

# HOW EARTO CAN SUPPORT THE DEVELOPMENT OF INNOVATION ECOSYSTEMS IN EUROPE

CASE: JOŽEF STEFAN INSTITUTE - 10 YEARS IN EARTO

JADRAN LENARČIČ

DIRECTOR JOŽEF STEFAN INSTITUTE EARTO BOARD MEMBER



**More than 350 RTOs**  
**Public-private not-for profit organisations**  
**23 countries**

Bringing together key players from  
across the innovation chain

**LINK** research, innovation and development  
**TRANSFER** to private sector and society

EARTO Vision: **Technology for a Better World**  
EARTO Moto: **Impact Delivered**



# MEMBERS

**FRAUNHOFER** Germany

**VTT** Finland

**TECNALIA** Spain

**TNO** The Netherlands

**CEA** France

**CATAPULT** UK

**SINTEF** Norway

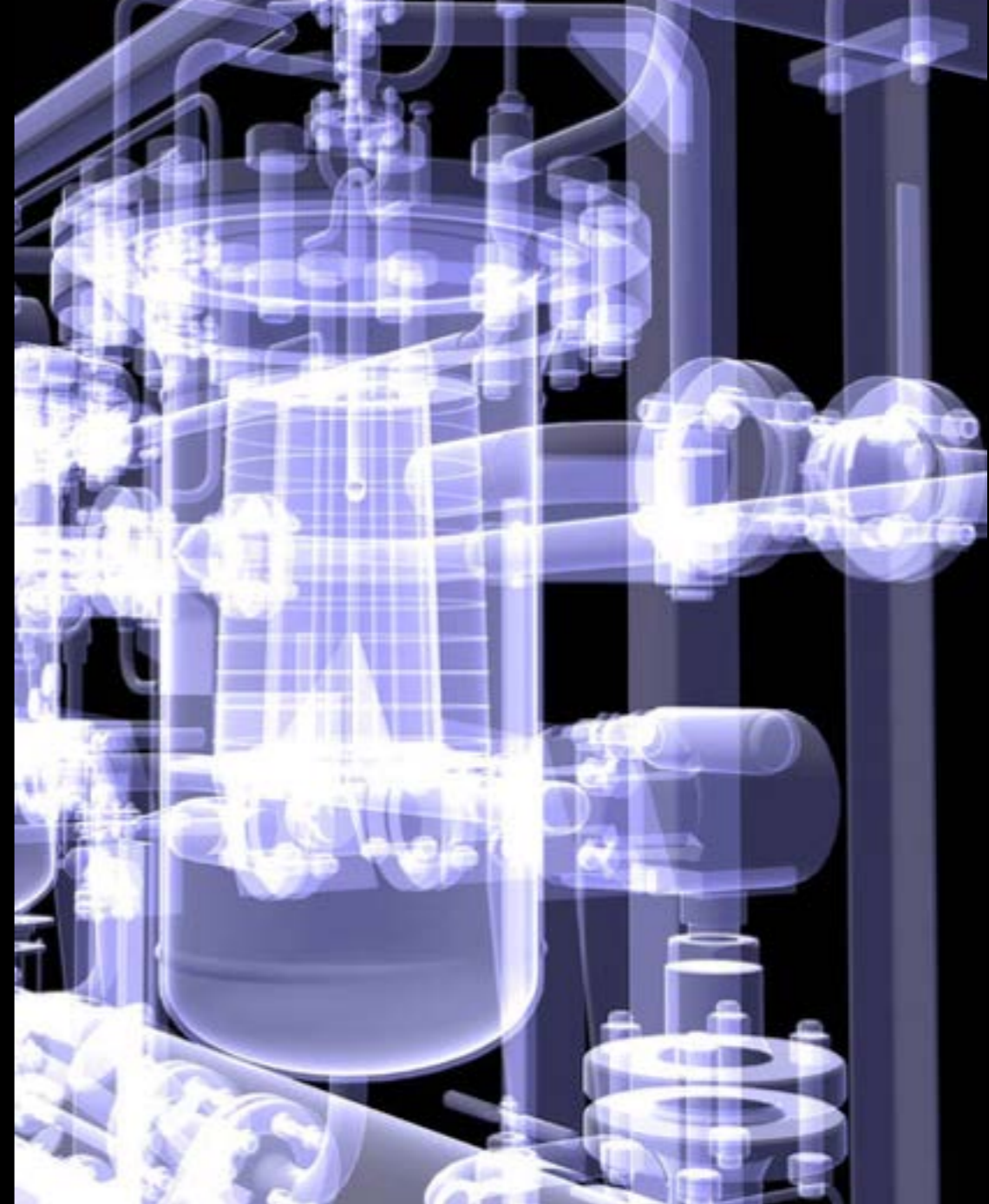
**DANISH TECHNOLOGICAL INSTITUTE** DK

**JOANNEUM RESEARCH** Austria

...

**JOŽEF STEFAN INSTITUTE**

Slovenia (since 2006)



# IMPACT DELIVERED



Industrial biotech



Drug development



3D media



Health



Fraud detection



Value-added forestry



Green shipbuilding

# IMPACT DELIVERED



Port security



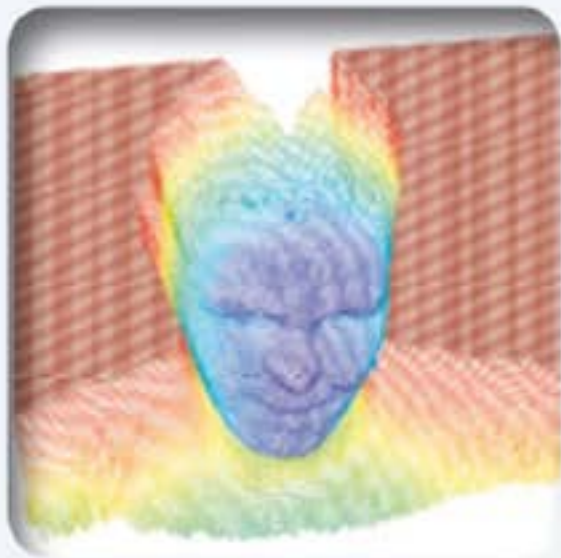
Predicting Alzheimer's



Food hygiene



Perfect chocolate



Hyper-accurate



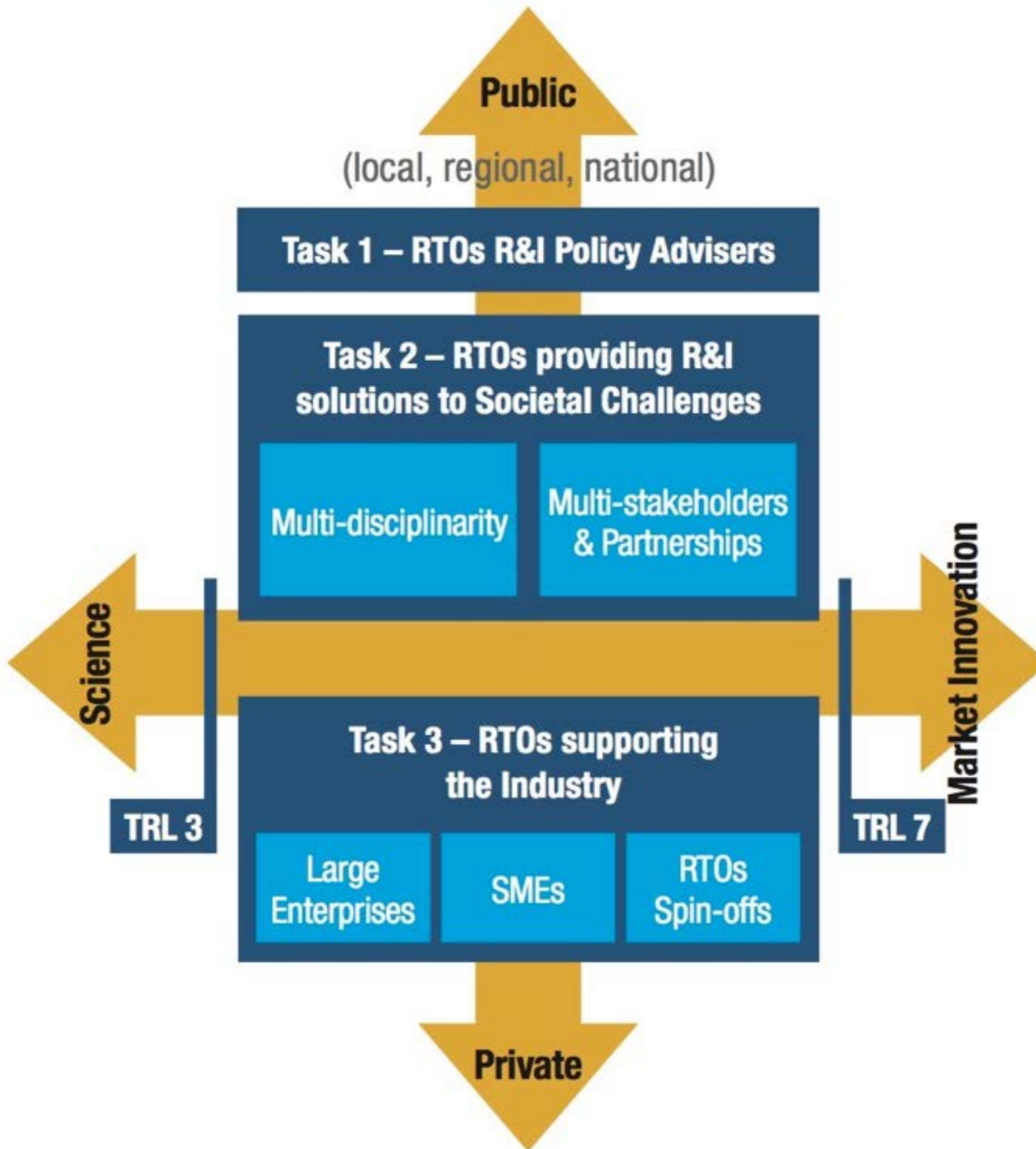
Green manufacturing



Educational testing



Flood prevention



**Jobs & Growth**  
Economic  
Footprint Study  
Impact of 9 European RTOs in  
2014

For each job in the RTOs,  
another 3 jobs are created elsewhere

For each euro invested in the form of operational  
grants, almost 4 euro flow back to the national governments



# EARTO SERVICES

Represents the interests of RTOs towards European institutions

Dialogues with key persons in the European institutions (EC, PARLIAMENT)

Produces policy papers and press statements, testifies before official committees and evaluation panels, participates in expert groups, etc.

EARTO offers its members information services and opportunities for professional networking and mutual learning

A photograph of a cityscape in The Hague, Netherlands, featuring several flags in the foreground and buildings in the background. The flags include the Dutch national flag (red, white, and blue horizontal stripes) and the flag of the province of North-Holland (blue and white horizontal stripes with a red shield). A dark blue banner at the top left of the image contains the text "EARTO Conference 2016 in The Netherlands". A white box in the center of the image contains the text "THE HAGUE" and "APRIL 18-19, 2016".

EARTO Conference 2016 in The Netherlands

THE HAGUE

APRIL 18-19, 2016



# POLICY WORKING GROUPS

HORIZON 2020

STRUCTURAL FUNDS

COOPERATION WITH EIB

EUROPEAN INNOVATION COUNCIL EIC

# FRAMEWORK SETTING WORKING GROUPS

FINANCIAL EXPERTS

LEGAL EXPERTS

HUMAN RESOURCES

COMMUNICATION EXPERTS

# TECHNOLOGY ORIENTED WORKING GROUPS

SECURITY RESEARCH

EMERGING TECHNOLOGIES FOR HEALTHCARE



- EARTO Paper on Open X - 18 November 2015
- 2015 EARTO Innovation Awards brochure - 15 October 2015
- EARTO Paper - The European Innovation Council – A New Framework for EU Innovation Policy - 9 October 2015
- EARTO Letter to Mr Juncker on Appointment Adviser on Innovation - 25 June 2015
- EARTO Annual Report 2014 - May 2015
- EARTO Open Letter to European Parliament on EFSI - 24 April 2015
- EARTO Paper - Data on European RTOs - 13 March 2015
- EARTO Amendments to the European Commission's Proposal for Regulation on the European Fund for Strategic Investments (EFSI) - 11 February 2015
- EARTO Answer to EC Consultation on Patents and Standards - 26 January 2015
- CESAER, EARTO, EUA, LERU, Science Europe Joint Statement on Juncker Investment Fund - 23 January 2015 [link](#)



EARTO PUBLICATIONS IN 2015



1/3 RTOs beneficiaries in FP7  
14 RTOs in top 50  
J. STEFAN 37th - European Research Ranking (25%)

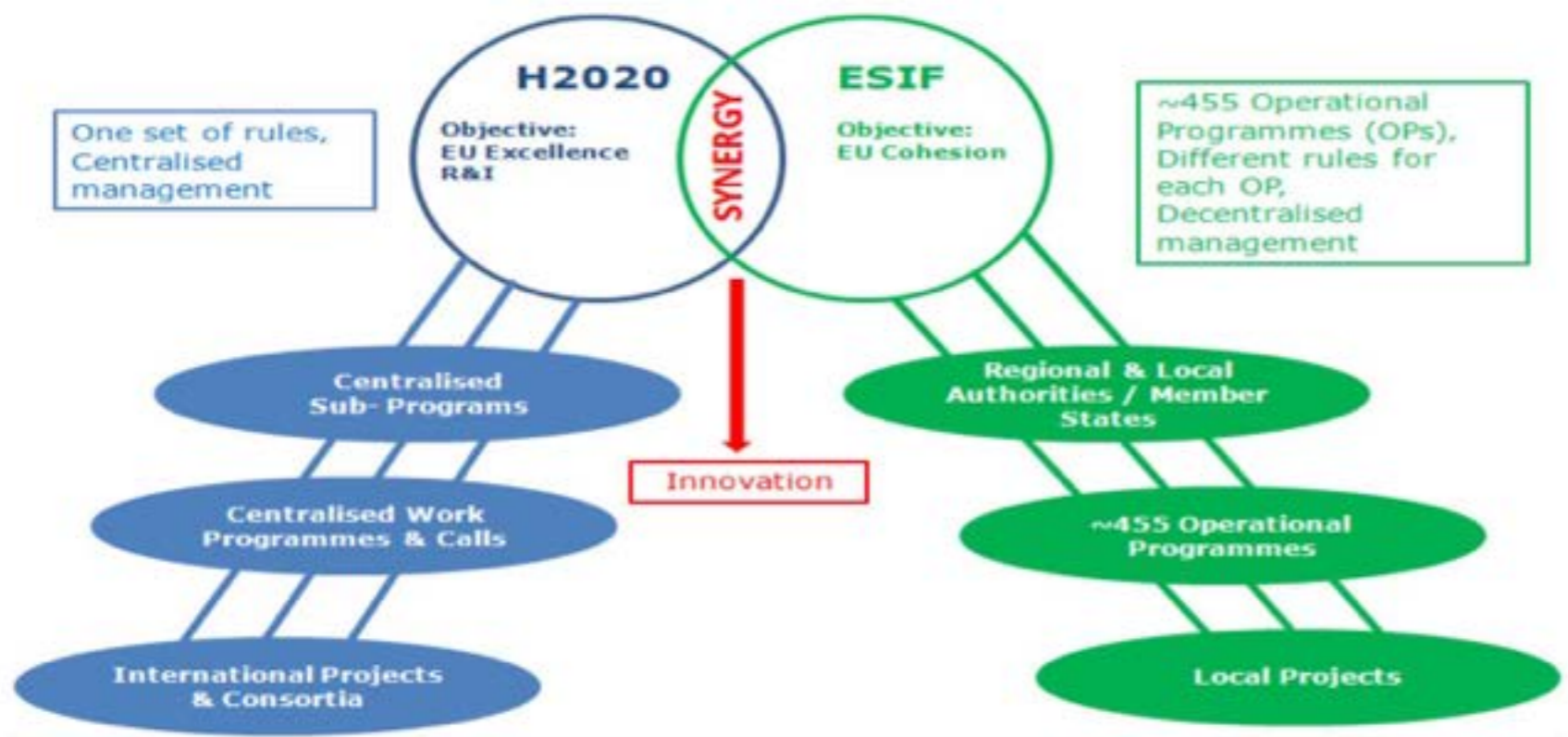


Access for RTOs is limited



ESIF - RTOs natural partners  
Slovenia - first call in progress - still to be seen

MISUNDERSTANDINGS ASSOCIATED WITH  
innovation needs systematic and persistent instruments  
innovation cannot be based only on SS  
mission SS - increase efficacy to reduce disparities



# ERRIN - EARTO COMMENTS

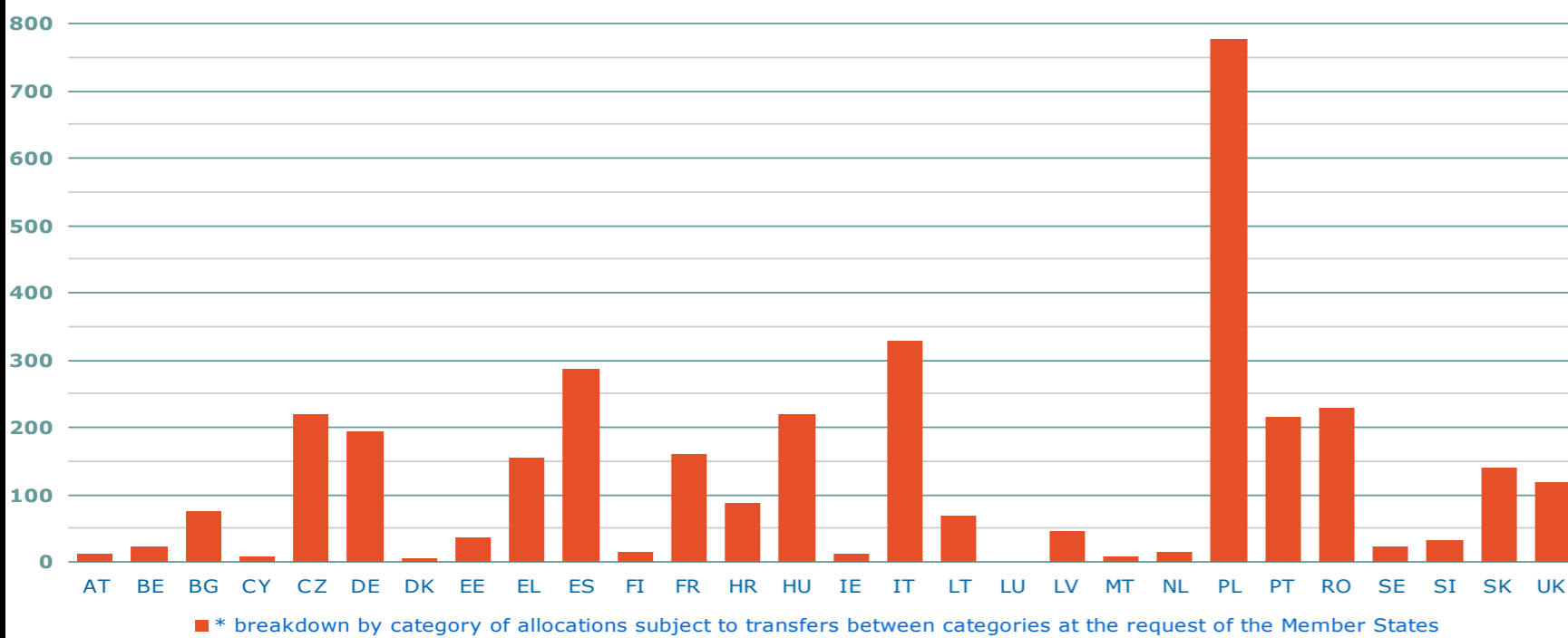
ERRIN: European Regions and Innovation Network

## Support and concern:

*a* - COHERENCE OF INSTRUMENTS NEEDED

*b* - SHOULD NOT BE USED AS CRITERION FOR H2020

Total EU allocations of cohesion policy 2014-2020\* (billion €, current prices)



Different missions  
 Different funding tools coming in a different TRL  
 Different timing



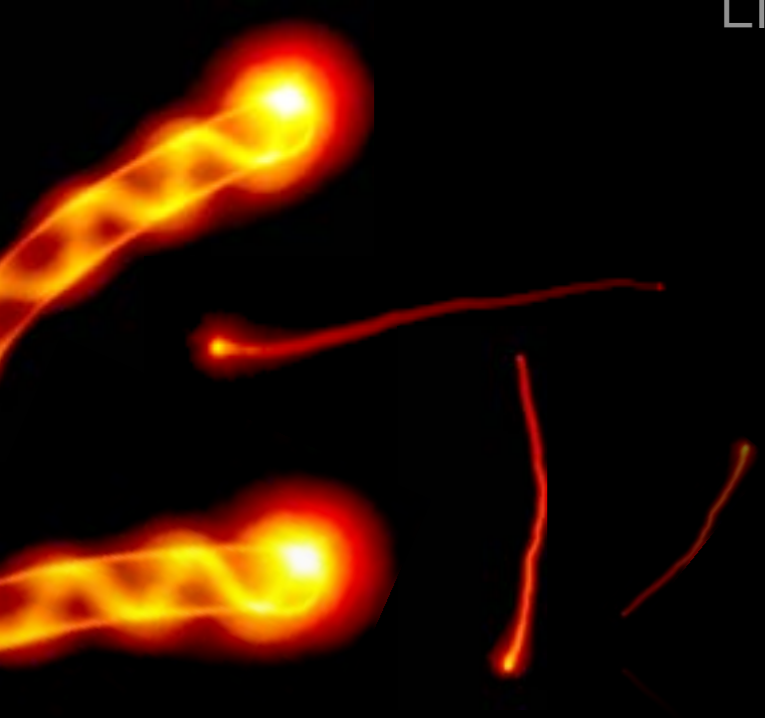
# Institute Jožef Stefan

Member of EARTO

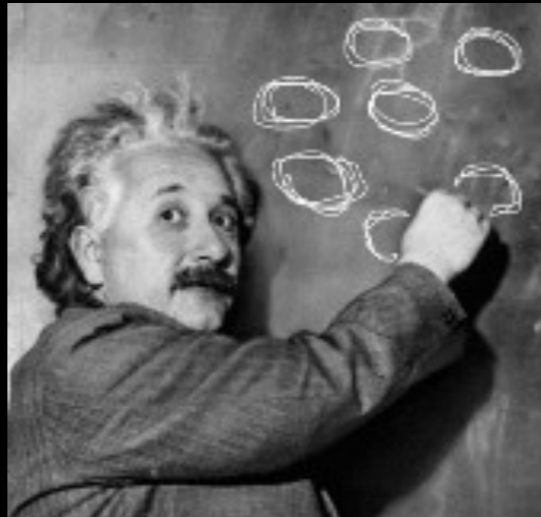
NATURAL SCIENCES  
ENGINEERING  
LIFE SCIENCES

960 employees  
750 researchers  
400 Ph. D.  
12-15% foreign

65% source in national budget (all competitive)  
25% international  
10% direct contracting  
*ESIF NOT TAKEN INTO ACCOUNT*



# SCIENCE AND TECHNOLOGY



# SOCIETAL IMPACT



UNIVERSITY OF NOVA GORICA



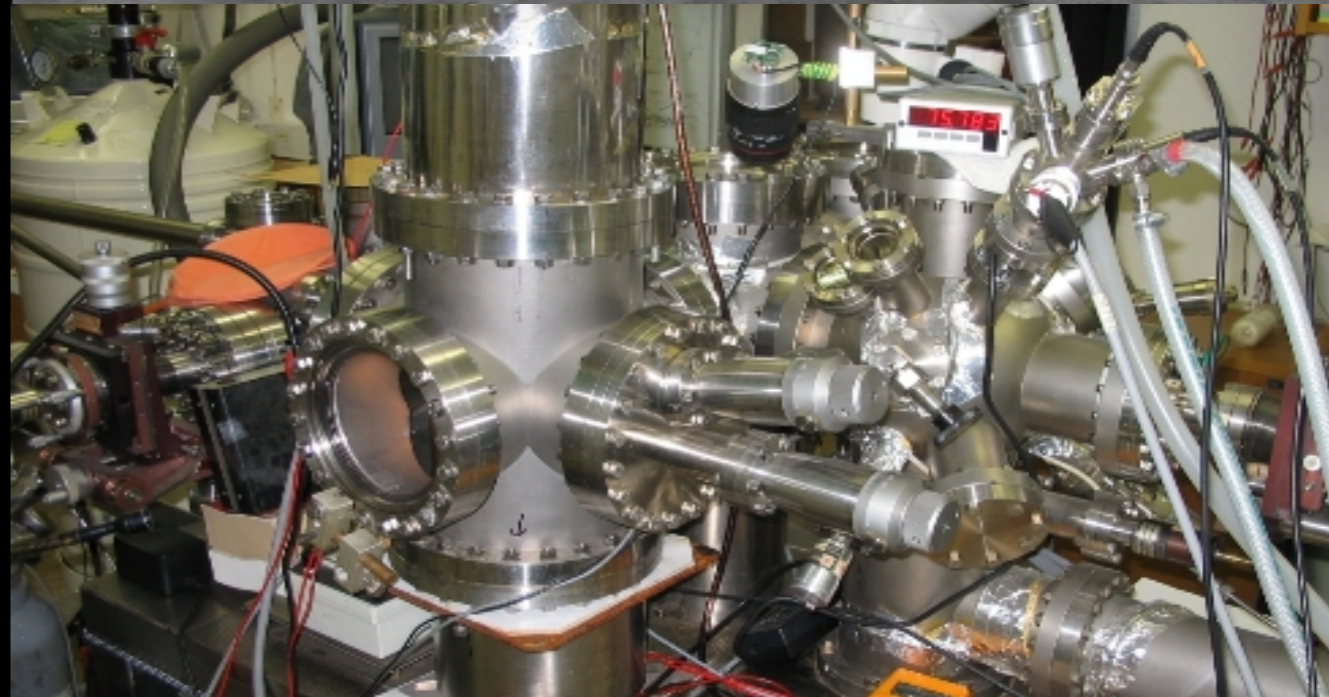
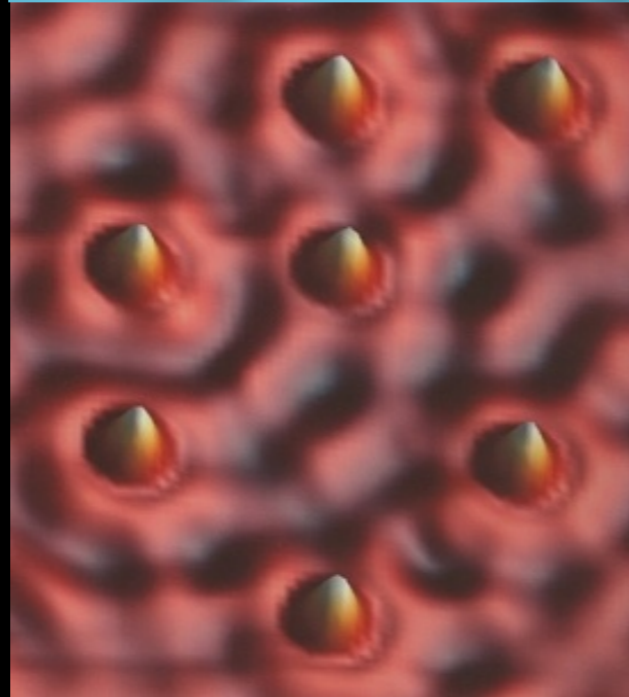
INTERNATIONAL POST. SCHOOL OF JOŽEF STEFAN



TECHNOLOGY PARK  
LJUBLJANA



cutting edge technologies





OSA Advancing the Science and Technology of Light

THE OPTICAL SOCIETY

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FOR IMMEDIATE RELEASE

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World's First Microlaser Emitting in 3D

Scientists in Slovenia Describe Practical, Tunable, 3D Microdroplet Laser in Optics Express

WASHINGTON, Dec. 8 — Versatile electronic gadgets should employ a number of important criteria: small in size, quick in operation, inexpensive to fabricate, and deliver high precision output. A new microlaser, developed at the Jožef Stefan Institute in Ljubljana, Slovenia embodies all these qualities.

Science

**World's First 3D Microlaser Announced**

Shane McGlaun (Blog) - December 10, 2010 6:00 AM

Print ShareThis New 8+1 0 17 comment(s) - last by illiears.. on Dec 12 at 4:05 PM

**Breakthrough microlaser is easy to build and cheap**

Scientists in Slovenia has made a breakthrough that has resulted in the world's first microlaser that emits in 3D. The new **3D microlaser** was created at the Jožef Stefan Institute in Ljubljana, Slovenia.

Physics News

Latest physics and nanotechnology news headlines

Home Physics Optics Nanophysics Soft Matter Condensed Matter Superconductivity Plasmas

**World's first microlaser emitting in 3-D**

Scientists in Slovenia describe practical, tunable, 3-D microdroplet laser in Optics Express. Versatile electronic gadgets should employ a number of important criteria: small in size, quick in operation, inexpensive to fabricate, and deliver high precision output. A new microlaser, developed at the Jožef Stefan Institute in Ljubljana, Slovenia embodies all these qualities.

News Sports Entertainment

**SILOBRE**

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SCI-TECH

**Slovenia scientists create world's first 3-D microlaser**

Thursday - Dec 09, 2010, 03:10pm (GMT+5.5)

Washington - A new microlaser, developed at the Jozef Stefan Institute in Ljubljana, Slovenia, is the world's first practical three-dimensional laser - cheap, portable and quick in operation with high precision output.

Matjaz Humar and Igor Musevic have developed a microdroplet 3-D laser system in which laser light shines forth in all directions from two molecules lodged within spherical droplets of a liquid.

Published Dec 08 2010 by Centre Daily Times

**World's First Microlaser Emitting in 3D**

WASHINGTON Versatile electronic gadgets should employ a number of important criteria: small in size, quick in operation, inexpensive to fabricate, and deliver high precision output. A new microlaser, developed at the Jožef Stefan Institute in Ljubljana, Slovenia embodies all...

READ FULL ARTICLE

# FOCUS ON INTERNATIONAL COLLABORATION FOR ADVANCEMENT OF SCIENCE



AND  
RESEARCH-BASED  
INNOVATION

PRODUCTION TECHNOLOGY AND CONTROL  
COMMUNICATION AND COMPUTER TECHNOLOGIES  
KNOWLEDGE TECHNOLOGIES  
BIOTECHNOLOGY AND BIOMEDICINE  
NEW MATERIALS AND NANOTECHNOLOGIES  
ENVIRONMENTAL TECHNOLOGIES, ENERGETICS

# IMPACT

Policy - professional basis and implementation

Knowledge and technology transfer

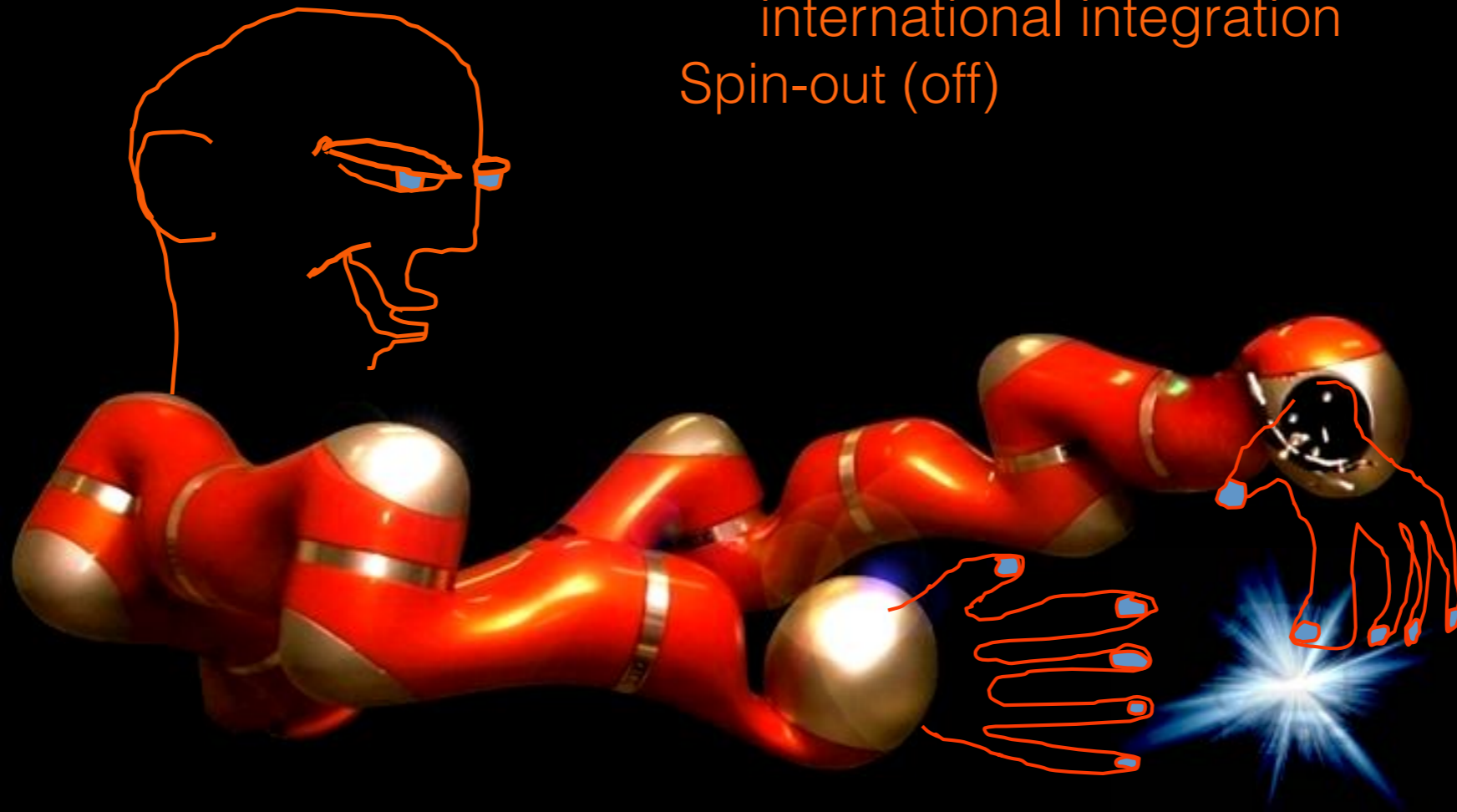
joint planning

joint R&D projects

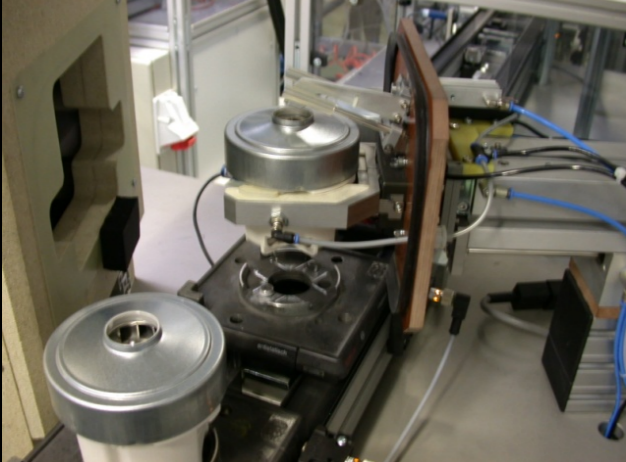
production of innovative human resources

international integration

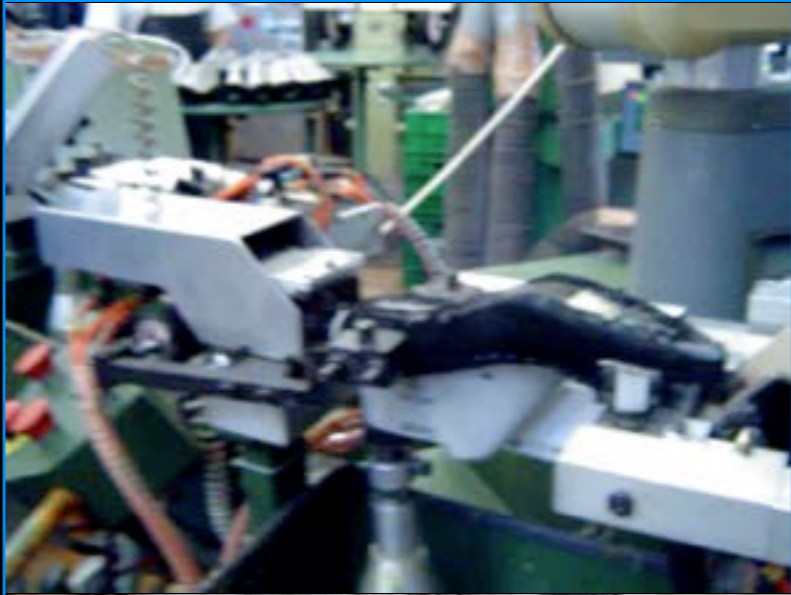
Spin-out (off)



# QUALITY CONTROL

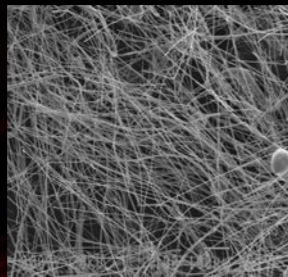


# PRODUCTION OF SHOES

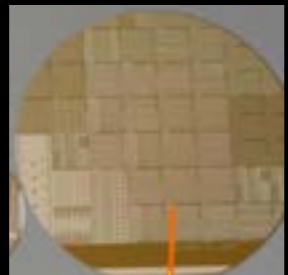


# PRODUCTION OF TEA





FREQUENCY DIELECTRIC  
CERAMIC FILTER  
in the mobile telephony  
EPCOS, Nokia, Ericsson



VARACTOR IN MICROWAVE FIELD  
Manufacture of thin layers of  
barium strontium  
Hyb, Thales, EPLF, EADS



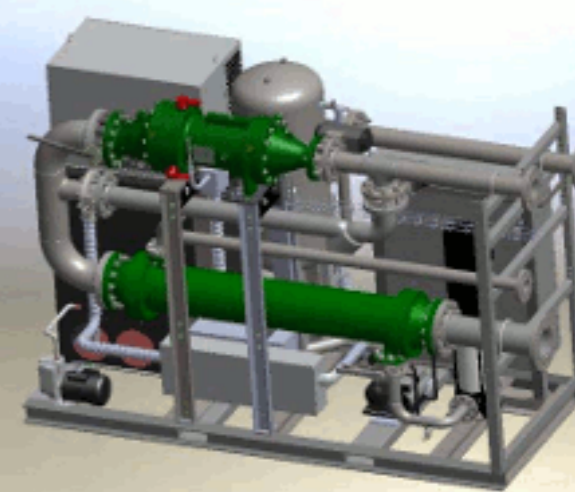
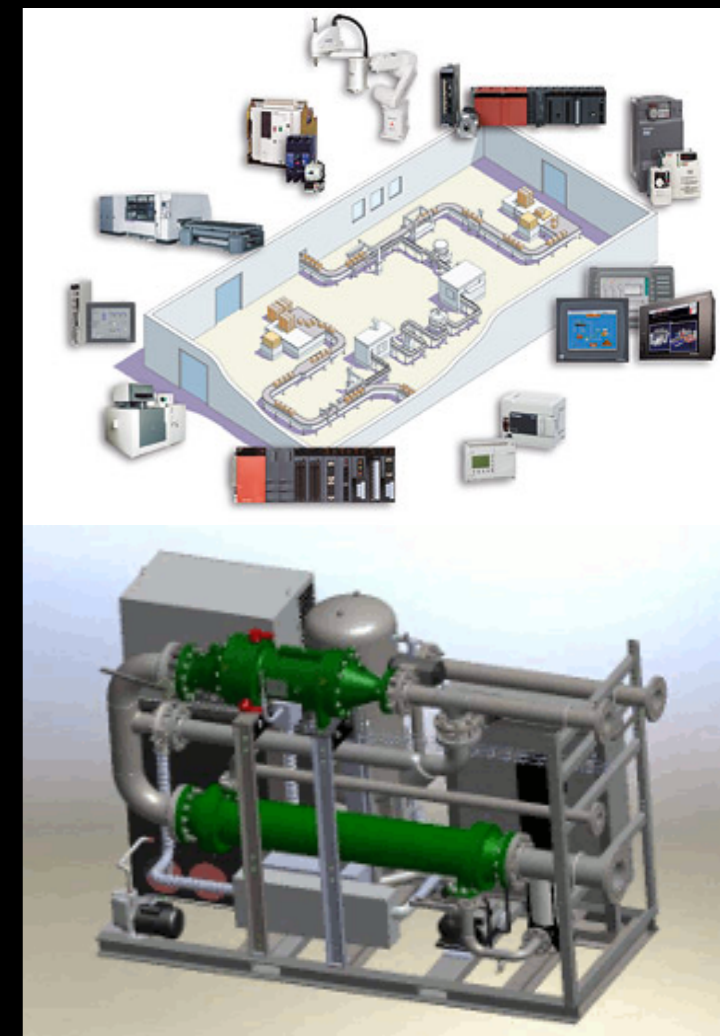
INNOVATION  
PRICE  
Glassworks  
Steklarna  
Hrastnik



BALDER

BORN AT THE INSTITUTE

INEA



# SCIENCE FOR BETTER WORLD







THE END