



technology innovation

A G E N C Y

What is Needed to Increase R,D&I in Low Carbon Technology Innovation

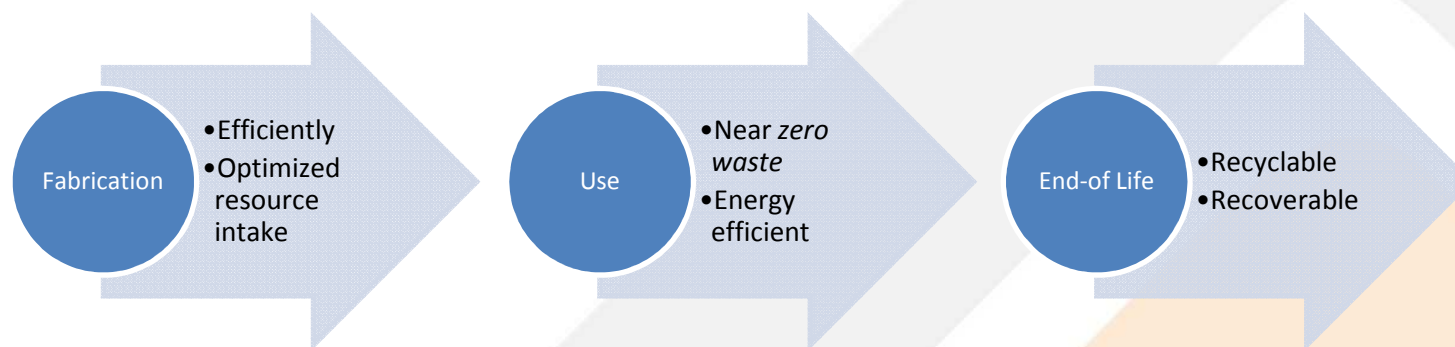
8th October 2012
Dr. T. L. Mthombeni

Introduction | R,D&I Landscape in RSA| Challenges and Opportunities

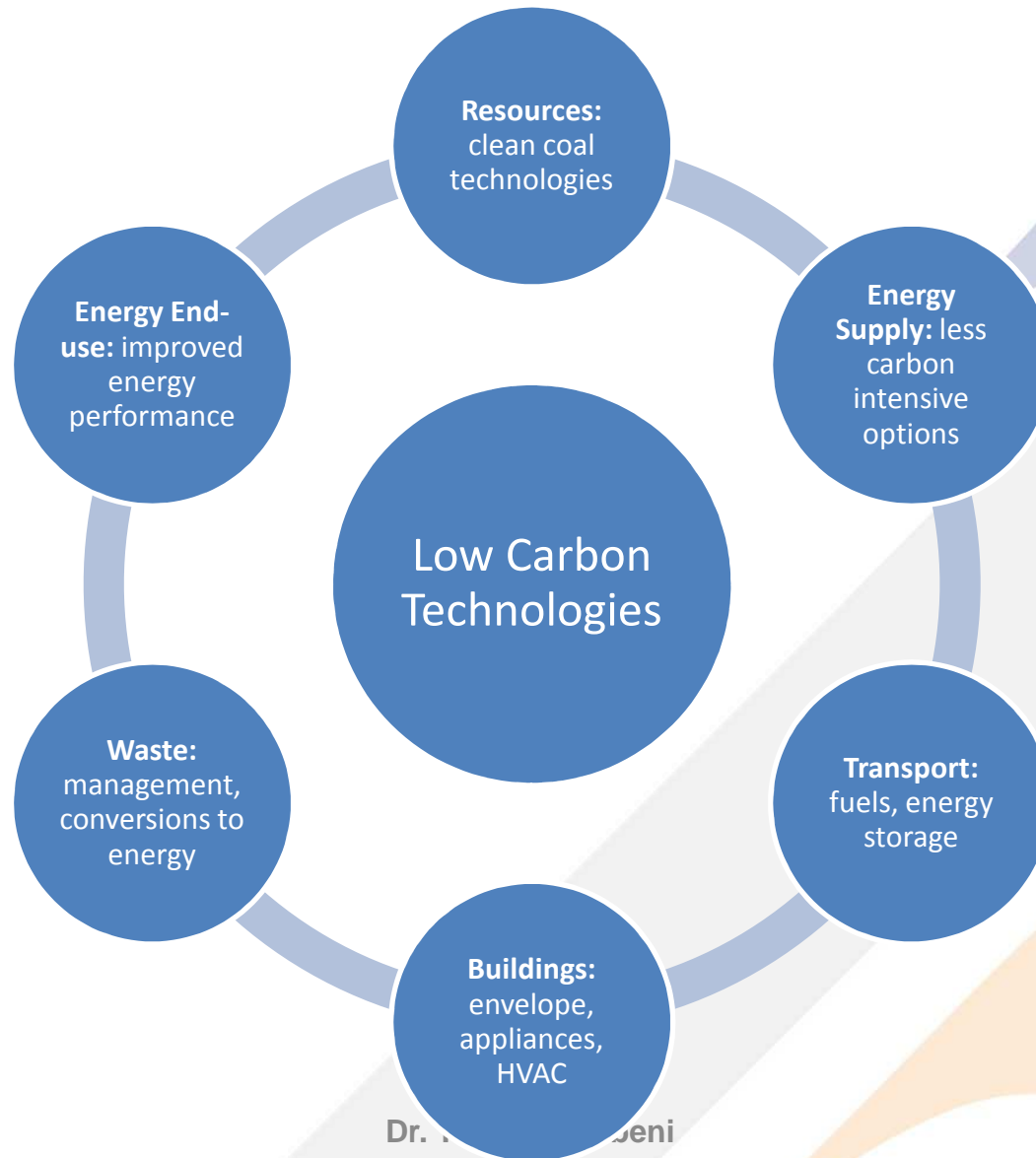
Low Carbon Technologies

The OECD defines cleaner technology as:

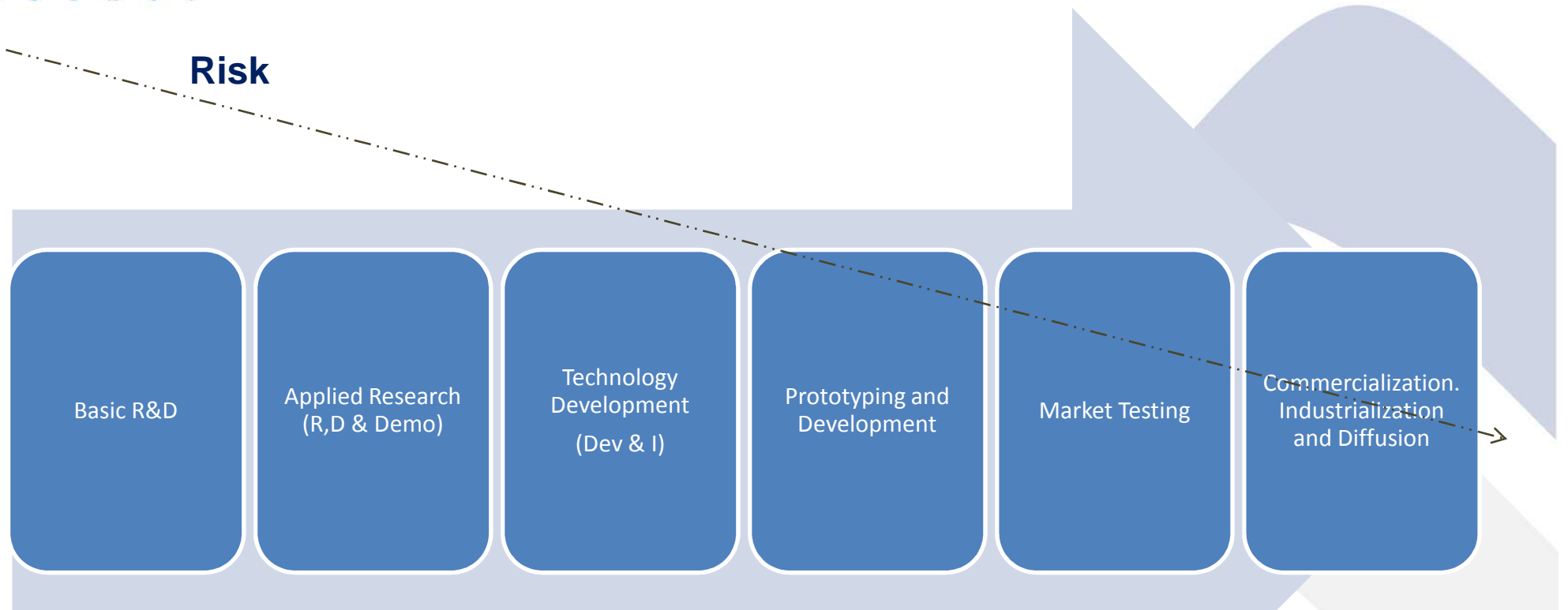
“Technologies that extract and use natural resources as efficiently as possible in *all stages* of their lives; that generate products with reduced or no potentially harmful components; that minimise releases to air, water and soil during fabrication and use of the product; and that produce durable products which can be recovered or recycled as far as possible; output is achieved with as little energy input as is possible”.



LCT Innovation Opportunities



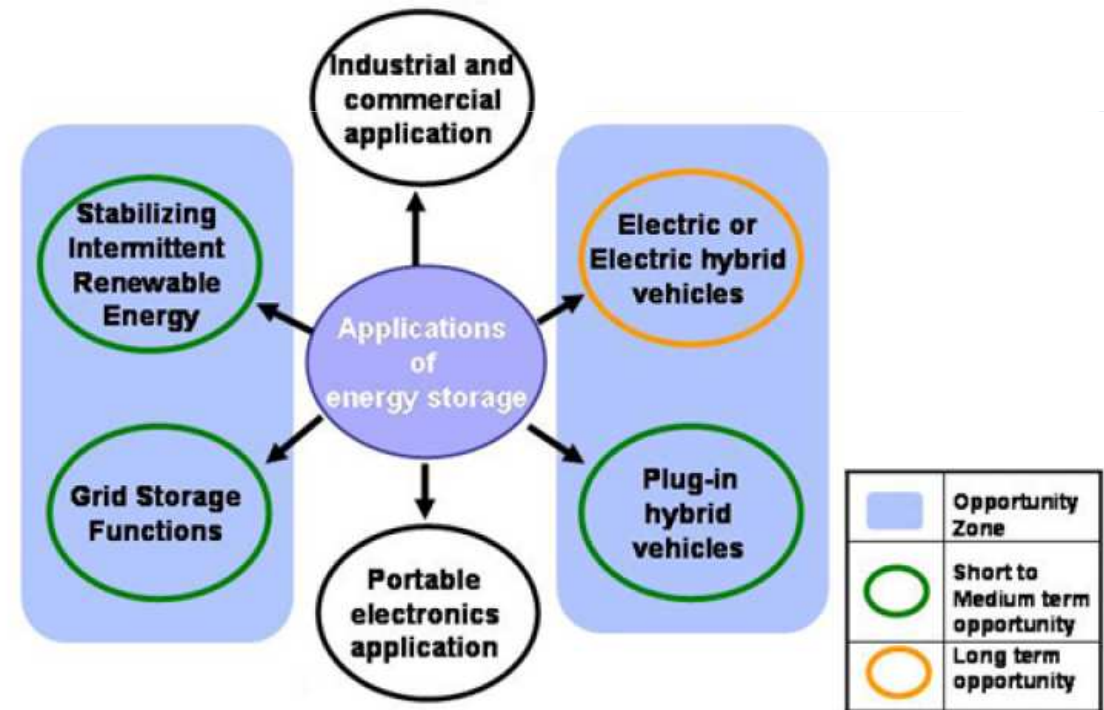
LCT R&I Value Chain



Value chain views allows for an opportunity to correlate the R&D spend to innovation rate

Innovation is Non-linear

- IP requires lateral migration
- Development never stops
- Requires flexibility
- Market needs shifts
- Very risk investments

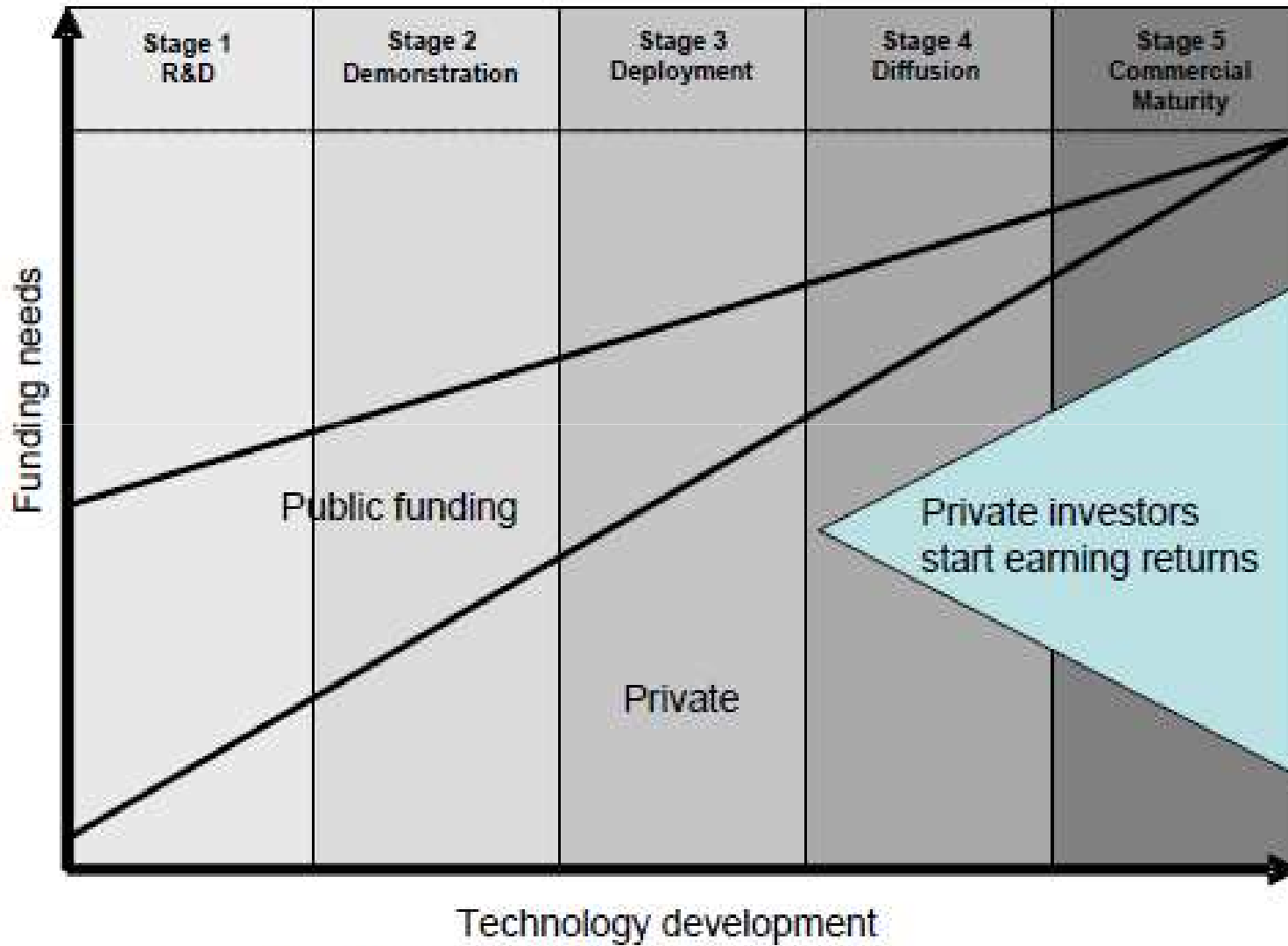


Key Challenges

- Intellectual property rights
- Capacity (institutional, human, policy and regulatory)
- Funding
- Awareness
- Private sector interest could assist



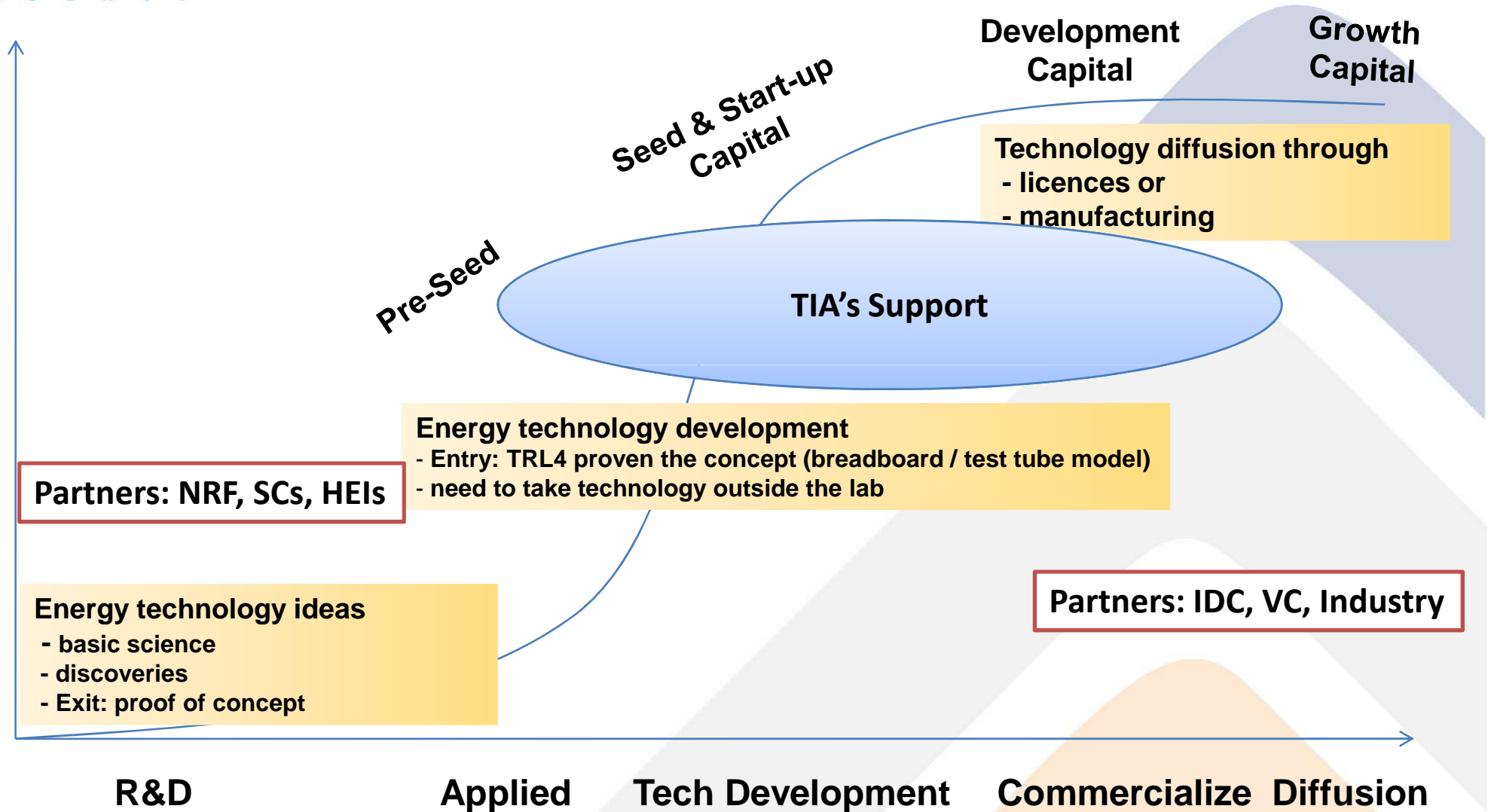
Challenges: PPP



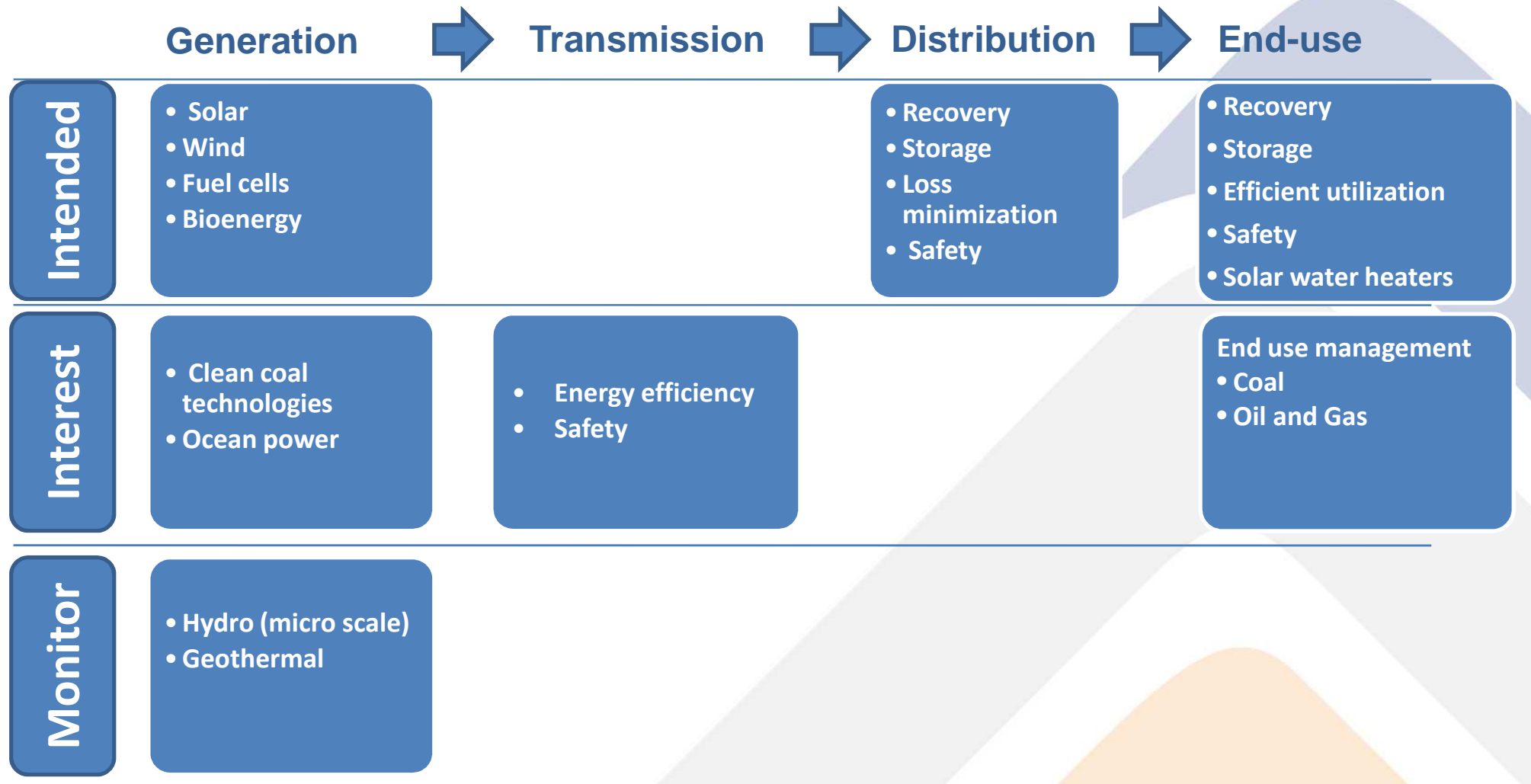
Abbreviation: R&D = research and development.

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The Market Position



Energy Technologies



What is Needed?

- Institutional capacity: generate a large IP pool for exploitation
- Communication: examples of taking inventions to market
- Strategic funds to assist in passing proof of concept stage
- Understand market trends: for now and future, requires commercial thinking
- Stimulate a vibrant VC industry to share the investment risk with government

Thank You!

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Formation of TIA



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The TIA Act [No 26 of 2008]

“The object of the Agency is to support the State in stimulating and intensifying technological innovation in order to improve economic growth and the quality of life of all South Africans by supporting the development and exploitation of technological innovations”

Comments

Technology development and commercialization funding agency

Also offer non-financial support

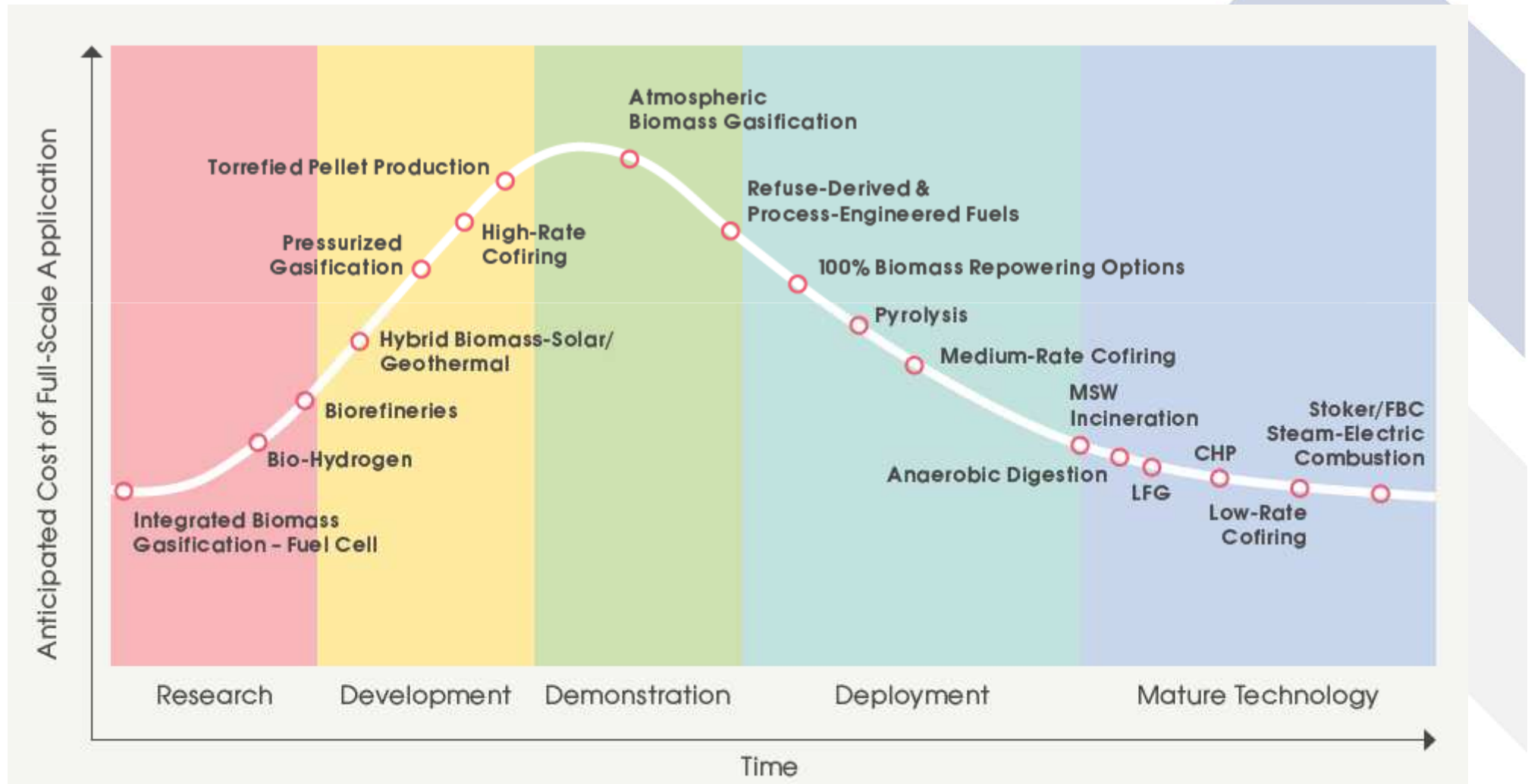
Innovation = Invention (discovery) + Market (application)

Output = new/improved technology, service, process or product

Outcome = positive impact on quality of life

Outcome = improve economic growth

Biomass for Power Generation



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