



No. 1

Research entity in
Italy in terms of No
of researchers



Around 8500
employees (70%
researchers)



Solid Gender Balance

52% Male
48% Female



330 Patent Family
50 company and
spin-off
51 bilateral
agreements with 37
countries



<https://www.cnr.it/en>



88 Research Institute
228 Branches and
Labs
7 Departments



Largest public
research institution
in Italy



only one under the
Research Ministry
performing
multidisciplinary
activities



- ☐ Biomedical sciences
- ☐ Chemistry and materials technology
- ☐ Earth and environment
- ☐ Engineering, ICT, energy and transportation
- ☐ Physics and matter
- ☐ Human sciences and cultural heritage
- ☐ Bio and agri-food



> 1 Billion Euro
Balance
37% from external IT







The Institute of Intelligent Industrial Technologies and Systems for Advanced Manufacturing

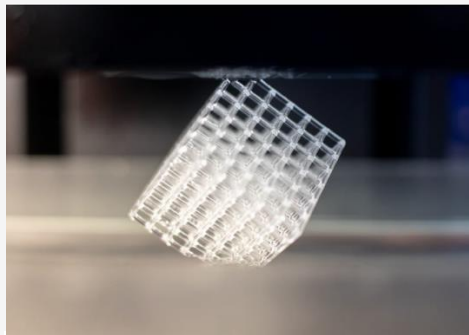
...deals with

- ☐ scientific research,
- ☐ development,
- ☐ technology transfer,
- ☐ Training,
- ☐ strategic road mapping

... to foster the innovation, competitiveness and sustainability of companies and to promote the central role of people in companies and society.



**Additive manufacturing
advanced control**



**Advanced Manufacturing
Tech & Systems**



**Advanced signals and
methods for biomedical
eng/proc**



Control Systems



De-Manufacturing



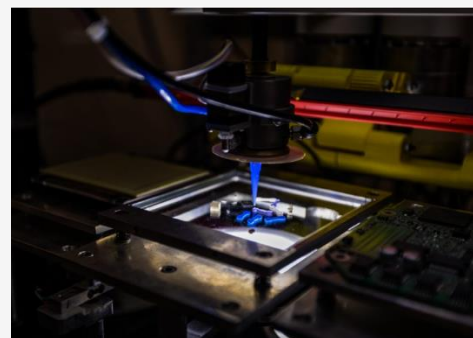
Intelligent Automation



**Intelligent industrial
Robotics for
Manufacturing**



Mechatronics



**Micro and
Personal Robots**

Milan



Physical Characterization



Polymer Matrix Composites



Virtual and Augmented Reality



**Mechatronic and
Prototype
Development**



**Micro EDM and
characterization**

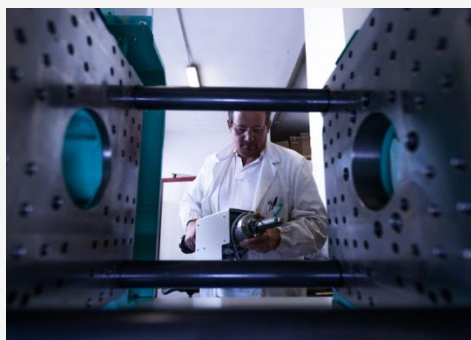


**Micro Injection
Moulding**

Bari



Mobile Robotics



**Precision Injection
Moulding**



**Sensing and
Imagingg**

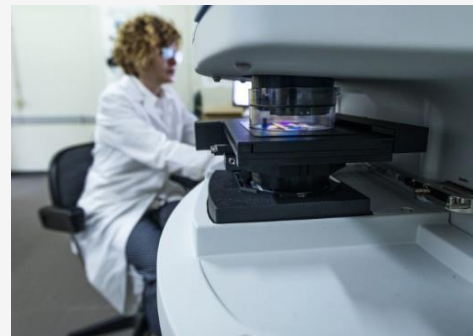
Biella



Biological



Chemical



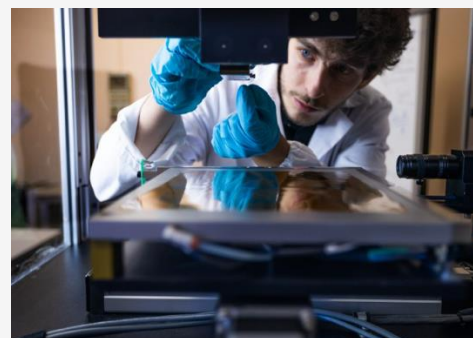
Electron Microscopy



**Physical Mechanical
Testing**



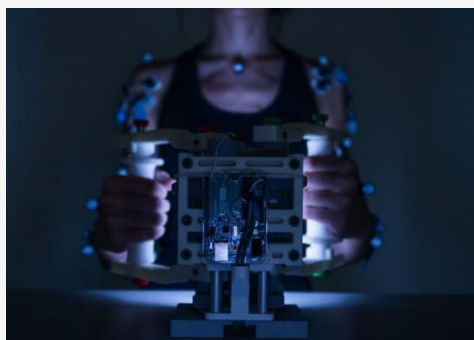
**Physical Mechanical
Testing**



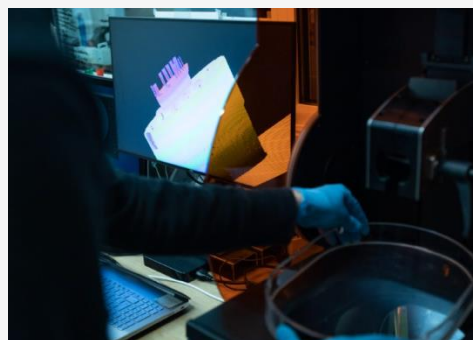
**Innovative sensors &
actuators for advanced
manufacturing**

Bologna

Lecco



**AAL, Robotic Rehab,
Motion analysis**



Additive Manufacturing



**Automation controls
for intelligent
Robotics**

Brescia

BUSINESS MODEL GROUP LEAD



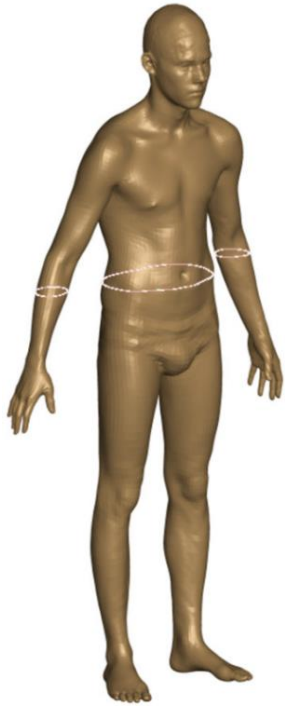
I am responsible of a Business Model group, where we bring to the market all solutions (in-house or through research & innovation action projects)

3 PROJECT IDEAS AS STIIMA-CNR

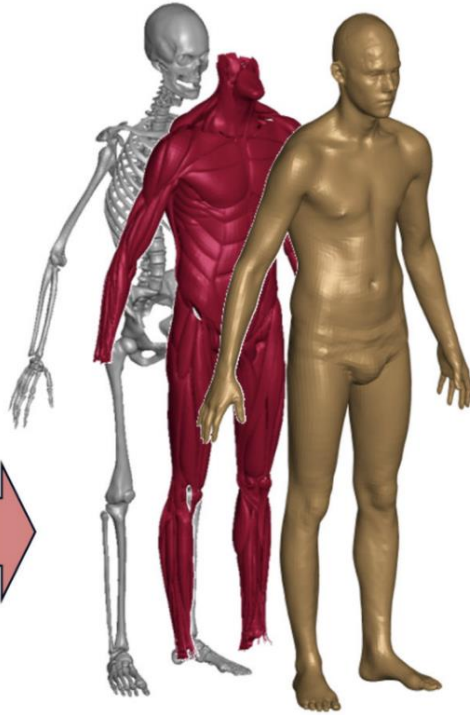
Circular Smart Textile for the citizens' health



*Individual body scan
and CRM management*



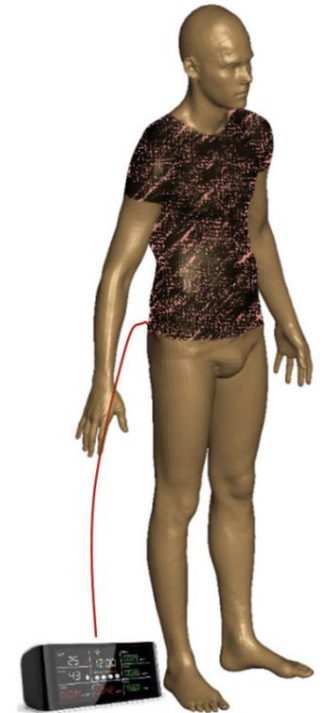
*Customized
anthropometry*



*Intelligent customized
problem definitions*

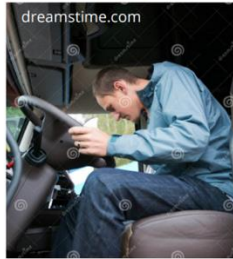


*Customized smart textile
solution*



3 Use Cases: Lower Back Pain Protection

truck driving



cycling



motorcycle driving



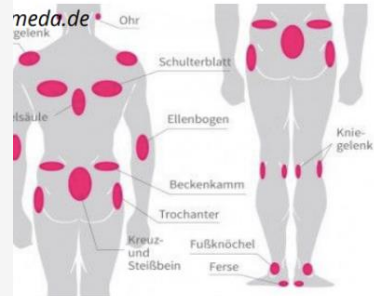
office work



school work



ursing
revention of bedsores



Hospital
Monitoring and prediction



Physiotherapy
Avoidance or support

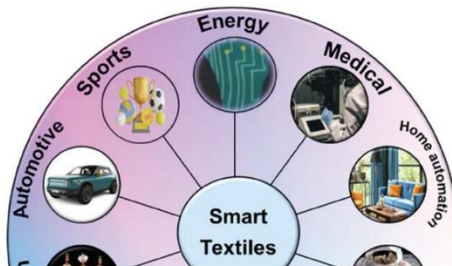


Special case Firefighter
Protection wear sensors



Optical Sensors respond to Physicochemical parameters → **Monitoring**
Oxygen, Temperature, Mechanical Deformations, pH.....

At the base of smart textiles are various types
of sensors integrated into fabrics



Imagine clothes that effortlessly gather essential data, warn about potential health risks, and give personalized advice, promoting a proactive approach to staying healthy (Tröster, G. 2005).



Interdisciplinary Approach and Partner Contributions:



Centexbel

RTA on 'Textiles' and 'Plastics'
Pilot platforms: extrusion –
textile intermediates – coating
& finishing



**Consiglio Nazionale
delle Ricerche**



Potential partner

D-House Pattern Group

End user manufacturer and
exploitation partner



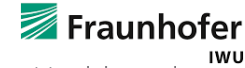
**UNIVERSITÀ
DEGLI STUDI
DI BERGAMO**



Data Security and
system integrator



End Of life
Electronics in Textile



Health and automotive
verticalization, with a focus on
implementing circular economy
strategies.



Smart textile hub GmbH

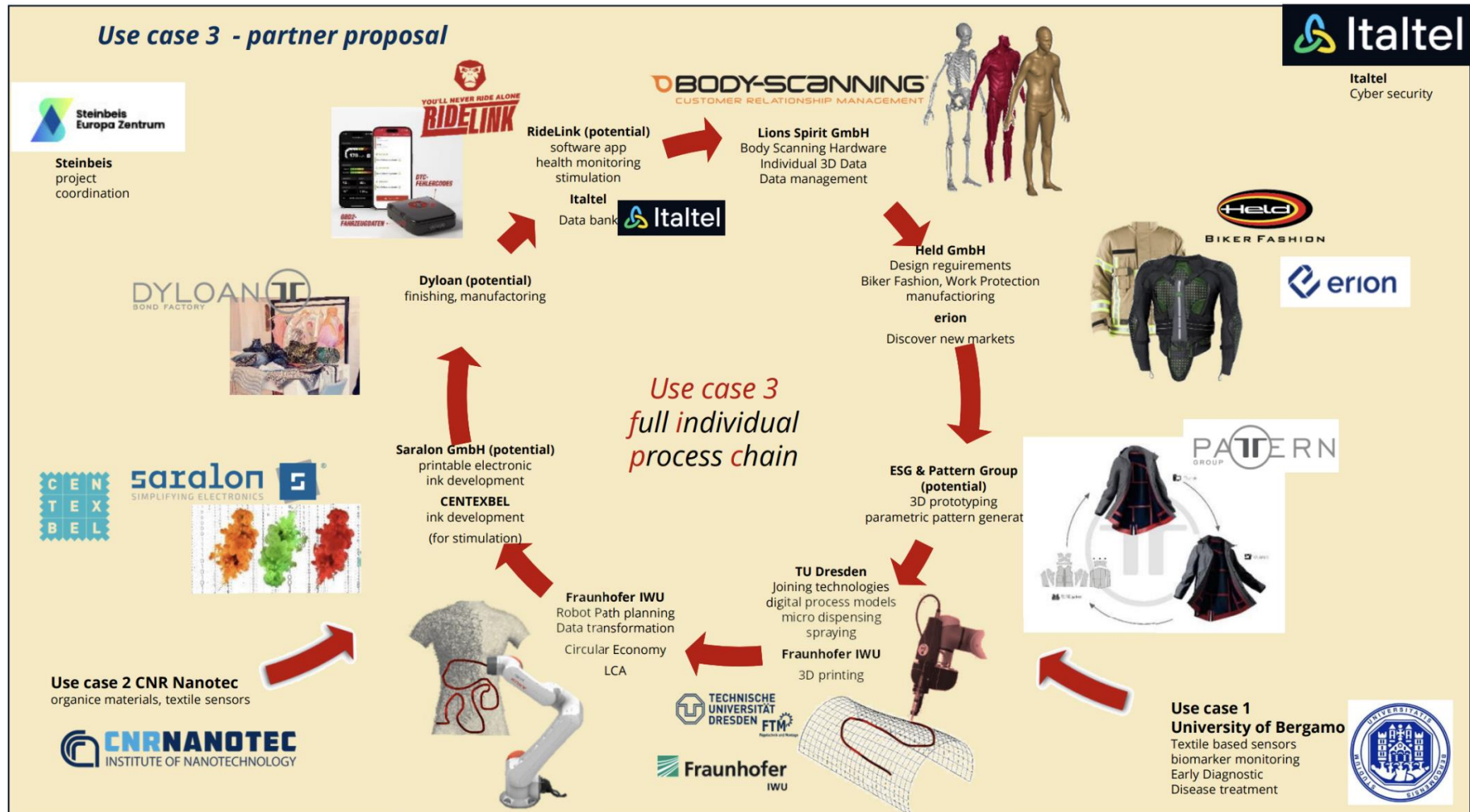
Currently produces smart textiles for
astronauts, attempting to extend the
applications to aged or ill citizen
segments.



Exploitation,
Communication,
Dissemination, Strategic
Partnership



Looking for partners in other European Countries at Textile or Automotive (circular) Value Chains Photonics Partnerships



HORIZON-CL4-2025-04-DIGITAL-EMERGING-01: Active sensor technologies and multimodal sensor integration for multiple application domains (IA) (Photonics Partnership)

Call: DIGITAL - HADEA	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of between EUR 4.00 and 6.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 25.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Technology Readiness Level</i>	Activities are expected to start at TRL 3-4 and achieve TRL 6-7 by the end of the project – see General Annex B.

HORIZON-CL6-2025-01-CIRCBIO-01: Novel circular business models to enable the just transition to a sustainable and circular economy

Call: Cluster 6 Call 01 - single stage	
Specific conditions	
<i>Expected EU contribution per project</i>	The Commission estimates that an EU contribution of around EUR 5.00 million would allow these outcomes to be addressed appropriately. Nonetheless, this does not preclude submission and selection of a proposal requesting different amounts.
<i>Indicative budget</i>	The total indicative budget for the topic is EUR 10.00 million.
<i>Type of Action</i>	Innovation Actions
<i>Technology Readiness Level</i>	Activities are expected to achieve TRL 6-8 by the end of the project – see General Annex B. Activities may start at any TRL.



HORIZON-CL5-2026-01-D6-13: Safety of Cyclists, Pedestrians and Users of Micromobility Devices call



Real Time Open Data platform:

- To promote the conscious use of bicycles as a daily means of travel
- To support the neighbourhood economy through a system of mobility vouchers to be spent in local stores
- To provide administrations with advanced digital tools to monitor and plan urban mobility through certified real data.

04



Rehabilia

Technologies
CNR Spin off

***Playstation for
rehabilitation***



Who we are ?



01

Based in Italy
Spin-off of Italian National Research Council
R&D since 2020
Founded in 2023

02

Researchers & Engineers became Entrepreneurs
4 Executive Members incl. 3 Founders
7 Operational Creativity Team
6 Advisory Board Members

03

Validation through MVP testing (2021), in-clinic demos (2022), clinical pilot tests (since 2023), Multicentric clinical studies (2025)

04

3 Prize Awards and Achievements during R&D
4 Finalist Awards since Founding

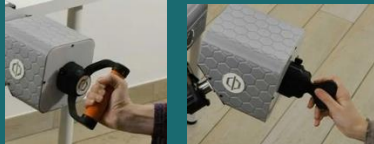
What is our PhiCube product for patients/therapists?



Neuromotor recovery



Bilateral upper-limb
training



Cognitive training



All in a single
package

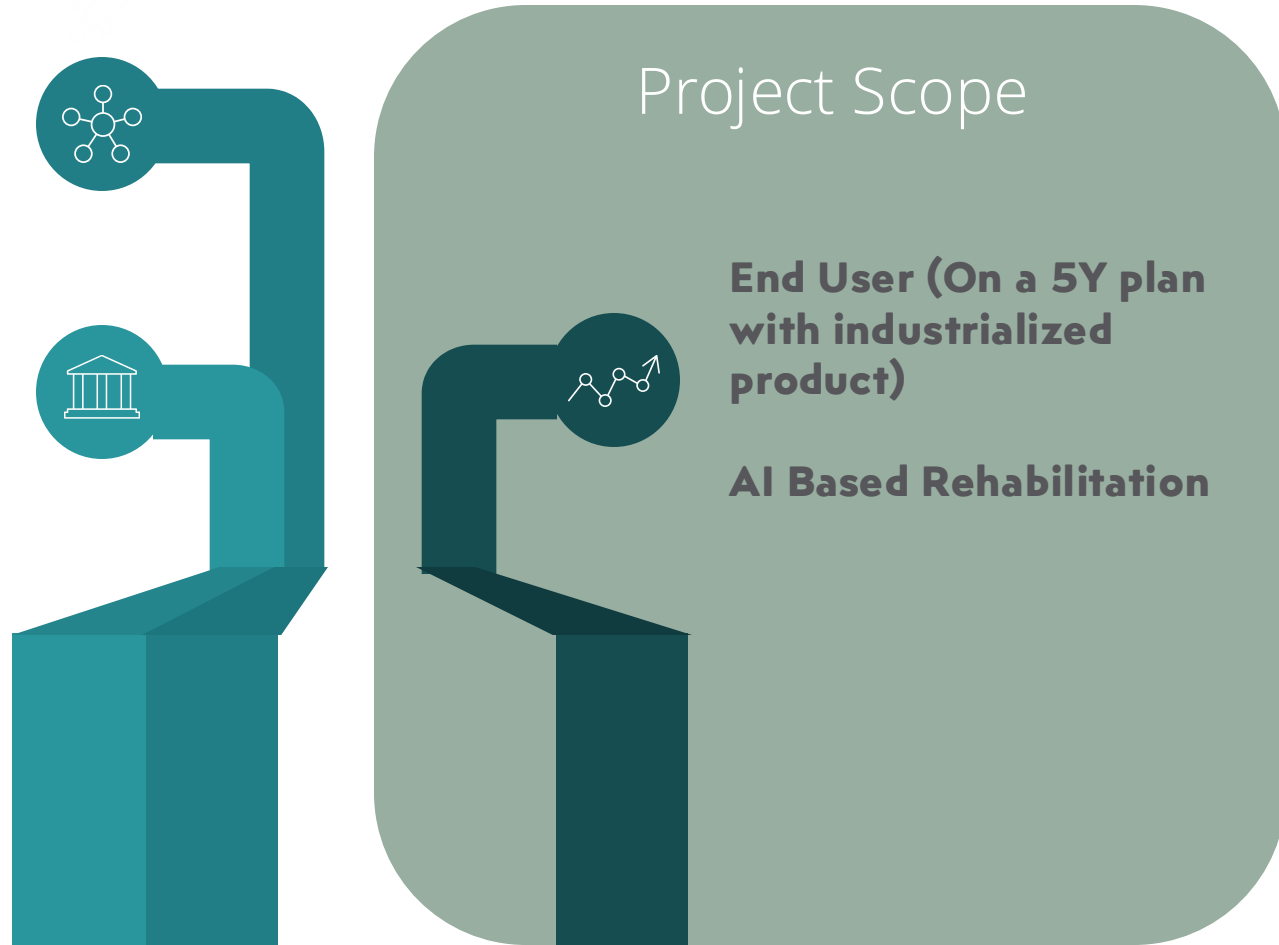


Offering per Client Segment

**Medical Centers or
Associations or NGOs**

Medical

Lifestyle



PhiCube: an Internationally Acclaimed Innovation



Premio 2031

€30,000 prize.

(2022)



InnovUp SUB2022

Special Award

(2022)



StartCup Lombardia

€25,000 Social Impact Award

(2022)



Medica 2022

Among the Top 5% worldwide Medical Start-ups

(2022)



LBG Innovator's Road Program

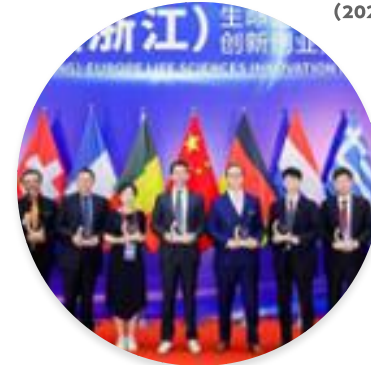
(2023)



EIT Health Wild Card

Top 7 most promising European pediatric innovations.

(2023)



China (Zhejiang)-Europe Life Sciences Innovation Fair

Second prize of €2,500.

(2023)

Executive Team incl. founders



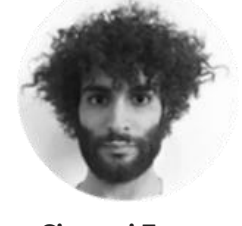
Matteo Malosio
CEO & Co-founder



Sarah Behnam
CBO



Matteo Lavit Nicora
CTO & Co-founder



Giovanni Tauro
CPO & Co-founder

Creativity Team



Reyhaneh Mohammadi
Interaction designer



Maryam Roozbehi
Service designer



Marzieh Khoramabadi
Service designer



Dennis Rolla
Digital Marketing Associate



Anna Brizzolara
Digital Marketing Associate



Ali Maamoun
Marketing Strategist

Advisory Board



Francesca Fedeli
Key Opinion Leader
Advisor
Co-Founder and
President of the
Fight The Stroke
Foundation, Italy



Marco Lodi Pasini
Clinical Advisor
Ex-Vice-president of the
Italian Ass. of
Occupational Therapists,
Italy



Giuseppina Sgandurra
Medical Advisor
Pediatric neuropsychiatrist
and head of Stella Maris
InnovateLab, Italy



Gianluca Sferrazza
Medical Advisor
Pediatric neuropsychiatrist
and head of Stella Maris
InnovateLab, Italy



Elena Beani
Clinical Advisor
Neuro and Psicomotor
therapist and researcher at
Stella Maris, Italy



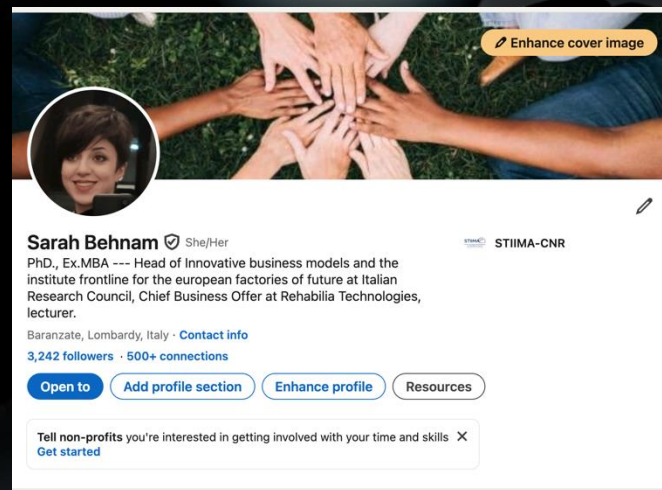
Werner Wutscher
Business Advisor
Business Angel and founder
of New Venture Scouting,
Austria

Thank you!

Sarah Behnam



<https://www.linkedin.com/in/sarah-behnam-5658955b/>



Let's connect and Exploit Novel Ideas together!

Sarah.Behnam@stiima.cnr.it