

WIPO 3rd Regional Conference for Presidents and Vice-Presidents of Universities and Research Institutions on Creating an Enabling Intellectual Property (IP) Environment for Technology Development, Management and Commercialization

Panel 1: Innovation and Knowledge Integration

- from JICA's International Cooperation Experience -

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What is JICA?

Japan International Cooperation Agency (JICA)

Field network

91 overseas offices,
many project offices &
17 domestic Offices

Human network

approx. 20,000/year
personnel dispatched
for training in Japan
50+ years cooperation



Expertise

Staff and external
experts (Approx.
10,000 experts/year
newly dispatched)



JICA covers various
area such as:

Education
Health
Water / Disaster
Governance
Peace-building
Social security
Transportation
ICT
Natural resources & Energy
Private Sector Development (PSD)
Agriculture and fisheries
Environment
Urban development
... etc.



JICA's Cooperation at a glance

\$9.289 billion

* JICA's disbursements in FY2015

\$1.917 billion

*technical cooperation expenses

572 projects

*number of Technical cooperation projects(ongoing)



11,134 experts

*number of dispatching experts(new)



\$1.117 billion

*amount of concluded Grant Agreements



154 projects(58 countries)

*number of grants aid projects (ongoing)

\$22.609 billion

*amount of loan aid distributed



75 projects(31 countries)

*number of loan aid projects(new)



JICA's Mission, Vision and Actions

*Renewed in
2017*



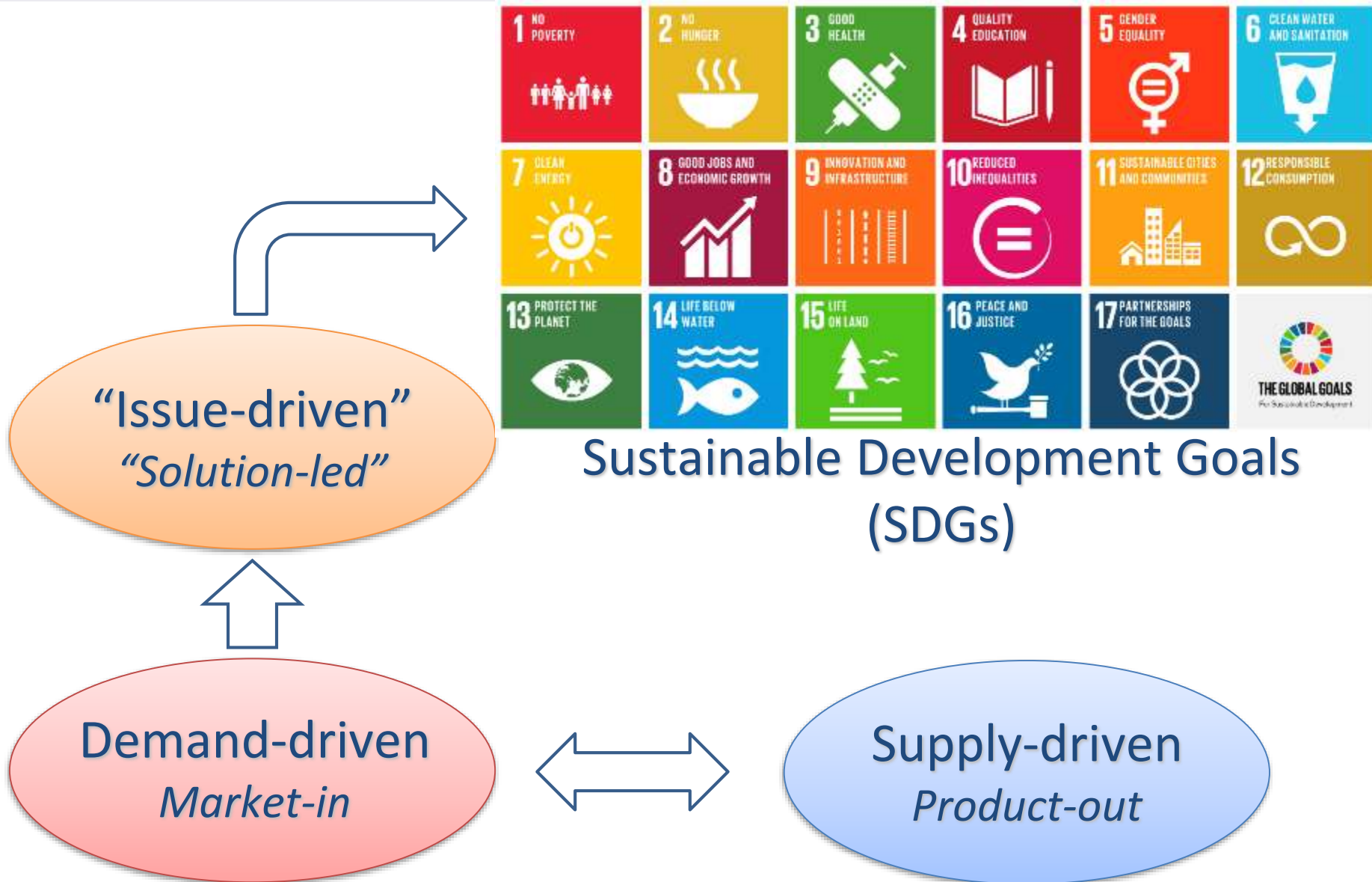
Source: JICA website (2016)



JICA's Science, Technology and Innovation (STI) = STI for SDGs

Utilization of Science, Technology and Innovation (STI)
for solving social issues in developing countries:
UN's Sustainable Developing Goals (SDGs)





- ✓ Innovation, Co-creation and *Gemba* in JICA's Vision
- ✓ Need to consider how STI can be inclusive and contribute to the whole society
- ✓ It is important for STI to share common goals
- ✓ Japan's innovation nurtured by this sharing common goals: such as Toyota's Kaizen

(President Prof. Kitaoka, JICA, 14 Dec. 2017, at the STI Forum at the University of Tokyo, with the President of the World Bank and the President of the University of Tokyo)

STI will be one of the most important pillar at 2019 G20 hosted by Japan



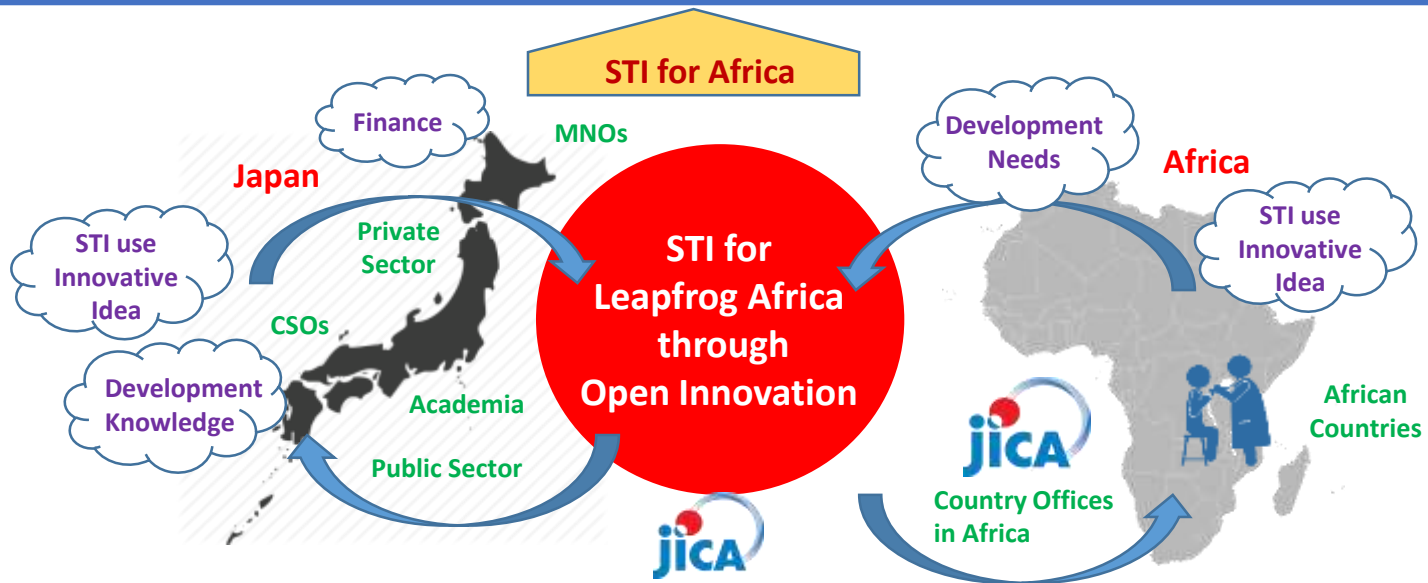
STI for Leapfrog Africa through Open Innovation

SDGs

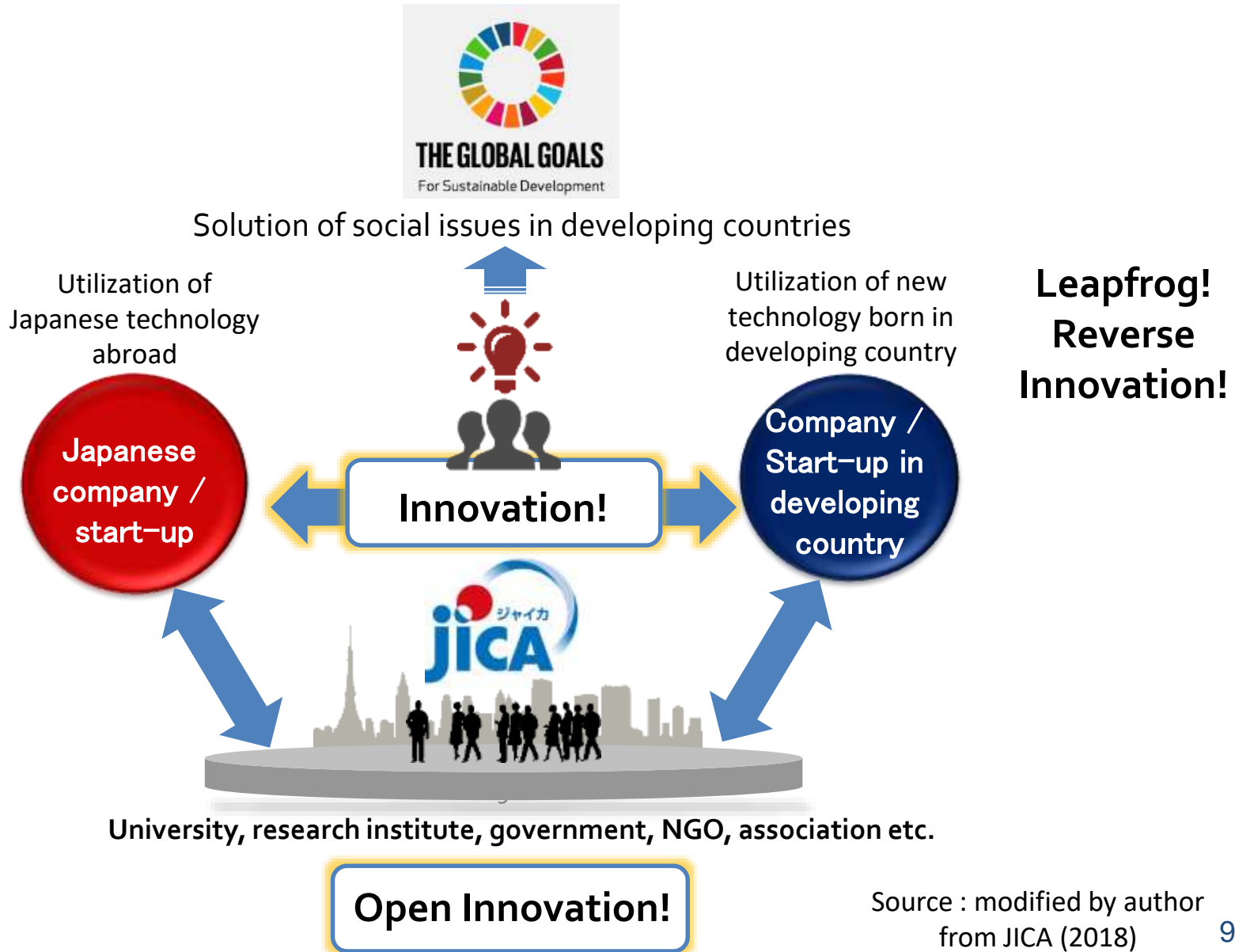
STI Private Investment to Africa

STI use Solution Provision for Africa's Development

- ✓ **Raising Awareness** among multi-stakeholders in relation to Africa's development using the power of STI.
- ✓ **Consensus Building and Acceleration** particularly between African countries and JICA to re-identify development agenda and practice of using the power of STI.
- ✓ **Resource Mobilization and Ecosystem** through inclusive and collective approach with multi-stakeholders include encourage private finance to accelerate the STI for Africa's development.



JICA to become a catalyst for innovation for solving social issues in developing countries



Kaizen

as one of
the solutions



Source: JICA (2018)
“Kaizen Handbook”

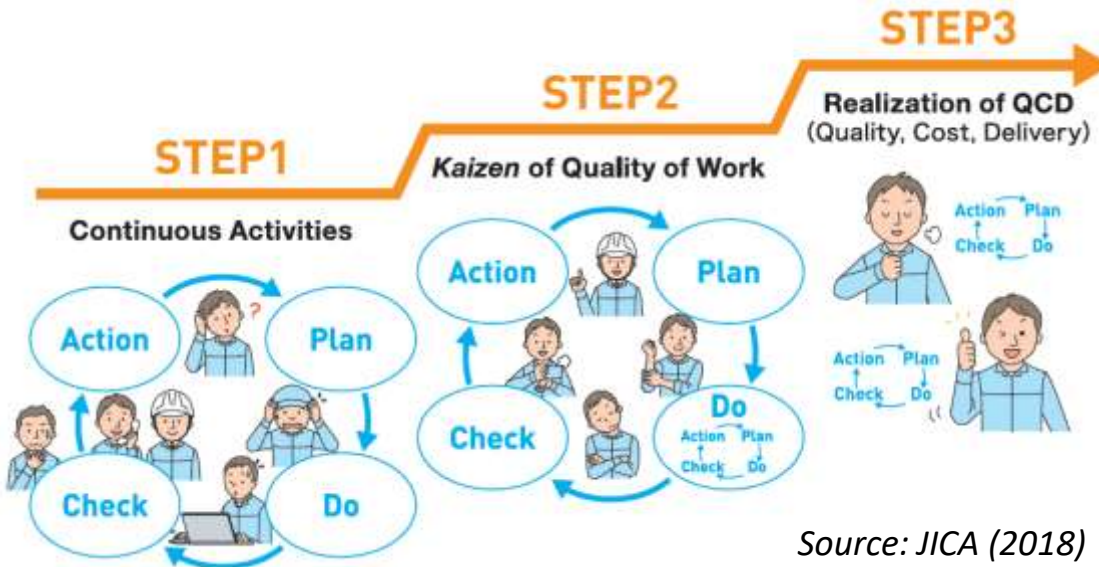
Kaizen as one of the solutions



<p>Effect 1 Improves quality, productivity and service level; Reduces cost and delivery time</p>	<p>Effect 2 Changes mindsets of managers and workers</p>	<p>Effect 3 Fosters personnel who can think and act by themselves</p>
<p>Effect 4 Builds teamwork and enhances communication</p>	<p>Effect 5 Creates a strong organization that keeps evolving and developing</p>	<p>Effect 6 Creates a safe and comfortable work environment</p>



Firm Capabilities Building



Source: JICA (2018)
"Kaizen Handbook"

Basic features of KAIZEN

- **Quality** and **Productivity** Improvement
- **Incremental** and **continuous** improvement
- **Without** additional investment: **economical**
- Participatory process and **bottom-up** from factory floors (*gemba*)
- With strong **commitment** of **top** management
- Practical **methods/tools** as well as **philosophy**
- Base of the **success** of well-known Japanese companies such as Toyota while also SMEs; Idea of KAIZEN is **embedded** in work style / daily life
- Already **spread** in the **world**
- Also spread from manufacturing to service, public and other **sectors**

JICA Kaizen projects spread all over the world

for industrial
development



Kaizen Support from JICA

Source: JICA (2018)
"Kaizen Handbook"

Africa Kaizen Annual Conference 2018 in Durban for knowledge sharing and integration



Held on 2-4 July 2018 with 150 participants from
20 countries in and out of Africa

Kaizen: results and impact

- Introduction of KAIZEN to SMEs in 8 countries, Supported over 1,000 firms, Beneficiaries of 60,000 people
- Formed “Africa Kaizen Initiative” with NEPAD (April 2017)
- Productivity improvement by 30%

Improvements in productivity and cost reduction in a KAIZEN workshop

[TANZANIA • Shoe Workshop]

The issues before KAIZEN

- Scattered waste material and dust was the cause of defective products.
- Errors in production or delivery delay frequently happened due to inadequate inventory control.



BEFORE

The results of KAIZEN

- The possibility of contamination, errors in production and delivery delays has been decreased.
- Productivity has increased 3.0-fold at the most.



AFTER

Implementation
of KAIZEN

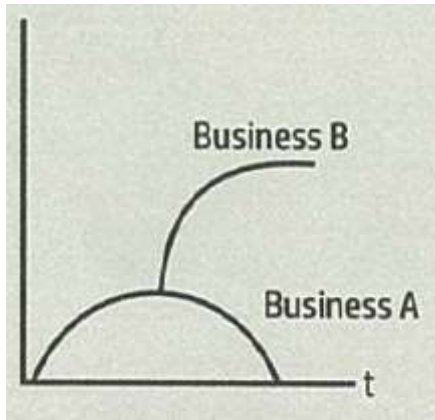


5S
Visual
Control

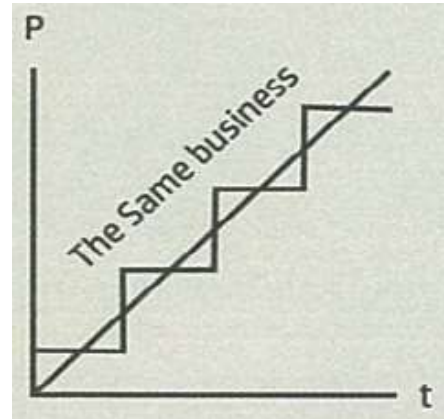
But not only these...

Kaizen for innovative business

- Kaizen is also an innovation.
- **Kaizen is Incremental Innovation** to complement **Radical Innovation (Breakthrough)**.
- **Kaizen is Process Innovation** and a **most basic capability** for enhancing firm capability.
- **Invention capabilities** and **Technological adoption capabilities**, essential for economic transformation

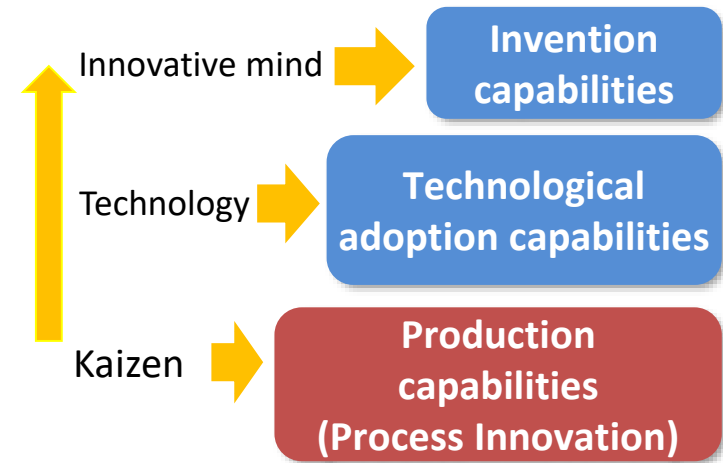


**Radical
Innovation
<Breakthrough>**



**Incremental
Innovation
<Kaizen>**

Ladder of Firm Capabilities



Source: World Bank (2017) "The Innovation Paradox", modified by JICA



AUN/SEED-Net



ASEAN University Network

Southeast Asia Engineering Education Development Network Project

Achievement by Phase 3

- (1) Improvement of Quality of Academic Staff
1,392 Master and PhD scholarship
- (2) Improvement of Quality of Research
211 Research Projects
- (3) Mobility/Network
More than 700 Trips (Research Fellowship, Short-term Research Program in Japan, Short-term Visit Program in ASEAN, Japanese Professor Dispatch Program)

Project Purpose of Phase 4

The network of AUN/SEED-Net among member countries is well maintained and expanded.

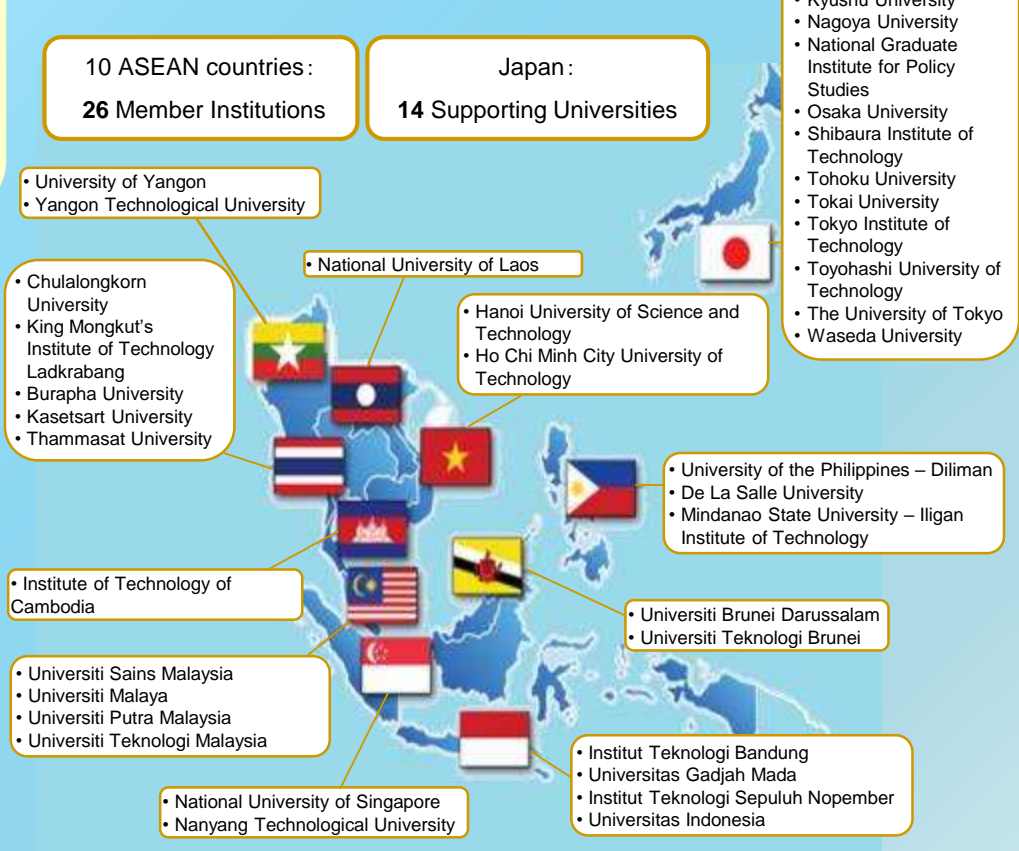
Networks among Member Institutions (MIs), Industry and community are strengthened

Research and educational capacity of MIs is enhanced through collaboration among MIs/Japanese Supporting Universities (JSUs)

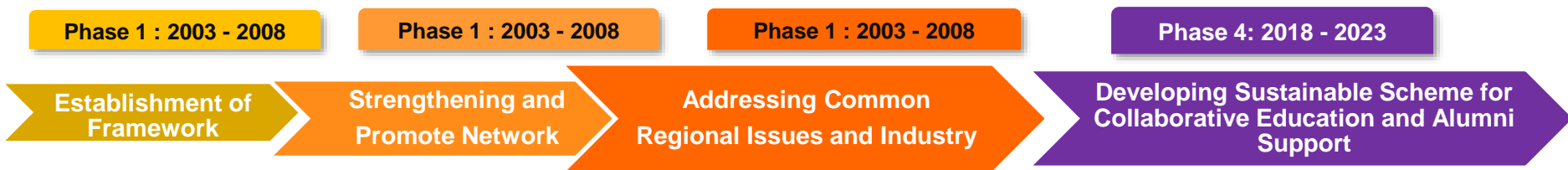
Joint research is promoted for solving regional issues

Academic network among MIs /JSUs is strengthened and expanded

Network of 40 Engineering Universities in ASEAN and Japan



Project Timeline



Network of 40 Engineering Universities in ASEAN and Japan

10 ASEAN countries:
26 Member Institutions

Japan:
14 Supporting Universities

- University of Yangon
- Yangon Technological University

- National University of Laos

- Chulalongkorn University
- King Mongkut's Institute of Technology Ladkrabang
- Burapha University
- Kasetsart University
- Thammasat University

- Hanoi University of Science and Technology
- Ho Chi Minh City University of Technology

- Institute of Technology of Cambodia

- University of the Philippines – Diliman
- De La Salle University
- Mindanao State University – Iligan Institute of Technology

- Universiti Sains Malaysia
- Universiti Malaya
- Universiti Putra Malaysia
- Universiti Teknologi Malaysia

- Universiti Brunei Darussalam
- Universiti Teknologi Brunei

- National University of Singapore
- Nanyang Technological University

- Institut Teknologi Bandung
- Universitas Gadjah Mada
- Institut Teknologi Sepuluh Nopember
- Universitas Indonesia

- Hokkaido University
- Keio University
- Kyoto University
- Kyushu University
- Nagoya University
- National Graduate Institute for Policy Studies
- Osaka University
- Shibaura Institute of Technology
- Tohoku University
- Tokai University
- Tokyo Institute of Technology
- Toyohashi University of Technology
- The University of Tokyo
- Waseda University

Keywords/implications

STI for SDGs - issue-driven

Collaborative Innovation - Open Innovation

Kaizen - Incremental Innovation

Knowledge sharing and integration

University and industry network



Thank you!

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