

Make the Emilia-Romagna Region INNOVATIVE AND COMPETITIVE, INCLUSIVE AND SUSTAINABLE, CREATIVE AND OPEN

by promoting innovation for development

of the territory and its businesses,
enhancing its excellent research resources,
the qualified employment of its talents,
and the well-being of people





Factsheets

EMILIA-ROMAGNA REGION









Area: 22.452,78 sq. km



Population: 4.454.393



GDP: 144.515 M€





GDP per capita: 32.487 €



Unemployment rate: 7,7% (Italy 12,3% - EU18 10,9%)



A VIBRANT PRODUCTIVE SYSTEM WITH WORLDWIDE EXCELLENCES

Enterprises: 424.000

Manufacturing enterprises: 50.000





















RENOWNED COMPANIES

Amadori, Barilla, Carpigiani, Conserve Italia, Parmigiano Reggiano, Prosciutto di Parma, Dallara, Datalogic, Ducati, Ferrari, Ferrarini, IMA, Maserati, MaxMara, Pollini, Sacmi, Technogym, Tetra Pak, etc



Emilia-Romagna ranks 2nd in Italy





BIG DATA COMMUNITY



1791

RESEARCHERS INVOLVED



230

FOREIGN RESEARCHERS HOSTED



94

INTERNATIONAL EVENTS



60

HIGHER EDUCATION INITIATIVES INCLUDING

PhD courses

Laurea magistrale

Master

Summer schools



GARR-X

Figures

RESEARCH NETWORK

Up to 100 gbps

Capacity 4 point of presences (pop)

LEPIDA

Connectivity infrastructures

THE EMILIA-ROMAGNA REGIONAL NETWORK OF THE PUBLIC ADMINISTRATIONS

Towards **100 gbps** capacity

More than 140,000 km optical fibers and 2,500 access nodes

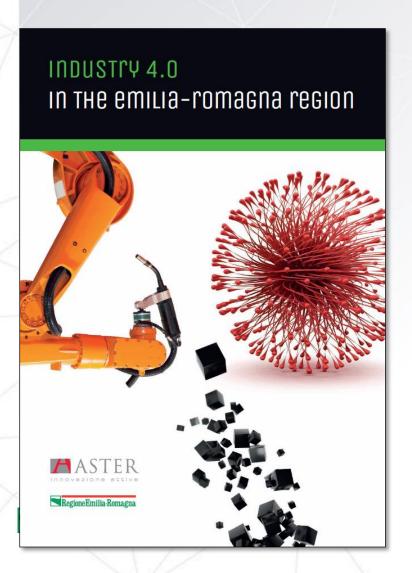
42 Pop nodes + 4 integrated regional data centers

Current coverage of fast internet availability in emiliaromagna: **40% of households**





AN ANALYSIS OF INDUSTRY 4.0 ASSETS IN THE REGION



- Education and training
- Skills supporting innovation
- Infrastructures
- Project development skills
- Market oriented activities (patents and spin-offs)
- Synergies and vision for Emilia-Romagna smart specialization strategy



https://www.aster.it/en/pubblicazioni



EDUCATION



University students



PRIMARY SCHOOL

Worldwide leader in childcare

(Reggio Children - www.reggiochildren.it) Important presence of PCs, interactive whiteboards and Internet connections in schools

POLYTECHNIC NETWORK SYSTEM

7 institutes of high technology 100 secondary-level technical training programs 130 million dollars per year for the Regional Training System

UNIVERSITY&RESEARCH

6 Universities, 1 School of Advanced International Studies (Johns Hopkins University),

1 Motorvehicle University of Emilia-Romagna (MUNER)

4,500 professors and researchers

830 courses of study from bachelor degrees to doctorates

66 courses of study granting double/triple degrees

8 National Public Research Centers



EMILIA-ROMAGNA RESEARCH INFRASTRUCTURE

Main Research Centers highly specialised

CNR - National Research Council (16 institutions)

ENEA - Italian National agency for new technologies, Energy and sustainable economic development (4 centers)

INFM - National Institute for Material Physics

IASF – Italian national institute for astrophysics

INGV – National Institute of Geophysics and Volcanology

CINECA - the largest Italian computing centre

IOR - Orthopedic Institute Rizzoli

CNIT - the National Inter-University Consortium for Telecommunications

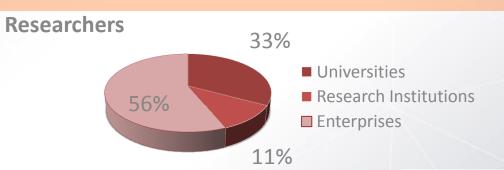
SSICA - Preserves' Experimental Centre in Parma

CMR - Regenerative Medicine Center "Stefano Ferrari"

Full time

Researchers/Scientists:

23,100







RESEARCH AND DEVELOPMENT INDICATORS 1

SPESA R&S TOTALE



in percentuale del Pil | 2014 | Noi-Italia Istat

SPESA IMPRESE R&S



in percentuale del Pil | 2014 | Noi-Italia Istat

INTENSITÀ BREVETTUALE



Brevetti registrati presso EPO per milione di abitanti 2012 | Noi-Italia Istat

OCCUPATI MANIFATTURA HI-TECH



in percentuale sul totale degli addetti | 2016 | Eurostat

OCCUPATI SERVIZI ALTA CONOSCENZA



In percentuale sul totale degli addetti | 2016 | Eurostat

BANDA LARGA NELLE IMPRESE



in percentuale sul totale delle imprese 2016 | Noi-Italia Istat



RESEARCH AND DEVELOPMENT INDICATORS 2

ADDETTI R&S



Per 1.000 abitanti | 2014 | Noi-Italia Istat

ISTRUZIONE TERZIARIA



In percentuale sulla popolazione nella stessa classe di età 2016 | Noi-Italia Istat

LAUREATI SCIENZA E TECNOLOGIA



per 1.000 residenti in età 20-29 anni | 2014 | Noi-Italia Istat

ATTRATTIVITÀ UNIVERSITÀ

Regione Emilia Romagna - 1° posto per indice di attrattività del sistema universitario (25,1%)





Per aggiornamento dati vedi https://www.aster.it/indicatori/indicatori-ricerca





15 years of industrial policies that support innovation

EMILIA-ROMAGNA INDUSTRIAL POLICY





EMILIA-ROMAGNA INDUSTRIAL POLICY

2001

2002

2003

2004-2008

- In Italy the responsibility for R&I moves to regional level
- MoU between Regional Government, Universities, Research Organizations, Entrepreneurial Associations for a "Towards regional system of R&I"
- First regional law for applied research and innovation in Italy
- ASTER Consortium:
 - → 6 Universities in ER
 - →3 National research centres
 - → Entepreneurial Associations

- Regional Programme for Industrial Research, Innovation and Technology Transfer
- Collaborative projects promoted by universities/research organizations with companies



Improving the capacity of industrial system (SMEs) to invest in R&D&I

Building a network of competence centres, organizing the "offer" of research and innovation of the public system





EMILIA-ROMAGNA INDUSTRIAL POLICY

ERDF 2007-2013

ERDF 2014-2020

2009

2012-2013

2014-2016

2017

- 3-years research programme
 →35 labs promoted by universities and public research organizations
- enlargement of HTN to private labs and other research organisation

82 Industrial Research labs

14 Innovation Centres

- Regional S3 developed and approved by the EC
- 54 strategic industrial research projects selected with a competitive call for proposals
- Improve focus on S3 priorities
- CLUST-ERs
 Associations based on
 S3, putting together
 - Enterprises
 - HTN Labs
 - training bodies





RETE ALTA TECNOLOGIA E MILIA - ROMAGNA HIGH TECHNOLOGY NETWORK



700 full time Researchers
2.400 other Researchers

2.900+ contracts195+ M€49% enterprisesdirect funding

Monitoring dashboard (2009-2016)



Impact on regional priorities

Increased involvement of companies

Focus on "demand", no more on "offer"

Regional Policy – FOCUS on

SMART SPECIALIZATION STRATEGY





EMILIA-ROMAGNA S3 VISION

Vertical objectives

- Reinforce the industrial systems strategic for regional specialization
- Reinforce the industrial systems with high growth and social inclusion potential

Horizontal drivers

- Drivers concerning socio-economic trends and changing
- Service Innovation





Pillars of the regional economy

(% of the total number of employees)



16,7% AGRI-FOOD



18,8% BUILDING AND CONSTRUCTION



18,2% MECHATRONICS AND TRANSPORT



Over 1 million EMPLOYEES, more than 50% of regional employment



80% OF REGIONAL EXPORT

Emerging areas with high growth potential (% of the total number of employees)



8,9%

HEALTH AND WELL-BEING INDUSTRIES



6.9%

CULTURAL AND CREATIVE INDUSTRIES



Over 300,000 EMPLOYEES, more than 15% of regional employment





SUPPORT TO INTERNATIONALIZATION





MAIN ACTIONS

"OUTGOING": regional measures to support internationalization of SMES

"INCOMING": regional agreements for the settlement and development of enterprises





THE MEASURES FOR SMES

- Promotion of the regional economic system
 - Clustered promotional projects
 - Promotion of international fairs
 - Promotion and networking of R&D organisations
- Subsidies to SMEs
 - Support to selected projects of internationalisation realised by SMEs
- National or inter-regional projects
 - 2017: Expo' Astana (Khazkistan)





RESULTS - 2016

	N. Projects approved	Total subsidies € Milions	Total investment € Milions
Clustered projects	24	1,37	3,6
Projects for SMEs' partic. to fairs	257	6,4	21,7
New exporting SMEs	164	10,3	20,6
Export consortia	17	2,0	4,0
Promotion of ER fairs	18	0,91	1,9





ATTRACTIVENESS

- Based on: Regional Law for the Promotion of Investments in Emilia-Romagna n.14/2014
- Support the development of Regional
 Agreements for Settlement and Development of Enterprises
- Two calls: 2016 and 2017





TOTAL AMOUNT TO BE FINANCED TOTAL AMOUNT COMPANY PROVINCE INCENTIVES ADDITIONAL JOBS TIMING OF INVESTMENT (ELEGIBLE EXPENDITURE) A) INVESTMENTS WITH AT LEAST 150 ADDITIONAL EMPLOYEES AUTOMOBILI 150 (110 BOLOGNA 298,594,786 23,634,953 8,180,554 31/12/2019 LAMBORGHINI GRADUATES) YOOX NET-A-PORTER 205 (180 BOLOGNA 30,016,250 30,016,250 4,000,000 21/12/2018 GROUP GRADUATES) 260 (90 BOLOGNA 22,500,000 5,934,388 2.295,928 30/04/2020 TEKO TELECOM GRADUATES) B) INVESTMENT PROGRAMME WITH A HIGH STRATEGIC VALUE (> 50 persons of which graduates > 40%) DUCATI MOTOR 62 (38 BOLOGNA 29,191,000 15,424,336 4,587,499 31/12/2019 HOLDING GRADUATES) 52 (43 REGGIO EMILIA 10,524,689 9,455,761 30/04/2020 AVL ITALIA 3,283,144 GRADUATES) 50 (20 MODENA 9,342,000 3,608,658 1,517,406 09/01/2020 B.BRAUN AVITUM ITALY GRADUATES) 60 (30 REGGIO EMILIA 10.072.000 2,785,500 **ELETTRIC 80** 1,227,906 30/04/2020 GRADUATES) C) CREATION OF R&D CENTRES (at least 20 employees, all graduates) 20 (ALL BOLOGNA 31/12/2019 IMA 8,061,815 8,061,815 3.548.408 GRADUATES) 21 (ALL HPE MODENA 9,668,000 8,039,593 3,509,154 31/12/2019 GRADUATES) 20 (ALL MODENA 5.064,302 5.064.302 2,383,839 08/01/2020 **ECOR RESEARCH** GRADUATES) 25 (20 IRST IRCCS FORLI'-CESENA 4.150.000 3,000,000 1,500,000 31/12/2019 GRADUATES) D) REDIRECTION OF PRODUCTION (100 employees involved and 10% of additional employees) 22 (8 GRADUATES) PARMA 79,385,730 8,105,369 3,322,662 30/08/2020 SECI + 78 FOX (di Renzo Bompani 20 (5 GRADUATES) FERRARA 5,275,000 3,062,245 1,540,140 30/12/2019 + 159 e C.) 1.204 (605 GRADUATES: **TOTAL: 13 COMPANIES** 521.845.573 126, 193, 172 40.897.639 more than 300 new researchers)

2016 RESULTS

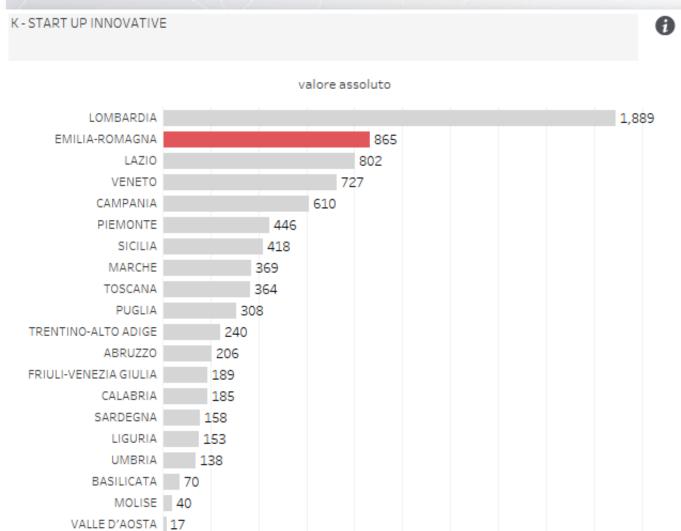


STARTUP ECOSYSTEM IN EMILIA-ROMAGNA



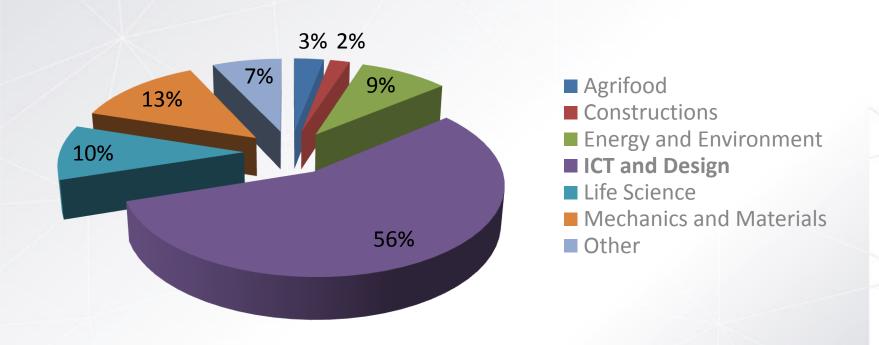


2° IN ITALY





STARTUPS PER INDUSTRIAL SECTOR







ECOSYSTEM ACTORS







Where everything happens

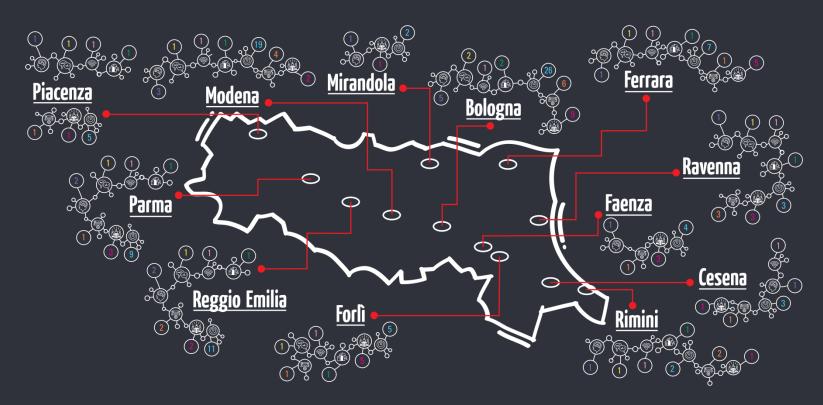
INNOVATION PLACES





Innovation&Education

Networks to multiply Skills and Opportunities





HIGH TECHNOLOGY NETWORK

82 Industrial Research Laboratories 14 Innovation Centres



TECHNOPOLES NETWORK

10 Infrastructures 20 Locations



LOCAL NETWORK "SPAZI AREA S3"

10 Officies located in the Technopoles to assist highly-skilled (young) people



INCURATORS NETWORK

38 Public and Private organisations



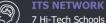
DIGITAL MANUFACTURING NETWORK MAK-ER





OPEN LABORATORIES NETWORK

10 Equipped Areas with hi-tech solutions



REGIONAL INNOVATION BUILDING BLOCKS

HIGH TECHNOLOGY NETWORK

TECHNOPOLES

AREA S3 NETWORK

FABLABS

OPEN LABORATORIES





REGIONAL INNOVATION BUILDING BLOCKS

HIGH TECHNOLOGY NETWORK

TECHNOPOLES

AREA S3 NETWORK

FABLABS

OPEN LABORATORIES





TECHNOPOLES GEOGRAPHIC DISTRIBUTION







TECHNOPOLES

10 infrastructures located throughout the Emilia-Romagna region, organizing activities and providing services for industrial research, experimental development and technology transfer

Technopoles stem from an initiative of the Emilia-Romagna Region in collaboration with universities, research centres and local authorities





HIGH TECHNOLOGY NETWORK

The High Technology Network is composed by **96 accredited members**, comprising **82 Industrial Research Laboratories** (Universities and Public Research Centres) and **14 Innovation Centres**.

The Network provides skills, facilities and projects to the business sector.







HTN TOOLBOX



Vuoi innovare la tua impresa?

CATALOGO DELLA RICERCA

Industrial Research Competencies Catalogue



Research Equipments
Catalogue



Dashboard: contracts signed by the Network



Business – Research collaboration:
Template Contracts



Business – Research collaboration:
Best Practices





Vuoi assumere un ricercatore?

RicE-Rcami

Highly-qualified industrial researchers' profiles database

AREA S3 NETWORK

Spaces within the regional Technopoles, where students, researchers, entrepreneurs and teachers can find information on how to develop a project idea, start a new entrepreneurial venture, improve their skills





REGIONAL INNOVATION BUILDING BLOCKS

HIGH TECHNOLOGY NETWORK

TECHNOPOLES

AREA S3 NETWORK

FABLABS

OPEN LABORATORIES





THE FABLABS NETWORK







THE FABLABS NETWORK

- Mak-ER is the regional network for digital manufacturing
- It brings together communities of people in Emilia-Romagna who share digital fabrication and advanced manufacturing laboratories
- Mak-ER aims to increase distributed creativity and establish itself with local, national and international players by promoting its members' activities





REGIONAL INNOVATION BUILDING BLOCKS

HIGH TECHNOLOGY NETWORK

TECHNOPOLES

AREA S3 NETWORK

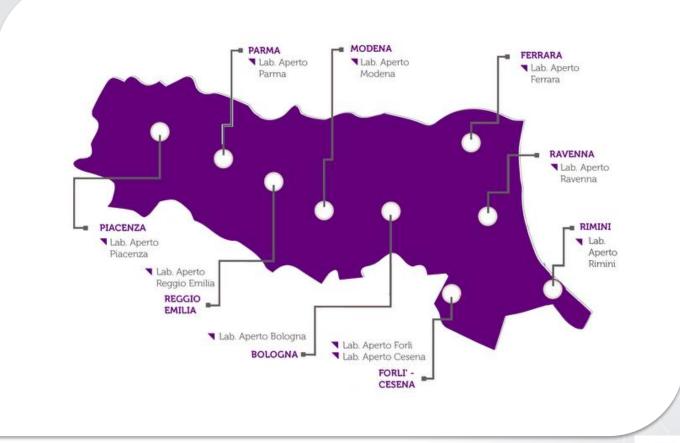
FABLABS

OPEN LABORATORIES





THE OPEN LABORATORIES NETWORK







THE OPEN LABORATORIES NETWORK

Open Laboratories are areas where **new models of collaboration** among citizens, public authorities, civic associations, universities, etc are experienced and developed

They involve all players with an important role in the transformation of urban areas using the digital component as enabler of new relationships/applications/services





At the core of the ecosystem

ASTER





ABOUT US

ASTER is the **Consortium** among

- ✓ the Emilia-Romagna Regional Government
- √ the 6 regional Universities
- ✓ National Research Centres located in the region (CNR, ENEA, INFN)
- √ the Regional system of Chambers of Commerce

ASTER works in collaboration with regional **Business Associations** and **Innovation Centres**

Since 1985 ASTER has shaped and defined pathways and tools for innovation, industrial research, technology transfer and for the improvement of high quality skills and careers on innovation





A VIBRANT ECOSYSTEM

ASTER is at the core of a vibrant eco-system

ASTER animates it through joint activities and open innovation actions involving all the relevant stakeholders of the territory: Universities, RTOs, Innovation Centres, Technopoles, Incubators, Startups and Fablabs





ASTER AT THE CORE OF THE ECOSYSTEM

Supports the Regional
Government and provides
technical assistance for the
definition of innovation
policies

Represents the regional innovation system at regional, national and international level

Designs and develops strategic projects

Coordinates **networks and initiatives on innovation**





PROJECT DESIGN AND DEVELOPMENT

- It is a cornerstone of ASTER activity
- Starting from late 80's, ASTER has managed more than 100 European Commission funded projects, 30% of which as lead partner
- Topics: R&D, innovation, technology transfer, startup creation, skills and human capital valorisation, regional development





ASTER TARGETS

BUSINESSES

RESEARCH

HUMAN CAPITAL

STARTUPS





ASTER TARGETS

BUSINESSES

RESEARCH

HUMAN CAPITAL

STARTUPS





2015-2016 | A FEW RESULTS

- 320 Companies and researchers supported in the search, management and promotion of innovative technologies (>: mechatronics and transport; health & well-being, cultural & creative industries)
- 400 Services provided (>: partnership researches and offers; checkups)
- 19 Brokerage Events and Company Missions organised in Italy and around Europe
- 458 Transnational meetings organised during Brokerage Events and Company Mission
- 25 Transnational partnership agreements signed
- DEM: 15.572 contacts; follow-up companies: 268





ASTER TARGETS

BUSINESSES

RESEARCH

HUMAN CAPITAL

STARTUPS





2017: TOWARDS A NEW PHASE

- Smart Specialization Strategy approved in 2015
- High Regional Network is at the center of the Strategy

BUT

- New organization and redefinition of mode of operation for HTN
 - Integration and multidisciplinarity
 - Focus on S3 priorities
 - Entrepreneurial discovery





FROM PLATFORMS TO CLUST-ERS

- From research driven to technology/innovation driven community
- Improved approach to the market
- Combination of different experiences and skills to identify new and unexpected products, markets and business models
- Enlarged impact on regional economy
- Increased involvement of companies
- Flexible and dynamic model, suitable for different value chains in the specialization areas

RegioneEmilia-Romagna

ASTER TARGETS

BUSINESSES

RESEARCH

HUMAN CAPITAL

STARTUPS





HUMAN CAPITAL

ASTER fosters high skills for industrial research and innovation as key element to attract investments and talents and to achieve qualified jobs.

ASTER promotes the development of career pathways for PhDs and international mobility opportunities.

"S3 AREAS" **network**supporting the
implementation of the
researchers High
Competencies

Promotion of the technical culture among secondary schools students

Matching between industrial research competencies and businesses





ASTER TARGETS

BUSINESSES

RESEARCH

HUMAN CAPITAL

STARTUPS





STARTUPS

Since 2000 ASTER provides services to knowledge-based, innovative and creative startups in Emilia-Romagna

Managing of
EmiliaRomagnaStart
Up, the regional
portal for innovative
start-ups

Support to startups in reaching **new**partners all over

Europe and worldwide

ion services

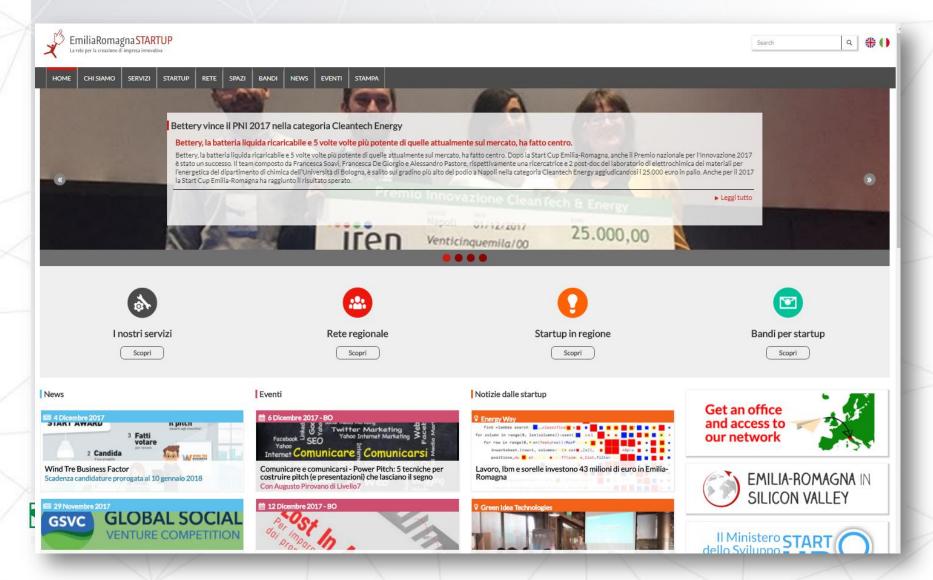
Support to the creation of crowdfunding and reward-based campaigns

Emilia-Romagna in Silicon Valley program Meetings with senior advisors and mentors





A REGIONAL PLATFORM FOR STARTUPS



AVAILABLE SERVICES

Prendi un appuntamento con



InfoDesk



Accompagnamento al crowdfunding



Finanza per l'innovazione



Helpdesk Proprietà Intellettuale



Prendi appuntamento con Incredibol!



Incontra il commercialista



Incontra il consulente del lavoro



Incontra l'ingegnere

Scrivi all'esperto



ERStartUp Risponde



Il Consulente del Lavoro Risponde



II Commercialista Risponde



Helpdesk Proprietà Intellettuale Risponde



RISULTATI DI 2 ANNI KICK-ER

- 88 RICHIESTE tramite form online
- 48 INCONTRI one-to-one
- **36 CHIAMATE** di approfondimento
- 26 REPORT
- **22** CHECKLIST personalizzate
- **9 CAMPAGNE ONLINE** seguite e promosse tramite i canali **ASTER** 100% success rate

STARTCUP: BUSINESS PLAN COMPETITION

2017 results

- scouting tour around all the region to listen to the projects and give inputs on how to present it to the competition - 117 business ideas and 162 people
- 136 applications 270 people involved
- 30 regional institutions involved in the initiative
- 22.000 € private sponsorship
- 23.000 € local prizes
- 40 business ideas coming from the Academia
- 3 regional winners 12.000 €, 5.000€ and 5.000€
- 3 projects selected to take part to PNI, the national competition for research-based startups.







MENTOR BOARD

People from large companies or corporations with a unique and high-level know-how, that are available for start-ups or business projects support, developing open innovation processes





LE SERRE INCUBATOR/ DI ASTER ACCELERATOR



Get an office and access to our network



InfoDesk e Mentoring

Acceleration services – just launched the 2017 call EmiliaRomagnaStartUp Network Headquarter

EU, internationalization and international mobility projects





ASTER AND RER IN SILICON VALLEY

www.emiliaromagnainsiliconvalley.it







RESULTS AFTER 2 YEARS

- A desk for ASTER and the Region has been created in Silicon Valley (San Francisco)
- Good practice transfer: ASTER Mentor Board
- 5 editions of the Silicon Valley Mindset Program involving 45 startups
- 1 Business Match in 2017 with 8 SMEs
- Silicon Valley Mindset @R2B 2016: talks with Venture Capitalists and international startups
- Creation of MindsettER, an "Alumni" Association (gathering participants to the various programs)





ERASMUS FOR YOUNG ENTREPRENEURS

• It is a European Union mobility program linked to EEN, to stimulate entrepreneurship, competitiveness, internationalization, start-up growth and the creation of small and medium-sized enterprises through the transfer of knowledge between established entrepreneurs and new entrepreneurs.

• It offers from 1 to 6 months with an experienced entrepreneur in all EU countries





At last

R2B: INTERNATIONAL EXHIBITION ON INDUSTRIAL RESEARCH AND SKILLS FOR INNOVATION







SAVE THE DATE R2B 2018 7-8 June

13° International Exhibition on Industrial Research and Competences for Innovation









R2B 2018



KEYWORDS

INTERNATIONAL
PROGRAMMING PLATFORM
SMART & OPEN INNOVATION

STRATEGIC THEMES

Industry 4.0
Big Data for Industry
Bio-Economy & Climate Change
Competences for Innovation

TARGET COUNTRIES

Europe - China, Emirates, Israel, South Africa, USA

R2B 2018 - FORMAT



VISION

High level Speakers
International Themes

LIVE SHOW

Connect Spread

FORMAT

EXHIBITION
CONFERENCES
B2B - INNOVAT&MATCH

INSPIRE

Fast Talks
Point of views

AWARDS

Share experiences

TECH WORKSHOP

Innovative solutions

SUCCESS STORIES

Start-ups
Industrial research

TECHNOLOGICAL AREAS



- Agrifood
- Building and Construction
- Energy and Sustainable Development
- Cultural and Creative Industries
- Life Sciences and Wellbeing
- Service Innovation
- Mechatronics and Motoristics

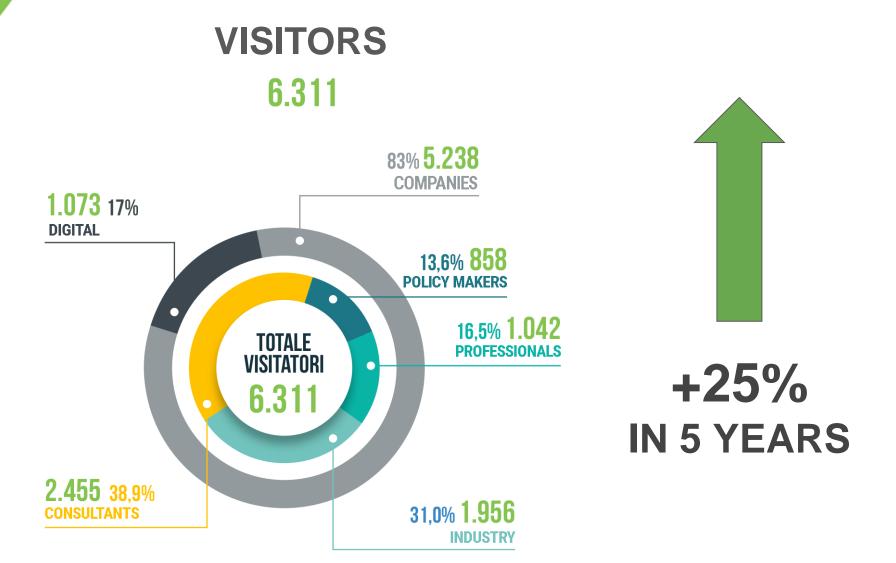
R2B 2018 - SUSTAINABLE EVENT





In collaboration with ERVET

R2B 2017 - FACTS & FIGURES



R2B 2017 - FACTS & FIGURES

INNOVAT & MATCH 2017



OVER 600 ONE-TO-ONE MEETING
250 DELEGATES
17 COUNTRIES











R2B - CONTACTS





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