

**Brussels, 18 December 2019**

**WK 14376/2019 INIT**

**LIMITE**

**ERAC-SFIC**

**WORKING PAPER**

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From:	SFIC Secretariat
To:	ERAC (SFIC)
Subject:	70 Years of Fraunhofer : 70 Years of Future # WHATSNEXT

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Delegations will find attached the PowerPoint presentation concerning the item 6 of the SFIC plenary agenda of 18 December 2019.

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# STRATEGIC FORUM FOR INTERNATIONAL S&T COOPERATION

**FRAUNHOFER-GESELLSCHAFT**

THOMAS DICKERT, HEAD INTERNATIONAL RESEARCH PROGRAMS AND NETWORKS

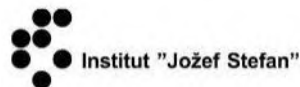
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70 YEARS OF  
FRAUNHOFER  
**70 YEARS  
OF FUTURE**  
*#WHATSNEXT*

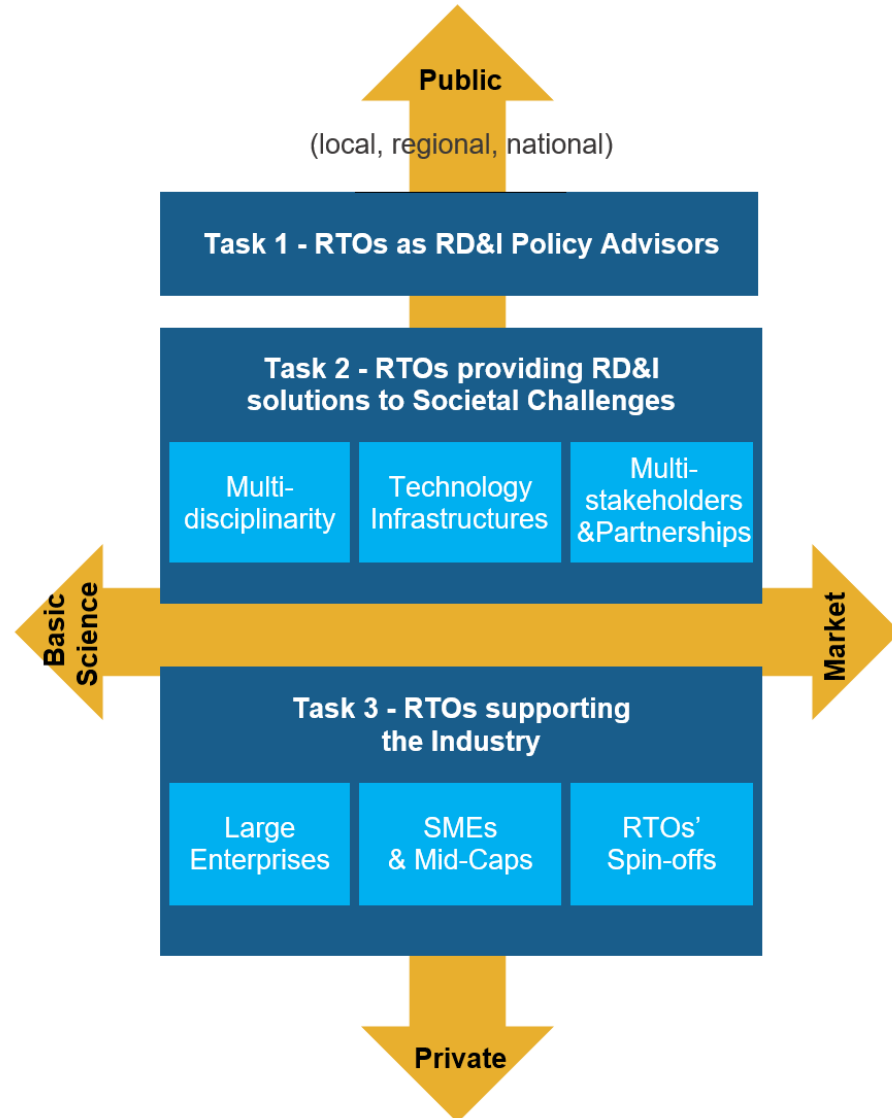
# EARTO

## The European Association of Research & Technology Organisations

EARTO Motto: **Impact Delivered!** | EARTO Vision: **Technology for a Better World**



# Understanding RTOs' activities



- RTOs' core public mission is to **harness science & technology in the service of innovation**, to improve quality of life and build socio-economic competitiveness.
- RTOs have **multidisciplinary expertise and skills**, and they closely collaborate with universities and industry (large and small).
- RTOs house various **technology infrastructures open to all stakeholders** to foster technology uptake.

# RIN - RTOs International Network

**New network initiated in March 2019 by EARTO to:**

- Create a platform for joint opportunities for RTOs: joint actions on common challenges and interests, promotion of the RTO model to international and national policymakers
- Create a group of RTOs' CEOs willing to share their national experiences and best practices
- Expand collaboration between RTOs worldwide in areas of common interest
- Develop a common narrative on RTOs at global scale
- Direct the creation of specialised communities of practice in key fields
- Potential to provide preferred access to fellow members' facilities

**Supported by EARTO Corresponding Members:**



National Research  
Council Canada

Conseil national de  
recherches Canada



**ITRI**  
Industrial Technology  
Research Institute





# JRC report on RTOs' Internationalisation

## Drivers & Motivations: Why do RTOs engage in Internationalisation?

- Access to foreign knowledge base and partners
- Access to new markets, clients and funding
- Strengthening the domestic consumer base
- Access to international public funding programmes

## Barriers against internationalisation:

- Funding dependence & mission from national governments
- Lack of financial, human resources and skills
- Legal, administrative and fiscal barriers
- Level of competition

## Strategies: How do RTOs internationalise?

1. Identifying RTOs' capabilities
2. Discovering new markets
3. Market consolidation



# EARTO Members in H2020 (eCorda Oct. 2019)



EARTO members represent 1% of the beneficiaries, but **receive 8% of the available funding**



**Industry participation increases to 32%** when EARTO members are involved in the project (from 26% when they are not)



EARTO members **coordinate 32% of the projects** in which they participate



EARTO members participate in large collaborative projects with **on average €5bn EU contribution and 14 partners per project**



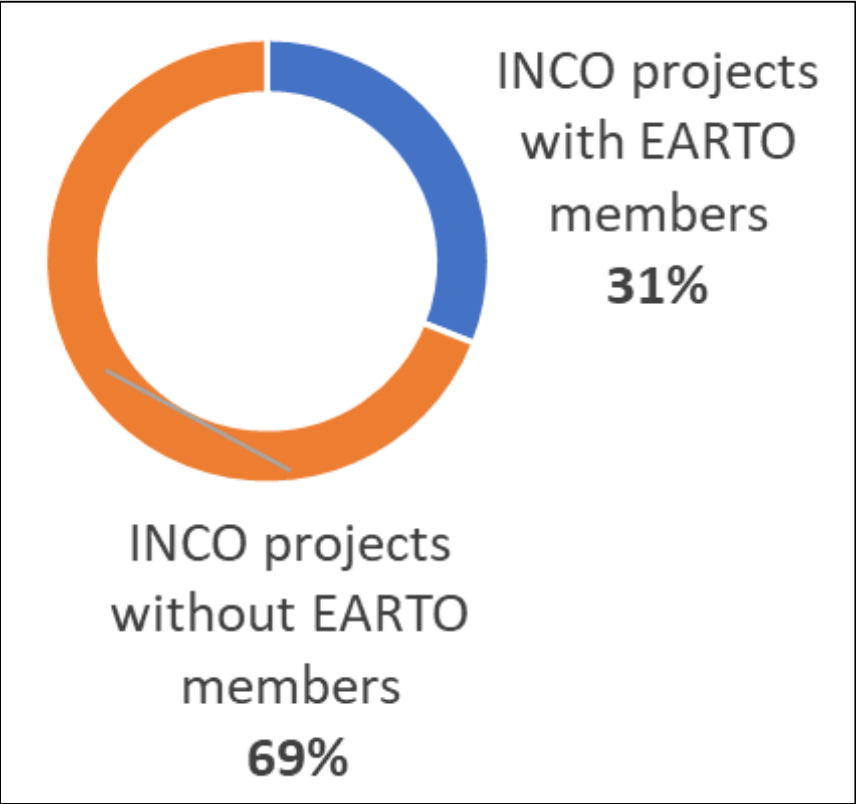
**63% of the funding spent in Pillar II** (Industrial Leadership) given to projects with EARTO members



**51% of the funding spent in Pillar III** (Societal Challenges) given to projects with EARTO members

# EARTO Members in INCO

(eCorda Oct. 2019)



	Top 15 INCO countries for EARTO members	Number of INCO projects with EARTO members
1.	Israel	299
2.	Turkey	254
3.	Serbia	117
4.	Ukraine	62
5.	South Africa	50
6.	Argentina	24
7.	Former Yugoslav Republic of Macedonia (FYROM)	24
8.	Moldova (Republic of)	24
9.	Tunisia	18
10.	Egypt	18
11.	Belarus	18
12.	Kenya	17
13.	Albania	15
14.	Georgia	15
15.	Chile	14



# Fraunhofer International

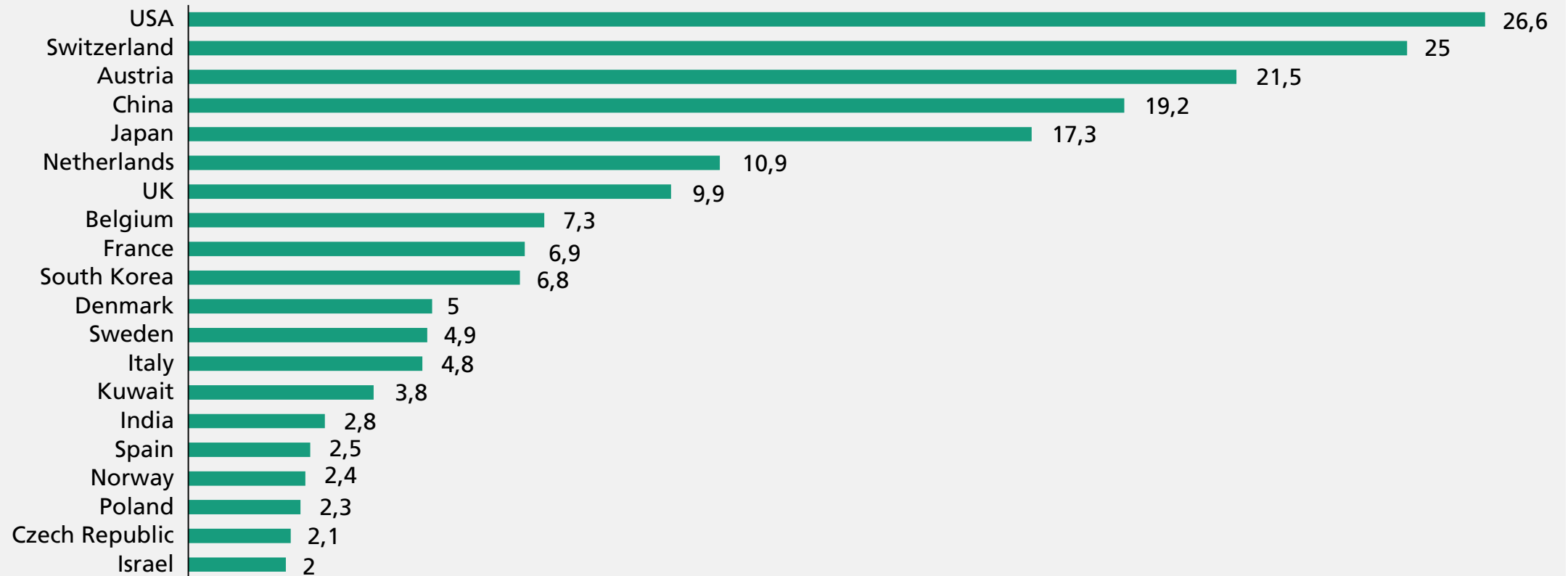


- 8 subsidiaries
- Strategic cooperations worldwide
- Representative Offices and Senior Advisors worldwide provide access to local markets



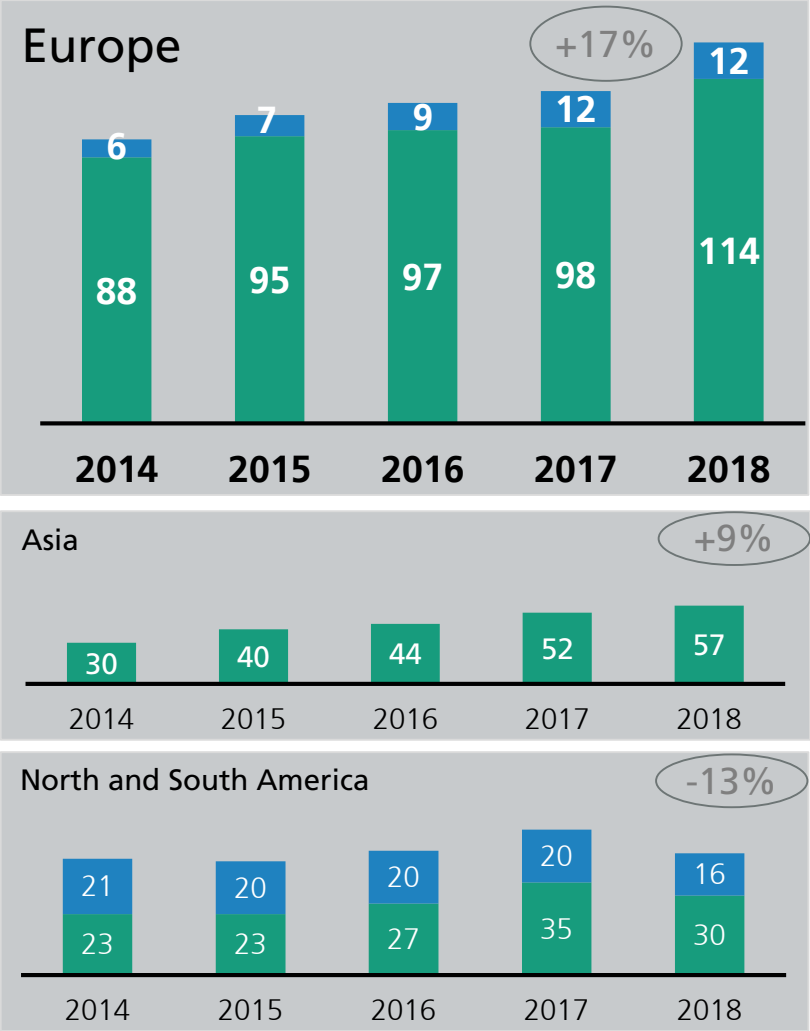
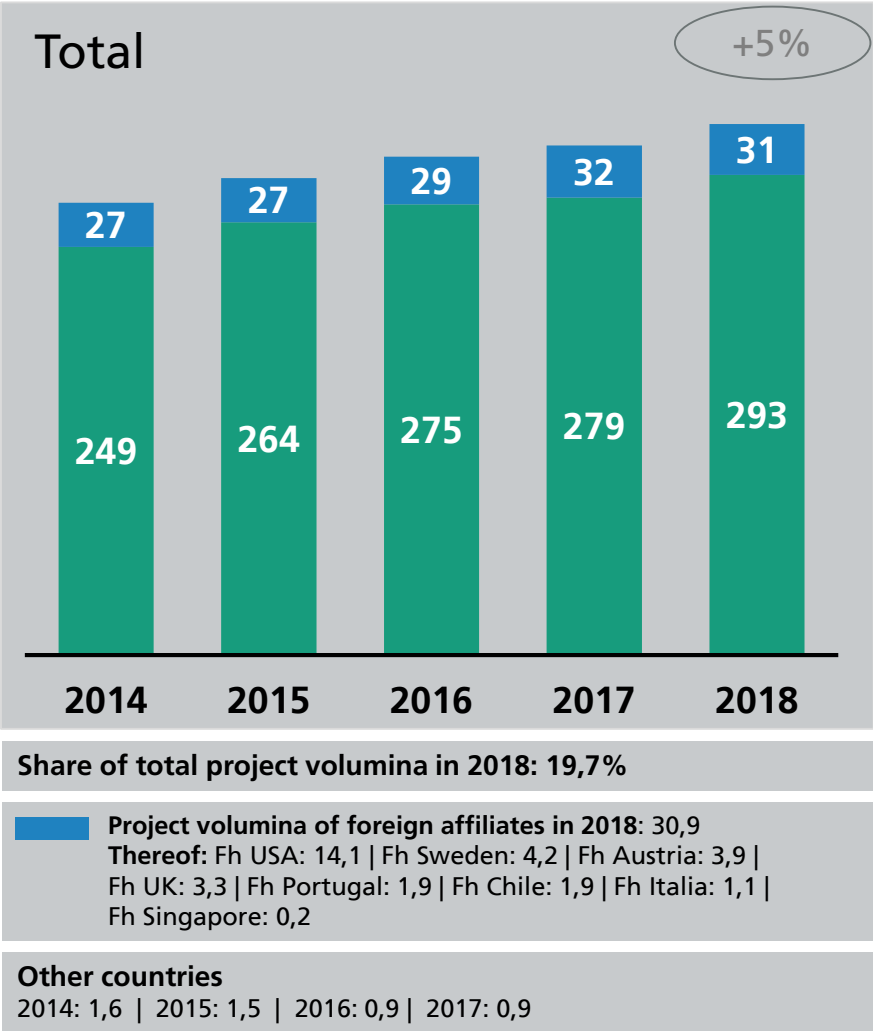
# International project volumes 2018

International project volumes – TOP 20 in €m

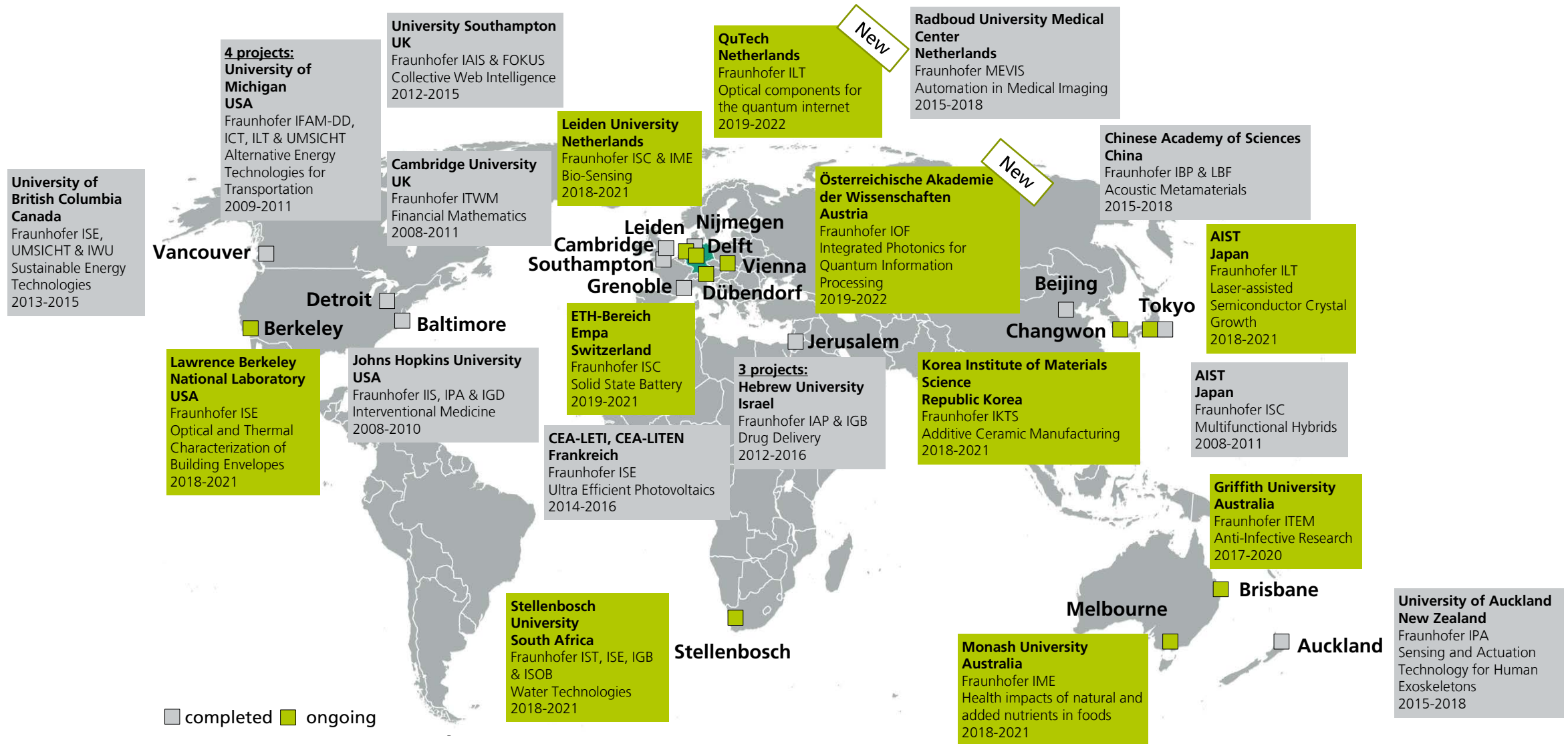


# International project volumes by regions

in €m



# Scientific collaboration with excellent partners: ICON Projects 2008-2019



# Fraunhofer Project Center – worldwide

Fraunhofer branded research unit at a partner university abroad





# The role of INCO in Horizon Europe and specific issues important for RTOs

## The role of INCO

- INCO helps building long-term, trusted ecosystems of RD&I partners along industrial value chains (amongst others)
- In some domains INCO is inevitable e.g.
  - Climate protection
  - Sustainable business practices
  - Technological contribution to SDGs



## Specific issues

- Acceptance on both sides (involving stakeholders on every side) is key
- Technological links must be given
- Platforms for exchange and excellent partners needed (e.g. WAITRO)

# >2/3 of Fraunhofer Institutes are engaged in projects with Chinese partners

- Fraunhofer project volume in China 2018: € 19,1 m
  - Foreign project volume worldwide: China **ranking #4**
  - **Fraunhofer Representative Office** in Beijing **since 1999**
- 2 newly-opened Fraunhofer Project Centers with Shanghai Jiao Tong University
  - **Smart Manufacturing** (Fraunhofer IPA)
  - **Urban ECO-Development** (Fraunhofer IBP)



Fraunhofer Representative Office in the Landmark Tower in Beijing

# Fraunhofer activities in Africa

## ■ Membership in the **World Association of Industrial and Technological Research Organizations**

- Founded in 1970 under the auspices of the United Nations system
- Since January 2019: Fraunhofer is hosting the WAITRO Secretariat
- Over 100 Research and technology organizations (RTOs) in 75 countries
- About **40% of the member organization are from African countries**

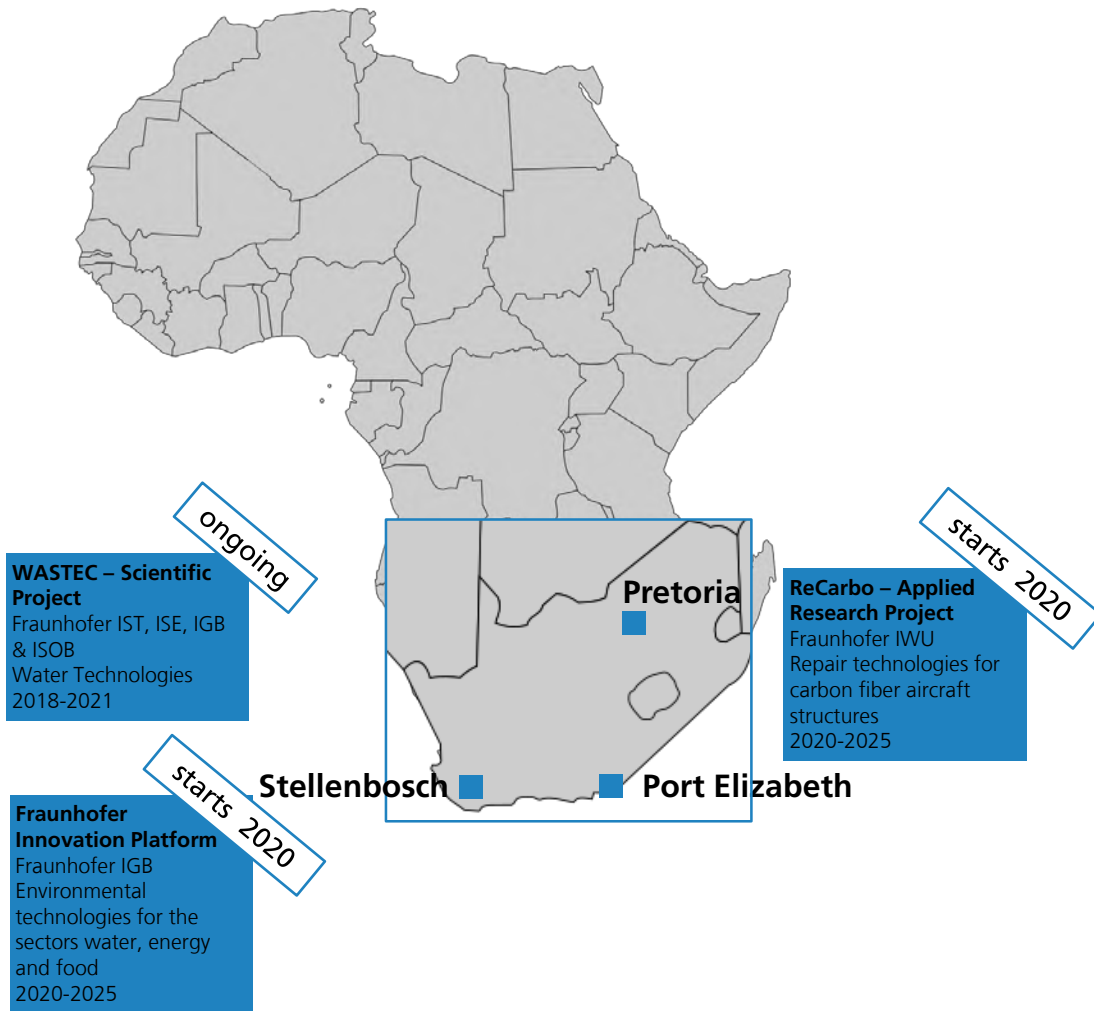
**WAITRO**

## ■ SAIRA – THE OPEN INNOVATION HUB FOR SUSTAINABLE DEVELOPMENT ([www.saira.eco](http://www.saira.eco))

- Open Innovation Platform developed by the Fraunhofer-Gesellschaft
- SAIRA connects
  - Researchers with Researchers
  - Companies and SMEs with Researchers
  - Start-ups with Researchers
  - NGOs and Government Organizations with Researchers (WAITRO members)

**SAIRA**

# Fraunhofer activities with South Africa



## Stellenbosch University

- Since 2018 a consortium of four Fraunhofer-Institutes cooperates with Stellenbosch University Water Institute
- **Scientific research** aims towards the development of energy efficient and sustainable water supply technologies
- To further strengthen ties between both research institutions a "**Fraunhofer Innovation Platform** for the Water-Energy-Food Nexus at Stellenbosch University" (FIP-WEF@SU) will commence in 2020

## Nelson-Mandela University and Aerosud Aviation Pty

- Trilateral cooperation between Fraunhofer IWU, Nelson-Mandela University and Aerosud Aviation
- Focus on **applied research** on efficient automatic maintenance and repair of carbon fiber reinforced aircraft structures

# #WHATSNEXT

Thomas Dickert  
Head International Research Programs and Networks

Fraunhofer-Gesellschaft  
Hansastr. 27c, 80686 München  
Telefon +49 89 1205 - 4700  
[thomas.dickert@zv.fraunhofer.de](mailto:thomas.dickert@zv.fraunhofer.de)  
[www.fraunhofer.de](http://www.fraunhofer.de)