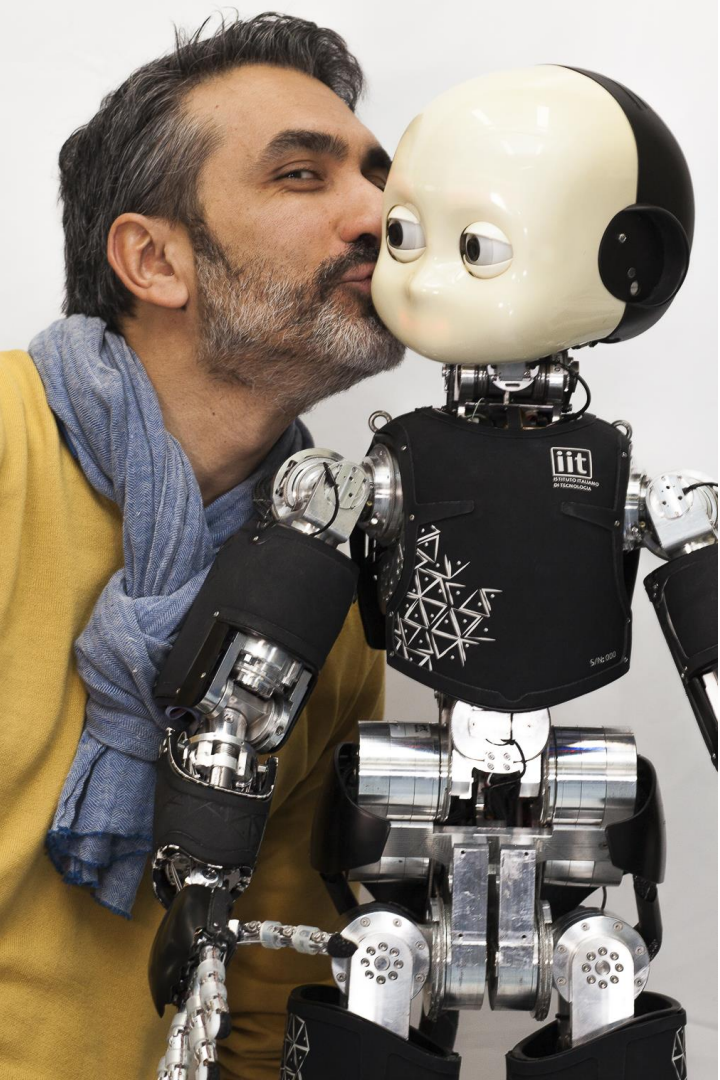


Istituto Italiano di Tecnologia

Infrastrutture per la ricerca nella competizione per le nuove tecnologie



ISTITUTO ITALIANO
DI TECNOLOGIA



Giorgio Metta

Scientific Director

Istituto Italiano di Tecnologia

Via Morego, 30 - 16163, Genoa, ITALY

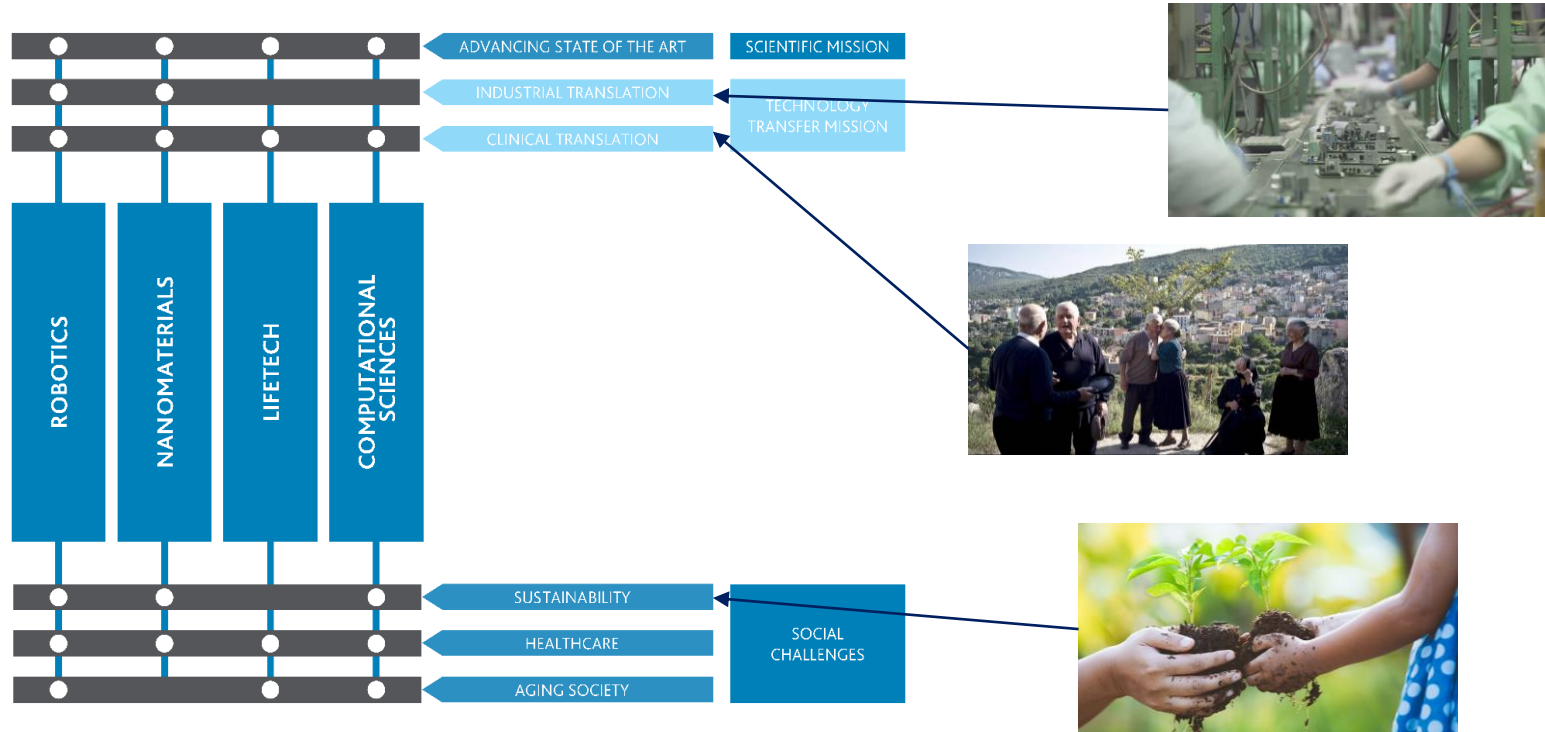
giorgio.metta@iit.it

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ISTITUTO

the [Istituto Italiano di Tecnologia](#)
promotes excellence in [fundamental](#) and [applied](#) research,
develops [higher education](#) in the area of science and
technology and fosters the [evolution of industry](#) towards the
forefront areas of technological innovation

a strategic plan for three big societal challenges



bits, atoms, neurons & genes

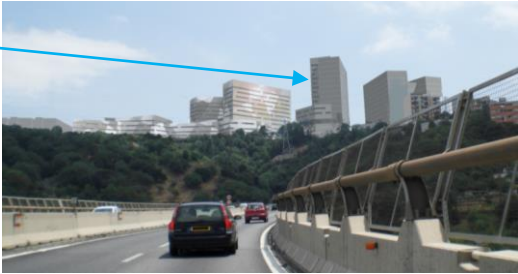




center for human technologies

center for robotics & intelligent systems

center for converging technologies





Center for Neuroscience e Cognitive Science,
Università di Trento, TRENTO



Center for Genomic Science,
Campus IFO-IEO, MILANO



Center for Nano Science and Technology,
Politecnico di Milano, MILANO



Center for Sustainable Future Technologies,
Politecnico di Torino, TORINO



Center for Translational Neurophysiology,
Università di Ferrara, FERRARA



Center for Microbirobotics,
Scuola Superiore Sant'Anna, PISA



Center for Nanotechnology Innovation,
Scuola Normale Superiore, PISA



Center for Life Nanoscience,
Università degli Studi di Roma La Sapienza, ROMA



Center for Advanced Biomaterials for Health Care,
Università Federico II di Napoli, NAPOLI



Center for Biomolecular Nanotechnologies,
Università del Salento, LECCE

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- Machine Learning, MIT, BOSTON (USA)
- Neurobiology Dept., Harvard Univ., BOSTON (USA)

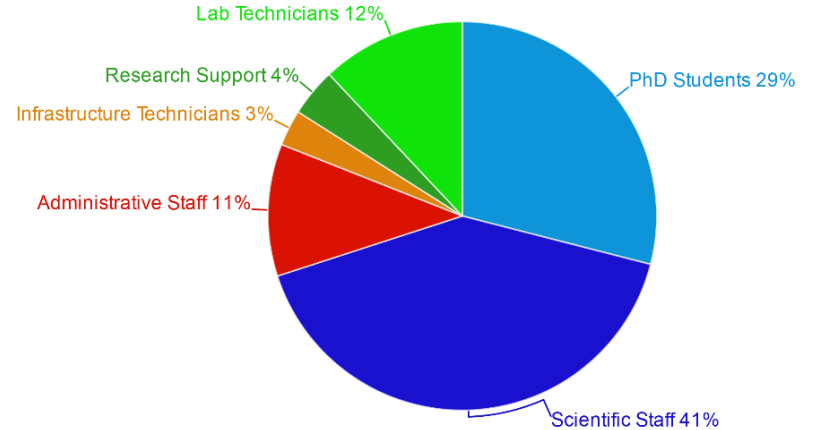
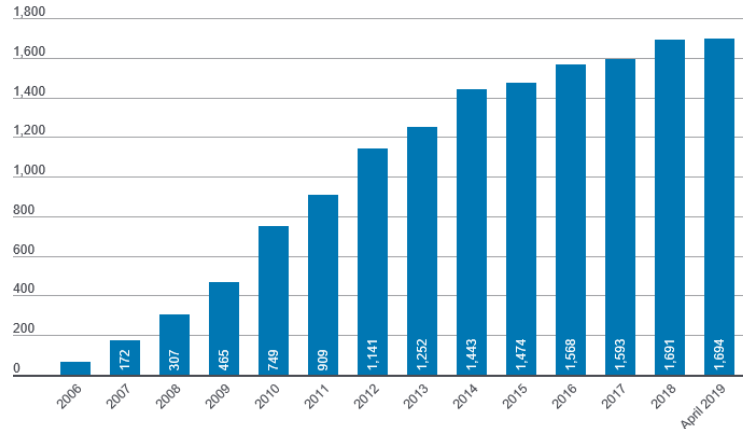
people, people, people

49% of personnel from 60 countries

16% returning Italians

41% women

average age of ~35 years



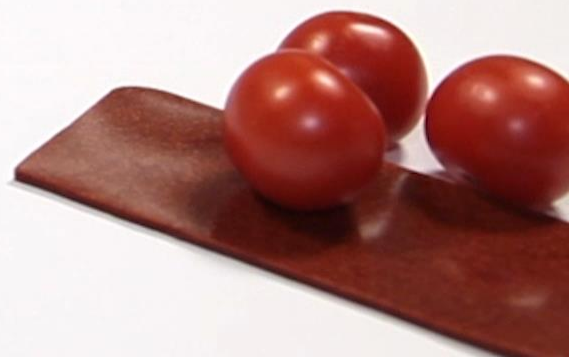
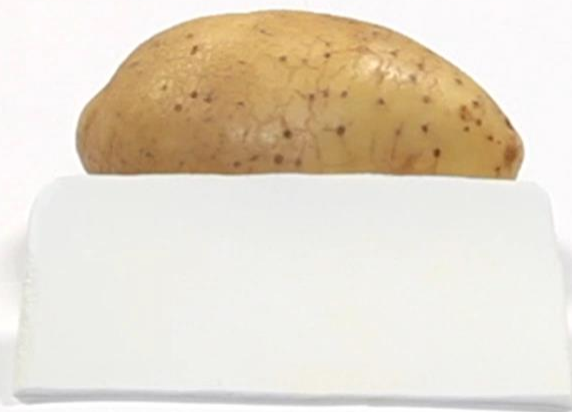
more than 1700 people

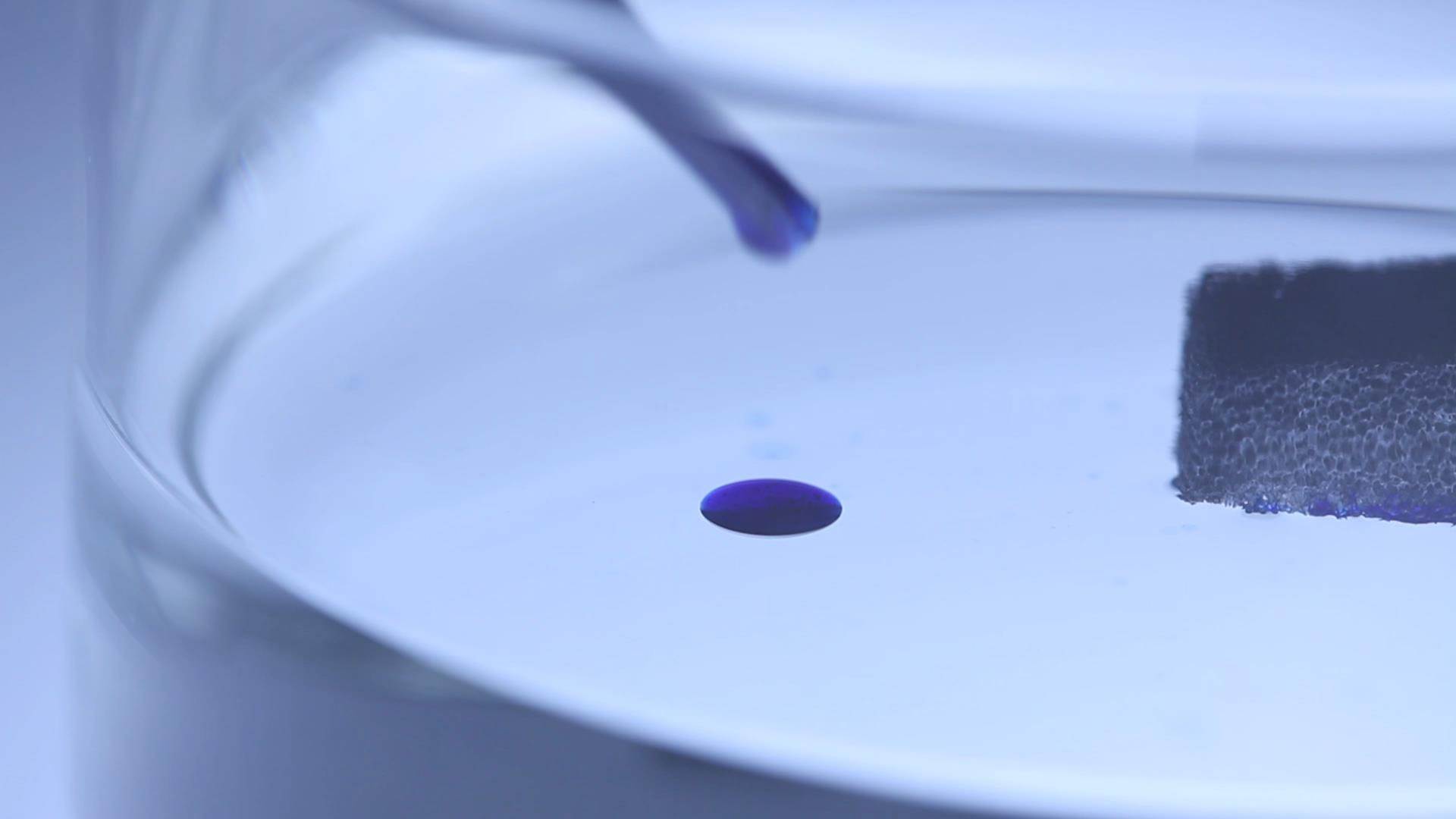


32















digital tech
for health

↓ IIT and Gaslini Children's Hospital

↓ 40 families analyzed

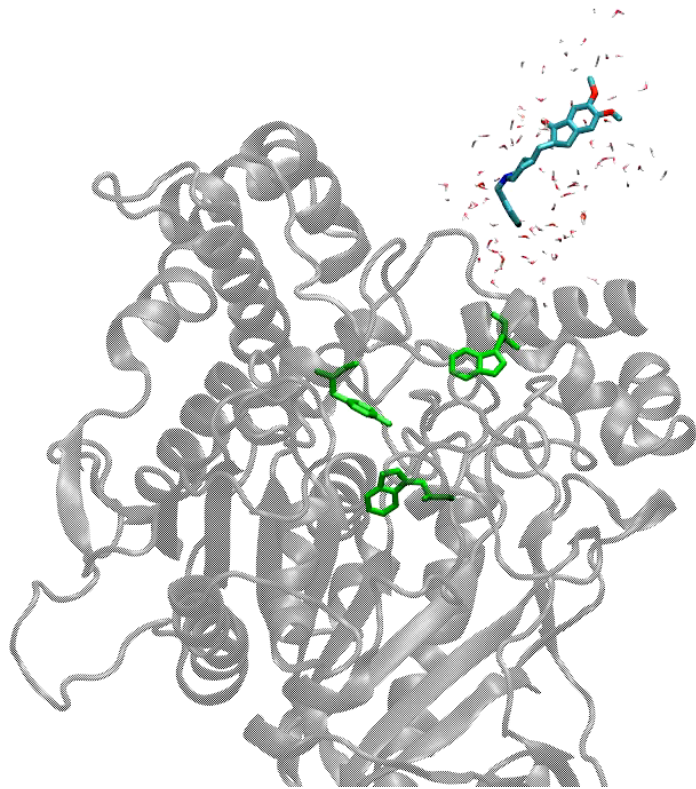
↓ 19,396 genes, 6Tb in 48 hours

↓ 150,000 variants per sample!

↓ 50-100 variants for manual analysis














↓ 1 candidate mutation found

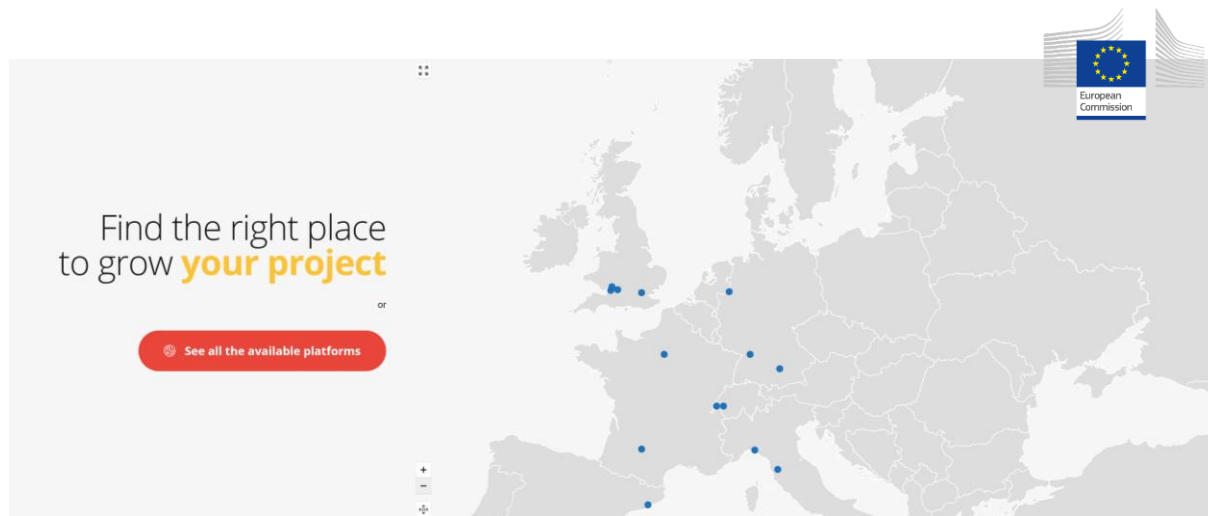
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The European Robotics Research Infrastructure Network

 SSSA Scuola Superiore Sant'Anna Italy (Coordinator) website	 CEA Commissariat à l'énergie atomique et aux énergies alternatives France website	 CNRS Centre national de la recherche scientifique France website	 KIT Karlsruhe Institut für Technologie Germany website
 TUM Technische Universität München Germany website	 IIT Istituto Italiano di Tecnologia Italy website	 UNIVERSITY OF TWENTE UT Universiteit Twente Netherlands website	 UPC Universitat Politècnica de Catalunya Spain website
 USE Universidad de Sevilla Spain website	 EPFL Ecole Polytechnique Fédérale de Lausanne Switzerland website	 UWE Bristol University of the West of England United Kingdom website	 UL University of Ljubljana Slovenia website
 Imperial College London United Kingdom website			



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or

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S/N 46 by mid '20
and counting...





**Molecular and mater
simulation at the tur
the decade: Celebrat
50 years of CECAM.**

9-12 September 2019
Lausanne, Switzerland

UPCOMING EVENTS

[Applications of Diffusiophoresis in Drying, Freezing and Flowing Colloidal Suspensions](#)

Location : CECAM-HQ-EPFL, Lausanne, Switzerland
October 30, 2019 – November 1, 2019

[Inverse Molecular Design & Inference: building a Molecular Foundry](#)

Location : CECAM-IRL, Ireland
November 1, 2019 – November 9, 2019

News

[2019 Berni Alder CECAM prize awarded to S. Succi](#)

[Two postdoctoral positions available at SISSA](#)

[Scam alert](#)

[Loup Verlet \(1931-2019\)](#)

[Postdoc Position at Univ. Barcelona, in Mesoscale Modeling in Nanostructured Materials](#)

Open calls

[CECAM-Lorentz Call](#)



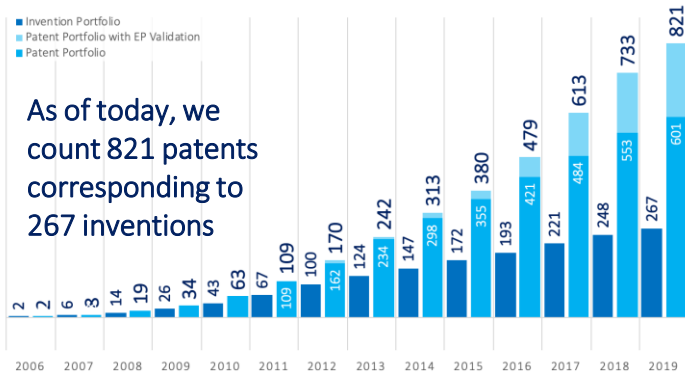




PARTNERS (IN CRIME)



technology transfer: some numbers



27
Active
Business
Ideas

17
Start-Up
Project

21
Launched Start-up

How many start-up companies by 2030?

How many still around by then?

OUTPUT vs. RESOURCES

267 inventions (>800 patents), 21 startups, >50M Euro project funding

Q: What can be our impact by 2030?



IIT – Contribution of the four Research Domains Start-up pipeline (September 2019, %)



415 People*



529 People*



413 People*

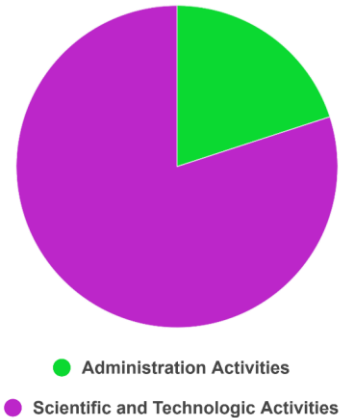


168 People*

PUBLIC RESOURCES

2017 data:

- 94.4 M€
- 85% for science
- 15% admin



FUND RAISING

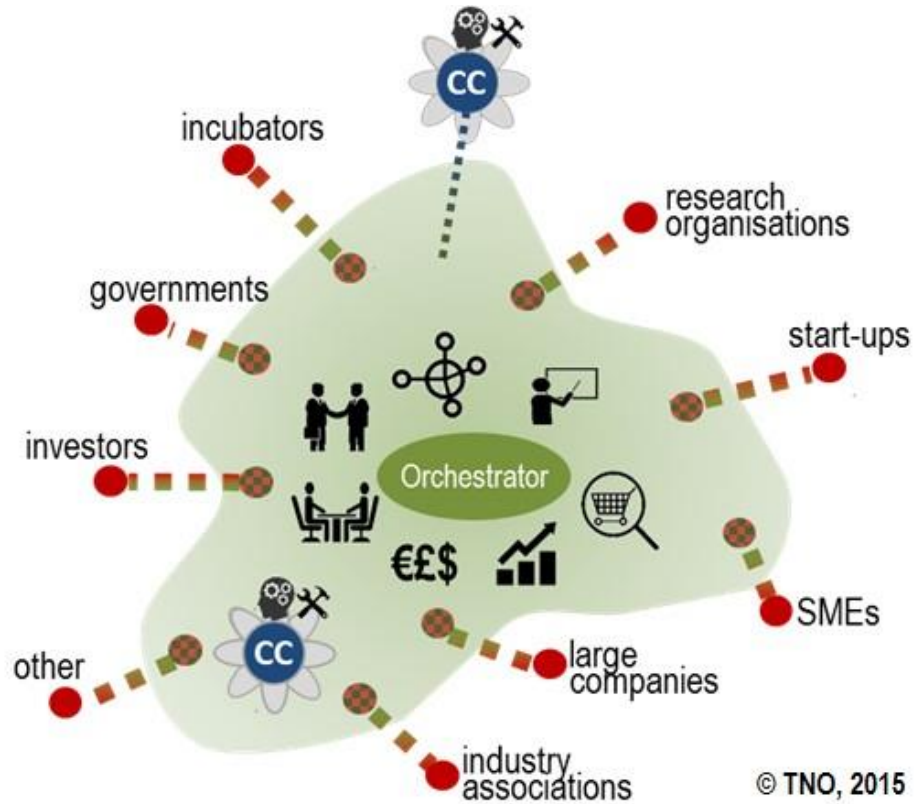
Fund raising: ~30% of the yearly budget. Cumulative is ~238.0 M€

- Competitive projects (e.g. EU): 168.6 M€
- Industrial projects: 52.8 M€
- In-kind contributions: 16.6 M€



joint research with industry

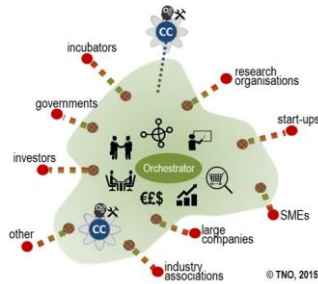




<http://s3platform.jrc.ec.europa.eu/digital-innovation-hubs>

<https://rodin-robotics.eu/>

SIZE DOES MATTER



1
local
one tech



10
regional ecosystem
multi tech

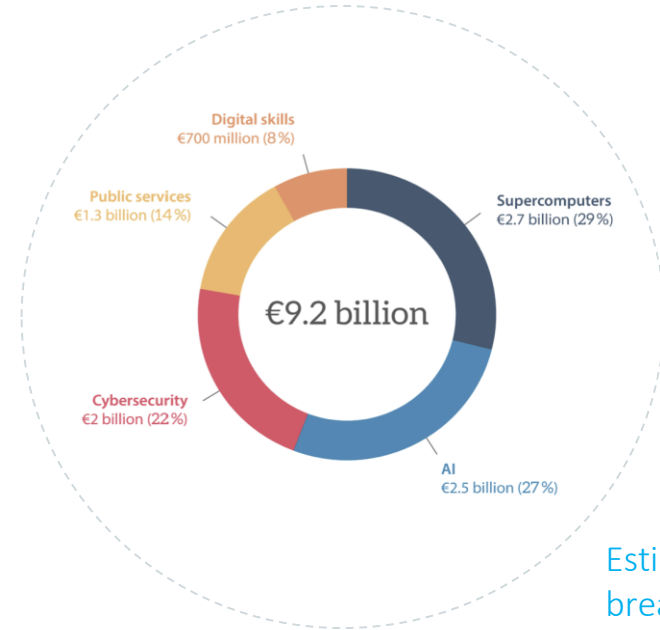


100
European
scale

digitalizing Europe

DIH'S OPPORTUNITIES

- ◎ The DIH's programme, which will be included in the next EU budget for the period 2021-2027
- ◎ The Commission's proposal is to allocate **€9.2 billion** to the programme to five thematic areas: *supercomputing, cybersecurity, advanced digital skills, use of digital technologies in all economic and social fields and artificial intelligence (AI)*



Estimated
breakdown of
Digital Europe
(European Commission 2018)

take home message

(in 5 easy steps)

1. strategic choices, focus
2. infrastructure, a bit of hardware stuff
3. people, people, people
4. scale up through regional networking
5. scale up through European networking



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