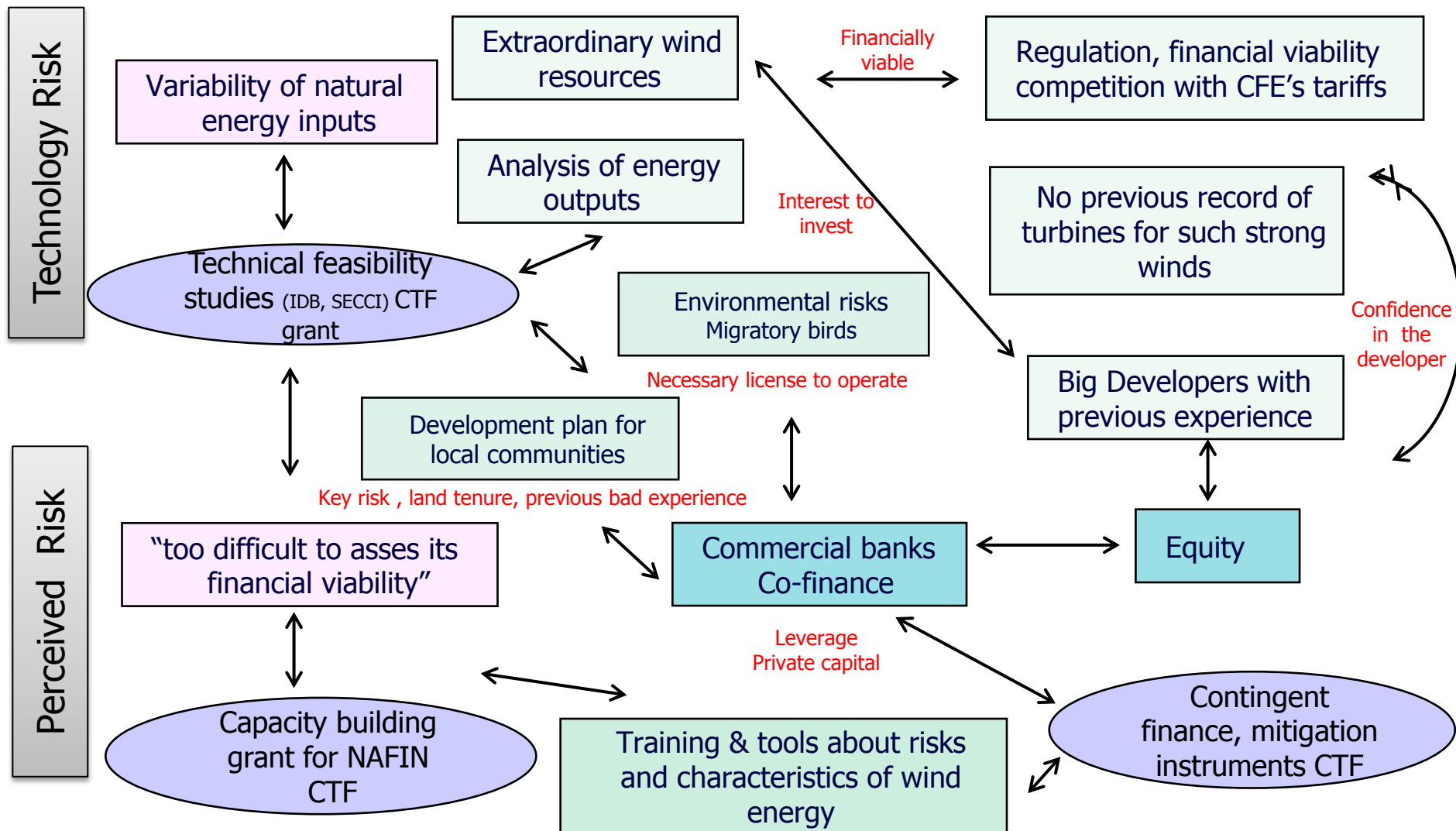


Source: Based on Smallridge et al, Visconti and CPI

Catalytic impact ➔ **> 2,000 MW of installed wind capacity and 3,600 MW expected soon.**

CTF Case study

Mexico Renewable Energy Programme

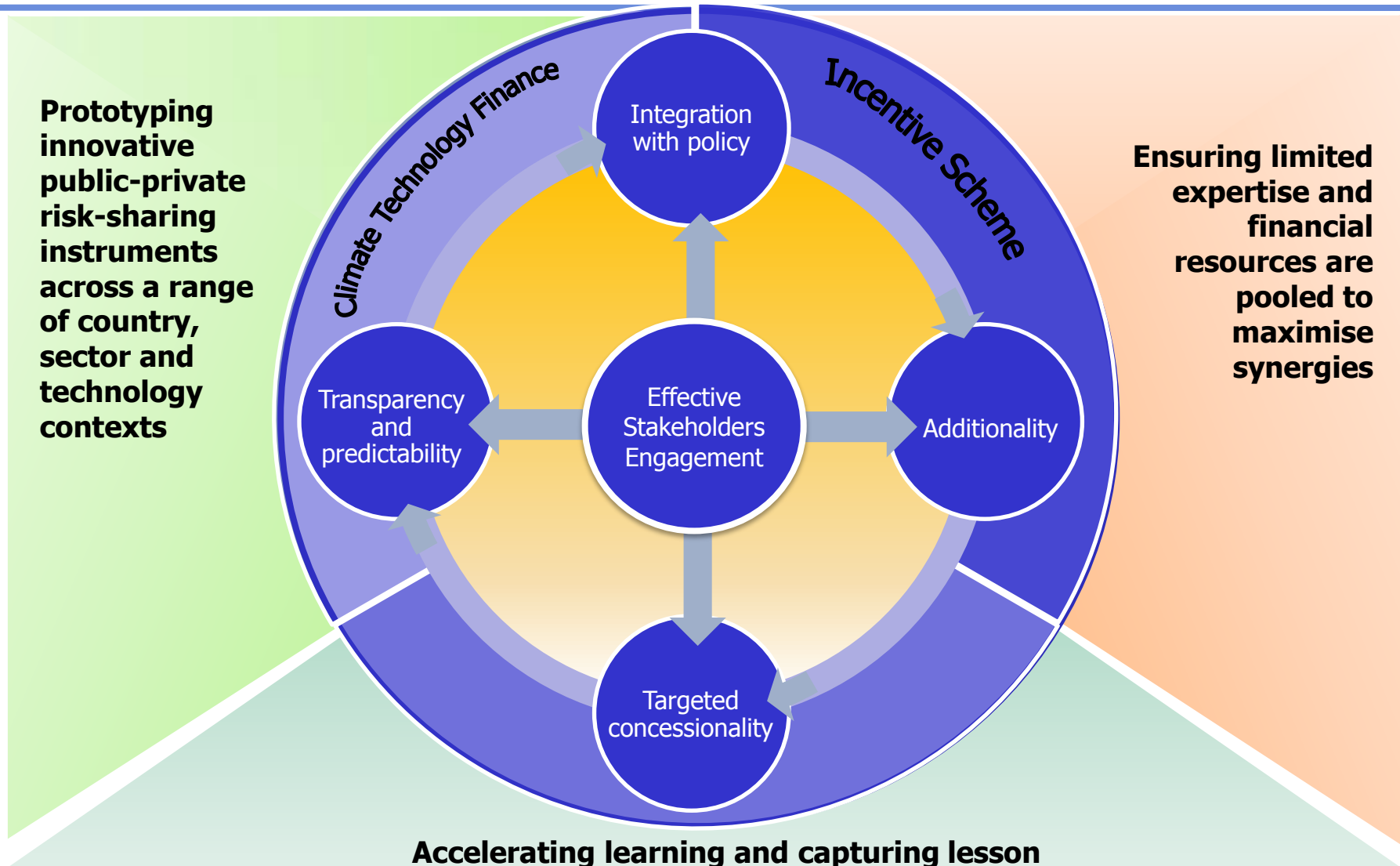


Designing financing instruments and incentives



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Good Practice



Concluding Remarks



- Financing climate technology will require the **combination of Long, Loud and Legal Policy incentives + Market Facilitation + Public Finance**
- Relatively small amounts of public finance compared to scale of investment = **use smartly through instruments for sharing risks between public-private sectors**
- Identify and address real and perceived risks within the specific country context and **tailored financing instruments** (avoid potential crowding out)
- **System wide capacity building and support for national champions** important for effective climate technology financing and technology transfer
- **Facilitate market development** through providing information, data and business support for (potentially) new entrants and business models
- **Wide and early stakeholder engagement** helps reduce risks and barriers to investment in relatively newer technology

Concluding Remarks

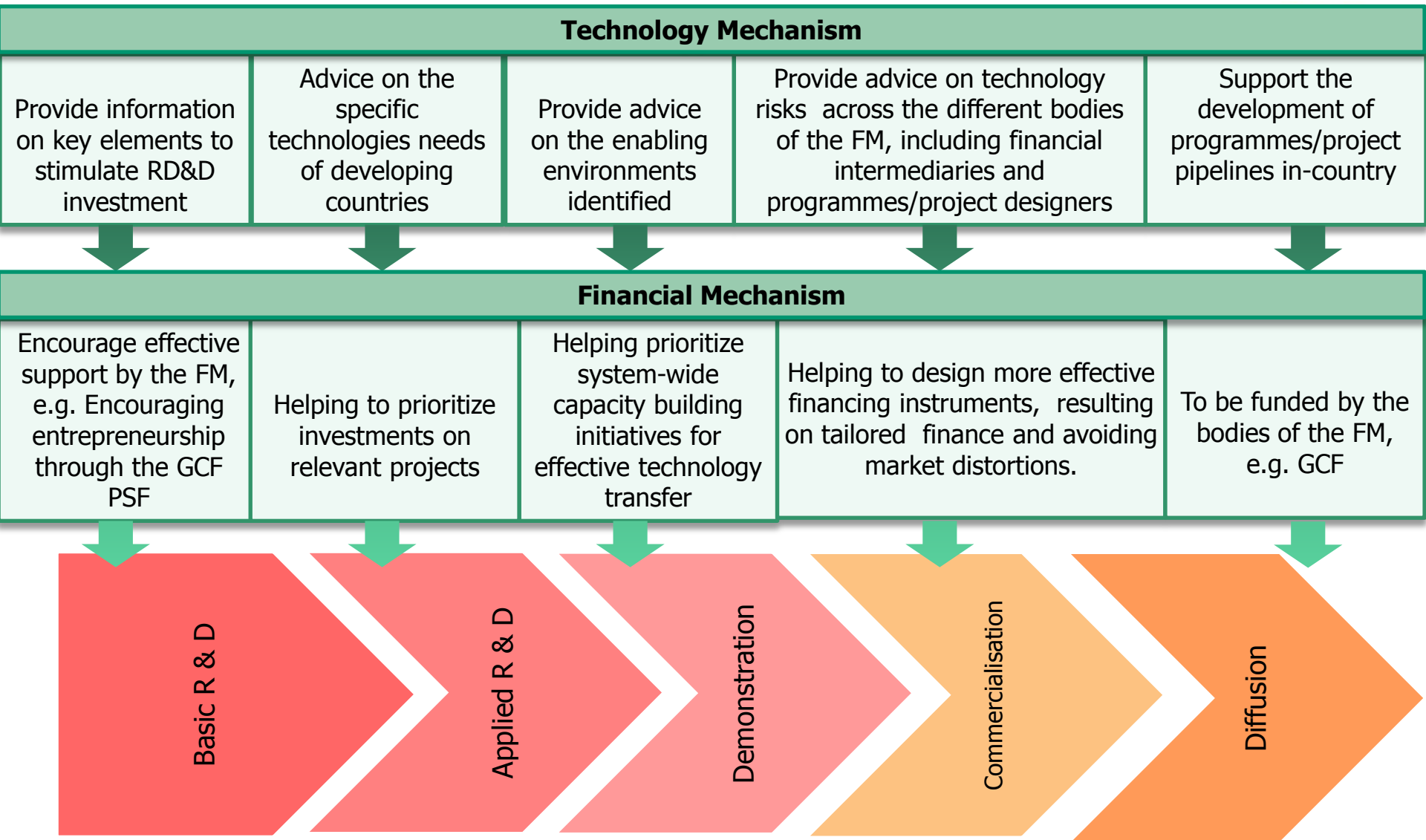


- Important to ensure integrated approach between technology and climate finance related plans and programmes
- Differing criteria and evaluation of international climate finance and technology support mechanisms can lead to fragmentation of international ecosystem, this can:
 - Increase burdens on limited developing country institutional capacity
 - Lead to inefficient use of public resources
 - Reduce transparency and predictability for investors – undermine growth of new climate technology markets
- Important to **enhance coherency between international mechanisms**
- Equally important that countries have **capacity and support to integrate TNAs with other relevant national and sectoral plans and programmes**



Technology Mechanism and Financial Mechanism

Initial thoughts on some synergies



Thank You



Detailed materials of E3G finance work can be found at www.e3g.org

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