

# Innovation Summit & International Conference on Technology Transfer and Internationalization of Technology-based Businesses

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## Collaboration and Knowledge Networks for Promoting Technology Transfer and Commercialization

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# Outline

- Innovation & Networking for inclusive and sustainable development
- Knowledge transfer and networks
- University-Industry collaboration
- Regional cooperation and networking
- Concluding remarks

# Achieving SDGs through STI and Collaboration

- **Science, Technology and Innovation (STI)** are key means to achieve SDGs
- **SDG 9 and 17** provide the framework for promoting innovation and regional cooperation



- Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation



- Strengthen the means of implementation and revitalize the global partnership for sustainable development

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# Technology Facilitation Mechanism

- Launched to **support the implementation of SDGs**.
- Facilitates **multi-stakeholder collaboration and partnerships** through the sharing of information, experiences, best practices and policy advice among Member States, civil society, the private sector, the scientific community, United Nations entities and other stakeholders.
- **Global online knowledge and networking platform** is being established.

# Innovation for inclusive & Sustainable Development

## Key messages of SDGs:

- Technology to address **economic, social and environmental challenges**
- Sustainable technological **solutions for local problems**
- Emphasis on **green and climate-friendly technologies**
- **Affordability and accessibility** of technologies to reduce technology inequality
- Innovation through **collaboration** among multiple stakeholders (e.g. university, industry, government, civil society, etc)

# Low cost and affordable water purification Nanotech-based solution in the Philippines

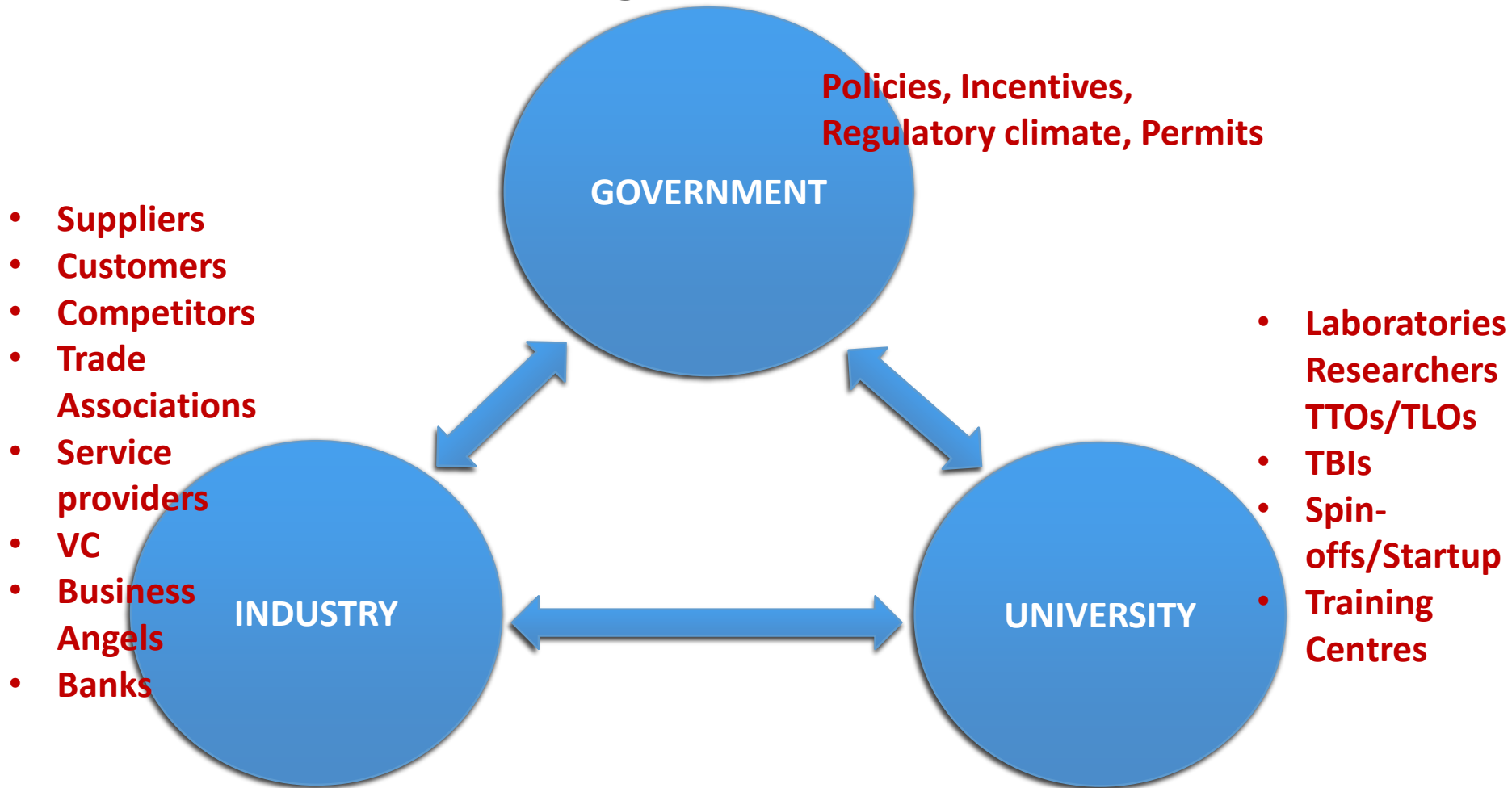


- Developed by Industrial Technology Development Institute (ITDI) of Department of Science and Technology (DOST), Philippines
- Ceramic water filter made of red clay coated with an anti-microbial agent that can substitute the chlorination process for purifying water
- Low cost, affordable, widely deployed, particularly in the far flung areas

## Knowledge Transfer for Networking / Collaboration

- Knowledge is a **Critical Asset**
- Knowledge transfer is key to **mutually beneficial collaborations** between universities, businesses and the public sector.
- *Policy & regulatory info; Intellectual property; Technical and managerial services; Knowledge resources and products; Market info/needs; Sources of capital; Technology, investment & business opportunities*

# Networking in the Triple Helix

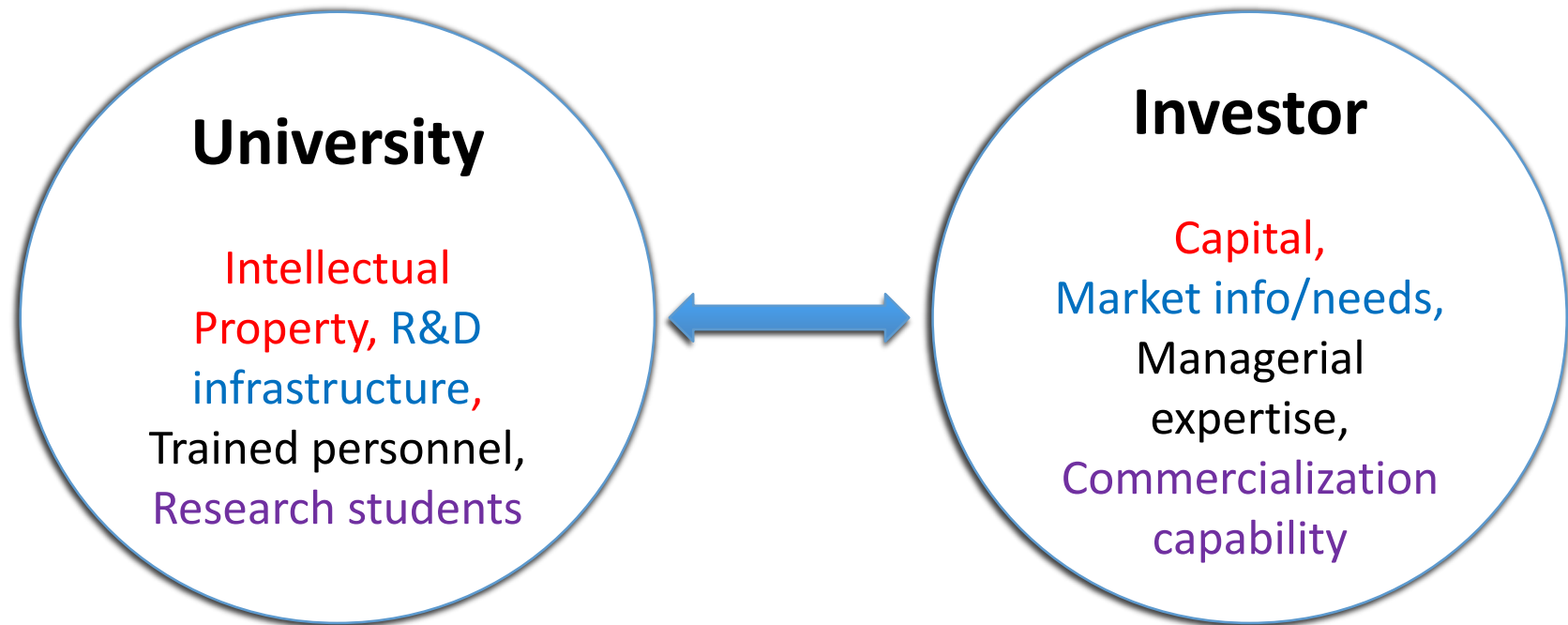




# Knowledge Networks for Innovation & Technology Transfer

- ❑ **Online networks** - ICT-driven for seamless access to valuable data and technological information
- ❑ **Market place** for technology and business cooperation
- ❑ **Cost effective** technology sourcing and match-making
- ❑ **Link multiple institutions**  
Universities, R&D laboratories, industry, technology promotion institutions, policy makers, industry, venture capital agencies, business angels, govt. funding agencies

# University – Industry Linkage



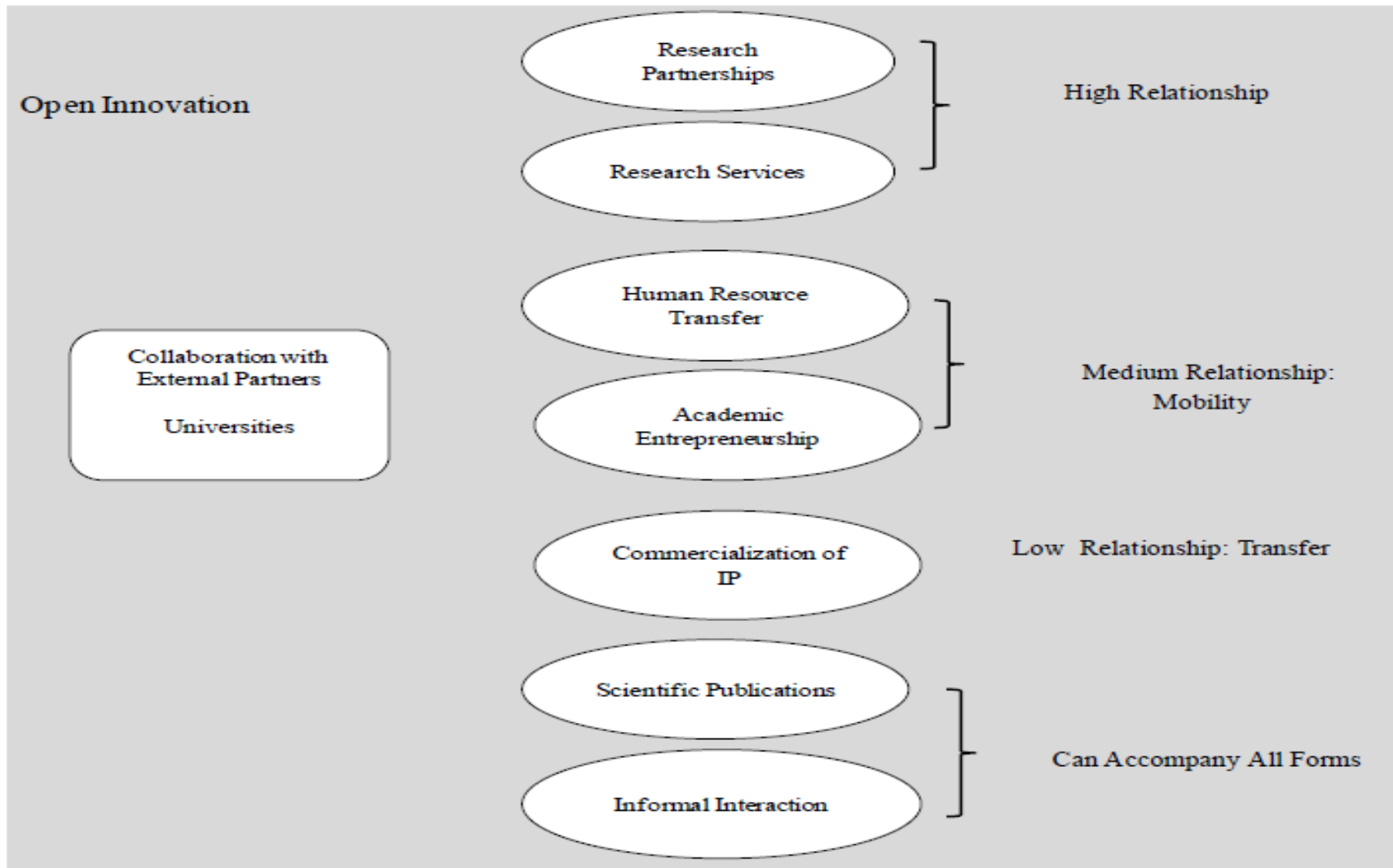
**Stanford, Purdue, MIT and Cambridge** have been particularly successful in establishing linkages with industry for commercializing research and nurturing start-ups.

# University-Industry Partnerships

1. **Research partnerships**: Collaborative R&D
2. **Research services**: Contract research, consulting
3. **Human resource transfer**: Personnel requirement of industry, training industry employees, internships
4. **Academic entrepreneurship**: Development and commercial exploitation of innovations by faculty/students through startups
5. **Commercialization of IP: Patents licensing to the industry**
6. **Joint scientific publications**
7. **Informal interaction**: Social relationship, networking, conferences

Perkman & Walsh, 2007

# University-Industry Collaboration (MIT Case Study)



CIRRELT, 2015-22, <https://www.cirrelt.ca/DocumentsTravail/CIRRELT-2015-22.pdf>

# Strategies for International Participation

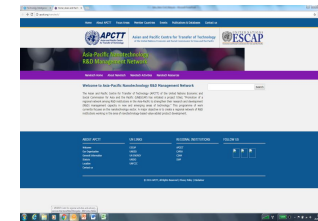
- Establish a robust and dynamic **outreach strategy** (online and offline)
- Strengthen **international operations** of innovation clusters, technology licensing/transfer offices and TBIs
- Find a position in the **global value chain**
- Improve innovation and move to the **higher end of value chain**
- Learn from **international experiences** and continue to improve **managerial skills and expertise**

*Source: Tech Monitor, Jul-Sep 2012*

# APCTT's Regional Institutional Cooperation Mechanisms



**Renewable Energy Cooperation Network for Asia Pacific (RECAP)**  
<http://apctt.org/RECAP/>



**Asia-Pacific Nanotechnology R&D Management Network**  
<http://apctt.org/nanotech/>

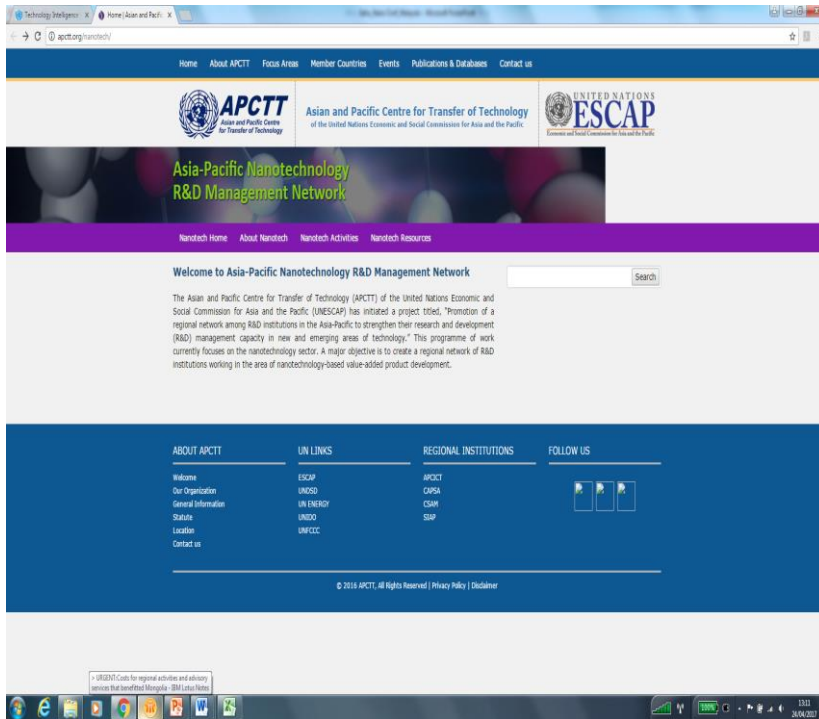


**Asia-Pacific Online NIS Resource Centre**  
<http://apctt.org/nis/>

**Biotechnology Information Network for Asia (BINASIA)**

# Asia-Pacific Nanotechnology R&D Management Network

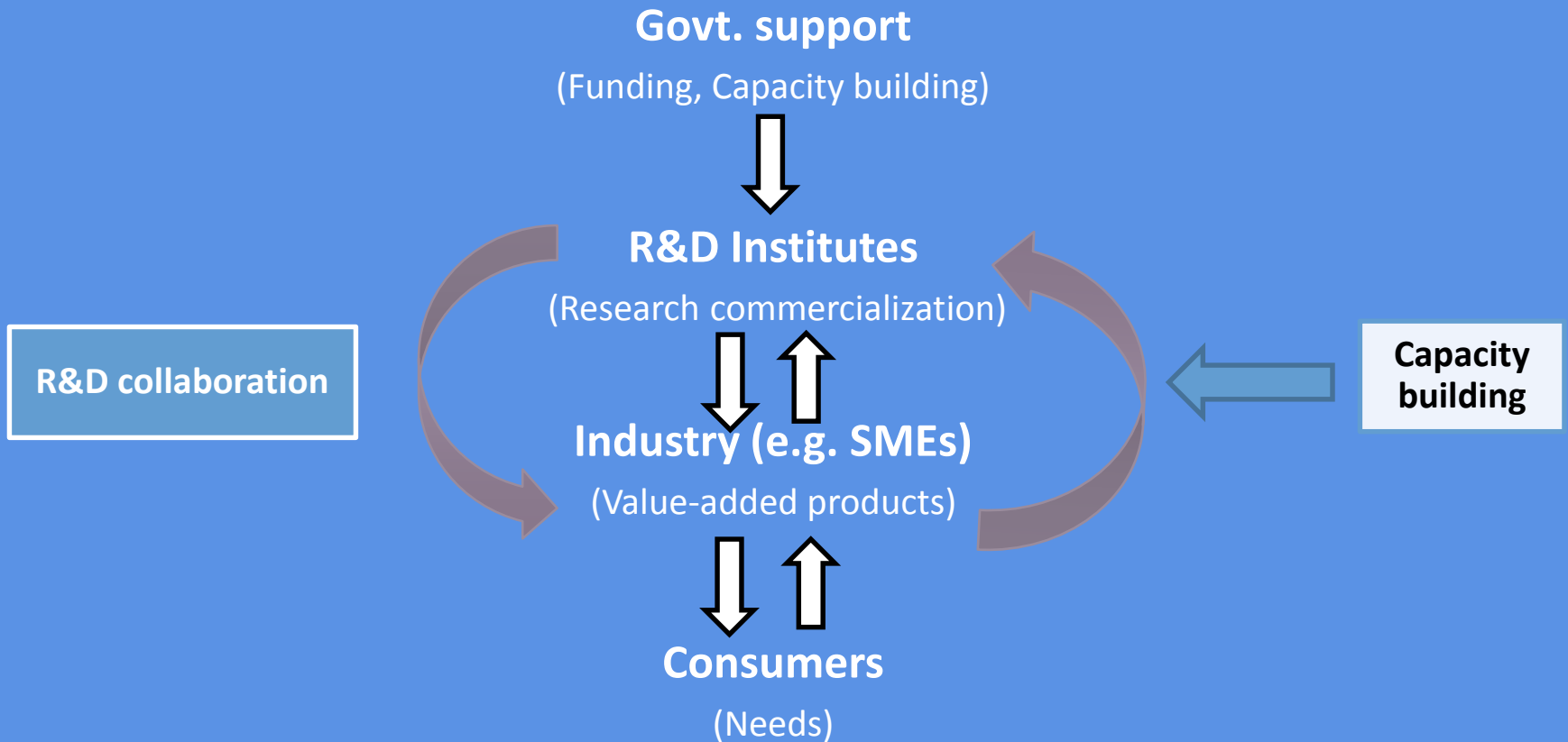
<http://apctt.org/nanotech/>



- **Nanotech-based value added products**
- Capacity building in **policy & strategy development, R&D management, Networking, Commercialization of R&D results, Nano-safety, IP protection and valuation**
- Sharing of **experience and best practices**
- Participating countries: **China, India, Indonesia, Iran, Pakistan, Philippines, Malaysia, Republic of Korea, Sri Lanka, Thailand, Vietnam**

# Nanotechnology R&D

## Integrating top-down and bottom-up approaches





# APCTT's Knowledge Networks and Platforms



Technology4SME



Technology Intelligence  
<http://www.techmonitor.net>



Renewable Energy Technology  
Bank



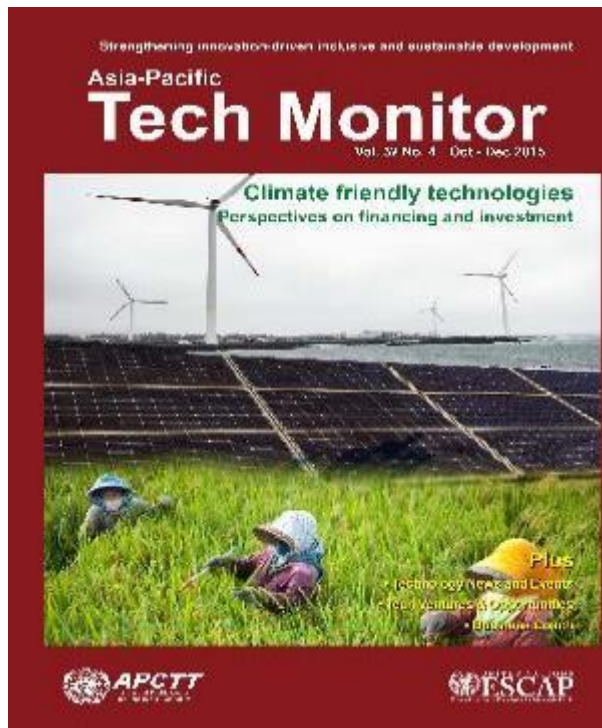
# Technology4SME Database

The screenshot shows the website's header with navigation links: About APCTT, Focus Areas, Member Countries, Events, Resource Centre, and Contact Us. The main header features the APCTT logo (Asian and Pacific Centre for Transfer of Technology) and the ESCAP logo (United Nations Economic and Social Commission for Asia and the Pacific). Below the header, a yellow banner displays "Technology Offers (855)". A red button labeled "Submit Technology Offer" is positioned above a list of sectors. The sectors listed are: Aerospace (6), Textile (4), Energy (23), environment (12), Food Processing (48), Cement (1), information technology (61), and Instrumentation (4). To the right of the sectors is a large green button labeled "Technology4SME Database". Below this button are four more buttons: a green "Login" button with a user icon, a green "Register" button with a plus icon, a blue "Technology Offers" button, and a blue "Technology Requests" button. At the bottom of the right-hand column is a blue button labeled "SME Inquiry & Partnership".

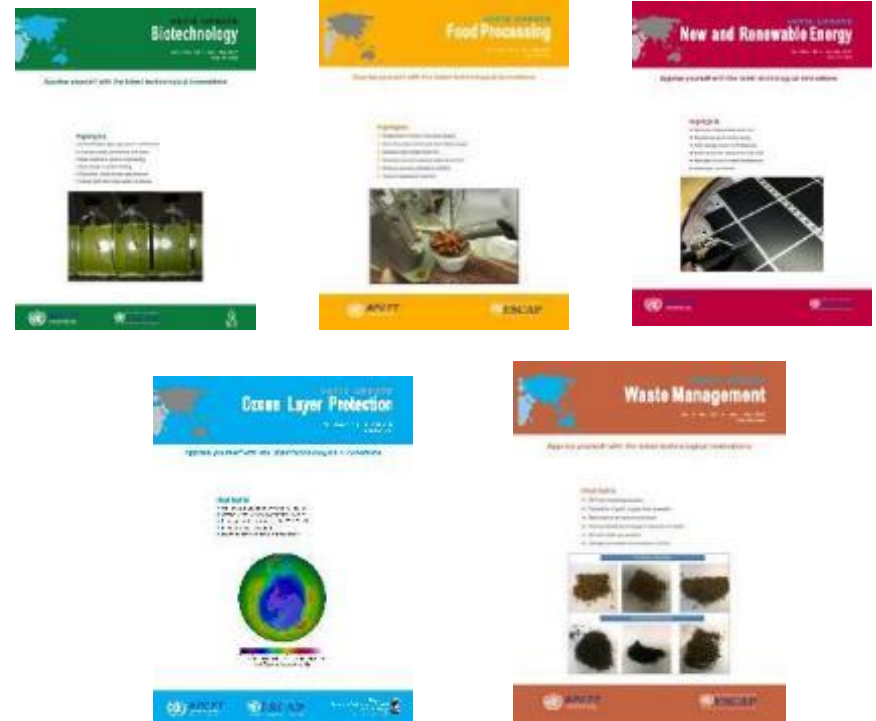
# Technology Intelligence

<http://www.techmonitor.net>

## Asia-Pacific Tech Monitor



## VATIS Updates



# Recent Analytical / Knowledge Outputs

## [www.apctt.org](http://www.apctt.org)

### National Innovation System

- NIS Training Manual - “NIS Diagnosis and STI Strategy Development to Achieve National Sustainable Development Goals”

### Sustainable Agricultural technologies

- Policies, Institutions and Processes (PIPs) to Support Value Chains for Seed Development for Pulses, Legumes and Oil crops in the Dry zone (*Case Study*)
- Supporting Value Chains for Seed Development of Pulses, Legumes and Oil crops in Myanmar’s Dry Zone (*Policy Brief*)

### Nanotechnology

- Manual on Critical Issues in Nanotechnology R&D Management: An Asia-Pacific Perspective
- Innovative Development of Bottom-up Nanotechnology-based Value Added Products for Enhancing Competitiveness in the Asia-Pacific

### Sustainable Energy

- National Assessment Framework on Sustainable Energy (Indonesia and Lao PDR)
- National Sustainable Energy Strategy Reports (Indonesia and Lao PDR)

# Concluding Remarks

- **Complex challenges of innovation and technology transfer can be addressed** through wider networking with stakeholders.
- Knowledge networks, online platforms and tools are **key to access up-to-date information and establish linkages and partnerships** for technology transfer and commercialization.
- **Participation in international networks** can boost the chances of cross-country collaborative innovation and technology transfer.
- APCTT can assist in strengthening **technology transfer and commercialization capacity** of member States through South-South, North-South and Triangular cooperation.

# Thank you

## For more information, contact

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