INNOVATION SUMMIT & INTERNATIONAL CONFERENCE ON TECHNOLOGY TRANSFER AND INTERNATIONALIZATION OF TECHNOLOGY-BASED BUSINESSES

1 - 2 November 2018, International Conference & Exhibition - Tangerang Selatan, Indonesia

Promoting Cross-Border Partnerships in Technologybased Businesses – Role of APCTT-ESCAP

Krishnan S Raghavan, Ph.D.

Coordinator – Technology Transfer
Asian and Pacific Centre for Transfer of Technology (APCTT) of the
United Nations Economic and Social Commission for Asia and the Pacific (ESCAP)





Outline

- Introduction
- Regional Cooperation for Technology Startups
- APCTT's Regional Platforms for Technology Transfer
- Selected Examples of APCTT's Accomplishments
- Concluding Remarks





Introduction

- Several startups have innovative ideas / solutions that can meet the requirements of stakeholders in other countries.
- Some of their technological innovations may even have better market opportunities in countries other than the home country of the startup
- There are several challenges for startups to establish as successful in foreign markets that can help in expanding their geographic coverage and sources of revenue.
- Some of the Challenges are: Regulatory approvals, Requirement of Product localization; Need for sales/service/operations teams on the ground; Local competition, and what competitive advantage they have (ROB MOFFAT, BALDERTON CAPITAL)





Regional Cooperation for SMEs and Technology Startups

- Cross-border cooperation provides enormous opportunities for startups to grow financially, technologically as well as geographically
- The networks and partnerships help them can gain access to a larger market and hence revenue generation possibilities also are immense
- They also learn from experiences, failures, success stories and best practices from their counterparts that makes them more competitive in a globalized and interconnected world
- Regional cooperation also helps them in terms of gaining access to new technologies and capital that helps them to expand their portfolio and/or market share





Enabling Environment for Startups

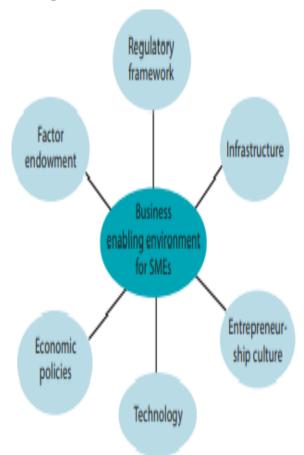
Sound monetary policy to control inflation preserves individual savings that are so often used as seed capital for start-ups.

Openness to competition and investment prepares startups for the global economy.

Factor endowments can be natural resources, human capital or an advantageous geographic location. In the absence of valuable natural resources, a diligent, well-educated workforce, favourable geographical location and a well-trained civil service to direct industrial development can be ample compensation.

Entrepreneurship culture - an appetite for risk and prosperity. Fear of failure and the stigma attached to failure, hinder entrepreneurial activity

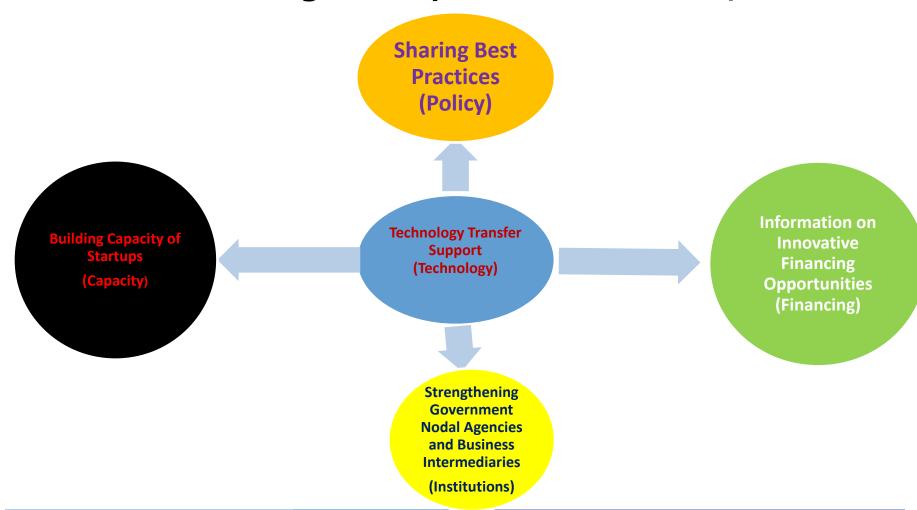
Infrastructure: Reliable roads, ports, electricity, water, and other such facilities







Promoting Startups – The APCTT Way







APCTT's Regional Cooperation Platforms for SMEs and Startups

APCTT has developed various free of cost, regional information repositories in the form of internet-based on-line tools and information platforms. Some of the key technology transfer on-line tools / information platforms are provided below:

- *Technology4sme Database (www.apctt.org)
- Global Technology Databases (www.apctt.org)
- Renewable Energy Technology Bank (www.apctt.org)





APCTT's Regional Cooperation Platforms for SMEs and Startups

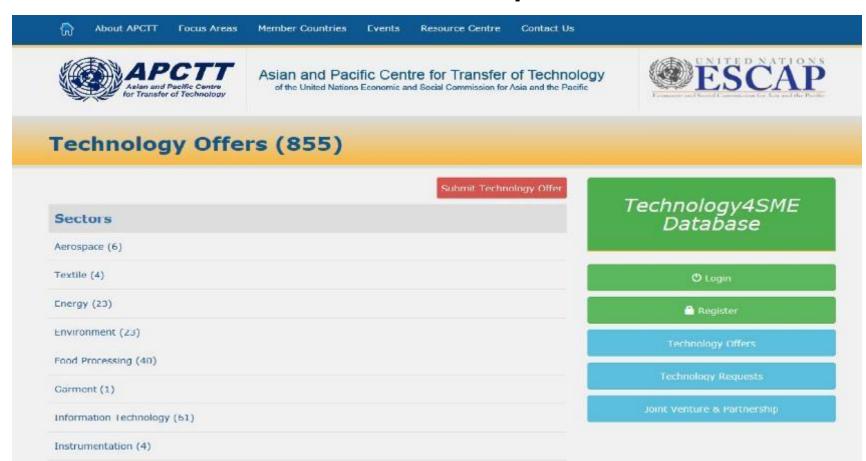
Technology4sme is

- A regional platform for technology suppliers and seekers from the Asia-Pacific region and beyond
- An <u>IT powered mechanism</u> that helps technology based small and medium enterprises in exploring opportunities across the region
- An <u>effective source of information on technological development</u> at regional level and also on technology related events such as conferences, workshops, exhibitions organized in the Asia Pacific region





APCTT's Regional Cooperation Platforms for SMEs and Startups







Preparing & Uploading Tech offers / Tech requests

Uploading Tech Offers

Submit Technology Offer This section enlists all the technology offers available under various sectors. The members can be browse and submit a new technology offer. While submitting tech offers, the members should fill in the fields appropriately as it makes their technology offers stand out better. * Indicates fields are manda *Title of Technology 🚱 *Sector @ Select *Country 🚱 * Description @ *Area of Application 🚱 Advantages ** Environmental aspects 💞 Cleaner Production - Energy efficiency Not Applicable □ Waste utilization □ Systems Integration □ Other Development Status & - Idea LaboratoryModel Commercial Prototype Design PilotPlant Fully Commercialized Legal Protection 😯 ☐ Trade Mark ☐ Patent ☐ Others Technical specifications @ "Trunsfer Terms 😭 Consultancy □ Technical services Turnkey Technology Licensing Others Joint Venture Equipment Supply Target Countries 🚱 Afghanistan Albania Algeria American Samoa (For multiple selection use "ctrl" key) Estimated cost(US\$) @ Browse.. Upload @ Browse. Contact Details (Click to fill / Edit) Do You wish to display your contact details O No Yes online?

Uploading Tech Requests

Submit Technology Request	
This section enlists all the technology requests available under various sectors. The members can both browse and submit a new technology request. While submitting tech requests, the members should fill in all the fields appropriately as it makes their technology requests stand out better.	
	* Indicates fields are mandatory
* Title of Technology 🚱	
* Sector 🚱	Select
* Country *	India
* Description 😯	
* Area of Application **	
* Keywords 🚱	
* Transfer Terms 🚱	□ Consultancy □ Joint Venture □ Technology Licensing □ Subcontracting □ Technical services □ Others □ Turnkey Plant □ Equipment Supply
Studies Available 🚱	☐ Feasibility Report ☐ Environmental Impact Studies (EIA/EIS) ☐ Others
Project Type 🚱	○ Start Up ○ Diversification
Estimated project cost (US\$) 🚱	
Target Countries 🔮	Afghanistan Albania Algeria (For multiple selection use "ctrl" key)
Assistance sought from potential partner 🚱	
Additional information @	
Upload 🚱	Browse
	Browse
Contact Dotaile /Click to fi	
Contact Details (Click to fill/ Edit)	
Do You wish to display you contact details online?	JI
Submit	

Global Technology Databases

Renewable Energy Technology Bank



Asian and Pacific Centre for Transfer of Technology of the United Nations Economic and Social Commission for Asia and the Pacific



Global Technology Databases

MCTT has compiled a list of global as well as country-wise technology disclasses that deal with the technology transfer relates services for SMEs and entrepreneurs.

If a perticular technology search has been made using APCTT'S Technology SPME datebase and if the search did not yield desired results, the users could use this section to extend their search to other databases listed in this section.

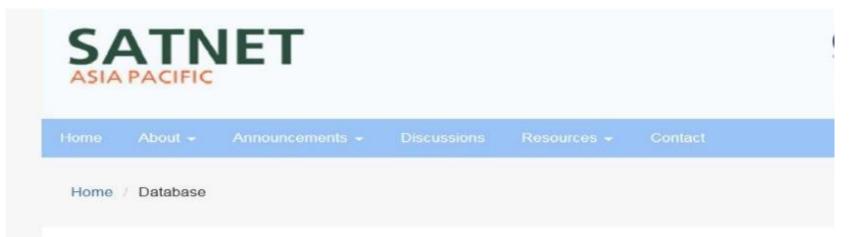
Over 18 technology databases could be readly accessed through this service of APCTT. More technology databases from countries across the globe will be added periodically for the benefit of SMEs and entrepreneurs.



Renewable Energy Technology Bank (RET-Bank)

Home > Renewable Energy Technology Bank (RET-Bank) APCTT's Renewable Energy Cooperation-Network for the Asia Pacific (RECAP) is an institutional RET-Bank Search Search cooperation mechanism that has been set up in accordance with United Nations ESCAP Commission resolution 64/3 of 30 April 2008 on promoting renewables for energy security and sustainable Country development in Asia and the Pacific, APCTT received generous funding support of the Ministry of New and What is In Store for Renewable Energy, Covernment of India for establishing this institutional cooperation mechanism for Offence Wind in the - Any promoting cross-porder cooperation in the promotion of renewable energy among countries in the Asia-Next Fire Vierni Technology Pacific region. RECAP aims to strengthen the capacity of member countries to promote the utilization and Cost Cutting: is: development of renewable energy technologies (RETs) to meet their energy needs and foster sustainable -An-QBobs the BC5 development. As on date, there are 15 member countries, viz. Bengladesh, China, Rij., India, Indonesia, Estamic Republic of Eran, Malaysia, Mongolia, Nepal, Pakistan, Philippines, Republic of Korea, Sri Lanka, (sate) The land, and Met Nam are cert of the RECAP network. This Institutional Cooperation Mechanism is in the form of a network of member countries, facilitated by APCTT, that would continue to perform four major. Green Tech States Ouck Links functions, namely: We Not Necessarily Democratic Collection and dissemination of information on renewable energy technologies (RETs). >> min Sharing of best practices on renewable energy (RE) promotion and utilization. Otrectives. · Developing capacity to gian and implement RET transfer projects, and Target Countries Promoting research and development (R&D) collaboration in renewable energy technologies. Since June 2009, APCTT planned and implemented several activities towards establishing this cooperation Other Links Constitution mechanism including the design and development of RECAP website and RECAP On line Solution Center to cater to the need of renewable energy practitioners in member countries in the Asia-Racific region. The RET RESOURCE primary objective of RECAP network is to facilitate technology transfer cooperation among countries in Assessment. the Asia-Papific region in the area of renewable energy. Towards this end, APCTT has developed a "Renewable Energy Technology Bank (RET-Bank)" of tested and proven renewable energy technologies Aufte book on (RETs) initially in the areas of solar, blomass, wind, mini-tycho power and geo-thermal energy, it is rin lectual property envisaced that this technology bank would act as a repository of information on renewable energy RES/25 technologies that are readily available for transfer and deployment. APCTT has developed this Renewable Energy Technology Bank as on-line technology database freely evallable for public access through its RECAP website. Visit RET-Bank

SATNET Agricultural Technology Database



Technologies And Good Practices In Sustainable Agriculture



This database contains information on sustainable agricultural technolog and good agricultural practices promoted by development practitioners a implemented by small farmers in various countries of South and South-E Asia. It is the result of research by the SATNET Asia – an open network institutions and individuals sharing a common interest and concern in addressing the urgent need for innovative approaches to increase agricultural productivity to feed the growing population in a sustainable manner.

The Food Security Centre of the University of Hohenheim, Germany, ha led the collection and analysis of technologies in this database. For more information on the experts who contributed to the database, please const the list of contributors.

Direct Technology Transfer Mechanisms

APCTT is assisting SMEs, R&D Institutions, Researchers, Technology Seekers, Technology Providers, Government Organizations through

- Sharing information on technology sources
- Technology based business partnerships
- Latest trends in specific technological sectors (through publications)
- Cross-border technology transfer events (B2B meetings in specific sectors).





Selected Examples of Key Accomplishments Establishment of India SME Technology Services Ltd.

- In partnership with the Small Industries Development Bank of India (SIDBI), APCTT incubated the Technology Bureau for Small Enterprises (TBSE) in its premises by providing access to technology transfer networks that the Centre had established over a period time as well as the technology databases
- TBSE has been renamed as **India SME Technology Services Limited** (**ISTSL**). It is currently operating independently and providing vital support to Indian SMEs in technology transfer and financing.



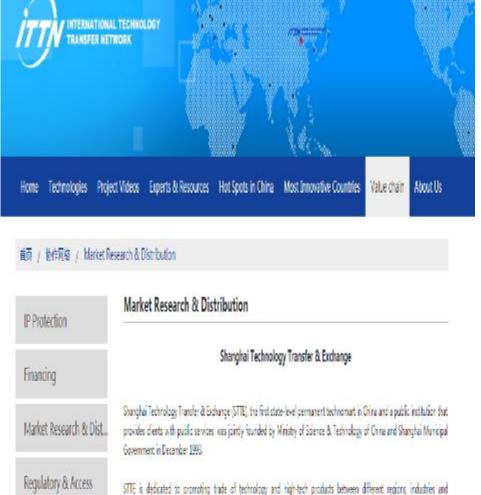


Selected Examples of Key Accomplishments (Contd.)

Establishment of Technology Parks and Indian University Technology Database

- APCTT in partnership with UNDP implemented a project entitled, "Nurturing Technological entrepreneurship through S&T Entrepreneurship Parks (STEPS) & Technology Business Incubators (TBIs)".
- ❖ Two technology business incubators were established. In partnership with Science and Technology Park, University of Pune and UNDP
- ❖ APCTT also set up the **University Grants Commission's Indian University Technology Database** which is the key technology transfer database for technologies developed by Indian universities. This database covered about **17 technological sectors**.

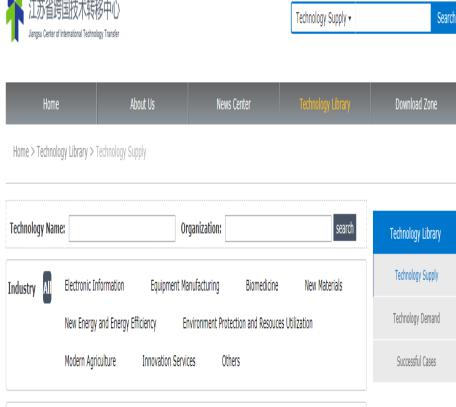
Selected Examples of Key Accomplishments (Contd.)



organizations to accelerate the industrialization and commercialization of scientific and technological achievements. With the goal of promoting technology transfer projects successfully, STTE has played an important role in constructing independent innovation.

system and performed an effective work in last decades.

CROs and R&D Network



Novel Diuretic and Inhibitor of Gastric Acid Secretion

Australia Austria Canada Germany Swedish The USA

[2017-12-04]

Prevention of Browning in Fruits and Vegetables

[2017-12-04]

Selected Examples of Key Accomplishments (Contd.)

Technology Transfer Capacity Building

Training of Trainers Programme on Technology Transfer

APCTT has been organizing Training of Trainers (ToT) programmes on Planning and Managing Technology Transfer projects for strengthening the technology transfer capacity of ESCAP member countries. Over 5000 representatives from SMEs and SME support institutions have been trained by APCTT in Bangladesh, Nepal, Thailand, Philippines, India, Fiji Islands, Pakistan, Islamic Republic of Iran, Sri Lanka, Viet Nam, Malaysia, Indonesia and China.

Concluding Remarks

- Unless an enabling environment that nurtures and supports startups is available, countries' transition from manufacturing economy to knowledge economy will not be possible
- Strengthening National Innovation Systems (NIS) that governs the science, technology and innovation ecosystem is the most critical step for developing countries to bridge technological gap with developed economies.
- APCTT supports Startups through its technology transfer platforms, knowledge products, partnership channels through its regional cooperation networks in new and emerging technological areas and business for a such as the Asia Pacific Business Forum (APBF) organized by United Nations ESCAP





Concluding Remarks

- To provide support to startups for developing critical skills in cross-border technology transfer, APCTT organizes technology transfer capacity building programme for startup promotion agencies in member states.
- This programme aims at imparting skills in technology transfer and the use of TT planning and implementing approaches to carefully selected trainers from participating member countries.
- These trainers will then train others thereby creating a multiplier effect so that within a short period a critical mass of skills can be developed in each participating member country to provide assistance to startups.





Thank you

For more information, contact

Krishnan S Raghavan, Ph.D. UNESCAP-APCTT

P.O. Box 4575, C-2, Qutab Institutional Area, New Delhi – 110 016, India

Tel: 91-11-30973758 | Fax: 91-11-26856274

Email: srinivasaraghavan@un.org | Website: www.apctt.org,



