FIRST ITALY – CANADA BUSINESS FORUM

MONTREAL 17TH SEPTEMBER 2019
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THE ITALIAN *INDUSTRIA 4.0* NATIONAL PLAN: GUIDELINES & MEASURES

bi-rex
Big Data Innovation & Research Excellence

Italian Industrial Sector peculiarities

- ✓ Limited number of large industry champions able to lead Italian Manufacturing transformation
- ✓ Deeply based on SMEs
- ✓ Key role of universities and research centers in development/ innovation
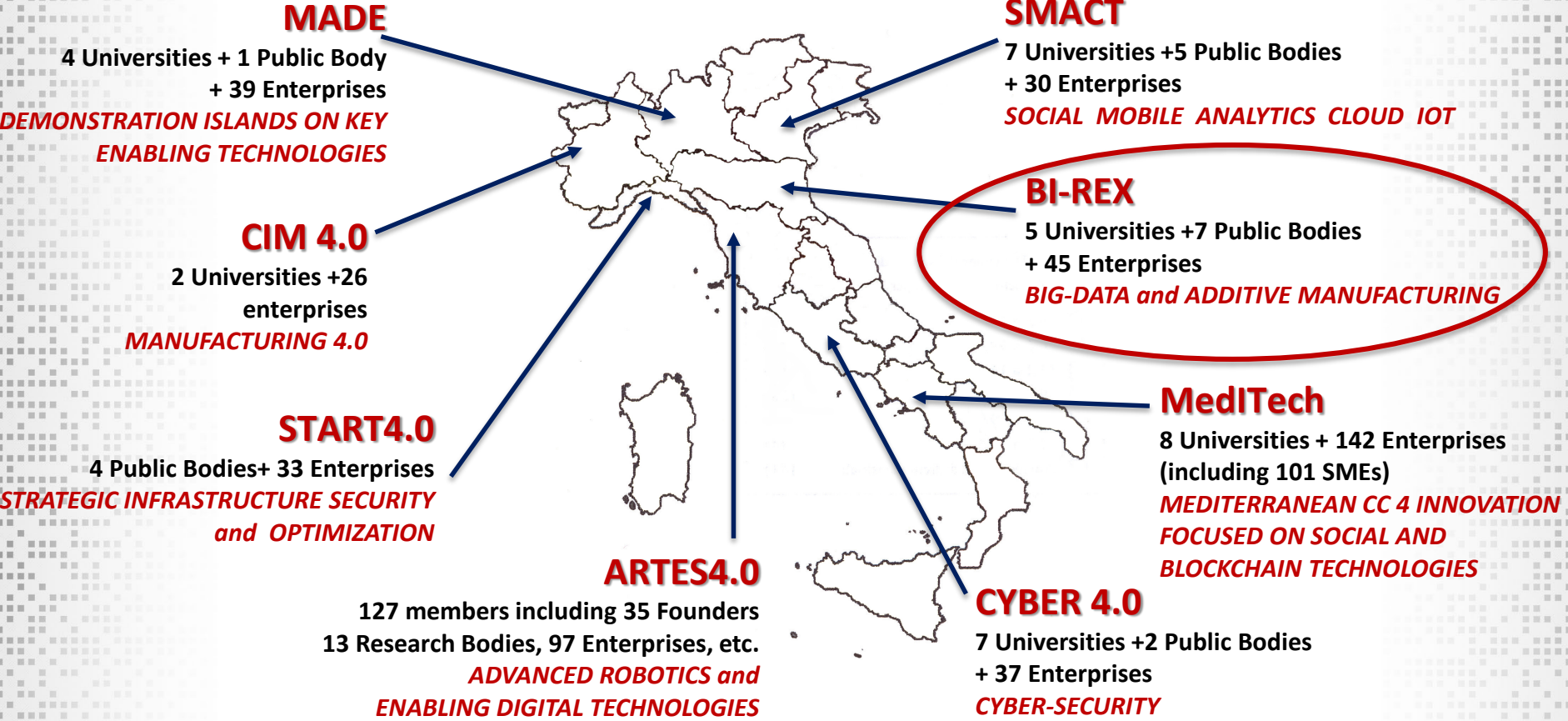- ✓ Strong cultural traits of finished products

Government Measures

PIANO INDUSTRIA 4.0

- ✓ Skills on I 4.0:
  - ✓ Specific school programs
  - ✓ Academic & research paths
  - ✓ Competence Centers & DIH
- ✓ Innovative investment
  - ✓ Private Investment
  - ✓ Venture capital
  - ✓ Start-up
- ✓ Enabling Infrastructures
- ✓ Public Support Instruments

The Italian government earmarked ≈ €20 billion for the period of 2017-2020.

THE ITALIAN INDUSTRIA 4.0 NATIONAL PLAN:
THE 8 COMPETENCE CENTERS

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MADE
4 Universities + 1 Public Body
+ 39 Enterprises
DEMONSTRATION ISLANDS ON KEY
ENABLING TECHNOLOGIES

SMACT
7 Universities +5 Public Bodies
+ 30 Enterprises
SOCIAL MOBILE ANALYTICS CLOUD IOT

BI-REX
5 Universities +7 Public Bodies
+ 45 Enterprises
BIG-DATA and ADDITIVE MANUFACTURING

CIM 4.0
2 Universities +26
enterprises
MANUFACTURING 4.0

MedITech
8 Universities + 142 Enterprises
(including 101 SMEs)
MEDITERRANEAN CC 4 INNOVATION
FOCUSED ON SOCIAL AND
BLOCKCHAIN TECHNOLOGIES

START4.0
4 Public Bodies+ 33 Enterprises
STRATEGIC INFRASTRUCTURE SECURITY
and OPTIMIZATION

ARTES4.0
127 members including 35 Founders
13 Research Bodies, 97 Enterprises, etc.
ADVANCED ROBOTICS and
ENABLING DIGITAL TECHNOLOGIES

CYBER 4.0
7 Universities +2 Public Bodies
+ 37 Enterprises
CYBER-SECURITY

BI-REX: THE PARTNERSHIP

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Big Data Innovation & Research Excellence

BI-REX is a **public-private Consortium** born on 11 December 2018 in Bologna gathering in partnership 57 actors: 12 Universities & Research Centers and 45 enterprises of excellence to assist companies and in particular SMEs in the Adoption of Industry 4.0 enabling technologies. Located in **Bologna**, BI-REX collects the know-how of the Emilia Romagna High Technology network but with a **national and international mission& road map**

12 Institutions

Università di Bologna
Università di Ferrara
Università di Modena Reggio Emilia
Università di Parma
Università Cattolica del Sacro Cuore
Consiglio Nazionale delle Ricerche
Istituto Nazionale di Fisica Nucleare
Istituti Ortopedici Rizzoli
CINECA
Bologna Business School
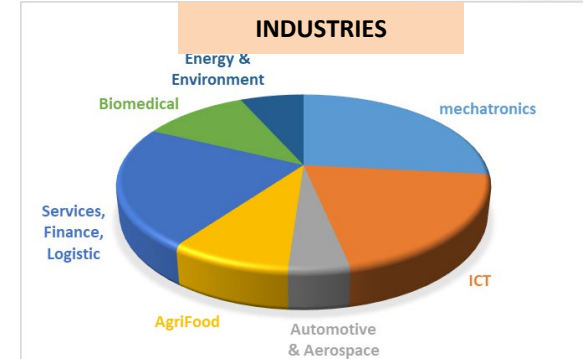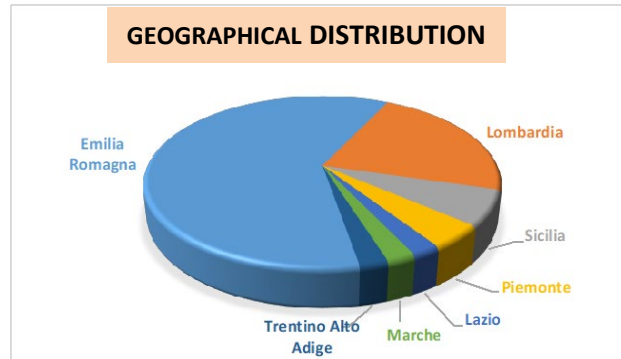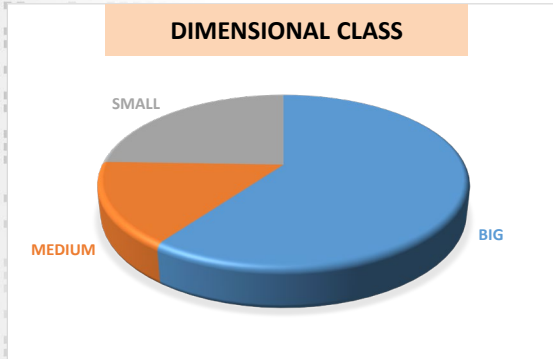Fondazione Golinelli (Host CC Headquarter)
ART-ER (RER)

28 End User Enterprises

Philip Morris	Poggi-polini	Marposs	Circle
IMA	Aetna	Conad	Marposs Italia
Samp	Rekeep	Hera	CRIF
Bonfiglioli	CNS	Eni	Euro Coating
Sacmi	Modis	Ducati	Filippetti
Ferrara Bio	UPMC	Rem Tec	Nano-surfaces
		Camst	Alascom
		Link Italia	Service

17 Provider Enterprises

Intesa Sanpaolo	Eascon	Juno Design
Altair	IBM	Kaitec
PTC	Data River	Nier
Manz		DVP
TIM		Nextema
Siemens		Energy Group
		Etna Bio
		Fancy Pixel

BI-REX IN NUMBERS

DIMENSIONAL CLASS

GEOGRAPHICAL DISTRIBUTION

INDUSTRIES

The 45 companies:
- 250,000 direct employees, aggregate turnover of almost 80 billion euros
- 190 Technology Transfer projects, 10,400 patents

The 12 "other entities":
- 5 universities, 4 research institutes, 1 business school, 1 private foundation (very active on training), 1 innovation institution
- Nearly 1,000 TT projects, 4,700 publications, 31 departments, 1,500 research fellows, 1,100 PhD students, 250 projects funded by competitive calls for a total of about € 15M
- Cineca + INFN -> 90% of national computing capability; global leadership in calculation speed BIG DATA (super computers of *Tecnopolo*)

BI-REX: SERVICES AND ACTIVITIES

bi-rex
Big Data Innovation & Research Excellence

Pilot Plant

Innovation Projects

8 thematic areas that make use of the I 4.0 enabling technologies in an integrated way. Special focus on BIG DATA & AI

Training & Education

On-line, in class, on the pilot

Entry level - on specific technologies– administrative and managerial on business models

Orientation & Consultancy

Workshops and conferences, thematic tables, reports and analysis on Key Enabling Technologies; assesment services,digital readiness, digital marketing, cybersecurity

Consultancy services, understanding and testing the real advantages offered by I4.0 technologies

BI-REX: WITHIN DATA VALLEY ECO-SYSTEM

✓ **Cineca + INFN -> already today > 70% of national computing capability**

✓ **European Centre Medium Weather Forecast, ECMWF Data Center**

✓ **Euro High Performance Computing "super computer"**

✓ **IoTwins Project, AI & Big Data to optimize systems and processes through Digital Twins**

Thank you!