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ISTITUTO ITALIANO DI TECNOLOGIA

Technology transfer and Smart City

Technology Transfer@ Istituto Italiano di Tecnologia

Istituto Italiano di Tecnologia

ISTITUTO ITALIANO DI TECNOLOGIA

is a Foundation that 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.

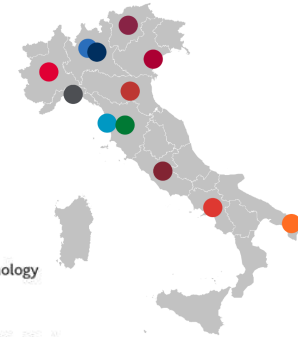**IIT@HARVARD**
Nanotech for Brain

IIT@MIT
Laboratory for Computational and Statistical Learning

CAMBRIDGE, USA

GENOVA		Central Research Lab NSYN@UniGe
TORINO	IIT@PoliTo	Center for Sustainable Futures
MILANO	IIT@PoliMi	Center for Nano Science and Technology
MILANO	IIT@SEMM	Center for Genomic Science
TRENTO	IIT@unitn	Center for Neuroscience and Cognitive Systems
FERRARA	IIT@UniFe	Center for Translational Neurophysiology
PISA	IIT@NEST	Center for Nanotechnology Innovation
PISA	IIT@SSSA	Center for Micro-Biorobotics
ROMA	IIT@SAPIENZA	Center for Life Nano Science
NAPOLI	IIT@CRIB	Center for Advanced Biomaterials for Health Care
LECCE	IIT@UniLe	Center for Biomolecular Nanotechnologies

ITALY

Genova Central Research Lab 32.000 sqm, fully equipped, one of the largest single-site labs in Europe
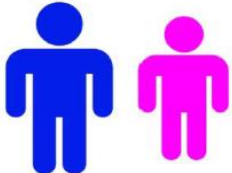
IIT **people composition reflect the cross** multidiscipline and the cross culture **mindset** of IIT organization:

Cross-sector
21+ different disciplines

Cross-culture
50+ countries & 5 continents
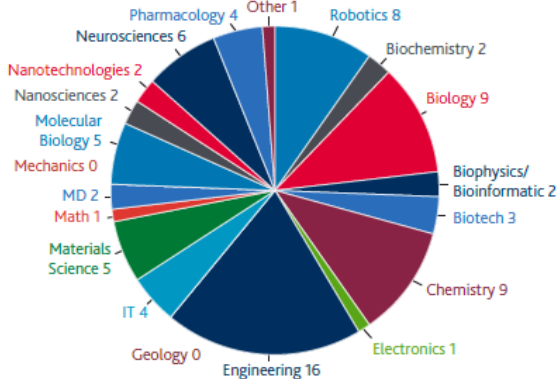
Headcount > 1600

59%   41%

Young average age ≈ 34 y

Scientific Staff - Countries of origin

Scientific Staff - Country of Origin

Europe
Austria, Belgium, Germany, Estonia, Romania, Switzerland, Finland, France, Lithuania, Great Britain, Slovenia, Sweden, Greece, Italy, Portugal, Czech Rep., Spain, Ukraine, Netherlands, Poland, Belarus, Cyprus, Bosnia-Herzegovina

North America
Mexico, Usa, Cuba

South America
Brasil, Colombia, Peru, Venezuela

Africa
Egypt

Asia
Bangladesh, China, South Korea, Russian Fed., Pakistan, Japan, Jordan, Vietnam, India, Iran, Pakistan, Turkey, Iraq, Lebanon

Oceania
Australia, New Zealand

Degree distribution

Pharmacology 4, Other 1, Robotics 8, Neurosciences 6, Biochemistry 2, Nanotechnologies 2, Biology 9, Nanosciences 2, Molecular Biology 5, Mechanics 0, Biophysics/Bioinformatic 2, MD 2, Biotech 3, Math 1, Materials Science 5, Chemistry 9, IT 4, Electronics 1, Geology 0, Engineering 16
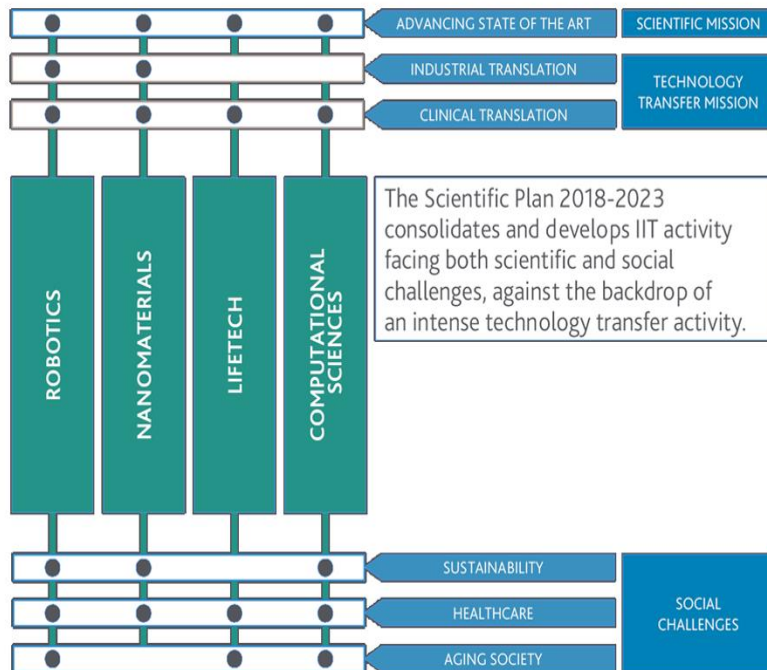
Institute's Strategic Plan

The New Institute Strategic Plan expands the interdisciplinary vision based on the concept of **Translating Evolution into Technology**, creating the knowledge basis for a research program targeting sustainable solutions for problems of fundamental importance to the future of mankind ("**human-centric research**").

The Scientific Plan 2018-2023 consolidates and develops IIT activity facing both scientific and social challenges, against the backdrop of an intense technology transfer activity.

- The **Strategic Plan** envisages an interdisciplinary combination of research and technology that will have a positive impact on some of the **twenty-first century's** most important societal **challenges**.

- IIT has started to apply different **bioinspired technologies** to healthcare, sustainability and personal assistance.

- These challenges reflect the **priorities of Horizon 2020**.

Spin-offs
31.10.2018

IIT@PoliMi (Milan)
FLEEP
Green Energy Everywhere
Medeas
Ribes Tech

IIT@PoliTo (Turin)
Morecognition
Polìpo
Politronica
ReHand Technologies

IIT@SEMM (Milan)
Genomic Data Software

30+ Spin-off Projects and Business Ideas

18 Spin-off Launched

Staff: 100+

IIT@Genoa
Abbi KIT
Advanced Microturbines
ApSurg
Artificial Retina
AWorld
BeDimensional
BiKi Technologies
Circle Garage
DualCam
Endoro
Febe
Genoa Instruments
Glassense
iCub House
Kimera Lab
MagnoTreat
Marep
Movendo Technology
Nanochrome
NeoKera Pharmaceuticals
Proteso
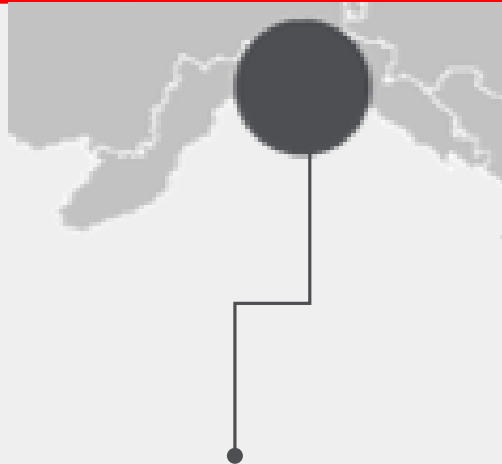QBRobotics
SmartMicroOptics
TREE
Uack
Unlock
ViBe
Wristbot

IIT@SSSA (Pisa)
Sensing Electromagnetic
Plus

IIT@Sapienza (Rome)
HoMoLoG
Tera Watcher

IIT@CRIB (Naples)
FitNEs
Histós
Kyme
MINE
mirTEc

IIT@UniLe (Lecce)
Fluctomation
HiQ-Nano
Optogenix
Piezoskin

Spin-offs Genova
31.10.2018

movendo technology

BE DIMENSIONAL

ADVANCED MICROTURBINES

BiKi TECHNOLOGIES
designing better medicines

CIRCLE GARAGE
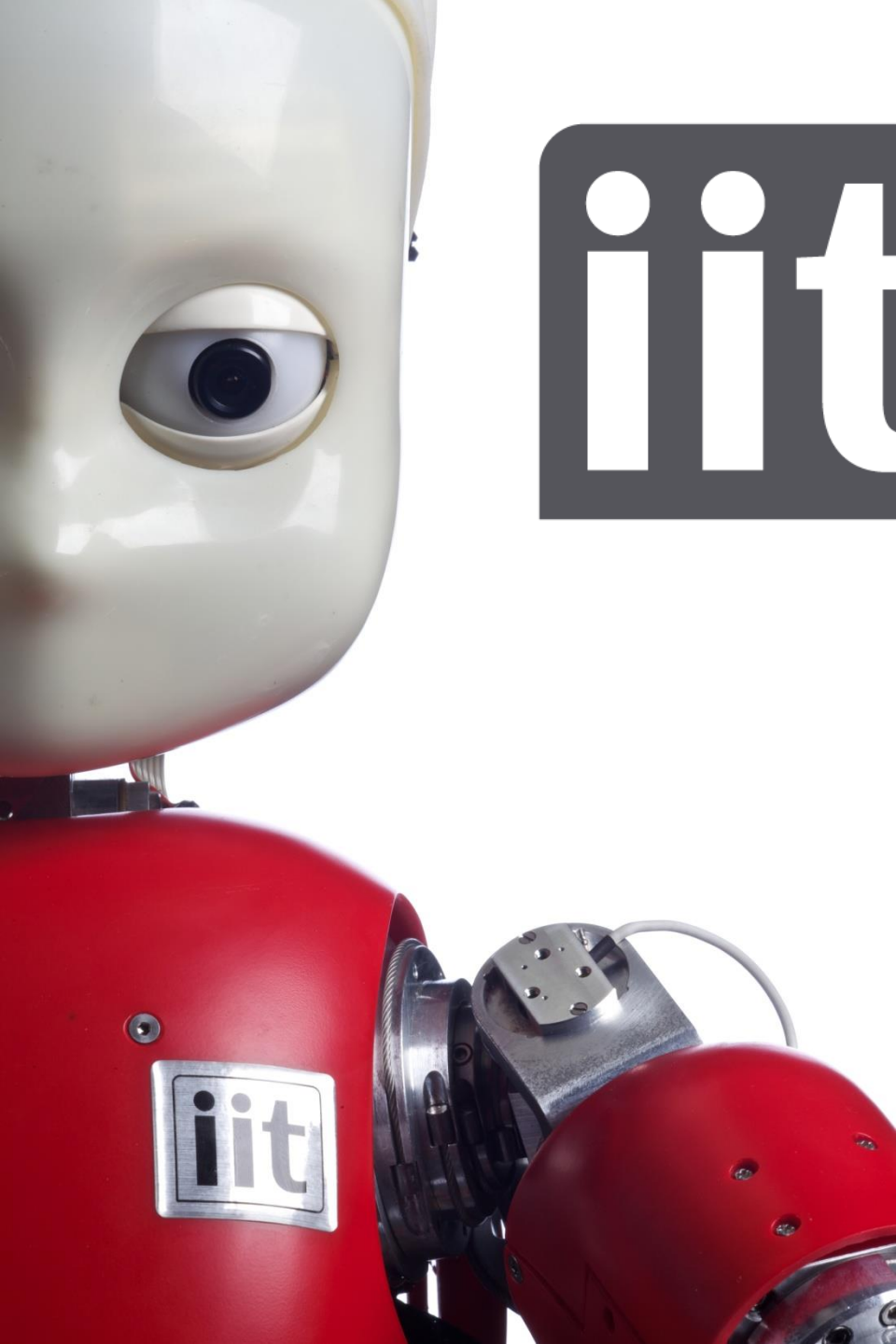
SMO SMART MICRO OPTICS

6 Spin-off Launched

Fundraising: >30 mln EUR

Staff: > 60

Circa 15 Spin-off Projects and Business Ideas

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Technology Transfer

What is and how it work?

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TT in practice: From Lab to Market

RESEARCH effort / involvement

| RESEARCH | INVENTION | PATENT | Proof of Principle | Prototype | Scale to industry std. | Deliver to Market |

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Determine research questions → Design study

Select topic

Collect data

Write research report

Analyze data

Validate Findings ← Generate findings

- The process is iterative and recursive; the driver of this phase is to capitalize on findings and know-how;

- These initial phases are technically driven / research oriented approach

- The idea is ready to be verified. A forecast of the target market and application must be provided;

- These phases are equally developed by researches and industry people, who become more and more relevant as the idea proceeds

- The work is focused on realizing a suitable prototype to be tested and prepared for the target market;

- Often times a set of additional patents can derive in connection with the introduction of an invention in a production cycle;

- In these phase the market players are the ones who take the lead.

- Product test; compliancy, security/safety;

- Market test and cost-return evaluation;

- Go/no-go for the launch

- The idea is out of the lab and begins its way to the market.

INDUSTRY effort / involvement
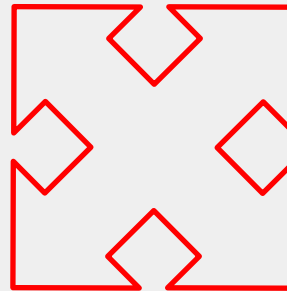
Technology Transfer Organization

Technology Transfer is in charge of facilitating and accelerating the adoption of IIT scientific findings into the **industrial cycle**.

IP Protection	Industrial Liaisons
Licensing	Spin-offs and Spin-off projects

MAIN ACTIVITIES ON INTERNAL SIDE:
Map and monitor inventive activity
Perform IP evaluation and protection
Disseminate IP protection and exploitation culture
Facilitate connection with industry players

MAIN ACTIVITIES ON MARKET SIDE:
Map and monitor industry needs
Identify best match between industry and research, and exploitation tools
Develop and maintain a relationship with the financial community (VC, angels, etc.)

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Thanks for your attention

Istituto Italiano di Tecnologia – Technology Transfer

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