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Ministero
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Italiadomani
PIANO NAZIONALE
DI RIPRESA E RESILIENZA

SUS-MIRRI.IT



THE ITALIAN NETWORK OF MICROBIAL CULTURE
COLLECTIONS: AN OVERVIEW ON MANAGEMENT AND
SUSTAINABILITY OF THE FUTURE RESEARCH
INFRASTRUCTURE MIRRI-IT

Marino Moretti



20 September 2024

Missione 4: Istruzione e ricerca

ITALIAN MICROBIAL CULTURE COLLECTIONS (mCCs)



Joint Research Unit (JRU) MIRRI-IT (from 2017)

- ▶ Improving Quality Management System of mCCs
- ▶ Addressing needs of stakeholders operating in the biotechnology transfer

SUS-MIRRI.IT partners (from 2022)

- ▶ Empowering facilities of Italian mCCs with cutting-edge technologies
- ▶ Implementing the offer of services
- ▶ Addressing weaknesses of Italian mCCs to reach MIRRI-ERIC standards

CREATION OF THE MIRRI-ERIC ITALIAN NATIONAL NODE

MIRRI-IT

Harmonisation of the service offer

proposed by Italian mCCs in accordance with international rules (Nagoya Protocol, Intellectual property rights, Privacy, Biosecurity, etc)

Supporting entry of new partners

Activity coordination of Italian mCCs
after Partner Charter signature



Poster S8.9 WP2

Overcoming fragmentation in the availability of resources, skills, and services of Italian mCCs by improving QMS, complementarity, reducing redundancy, and operating via a single access point

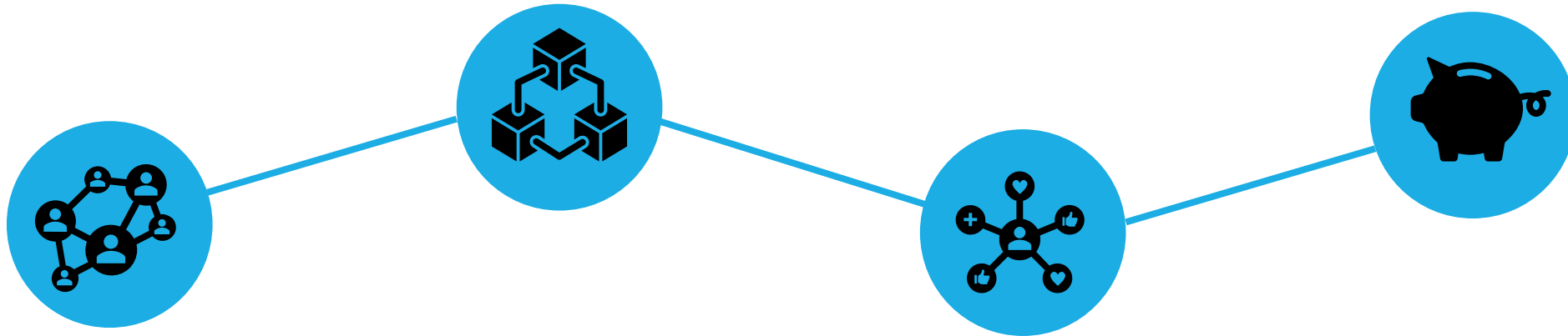
Providing high-specialised Training and professional growth initiatives

CREATION OF THE MIRRI-ERIC ITALIAN NATIONAL NODE

MIRRI-IT

Activation of working groups on "microbiological" topics and issues involving different stakeholders (SMEs, Research Institutes, freelancers, local authorities, civil society, etc)

Proposing a strategic policy for the future sustainability of Italian mCCs



Creation of synergies and collaborations between mCCs and policy makers (Government, Ministries, and territorial bodies), public Institutions (Hospitals, National Parks, etc), Research centres, other Italian and European RIs

Expanding communication activities of Italian mCCs to groups of interested users (citizens, schools, scientific community, industrial community, policy makers, etc) through website, social media and newsletters

OFFER OF SERVICES

MIRRI-IT

for
Scientific
operators

Single access point

Extensive catalogue of certified microbial resources and metadata (many of them are exclusively available from Italian collections)

Innovative research facilities and cutting-edge technological platforms for different types of microbial analyses

Excellent technical-scientific consultancy

Advanced training courses

for
Italian mCCs

Management optimization (software, bioinformatic workflows and pipelines, catalogue)

Increased visibility on the national and international scene

Increased profitability and therefore **future sustainability**

Promotion of **partnerships** with different stakeholders

QMS, IT, ELSI, Training support

for
EU members
of
MIRRI-ERIC

Synergies/collaborations (aggregation of skills and resources)

Scientific and technological development (exchange of knowledge)

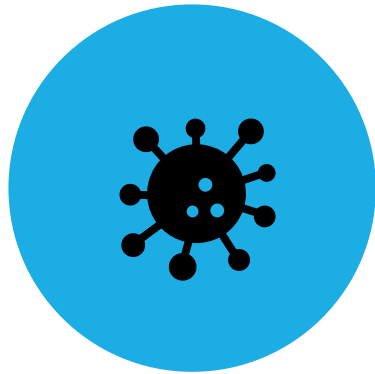
Competitiveness of European products and services

Support in **community political decisions** in the agri-food, environmental, and health fields

Promotion of **eco-sustainable industrial processes** (innovative, safe and environmentally friendly European bioeconomy)

STRENGTHS OF THE ITALIAN NATIONAL NODE

MIRRI-IT



AVAILABILITY OF SPECIFIC STRAINS
NOT PRESENT ELSEWHERE
(E.G. PLANT VIRUSES)
Hopefully soon: MICROBIAL
CONSORTIA



LONG-ESTABLISHED KNOWLEDGE,
EXPERTISE AND SKILLS IN SPECIFIC
SECTORS (E.G. BIO-RESTORATION OF
CULTURAL HERITAGE, PLANT VIROLOGY,
BIOINFORMATICS, VETERINARY
RESEARCH)



ALREADY 7 YS OF
COOPERATION AND
NETWORKING IN JRU MIRRI-IT

IMPACT OF THE ITALIAN NATIONAL NODE

MIRRI-IT

Economic value



CATALOGUE OF >100.000
PRECIOUS MICROBIAL RESOURCES
AND ASSOCIATED METADATA
(AVAILABLE TO DATE: 37.000)

New products and processes for
bioeconomy, Green transition,
R&I in academia and industry
engagement

Knowledge value



SCIENTIFIC COMPETENCE IN MICROBIAL
CHARACTERISATION, CONSERVATION,
CULTUROMICS, TAXONOMY,
BIOINFORMATICS

Support for policy makers, government
agencies, public Institutions, local
authorities...

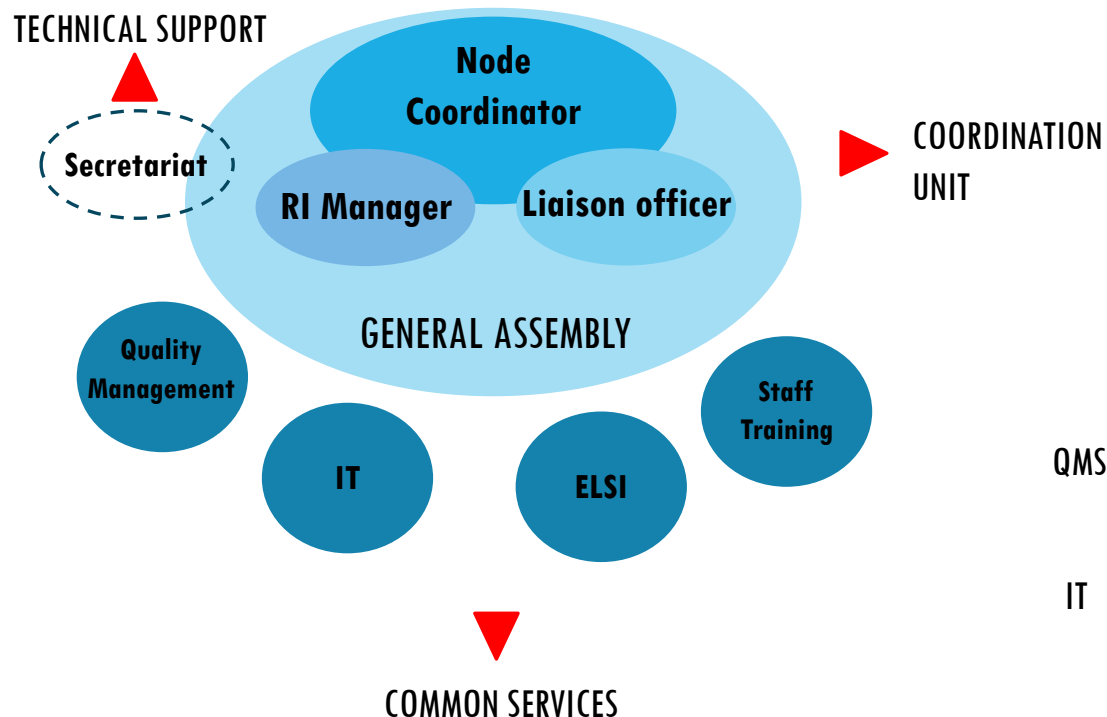
Development value



BIOTECHNOLOGICAL TRANSFER
APPLICATION IN HEALTH, FOOD,
AGRICULTURE, ENVIRONMENT,
ENERGY FIELDS

Renovable energy sources, Potential to
face big challenges of nowadays (e.g.
climate change, pollution, planet
sustainability) and reach UN SDGs

POSSIBLE GOVERNANCE STRUCTURE OF MIRRI-IT



MAIN FUNCTIONS:

- ESTABLISHING THE RULES GOVERNING THE MANAGEMENT AND DIRECTION OF MIRRI-IT (ORGANISATIONAL, FINANCIAL, AND MARKETING ASPECTS)
- COORDINATING THE OPERATIONAL ACTIVITIES OF THE NATIONAL NODE
- APPOINTING THE ADVISORY COMMITTEES OF COMMON SERVICES
- APPROVING THE OPERATIONAL PROGRAM (WORK PLAN)
- DESIGNING THE LONG-TERM SUSTAINABILITY STRATEGY

QMS

- HARMONISE SOPs AMONG PARTNERS
- SUPPORTING ACQUISITION OF CERTIFICATIONS AND ENTRY IN MIRRI-ERIC RI

IT

- MAINTAINING INTEGRATED DATABASE OF mCCs
- MANAGING IT SERVICES
- HELP DESK

ELSI

- LEGAL ISSUES SUPPORT (MTA, MDA, Nagoya Protocol, Informed consent, Privacy, Intellectual property, etc)

Staff Training

- ORGANISATION TRAINING COURSES FOR INTERNAL STAFF
- SUPPORT FOR STAFF PROFESSIONAL GROWTH

PRELIMINARY MARKET ANALYSIS OF STAKEHOLDERS

DATA HAVE BEEN COLLECTED BY SUS-MIRRI.IT WP5 (SERVICES & EDUCATION)

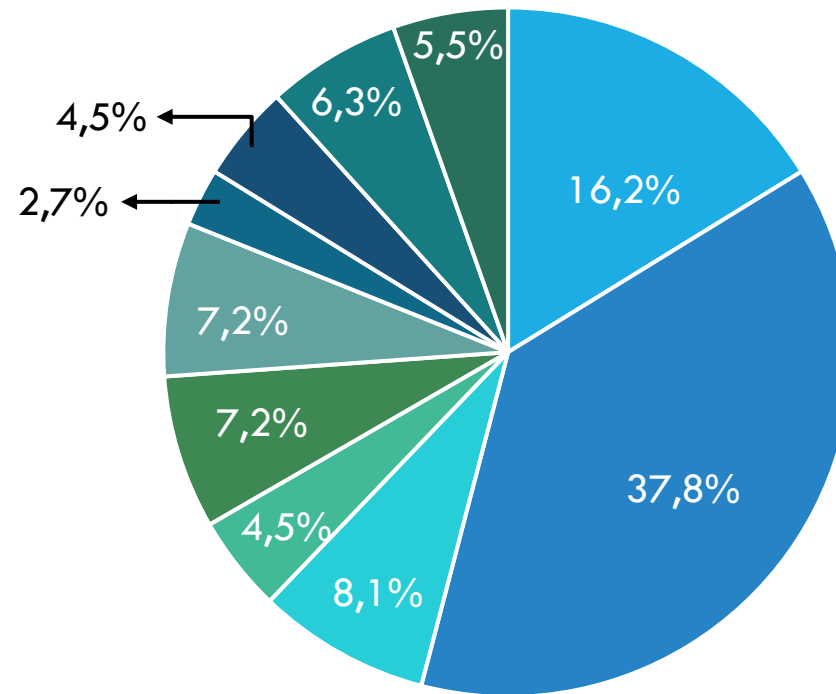
SURVEY

about 600
companies
cooperatives
consortia

20% REPLIES

84% SMEs

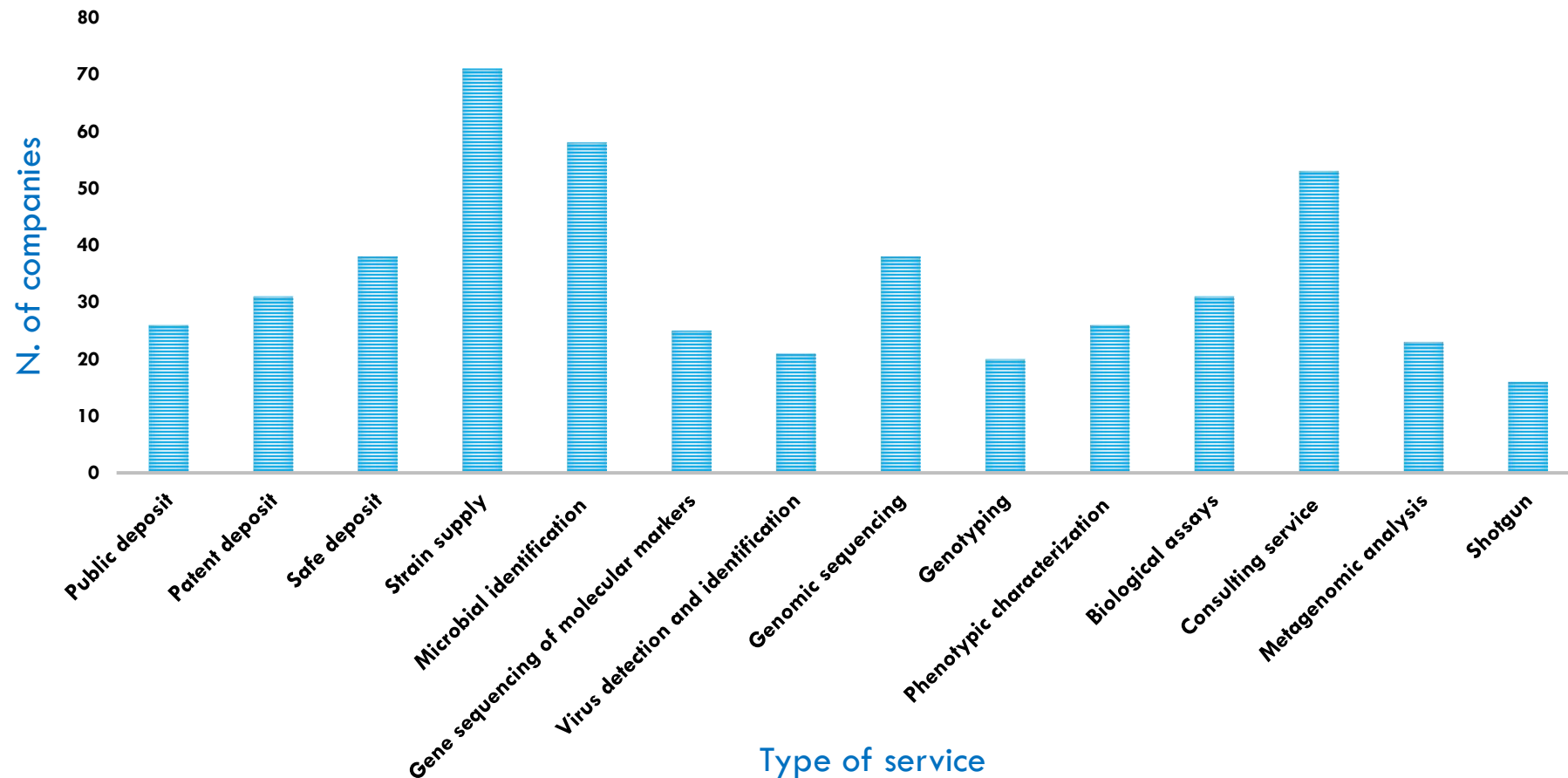
16% BIG COMPANIES



■ Agriculture ■ Food production ■ Environment ■ Analytics ■ Biotechnology
■ Chemistry ■ Cosmetics ■ Farmaceutics ■ Applied research ■ Others*

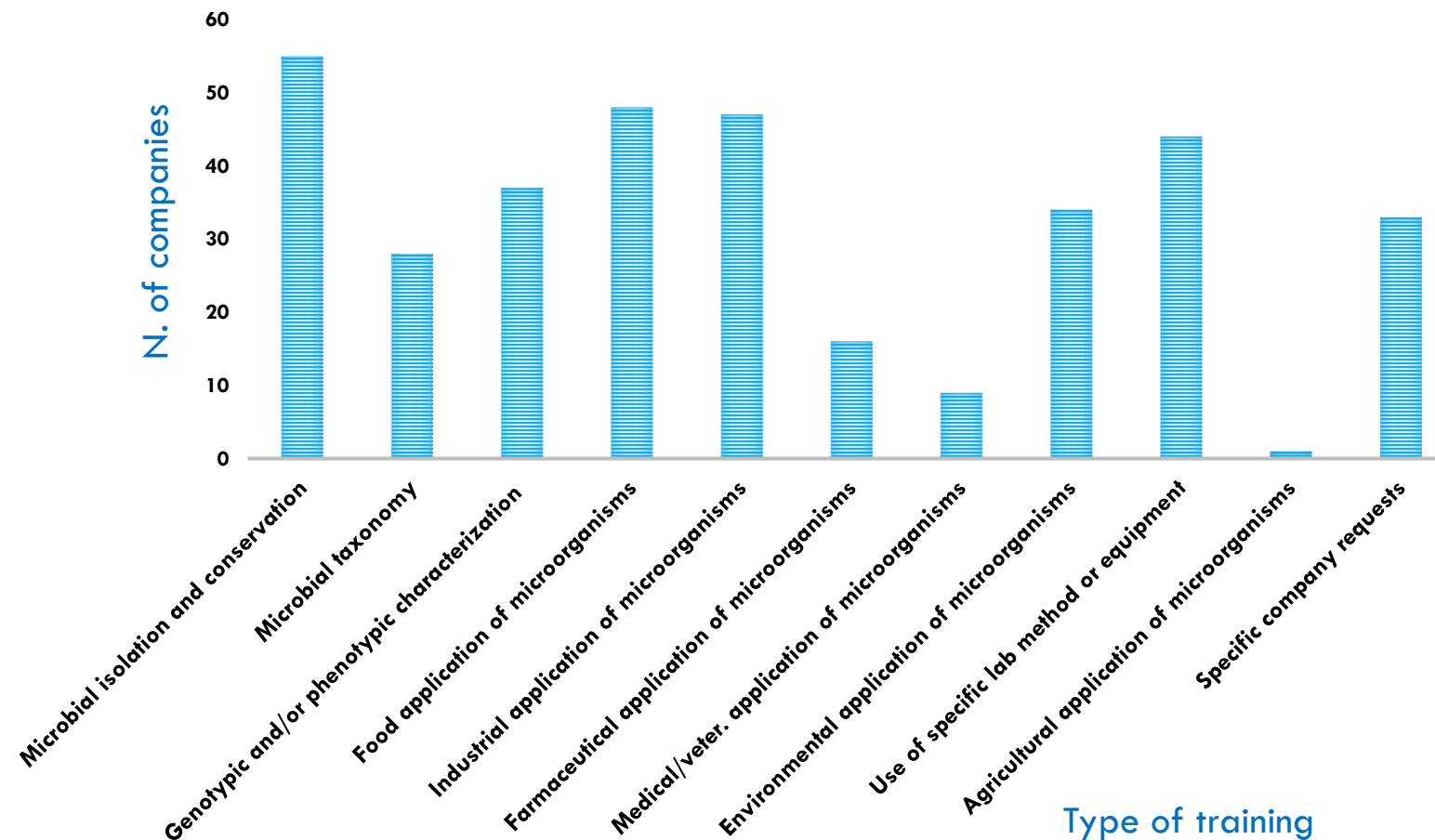
PRELIMINARY MARKET ANALYSIS OF STAKEHOLDERS

FUTURE SERVICES OF INTEREST (TAILORED ENGAGEMENT)



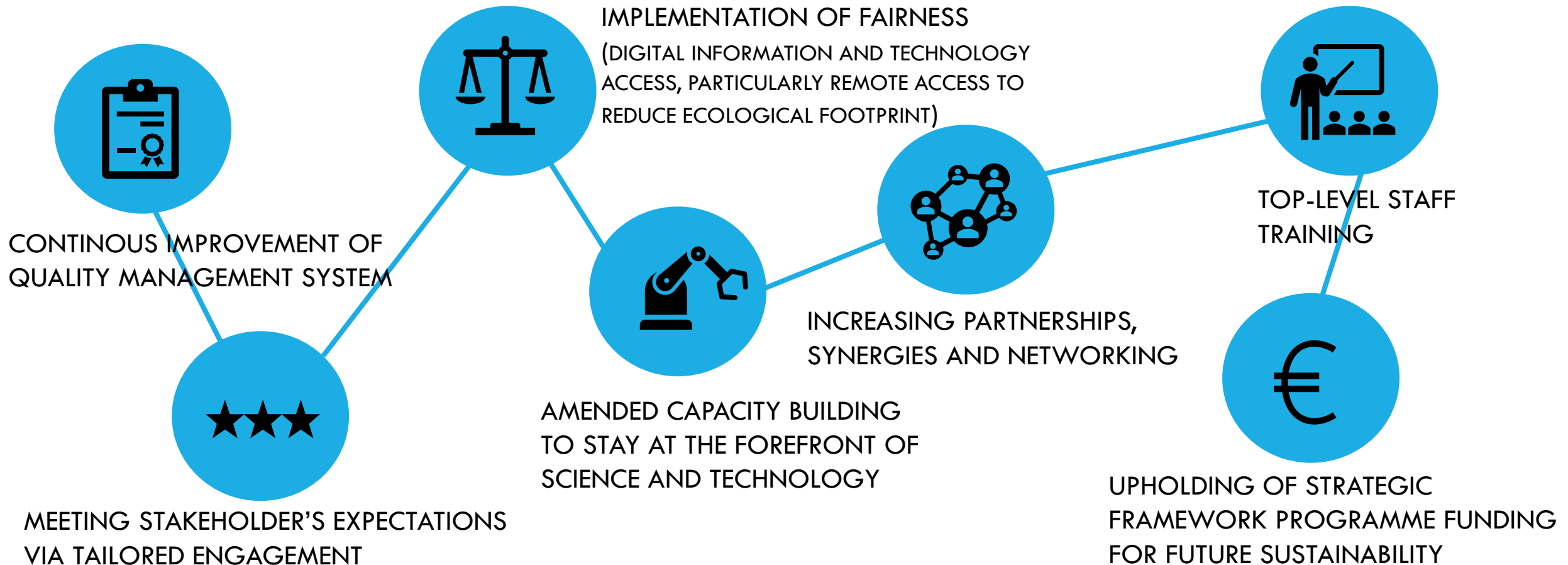
PRELIMINARY MARKET ANALYSIS OF STAKEHOLDERS

FUTURE TRAININGS OF INTEREST (TAILORED ENGAGEMENT)



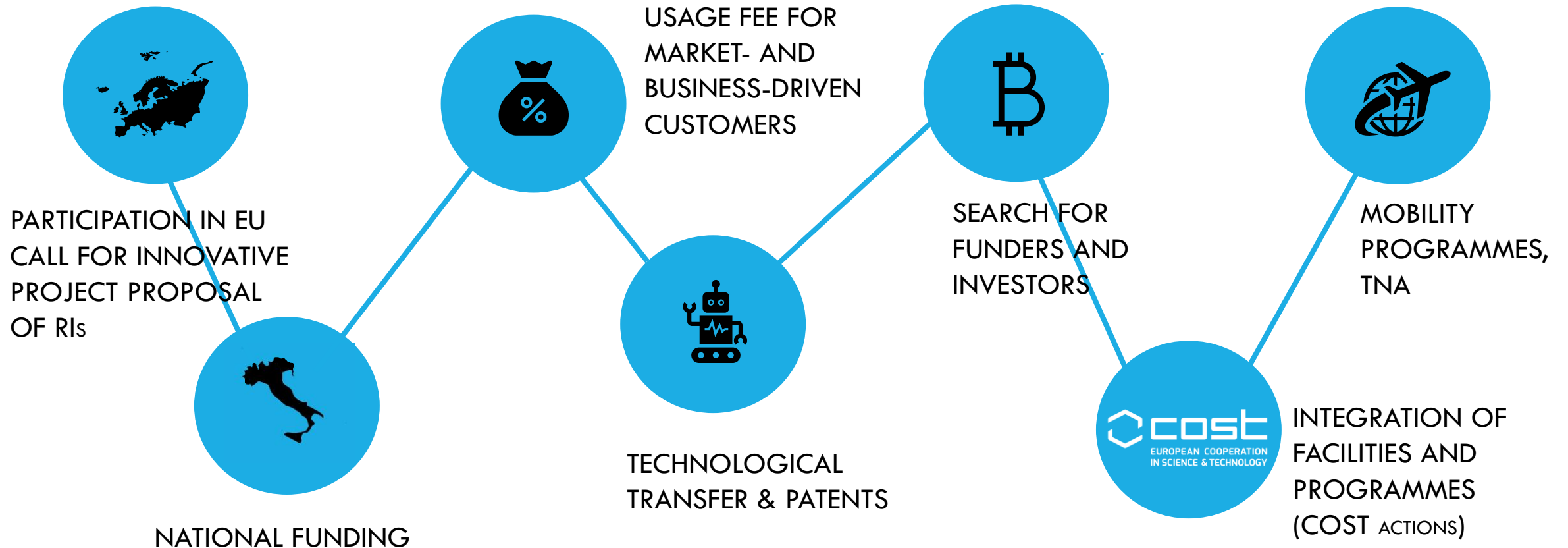
CHALLENGES

MIRRI-IT: ITALIAN NATIONAL NODE OF MIRRI-ERIC RI



FUTURE SUSTAINABILITY

MIRRI-IT: ITALIAN NATIONAL NODE OF MIRRI-ERIC RI



SUS-MIRRI.IT TNA & NOA



MIRRI-IT: ITALIAN NATIONAL NODE OF MIRRI-ERIC RI

STAY TUNED

TRANS NATIONAL ACCESS

NATIONAL OPEN ACCESS

1° CALL
OPENING SOON

[HTTPS://WWW.SUS-MIRRI.IT/](https://www.sus-mirri.it/)



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ACKNOWLEDGEMENTS



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SUS-MIRRI.IT PARTNERS



MIRRI

MICROBIAL
RESOURCE
RESEARCH
INFRASTRUCTURE

MIRRI-ERIC TEAM



UNIVERSITÀ
DI TORINO

UNITO COLLEAGUES