ITRI
Industrial Technology Research Institute

Innovate a Better Future

on ITRI's Position, Innovation System, Challenges and Opportunities

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Industrial Technology Research Institute (ITRI)

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Taiwan
an island of area 36.179 km², population 23,5M

International Competitiveness Ranking

✓ 2018 WEF Global Competitiveness: **13 (Super Innovator)**
✓ 2018 IMD World Competitiveness: **17**
✓ 2012 World Bank Knowledge Economy: **13**

TAIWAN'S SCIENCE AND TECHNOLOGY INFRASTRUCTURE

- Nankang Software Park
- Taipei Wireless City
- Hsinchu Science Park
- Central Taiwan Science Park
- Taichung Software Park
- Southern Taiwan Science Park
- Shalun Smart Green Energy Science City
- Kaohsiung Southern Software Park
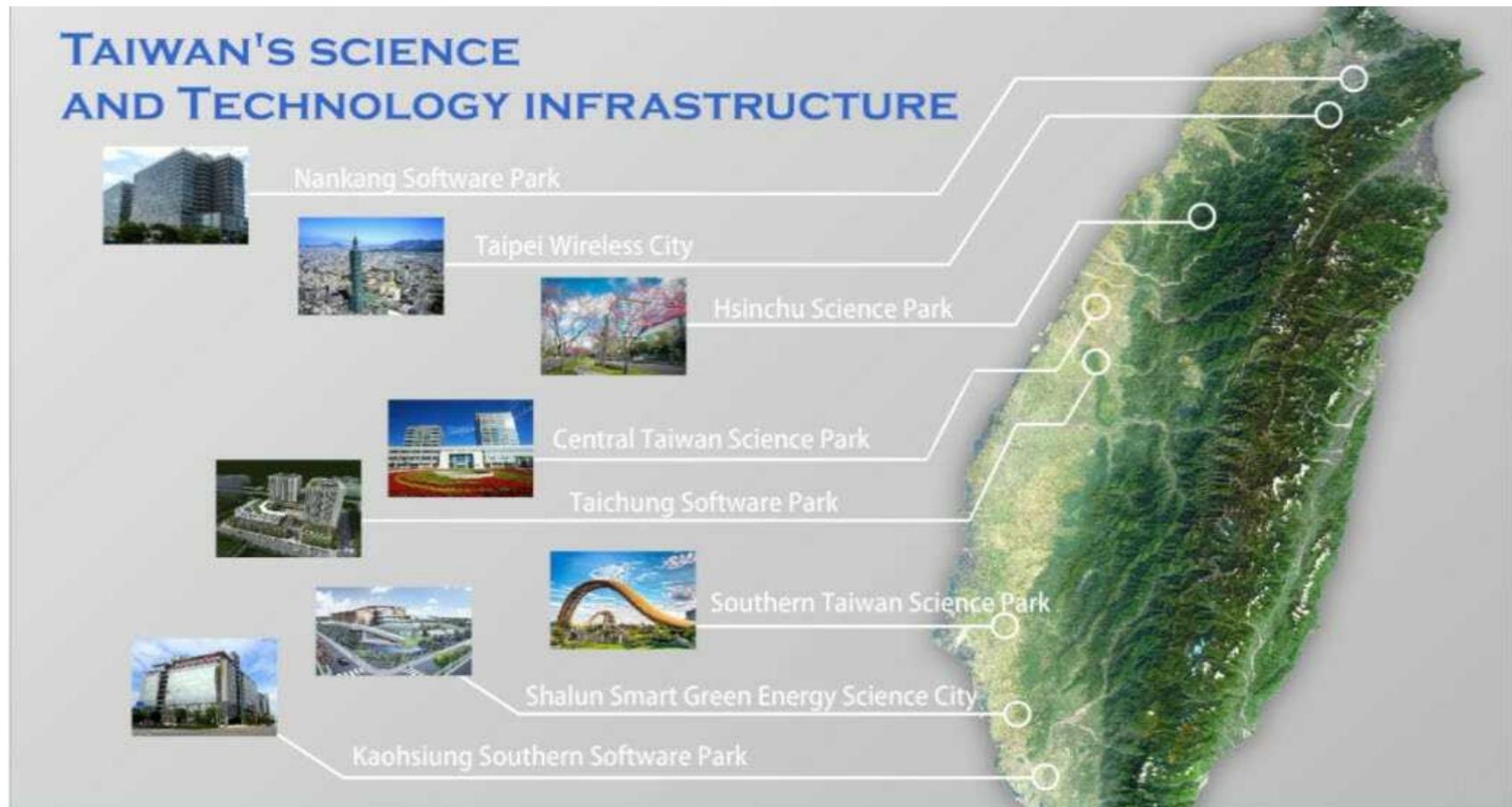
ITRI in Taiwan, reaching out to the world
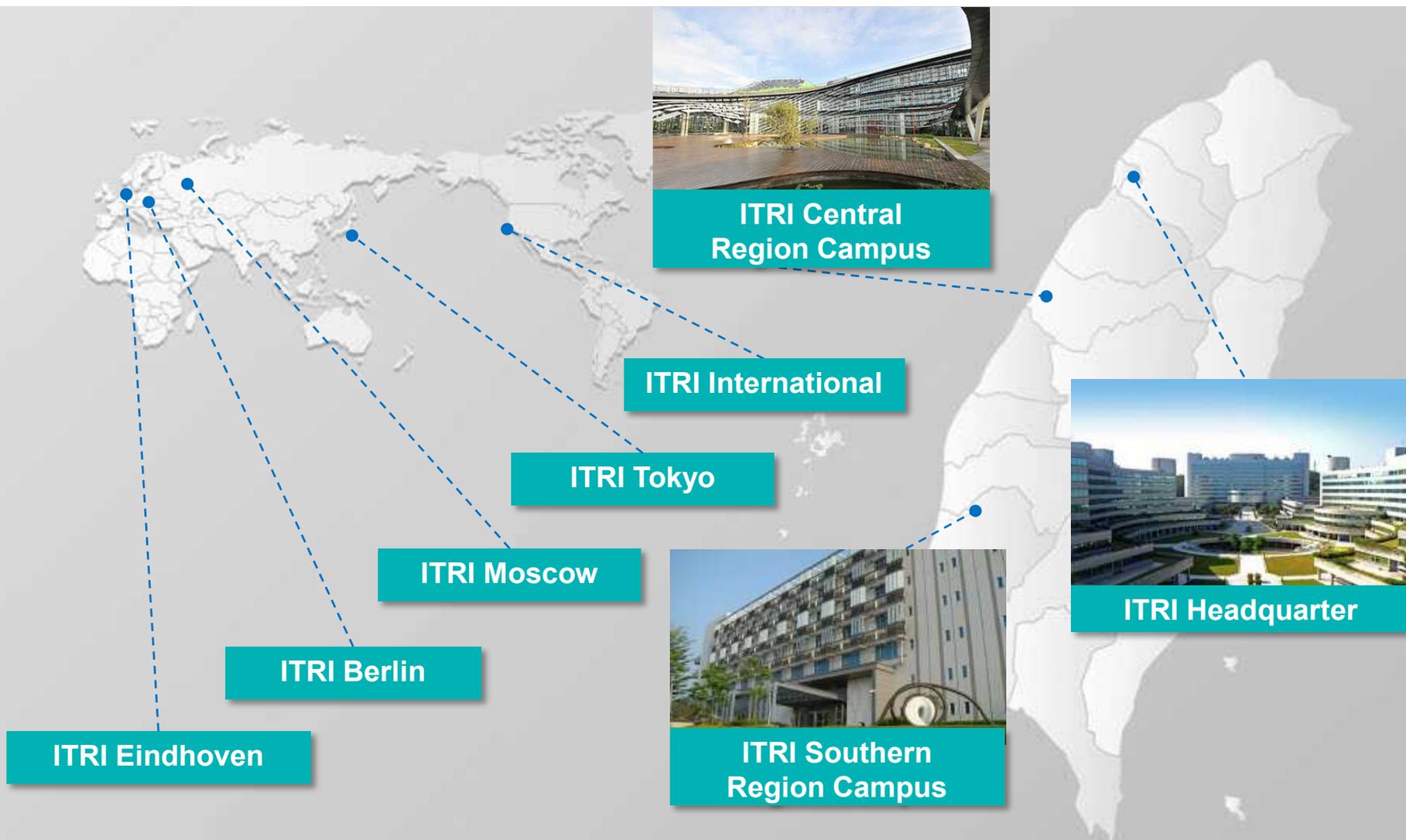
ITRI Central Region Campus

ITRI International

ITRI Tokyo

ITRI Moscow

ITRI Berlin

ITRI Eindhoven

ITRI Southern Region Campus

ITRI Headquarter

ITRI Basics

Information and Communications

Electronic and Optoelectronic System

Materials and Chemical

Smart Living

Sustainable Environment

Quality Health

Biomedical Technology and Device

Mechanical and Mechatronics Systems

Green Energy and Environment
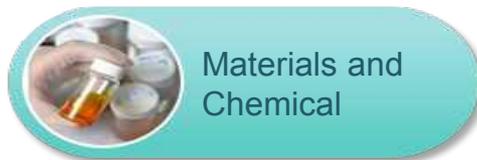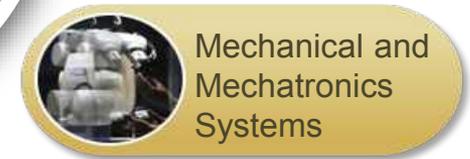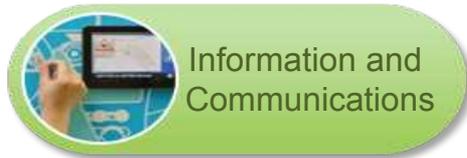
Total Staff：6,246
Advanced degree (PhD/MS) 82%

ITRI Alumni：25,099

Total Patents
27,835

Startups & Spinoffs
(upto 2018) 281 (Startups:143)

Revenue (2018)
About € 680 million

55%   45%   R&D

Industrial service

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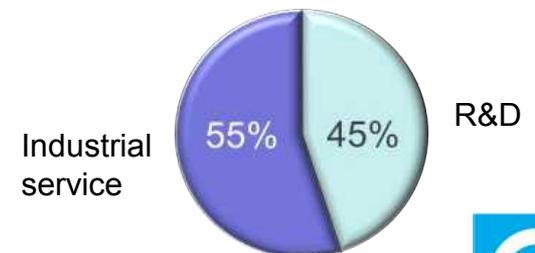
ITRI being Recognized,
Helping Bridge the Valley of Death

Source : Coyle, "The Missing Middle", National Security and Int'l Affairs, Office of S&T Policy, USA (May, 2011)

ITRI's Open Innovation System
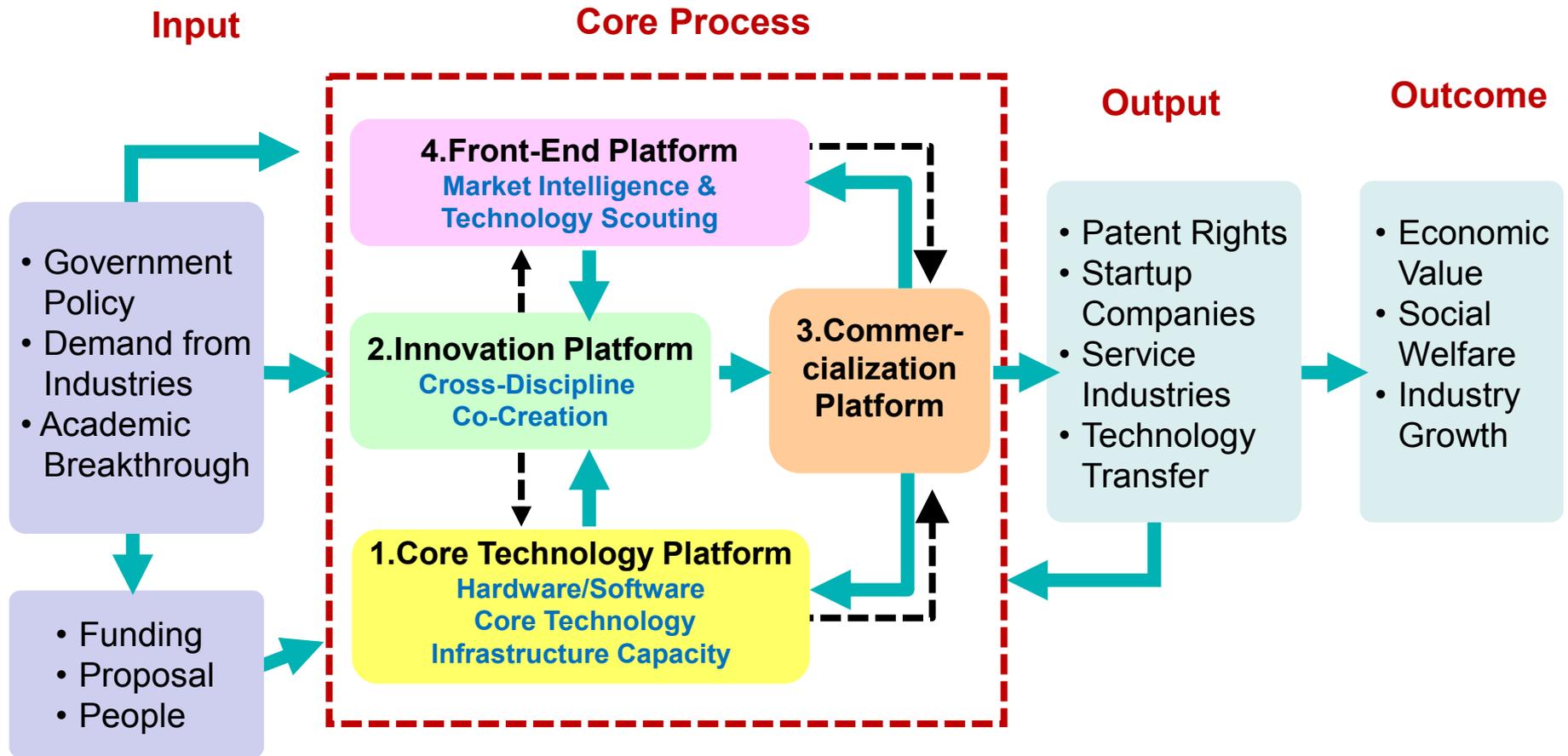
Challenges & Opportunities We Face

1. Sustainability & Circular Economy

2. Digital Transformation & Futuristic Society

3. Globalization & Localization

- Efficient use of Energy & Resource

- AI Boost Growth & Productivity

- International Collaboration

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1.LCD Waste Recycling System
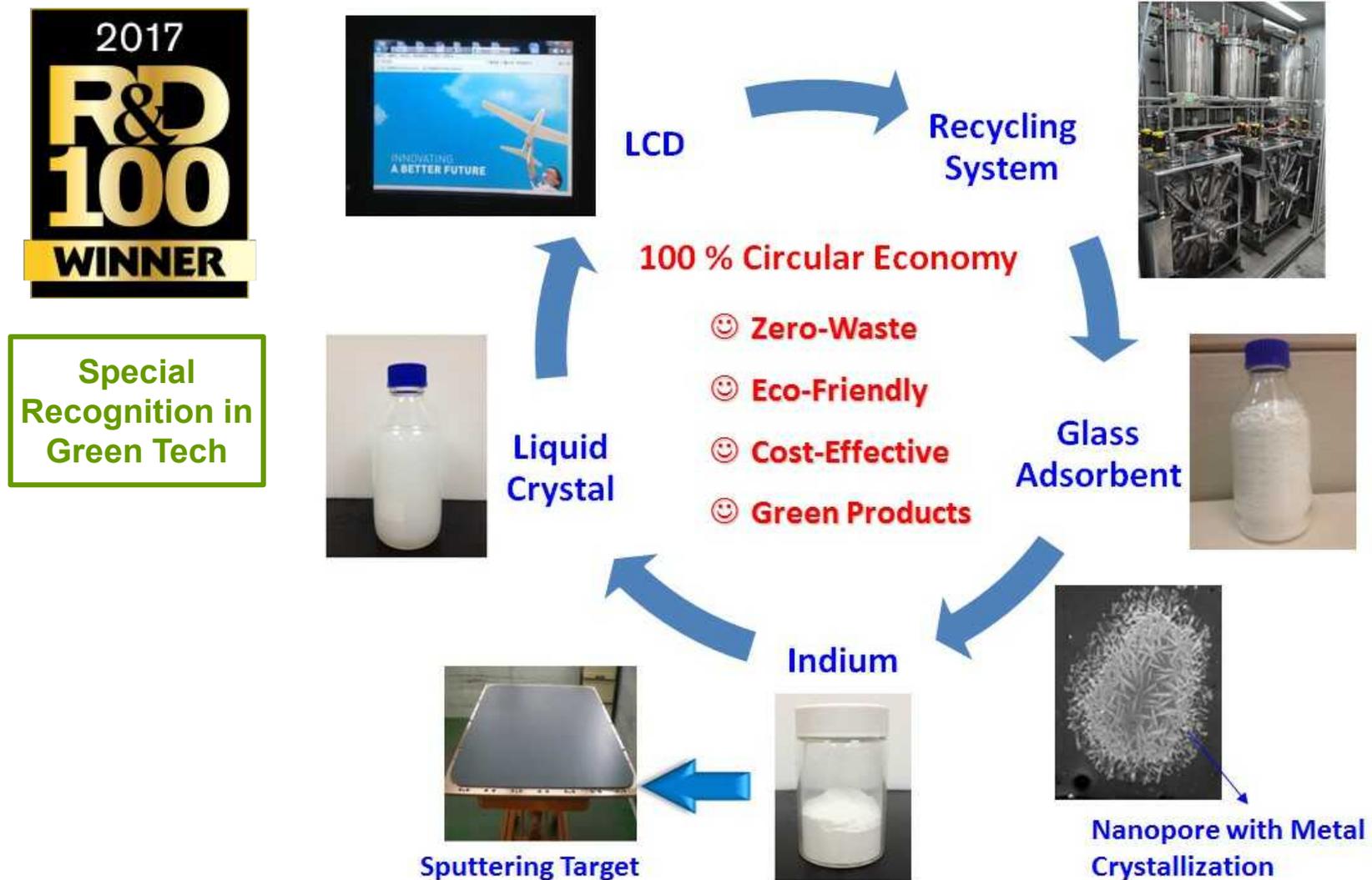
2. AIdea--Artificial Intelligence Co-Creation Platform

- To solve industrial problems of digital transformation
- Industry defines problems; academic and research institutes provide solutions.
- Some practical cases become schools' training materials.

Foundations

Academia — Open Co-Creation Platform ← Data Preparation Service ← Issue Evaluation Service — Industry

Understand Industry Needs/Collect Industry Data

AI Industrial Co-Creation Platform

Identify Problems and Industry Data

Solutions

Ideal Solution

Research Algorithms and Models/Provide Solutions

Ideal Solution for the Industry
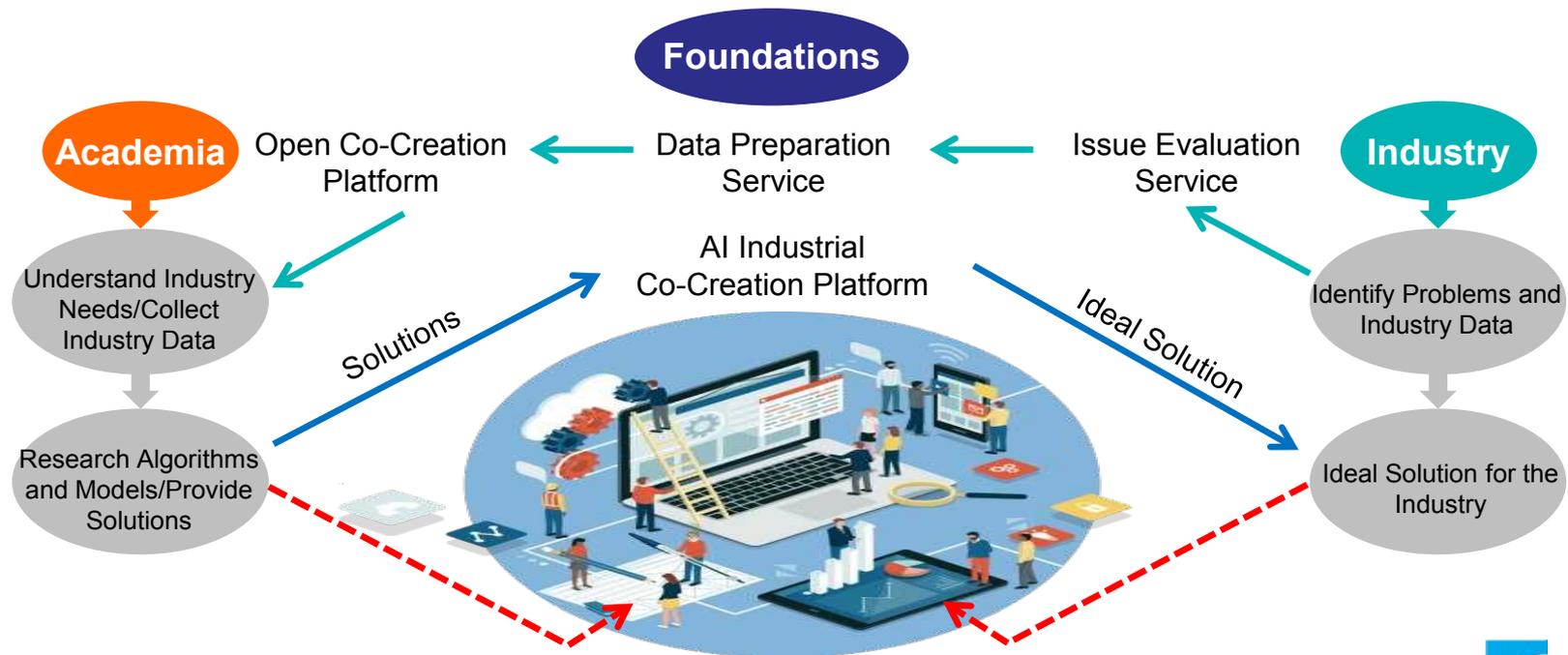
Established since August 22, 2018

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3.International R&D Collaboration

3J Model : Joint Call, Joint Research, Joint Pilot

Bilateral/Multilateral Calls

- EU Taiwan 5G Targeted Joint Call
- Taiwan/Netherland/Denmark/France Eureka Global Star joint call
- Taiwan Germany ZIM joint call
- Taiwan Spain Innovation Program
- Taiwan Israel Industrial R&D Program

Joint Call

Joint Research

Joint Pilot
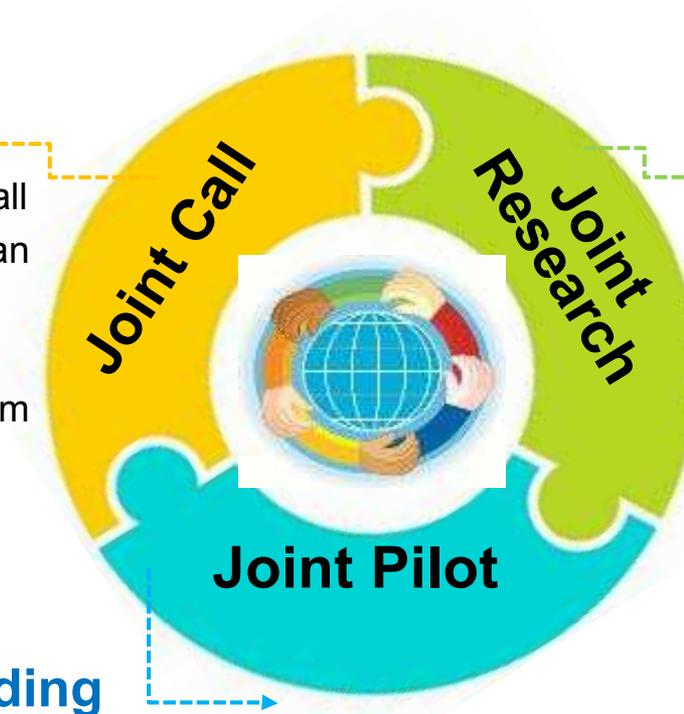
Partners with Research Organizations and Universities

- Fraunhofer
- AIST
- CEA
- U of Washington
- Russian Academy of Sciences

Partners with Leading Edge Technology

- Connect advanced key core technologies
- Fill technology gaps within domestic industry

ex: Corning--roll-to-roll manufacture process of additive fine-line circuit; Merck-Taiwan Biopharma R&D and Training Program, Dassault Systems smart manufacturing

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ITRI's Participation in EU R&D Programs

EU-Taiwan 5G Targeted Joint Call

2016
EC issued 1st EU-Taiwan 5G Targeted Opening Call in Work Programme 2016-017 under 5GPPP

- ICT-08-2017 (part b) : 5G PPP Convergent Technologies
- Scope : Cooperation in access convergence

  This activity takes advantage of the supporting 5G research and demonstration facilities offered by Taiwan towards collaborative 5G research with the EU, and aims at developing and demonstrating an integrated convergent access across different air interface technologies and the fronthaul/backhaul/core network. Test beds making use of facilities offered by Taiwanese partners are targeted. It demonstrates the capabilities of new spectrum access schemes, including for co-working with the network. A system demonstrator showing applications potential is thus favoured, e.g. for high speed moving vehicles.

- Level of Funding : €5 million
- Issued in May 2016, closed in Nov. 2016/11/8
 - 7 consortia formed and proposals submitted, two accepted

Taiwan & EC co-host several workshops in Taiwan and in Europe

Two projects being funded
- 5G Coral
- Clear5G

2018
EC issued 2nd EU-Taiwan 5G Targeted Opening Call in Work Programme 2018-2020 under 5GPPP

5G Coral project picked as one of the successful projects in 5GPPP Annual report 2018

**In 2012 Taiwan recommended as one of the ICT strategic partners**

- USA
- Canada
- Japan
- Australia
- South Korea
- Taiwan
- Brazil
- Russia
- India
- China
- South Africa

More specifically, Taiwan's intended global collaboration on system design for (bio)medical, "green" and automotive applications presents a unique opportunity for collaboration, as Europe's strengths are in system design which complements Taiwan's strong foundation in IC manufacturing and design. Opportunities can also be considered in robotics.

Joined 33 European R&I

- ZeroWin/FP7 (AUO)
- LCA to go/FP7 (UMC、ITRI)
- SAAPHO/FP7 (勤立生物科技)
- NANOREM/FP7 (晉元奈米環境科技)
- European Social Fund 計劃(晰鼎、沛鑫)
- CELL-UV/Eurostars (龍彩科技)
- MetAMC/EMRP (龍彩科技)

ECSEL Joint Undertaking
Electronic Components and Systems for European Leadership

Together, we build a better future !