

Enablers for the development of energy efficient technologies
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Technology adoption in products

- Consumers need products and solutions to meet their expectations and not the technologies
- Converting technology from proof of concept to commercial availability is a long process and takes more than a decade
- Multiple stakeholders are involved to commercialize the technology
- Consumers look at may aspects beyond energy saving in the buying decision such as maturity of technology, affordability, service..

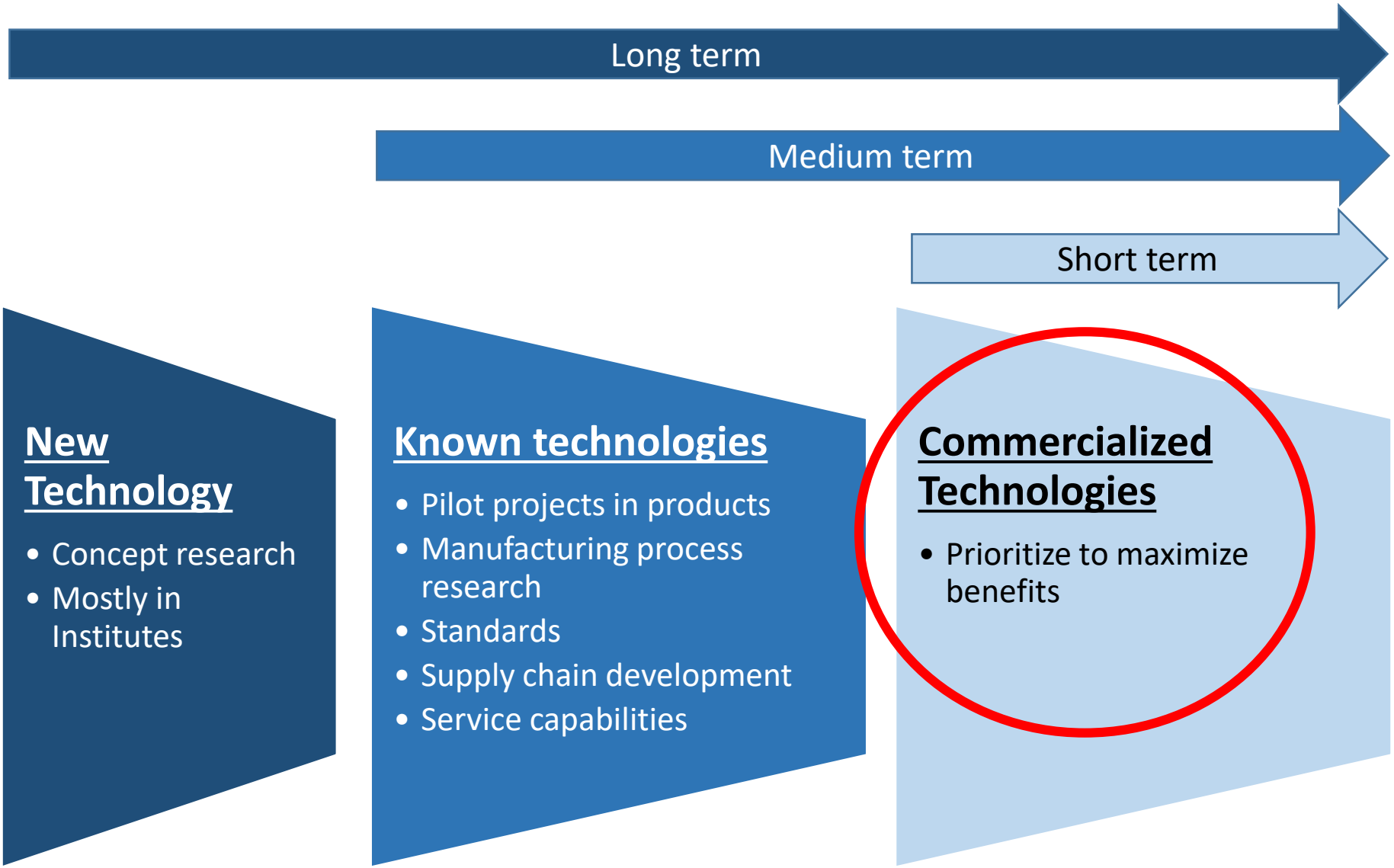
Stakeholders

- Consumers & end users
- Product & solution designers
- Product performance, reliability, codes and safety standards development institutes & bodies
- Process developers for new technologies
- Manufacturers across supply chain
- After sales service providers
- Architects , Consultants & Builders
- Labelling & Certifying bodies
- Test laboratories

Promising technologies

- High efficiency heat exchangers and motors
- Electronic controls and embedded software
- Evaporative cooling
- Phase change material
- Desiccant technology to address latent heat load
- District cooling
- Solar power in terms of heat and photovoltaic
- IoT & big data
- Building designs and material

Technology adoption



Implementation enablers

- Common platform involving all stakeholders to develop roadmap for deployment of new technologies
- Actions on long term , medium term & short term need to be started simultaneously
    - Industry will play an effective role to achieve short & medium term objectives
    - Institutes & Industry will have to jointly work on the long term objectives.
- Start-ups will help in fast commercialization

Cont...

- Capacity building
  - Talent across the development and deployment chain
  - Standards and code
  - Test labs and certifying bodies

- Human resource, revisit curriculum for :
  - Service technicians, Engineering and Architecture
  - Exposure to Electronics and IoT

Cont...

- Policies
  - Discontinuation of old inefficient products to create demand for new technologies
  - Percolation of technologies to MSMEs to develop robust supply chain
  - Awareness programs using digital platform
  - Pilot projects, tax benefits and subsidies
  - Institute and industry engagement on specific programs

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