Transforming our world – Using technology and innovation to achieve the SDGs

EU Research & Innovation Day 4 October 2016

Kilaparti Ramakrishna

Director and Head of Office

UNITED NATIONS
ESCAP
Economic and Social Commission for Asia and the Pacific
EAST AND NORTH-EAST ASIA OFFICE

Background

- A central promise of the SDGs is "Ensuring that no one is left behind"

- In 2010 Oxfam reported that the wealthiest 388 people in the world had the same amount of wealth as the bottom 50%.

- By 2016, the same report documented that the wealthiest 62 people had the same amount of wealth as the bottom 50%.

- In 2016, the world also passed 400ppm of Carbon Dioxide, the first time this has been caused by antropogenic pollution.

- Global unemployment in 2016 is expected to increase to an unprecedented 200 million people according to the ILO.

On the other hand

- The European Union is at the forefront of changing economic realities on the ground.

- As EU advisor Jeremy Rifkin puts it, Europe is laying the groundwork for what he calls "The Third Industrial Revolution", though Klaus Schwab calls it "The Fourth Industrial Revolution".

- Science, Technology and Innovation at the core of transforming our societies towards one that is green, prosperous, and more equal, the 21st Century Digital Economy.

- Similar with the SDGs as it aims to reorient economic and social systems towards sustainability and shared prosperity - to not leave people behind

The 2030 agenda for sustainable development, and the Sustainable Development Goals

SDGs:

- A plan of action for people, planet, prosperity, peace, and partnership.

- A historic decision on a comprehensive, far-reaching and people-centred set of universal and transformative Goals and targets.

- Aim is to **disrupt** the business as usual approach to achieve sustainable development

17 Sustainable Development Goals, 169

targets and 304 indicators:

- Demonstrate the scale and ambition of this new universal Agenda.

- Involve the entire world, developed and developing countries alike

PEOPLE
End poverty and hunger in all forms and ensure dignity and equality

PROSPERITY
Ensure prosperous and fulfilling lives in harmony with nature

PLANET
Protect our planet's natural resources and climate for future generations

Sustainable Development

PARTNERSHIP
Implement the agenda through a solid global partnership

PEACE
Foster peaceful, just and inclusive societies

Millennium Development Goals

8 goals   18 targets   48 indicators

Progress, but more to do

Millennium Development Goals

1. ERADICATE EXTREME POVERTY AND HUNGER
2. ACHIEVE UNIVERSAL PRIMARY EDUCATION
3. PROMOTE GENDER EQUALITY AND EMPOWER WOMEN
4. REDUCE CHILD MORTALITY
5. IMPROVE MATERNAL HEALTH
6. COMBAT HIV/AIDS, MALARIA AND OTHER DISEASES
7. ENSURE ENVIRONMENTAL SUSTAINABILITY
8. A GLOBAL PARTNERSHIP FOR DEVELOPMENT

Number of people living on less than $1.25 a day worldwide, 1990–2015 (millions)
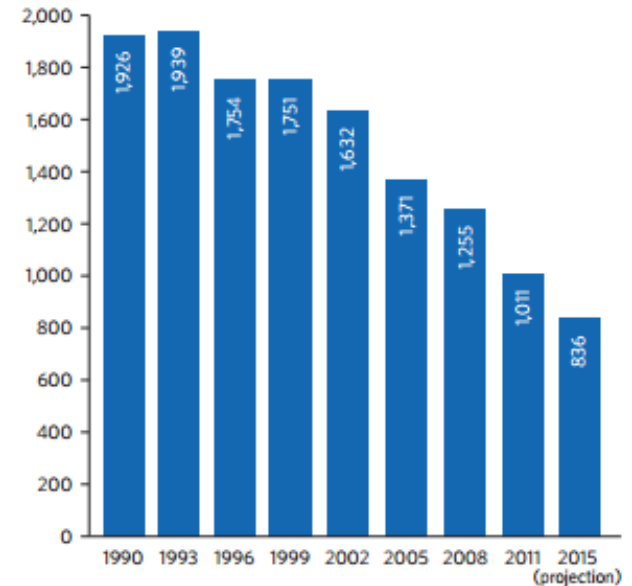
Year	Millions
1990	1,926
1993	1,939
1996	1,754
1999	1,751
2002	1,632
2005	1,371
2008	1,255
2011	1,011
2015 (projection)	836

Sustainable Development Goals

How do we get there?

- **Financing**

- **Capacity building in public and private sectors**

- **Trade and private sector growth**

- **Civil society participation**

- **Data revolution**

- **Science, Technology and Innovation (#Tech4Dev)**

#Tech4SDGs

- **"Ensuring that no one is left behind"**

- **Coherence between Policy and SDGs**

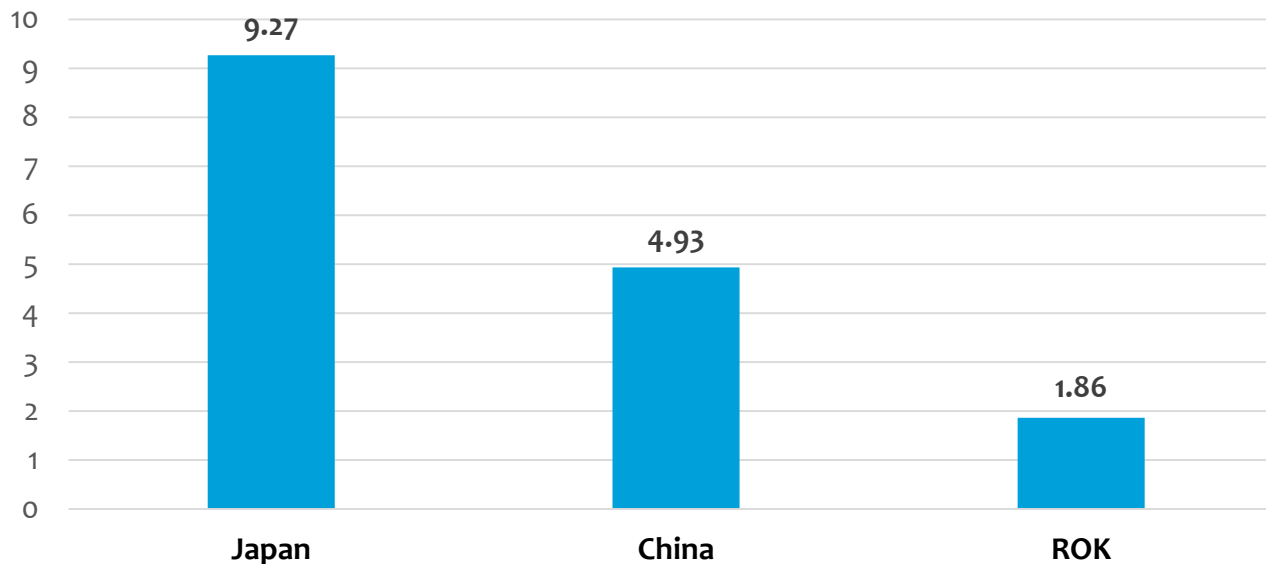- **Frugal/Hybrid innovation**

- **Social Innovation**

Contributing to SD in other parts of the world

- North-East Asia is a major source of ODA, technical cooperation, south-south cooperation in Asia-Pacific

- Properly harnessing their development experiences with developing countries can provide greater benefits.
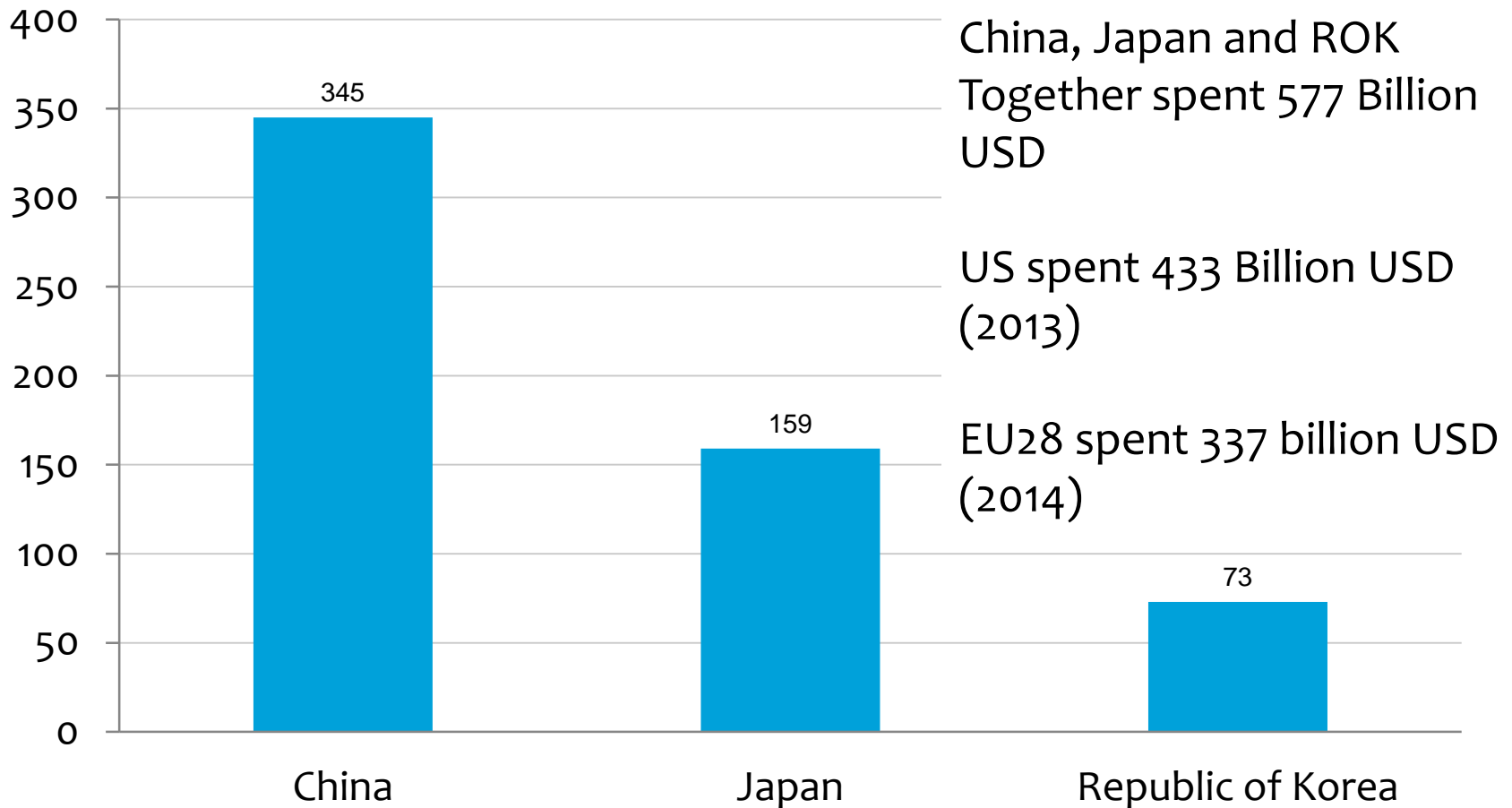
Net ODA/ Development Cooperation (2014, Billion USD)

Source: OECD for JAPAN and ROK; China: unofficial estimate by JICA Research Institute

North-East Asia is leader in global R&D spending

Gross Domestic Spending on R&D (2014, Billion USD)

China, Japan and ROK Together spent 577 Billion USD

US spent 433 Billion USD (2013)

EU28 spent 337 billion USD (2014)

Chart values:
- China: 345
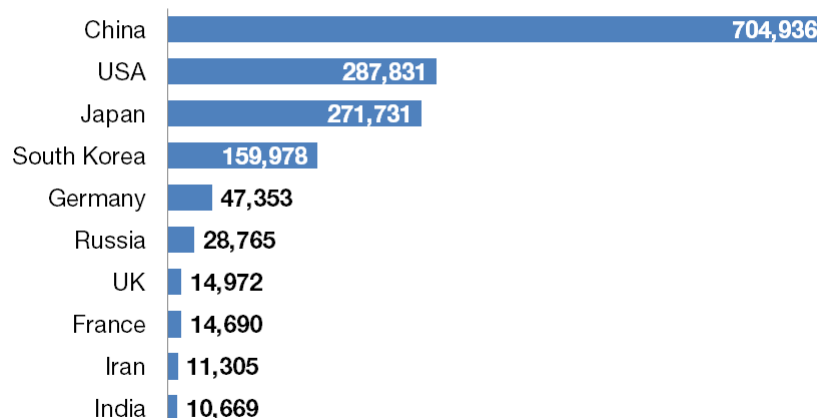- Japan: 159
- Republic of Korea: 73

Source: OECD

Science, Innovation and Technology

- North-East Asia is at the **forefront of global technological advancement** but innovation divide persists.

- As NEA accounts for 1/3 of global energy consumption, **STI is key in the absolute decoupling of energy and economic growth.**

  - China and Japan are among the world's leading economies in attracting clean energy investment (with global share of 31% and 13% respectively)

- NEA also lead the **development of environment-related technologies**

  - China has highest % of patent filings in 3 out of 4 CCMT patent landscapes (2006-2011) in biofuels, solar thermal and solar PV

  - Japanese and Korean companies play prominent role in solar PV patent landscape

Countries filing the most patent applications
Number of applications in 2013

WORLD ECONOMIC FORUM
COMMITTED TO IMPROVING THE STATE OF THE WORLD

Country	Applications
China	704,936
USA	287,831
Japan	271,731
South Korea	159,978
Germany	47,353
Russia	28,765
UK	14,972
France	14,690
Iran	11,305
India	10,669

Source: World Intellectual Property Organization (WIPO)

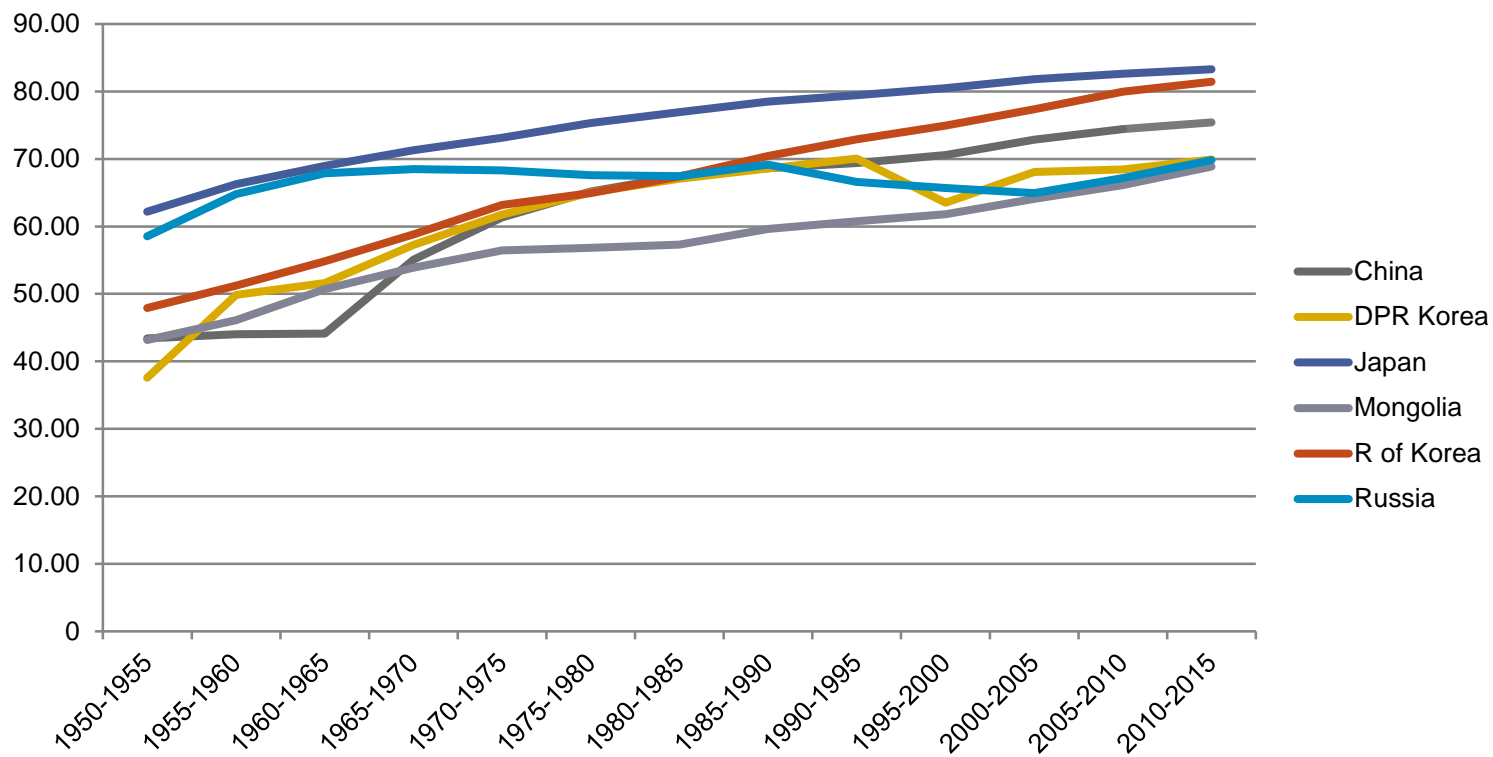# Industrialisation

Healthy Lives

People on average are living longer than ever before

Life expectancy in ENEA countries (1950-2015)

Legend:
- China
- DPR Korea
- Japan
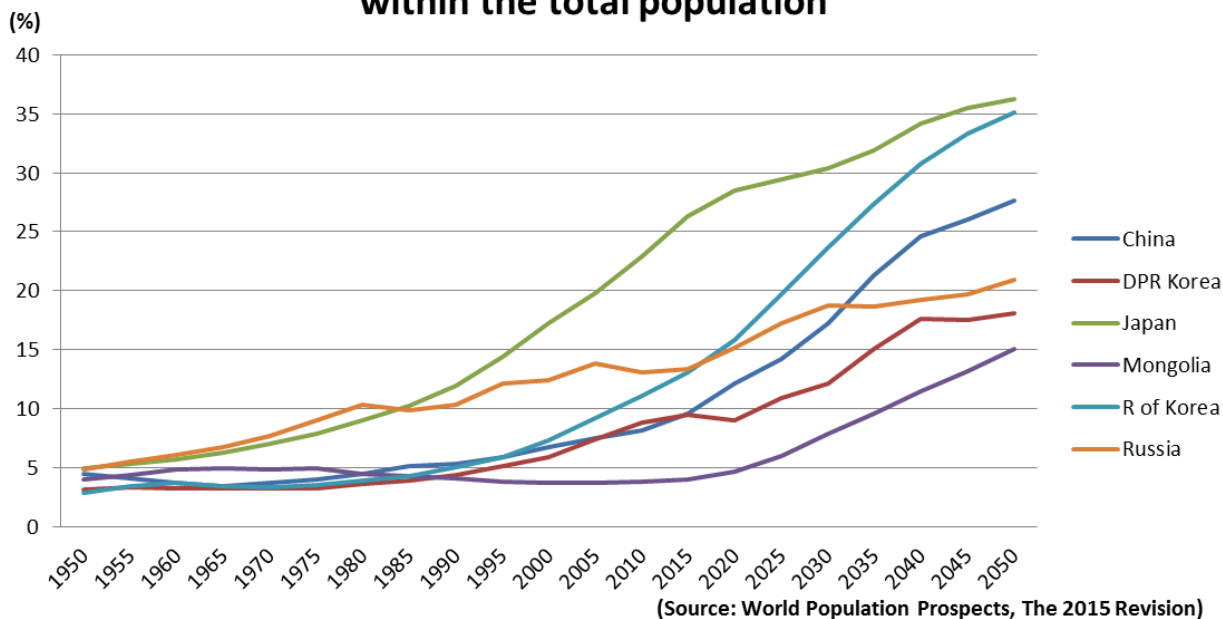- Mongolia
- R of Korea
- Russia

(Source: World Population Prospects, The 2015 Revision)

And Wellbeing for all

Ageing in North-East Asia: a critical factor Goal 3 as well as the fundamental structure of economy and society

Percentage of older persons (65+ years old) within the total population

(Source: World Population Prospects, The 2015 Revision)

- **JAPAN:** The world's most aged country

- **REPUBLIC OF KOREA:** The world's fastest ageing country

- **CHINA:** The world's largest population aged 80 years or over (2050)

Smart Green Cities

The demand and its potential

- Global LCC investment can reduce up to **18**% of global energy-related GHG emissions (New Climate Economy Report, 2014)

- More compact, connected urban development can reduce urban infrastructure requirements by USD 3 trillion over 2015-2030 (NCE, 2014)

- NEA shares **1/3** of global GHG emissions, cities are the major source of emissions

- NEA has high & continuing Urbanization: Japan (93% in 2014) ROK (82%), Russia (74%), China (50%)

Share of urban population in North-East Asia, 1970-2025
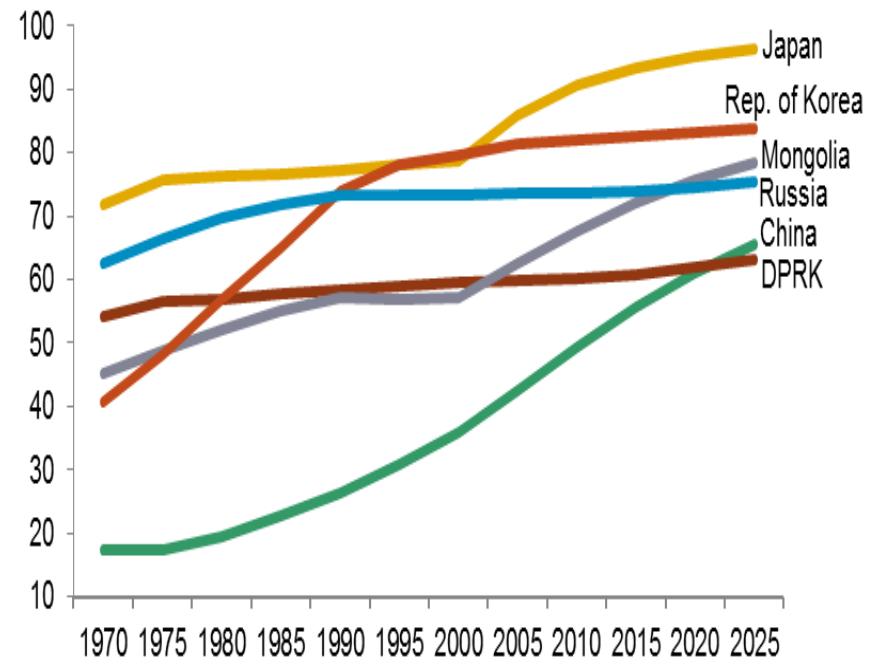
Smart Green Cities

Innovation and Demand

Technology

- 30 market-ready **low-carbon technologies** e.g. LED lighting, and electric buses, if applied in 30 world's megacities, can avoid 3 billion tonnes of **GHG** emissions and 3 million tonnes of **air pollution,** and create 2 million **jobs** between 2014-2025

Schemes/ Social

- Los Angeles's EV sharing targeting low income groups since 2015
- Seoul Eco-mileage programme, providing credits based on energy saved by households, to spend on eco-friendly products

New, bigger demand

| Demand | Co-benefits |

Innovation
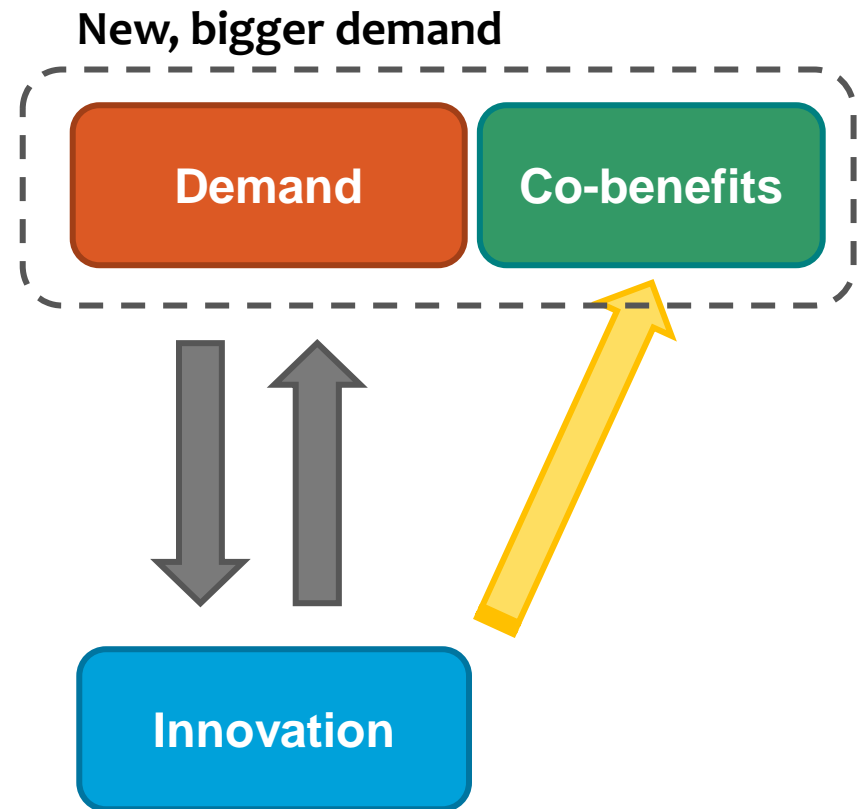
Supporting cooperation

Bangkok Declaration on Regional Economic Cooperation and Integration in Asia and the Pacific (2013)

- Specifies:

  - The significance of seamless connectivity in transport, energy and ICT infrastructure to boost trade, investment and movement of people

  - The need to substantially enhance the degree of connectivity, including ICT; and the need to address the growing gap in broadband connectivity

Supporting the Harnessing of Science, Technology and Innovation

Harnessing Science, Technology and Innovation for Inclusive and Sustainable Development in Asia and the Pacific (ESCAP Resol. 72/12, 2016)

- ESCAP to encourage dialogue and cooperation on STI policies, to support the attainment of the 2030 Agenda

- ESCAP to encourage promotion partnerships to harness STI for sustainable development

- Recognizes the importance of access by all countries to environmentally sound technologies, new knowledge, know-how and expertise

THANK YOU

http://enea.unescap.org

facebook.com/unescap.enea

@UN_EastAsia