The potential and prospects of the Technology Mechanism

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Climate Strategies event
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Radboud University Nijmegen

Climate, Technology and Development project

Translate academic insights for negotiators and policymakers

- ECN: Laura Wuertenberger, Lachlan Cameron
- IIT Delhi: Ambuj Sagar
- Radboud University: Heleen de Coninck
- University of Sussex: Rob Byrne, Jim Watson
- UNICEN: Gabriel Blanco
- Tufts University: Kelly Sims Gallagher

Planned activities

- Policy briefs
- Value chain case studies on cement in Africa, BRT, lighting, cook stoves and solar PV in China
- Various events and final conference

Climate Technology & Development

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Innovation systems in developing countries

Nature and process of innovation

- Innovation should be understood in broad terms
- Context of innovation matters

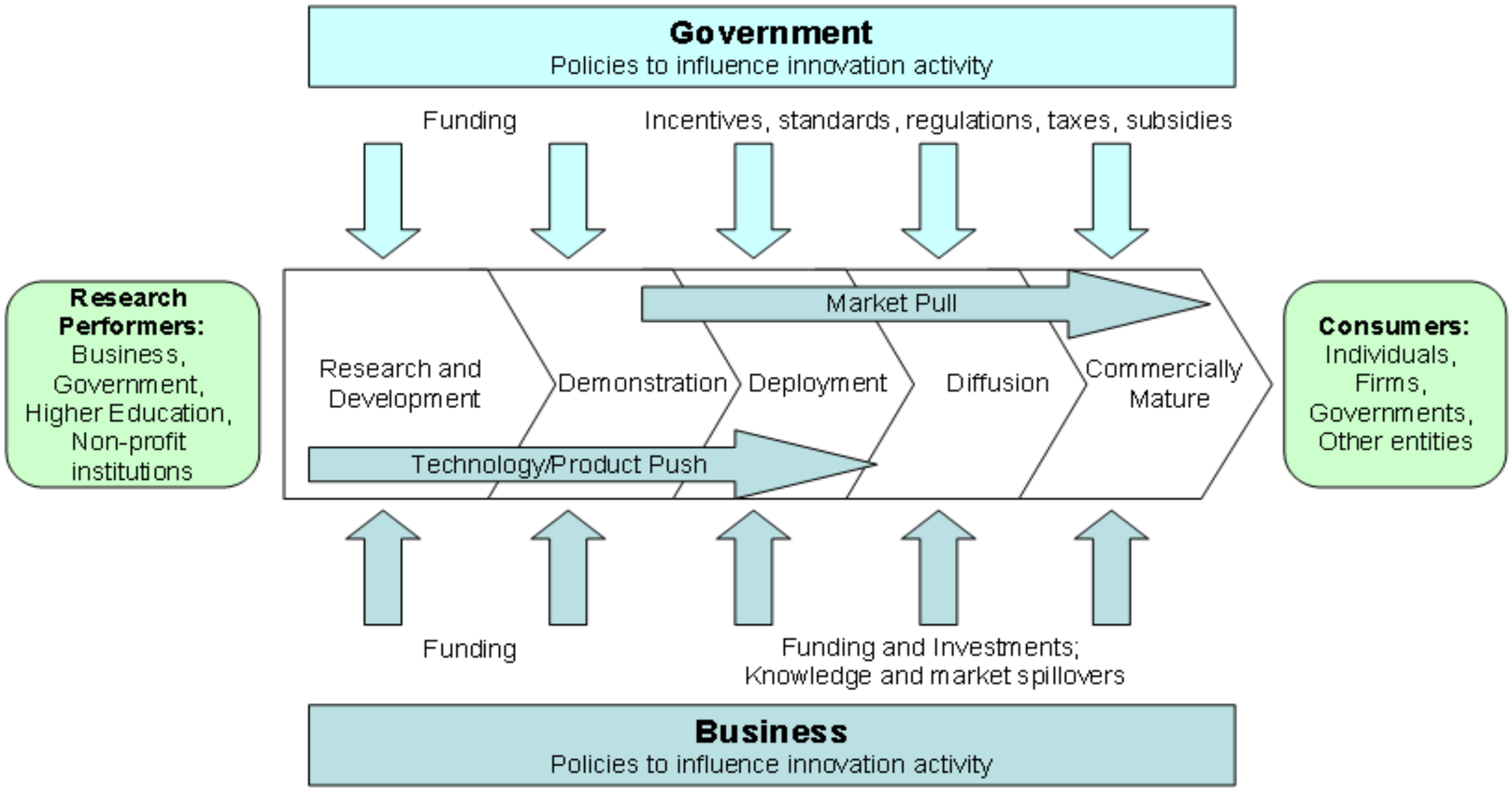
Opportunities to build low-carbon development pathways

- Often less well-entrenched vested interests and weaker energy-provision infrastructures in poorer developing countries
- Opportunities to circumvent the high-carbon pathways industrialised countries have followed

Role of policy in building low-carbon innovation systems

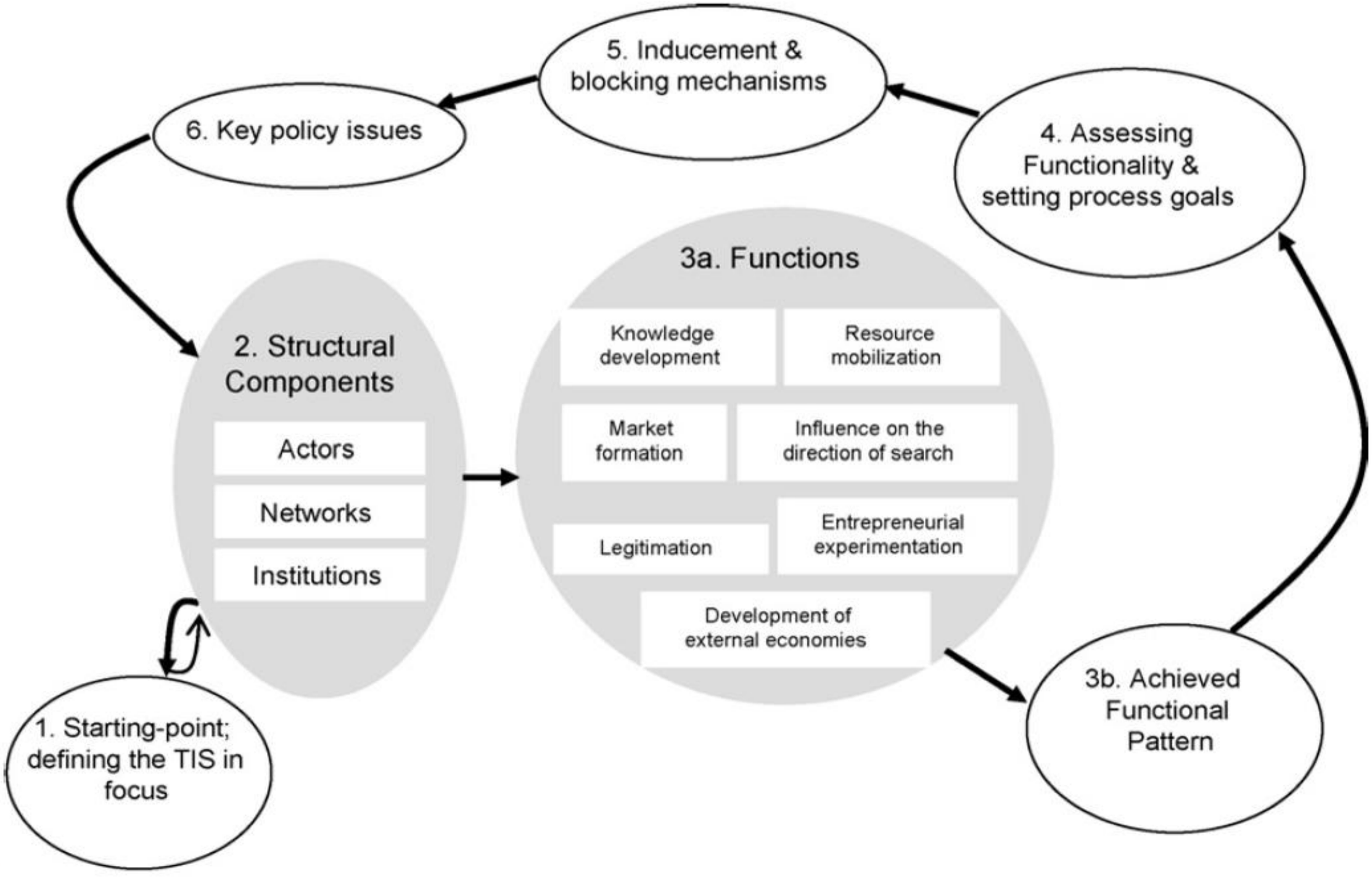
- International policy initiatives need to interact with national policy frameworks
- Cultivating indigenous innovation capabilities is essential
- Building low-carbon innovation systems is inherently long-term, resource-intensive, uncertain and risky

“Technology cycle”



Grubb (2008)

Technological innovation systems



Bergek et al. (2008)

Companies and entrepreneurs

- Experiment with and implement new technology
- Participate in applied R&D and demonstration

Financial sector

- Banks: provide loans
- Venture capitalists: invest in new inventions
- Development banks: reorient (soft) loans to low-carbon goals

Research institutes and universities

- Basic and applied R&D
- Knowledge development and education
- Workforce development

Users and consumers

- Public movement for social innovation
- Testing and acceptance low-carbon technologies and practices
- Legitimation further policy

Government

- Fund R&D and education
- Legislation
- Create conducive policies and markets
- Raise awareness

R&D

Demonstration

Diffusion

The Technology Mechanism

Cancun Agreements

- Enhanced action on technology development and transfer is to support action on mitigation and adaptation in accordance with nationally determined needs
- Priorities: endogenous capacity, collaborative RD&D, deployment and diffusion, increase public and private investment, soft and hard technology, climate observation, national technology plans

TEC (“policy arm”) and **CTC&N** (implementation)

General aim: Forming and strengthening national innovation systems for climate technologies

Specifically: Enabling different specific technologies in line with their stage of development where national needs emerge

Technology Executive Committee

20 expert members elected by the Conference of the Parties:

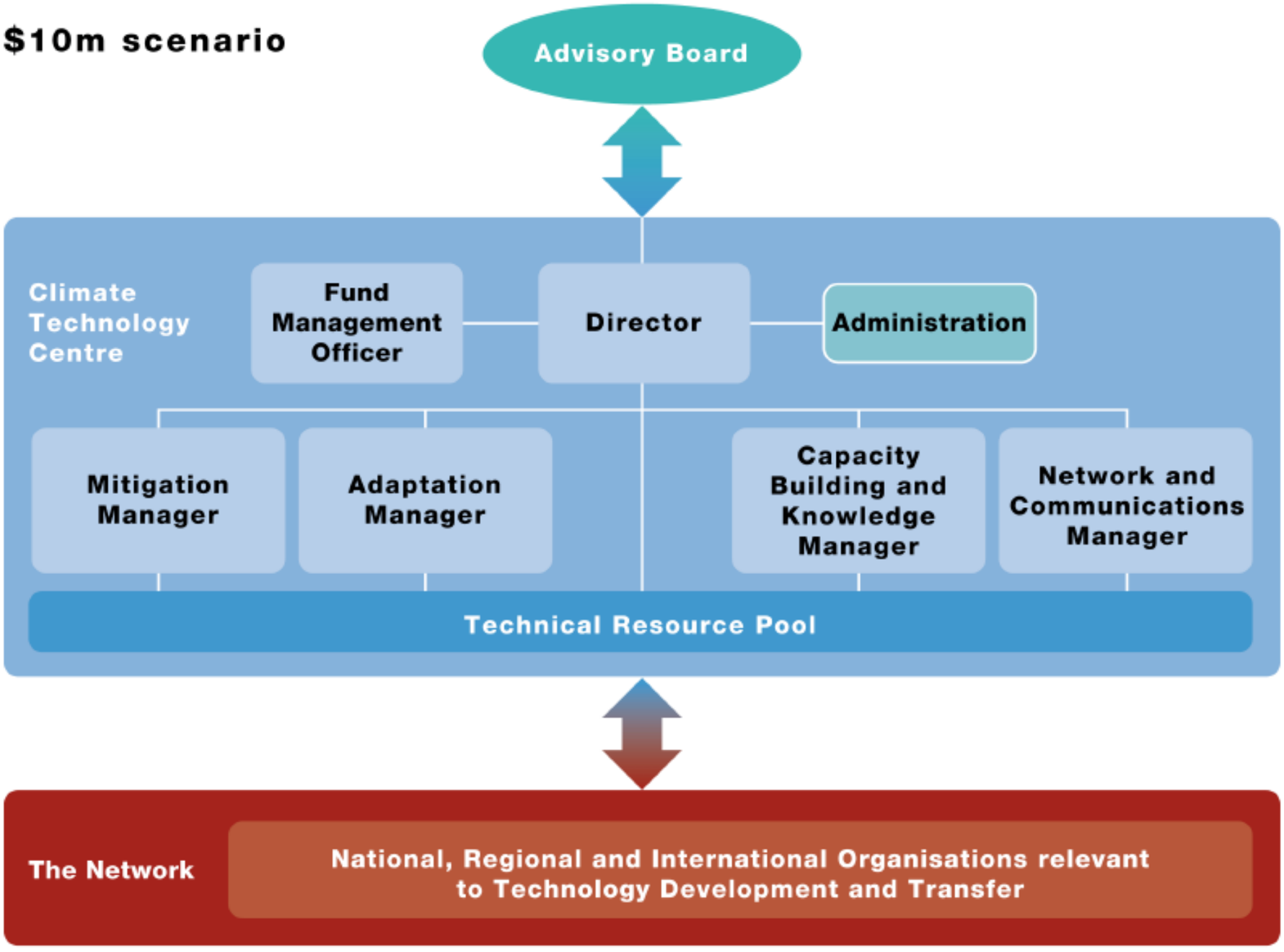
- —9 Annex I members
- —9 non-Annex I members
- —1 LDC representative
- —1 SIDS representative

Functions

- – Provide overviews of technology needs
- – Assess policy and technical issues related to technology development and transfer
- – Share information on new and innovative technologies
- – Facilitate and catalyse action on technology (roadmaps etc)
- – Find ways to engage stakeholders to build the momentum on the Technology Mechanism

Structure of the CTCN

$10m scenario



CTC lead: **UNEP**

CTC consortium:

AIT (Thailand)

Bariloche (Argentina)

CATIE (Costa Rica)

CSIR (South Africa)

ECN (Netherlands)

ENDA (Senegal)

GIZ (Germany)

ICRAF (Kenya)

NREL (United States)

TERI (India)

UNIDO (Austria)

URC (Denmark)

Delivery approach of the CTCN

Submission and Response Plan	• Submission of request by NDE • Logging and initial screening (Core Centre Staff) • Refining of request and preparation of response plan by NDE and CTC expert team • Review and approval of request (Director)
Response	• Delivery of initial quick response assistance from expert team (where appropriate) • Tendering of project to Network and selection of Network member for delivery of services • Network implementation of agreed support
Reporting and Evaluation	• CTC progress reviews and oversight • Summary report on results and impacts • Analysis and sharing of experiences through peer forums and knowledge management • Reporting outcomes publicly and to the Advisory Board

What should the TM do, and what is it doing?

- Language uses many of the right words
- TEC is meeting regularly, addressing some issues but still slightly deadlocked by developed vs. developing country positions
- Funding situation still unclear (Green Climate Fund?)
- Much depends on what the CTC&N is allowed (and budgeted) to do
- Technology Mechanism could go further; TEC could take initiatives:
  - Push: collaborative Research, Development & Demonstration
  - Pull: technology agreements on e.g. energy efficiency standards
- Clarify role of private sector

What could that mean in practice? Examples

R&D cooperation in water management

- Development of “climate-smart” practices and technologies in specific country
- Combining endogenous knowledge with international capacity
- Important co-benefit: local capabilities
- Handled by CTC&N (on request of a country)

Energy-efficient appliances: global technology standards

- TEC could set up a task group on appliances
- Engages with global manufacturers and standard organisations
- Supported by UNFCCC and independent technical expertise
- Set (voluntary and dynamic) standard, monitor progress
- If it works, repeat with in other products (cars, ACs, etc)

Remaining questions

- Linkages between the TEC and the CTC&N
  - They operate in one TM; how can they enhance and not hinder each other?
- UNFCCC's financial mechanisms
  - TEC has a mandate to initiative cooperation with other UNFCCC bodies
- Developed and developing countries
  - Promote and stimulate participation of their technological, scientific and academic institutions in the Network; essential for inclusiveness, reach and success of CTC&N
  - Be aware of the possibilities and challenges in climate technology innovation systems
- Special attention: RD&D cooperation and demand-side technology standards

Thank you

Policy brief 1 “Innovation systems in developing countries”
http://www.climatestrategies.org/research/our-reports/category/78/361.html
Policy brief 2: “Technology Mechanism in the UNFCCC: Ways forward”
www.climatestrategies.org/research/our-reports/category/78/364.html

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