+ COMPETENCE
INDUSTRY
MANUFACTURING
4.0

La “cassetta degli attrezzi” per l’Industria Sostenibile:
vision, competenze, partnership

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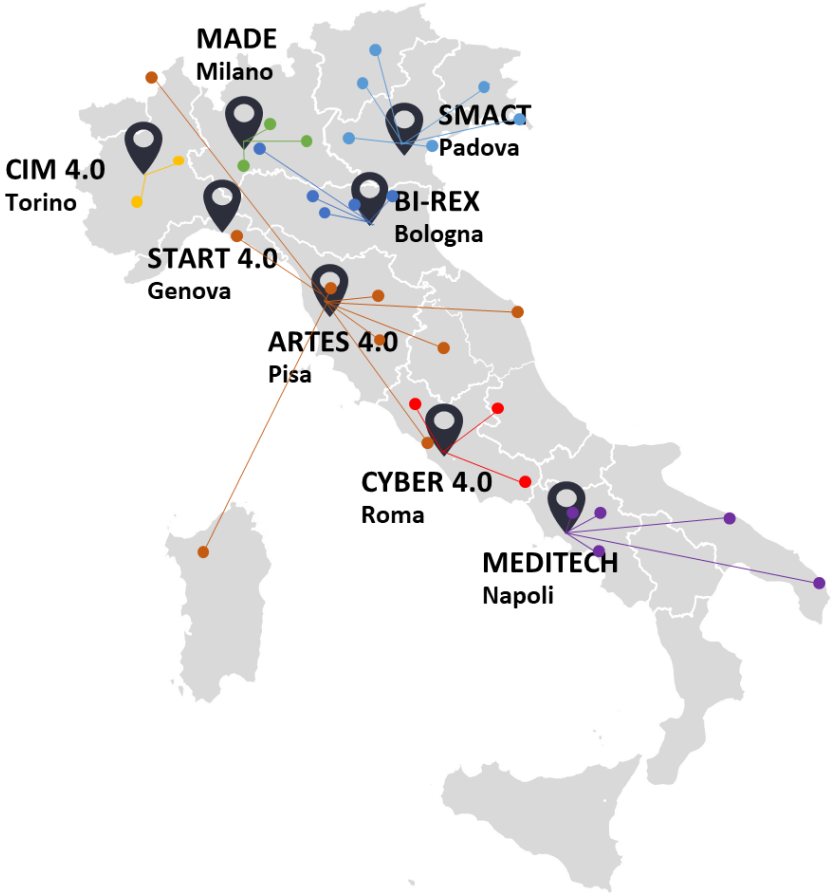
www.cim40.com

WHO WE ARE

CIM4.0 is a **public private partnership (PPP)** composed by **3 public bodies**, **22 enterprises** and **2 business associations** aimed to:

+ face industrial innovation challenges
+ support technology transfer
+ run innovation project
+ boost technology awareness
+ manage innovation fundings

THE 8 ITALIAN COMPETENCE CENTER



Competence Center	Reference Research Centers	Investigation Areas
CIM4.0	Politecnico of Turin University of Turin	• Aerospace/Automotive • Digital Factory • Additive Manufacturing
MADE	Politecnico of Milan	• Enabling technologies • Cyber-physics systems
BI-Rex	University of Bologna	• Smart city & Logistics • Big data
Artes 4.0	Scuola Superiore Sant'Anna of Pisa	• Advanced Robotics • AI
Smact	University of Padova and al.	• Agribusiness • Clothing & Furniture • Automation
Start 4.0	University of Genova and al.	• Cybersecurity • Safety (freight transport and infrastructure)
Cyber 4.0	University "La Sapienza" of Rome	Cybersecurity
MedITech	University "Federico II" of Napoli and al.	Integration 4.0: Horizontal and Vertical

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CIM4.0 - SCARL

FULL MEMBER
#25

ACTIVITY PARTNER
#8

3 PUBLIC BODIES

22 ENTERPRISES

2 ENTERPRISE ASSOCIATIONS

8 NEW PARTNER

HIGH EDUCATION

AUTOMOTIVE TECHNOLOGY CHAIN LEADER

AEROSPACE TECHNOLOGY CHAIN LEADER

SOFTWARE TECHNOLOGY PROVIDERS

HARDWARE TECHNOLOGY PROVIDERS

SERVICE INTEGRATORS

END USERS

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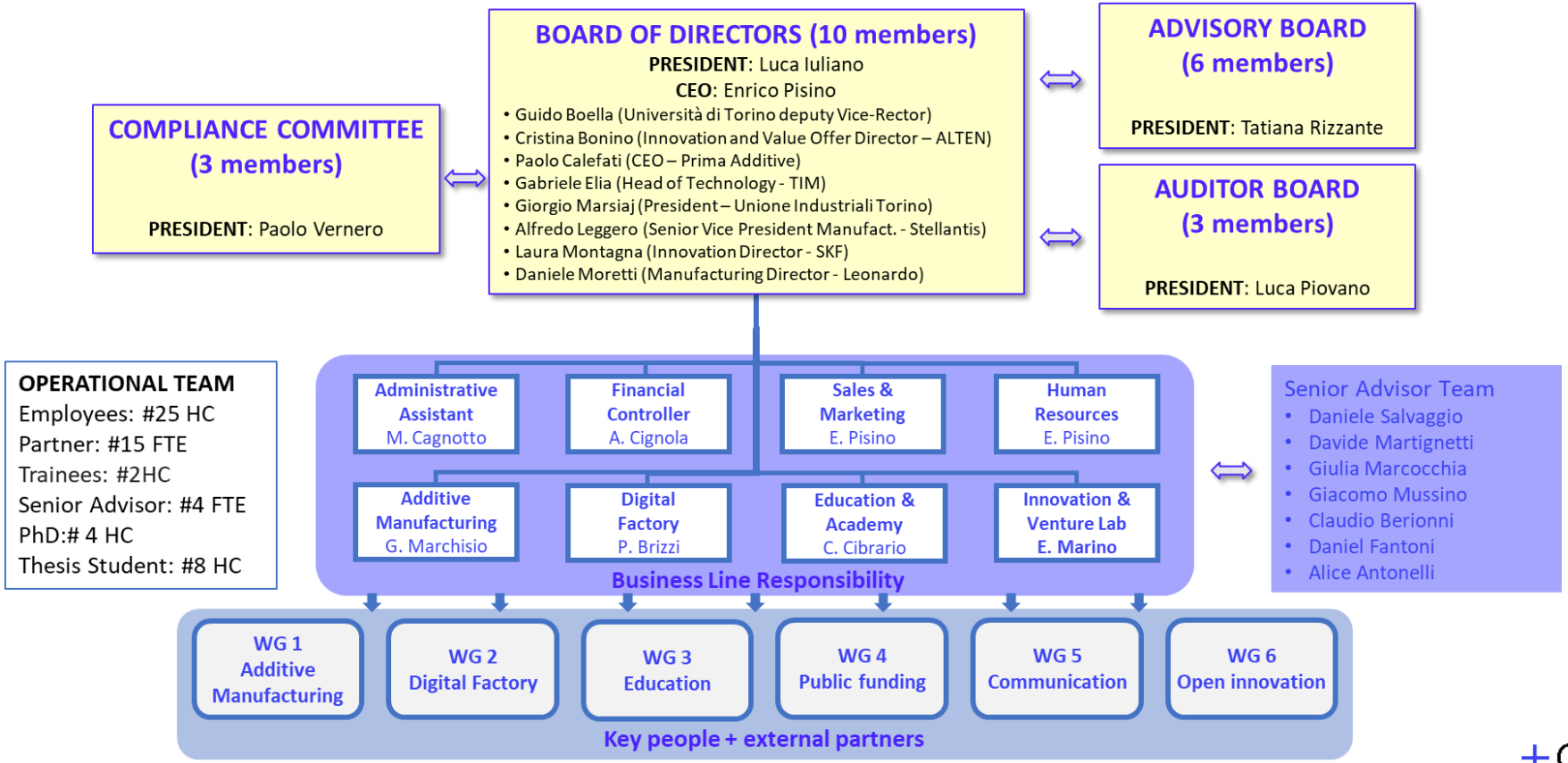
GOVERNANCE & OPERATION
Organization Chart



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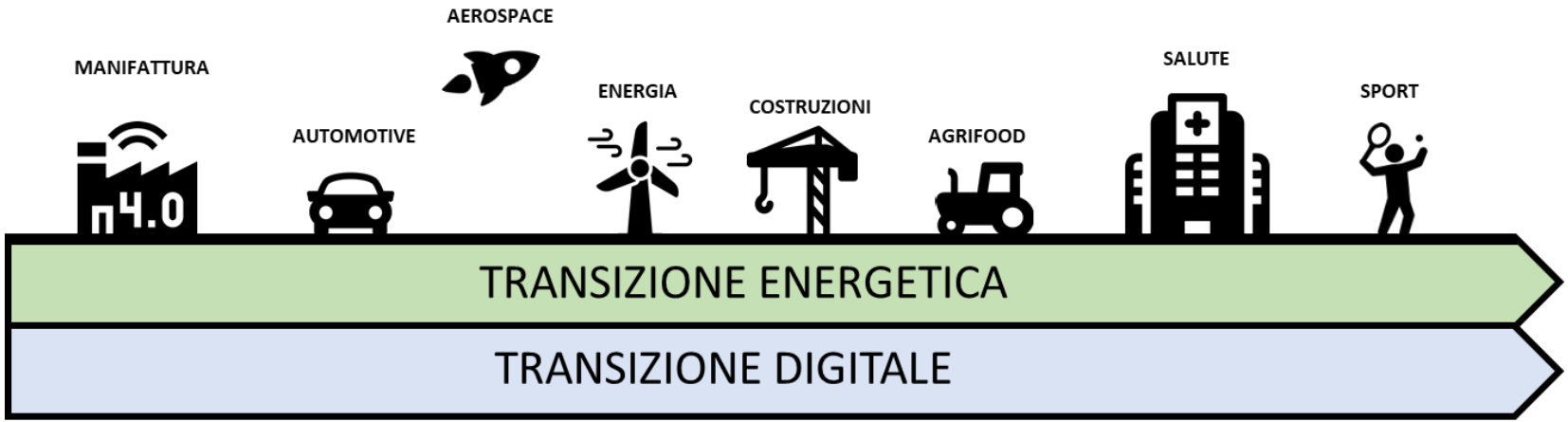
INDUSTRY CHALLENGES AND PRIORITY SECTORS



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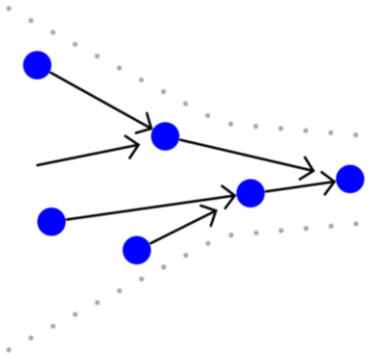
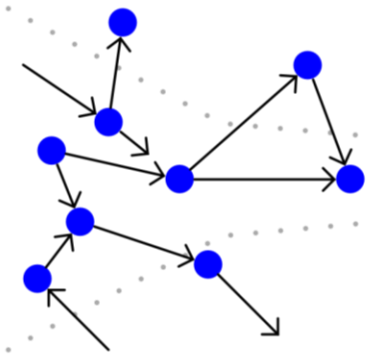
INNOVATION APPROACH



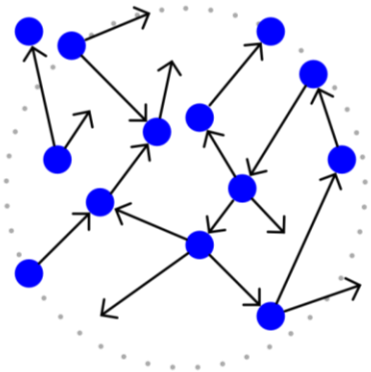
Centralized inward looking innovation

CLOSED INNOVATION



Externally focused, collaborative innovation

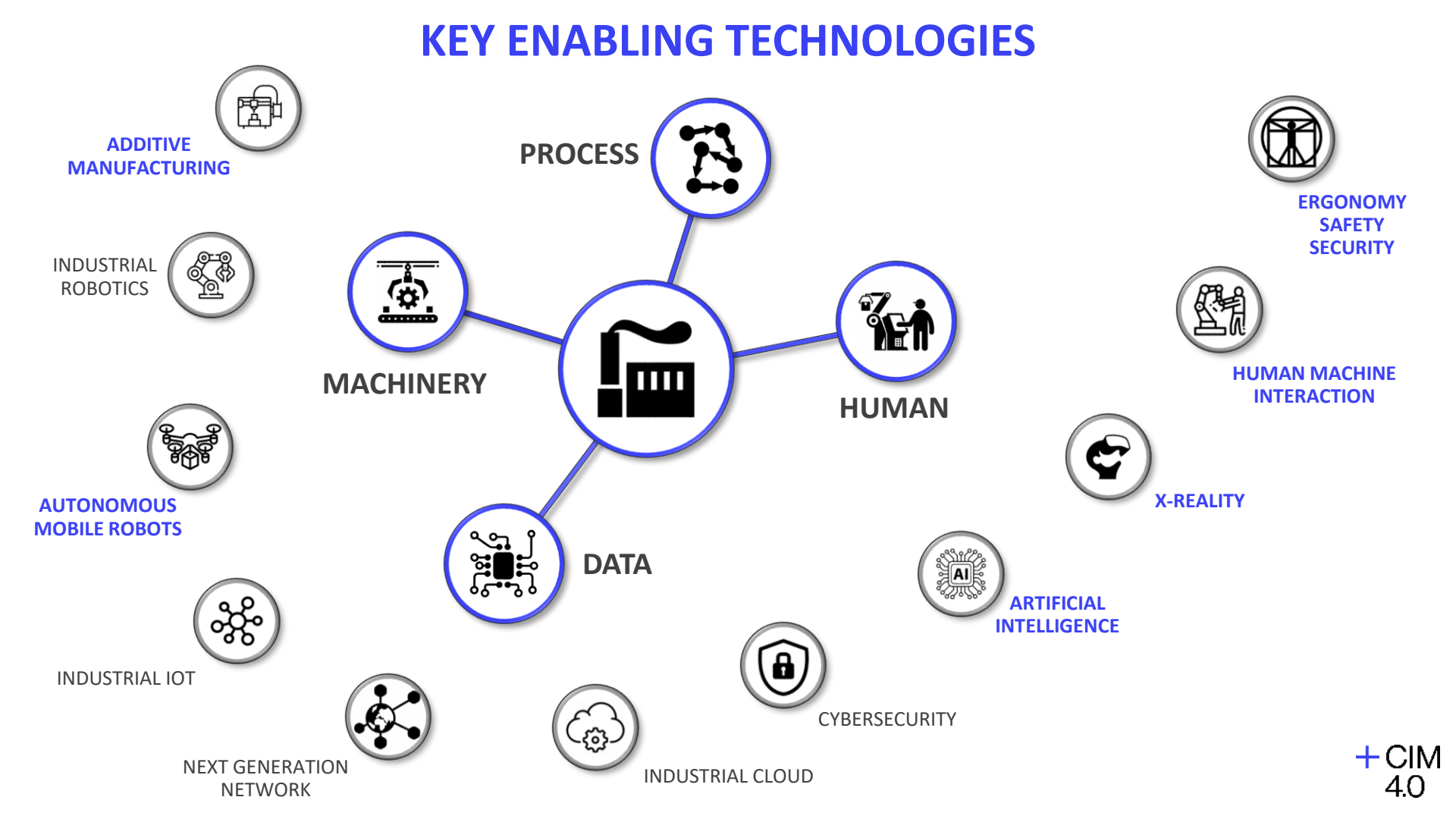
OPEN INNOVATION



Ecosystem centric, cross-organizational innovation

INNOVATION NETWORKS ECOSYSTEMS

KEY ENABLING TECHNOLOGIES



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CORE COMPETENCES

ADDITIVE MANUFACTURING

UPSKILLING & RESKILLING

DIGITAL FACTORY

COLLABORATIVE INNOVATION

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RESOURCES & ASSETS

PEOPLE

- **#25 CIM4.0 specialized personnel**
- **#138 professional employees** of the Consortium members involved in the activities through several Working Groups (WG)
  - 82 senior resources
  - 34 junior resources
  - 7 associate professors
  - 15 full professors

ASSETS

- 2 open spaces / 30 workstations
- 3 equipped areas dedicated to training
- Possibility to access the learning centers of our consortium
- **2 (+1) Pilot Lines: cutting-edge technologies and machinery**
  - **DIGITAL FACTORY**
  - **ADDITIVE MANUFACTURING**

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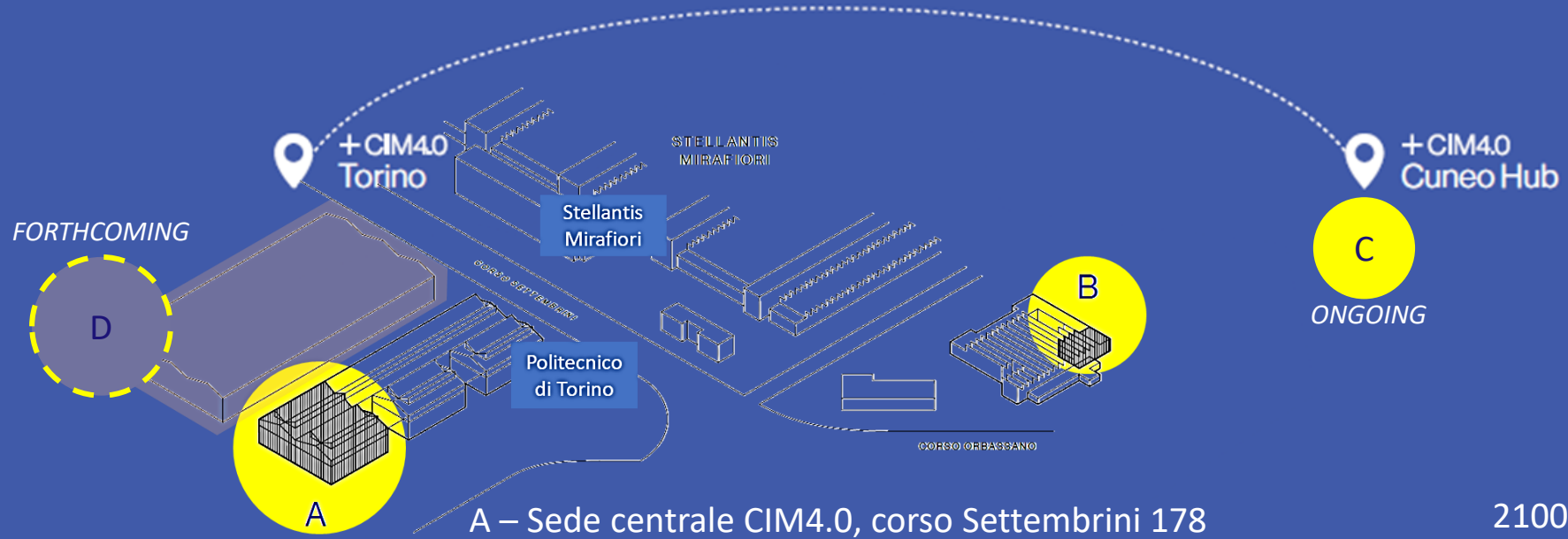
LOCATIONS



A – Sede centrale CIM4.0, corso Settembrini 178	2100 m^2
B – Additive Manufacturing Pilot Line, strada della Manta 22	1500 m^2
C – CUNEO Hub @Michelin plant / Zona Industriale	500 m^2
D – Nuovi spazi a disposizione dal Q4/2025	4000 m^2

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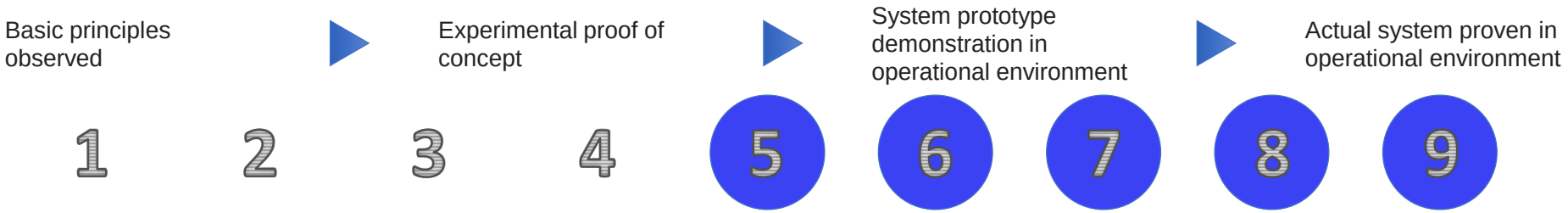
HOW WE WORK

TRL
TECNOLOGY READINESS LEVEL



TECHNOLOGY TRANSFER

RESEARCH → MARKET

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WHAT WE DO

PHASE 1

OPPORTUNITIES ANALYSIS

PHASE 2

IMPLEMENTATION STRATEGY DEFINITION

PHASE 3

PILOT PROJECT EXECUTION

PHASE 4

LONG-TERM STRATEGY EXECUTION

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INDUSTRY
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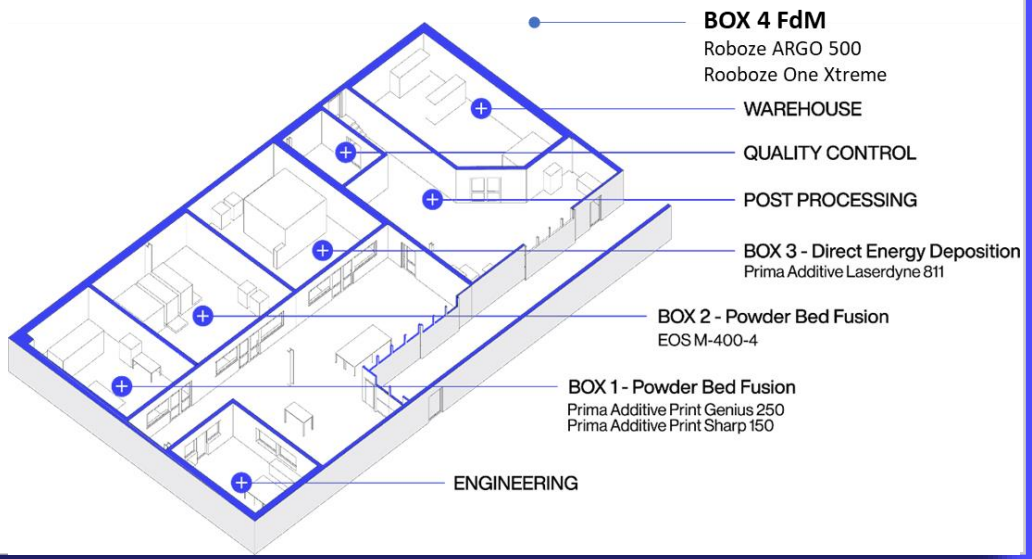
ADDITIVE MANUFACTURING PILOT LINE

COMPETENCES
+ AM Machines
+ AM Processes
+ Powders and materials
+ Design and modelling for AM

SERVICES
+ Product development
+ Process parameters definition
+ Best practices definition and product certification
+ Prototypes and pre series production
+ Business and cost analysis
+ Training



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4.0

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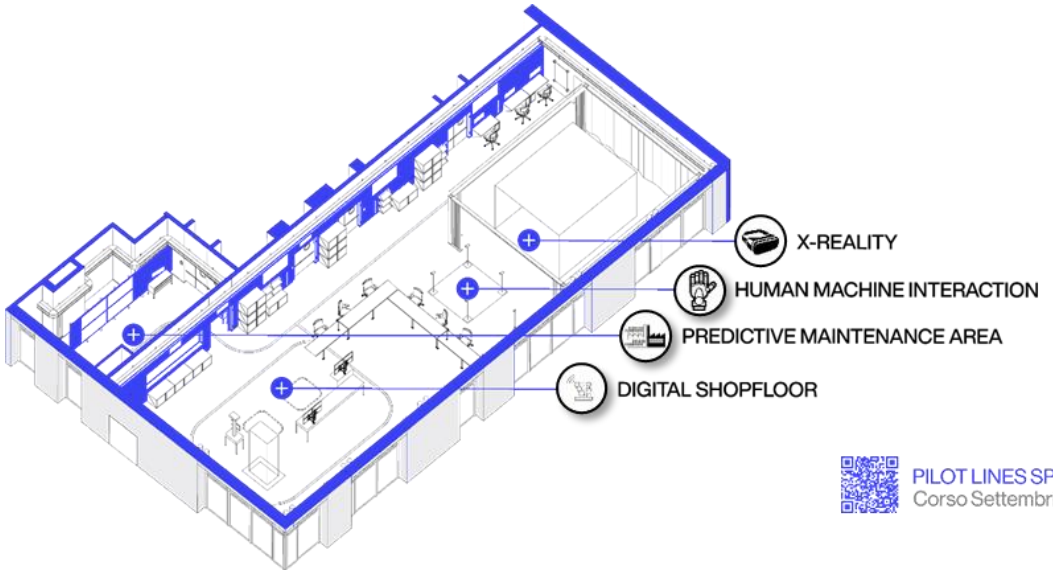
DIGITAL FACTORY PILOT LINE

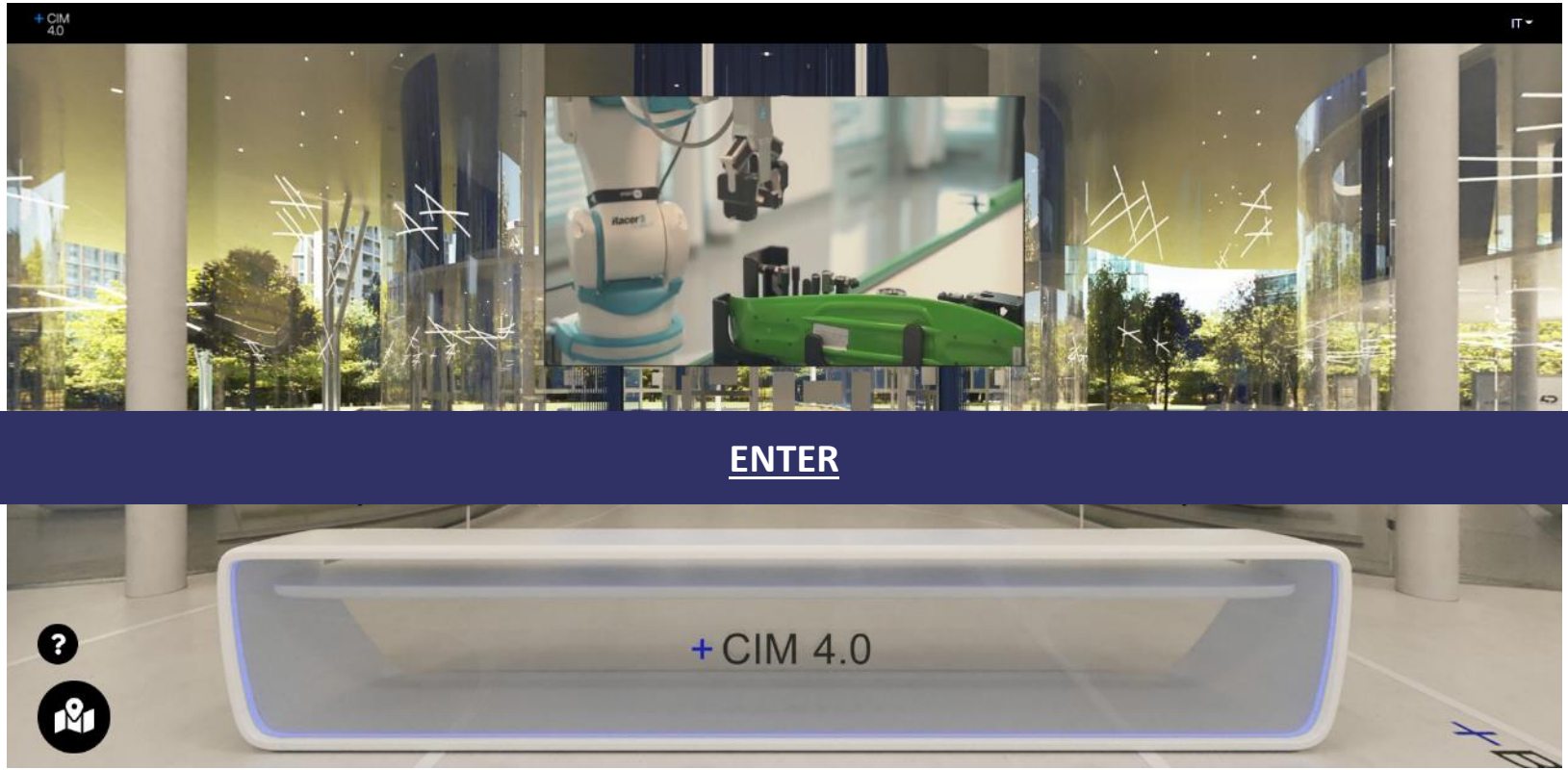
COMPETENCES
+ Industrial process digitalization
+ Artificial Intelligence
+ Industrial IoT
+ Predictive maintenance
+ Human machine interaction
+ Extended Reality
+ Indoor locating technologies
+ Next Generation Network
+ OT-IT Cybersecurity
+ Digital Retrofitting

SERVICES
→ Strategic consulting
→ Industrial process analysis and optimization
→ Prototyping and POC development
→ Field Trial deployment
→ System integration
→ Virtual experience design and development
→ Test before invest



PILOT LINES SPACES
Corso Settembrini 178, Torino

VIRTUAL INTERACTIVE ENVIRONMENT



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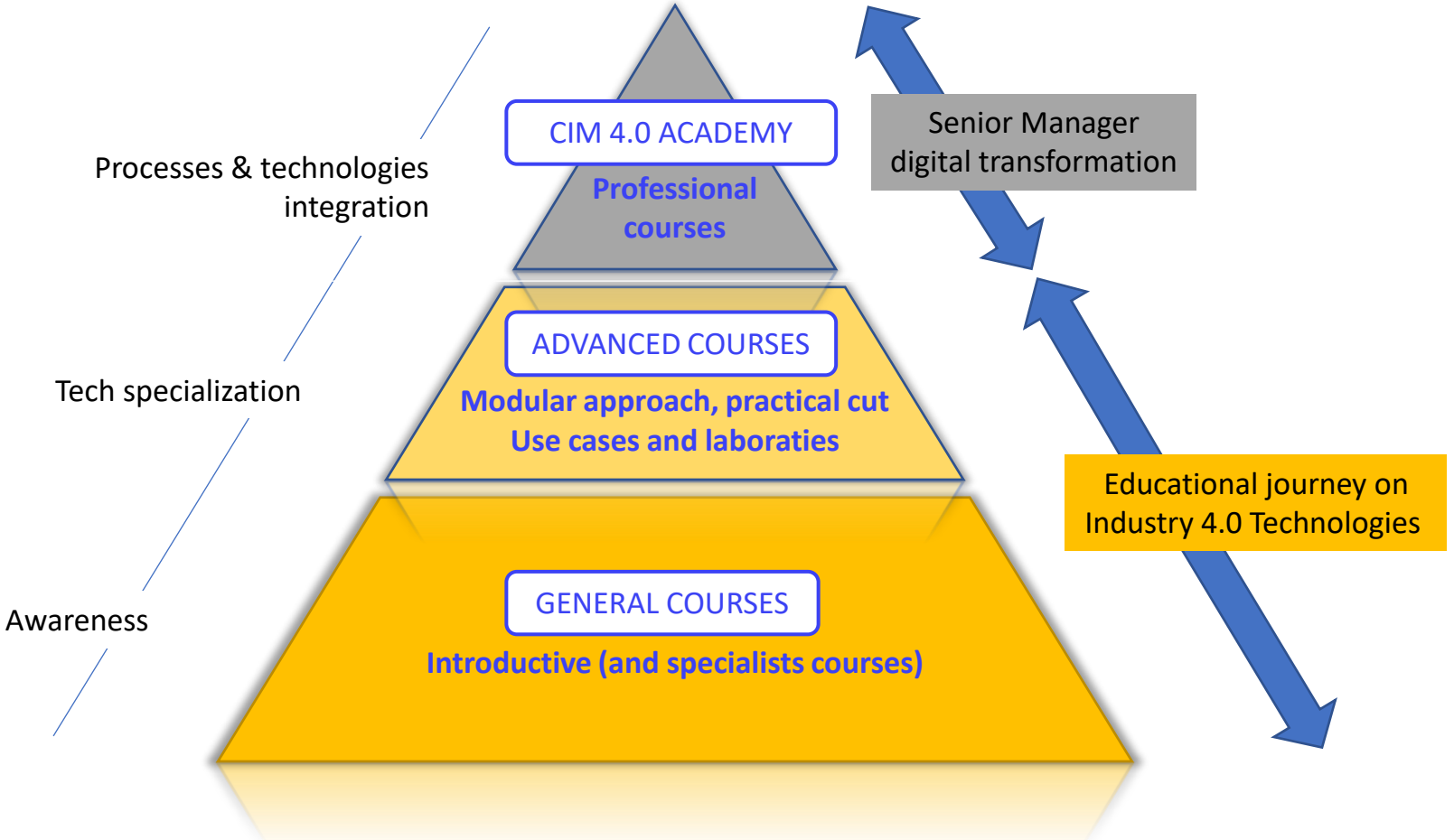
EDUCATIONAL OFFERING



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LEARNING HUB

CATALOGUE

GENERAL COURSES

ADVANCED COURSES

Plant Operations:

4 ÷ 8h — 24 ÷ 40h

1. Lean Manufacturing
2. Should Cost Analysis and Value optimization
3. Logistics (Procurement, Industrial, Commercial)
4. Quality and Perceived Quality
5. Maintenance management
6. Manufacturing processes

Industry 4.0:

1. Robotics and Cobotics
2. Virtual & Augmented Reality
3. Data Science
4. Cyber Security
5. Additive Manufacturing
6. Digital Transformation, tools and methods

Classroom: 10-15 people
Single company
Multi company

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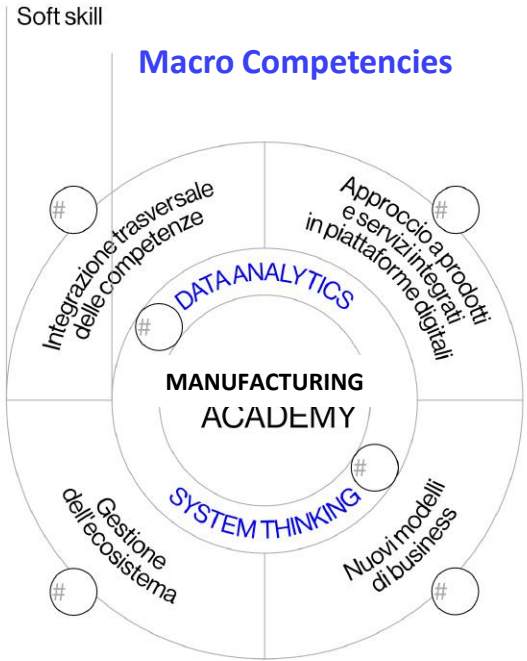
Competences

Tech. Competencies

- Digital transformation tech.
- Manuf. Operation methods
- Automation & Robotics
- VR/AR technologies
- Logistics



Transversal Competencies

- Platform design and management
- Agile, Lean management
- Problem solving, Design thinking
- World Class Manufacturing
- Predictive maintenance

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CIM4.0 ACADEMY

Struttura percorso formativo
Durata part-time: 5 mesi TOTALE 350 ore

STEP 1: WELCOME

STEP 2: SYSTEM THINKING
Ecosystem-based value network

STEP 3: I4.0 TECH. GAP RECOVERY
Virtual classroom, laboratori (linea pilota)

STEP 4: SVILUPPO COMPETENZE SISTEMICHE E PROJECT WORKS
Challenge-based learning: gestione di sistemi complessi, contamination, cross-experience

STEP 5: FINAL ASSESSMENT AL TERMINE
Final assessment dopo 6 mesi dal termine

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Risorse & Competenze

+ 5 Tutor dedicati ai partecipanti
+ 42 Technical fellow e Senior specialists
+ 5 Mentor aziendali
+ 33 Professori universitari

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+ COMPETENCE
INDUSTRY
MANUFACTURING
4.0

Politecnico di Torino

master school

CIM4.0 ACADEMY
4ª EDIZIONE

Torino
27 gennaio 2023

+COMPETENCE
INDUSTRY
MANUFACTURING
4.0

Politecnico di Torino

master school

CIM4.0 ACADEMY - PARTECIPANTS

70
PARTECIPANTI

12%
DONNE

40aa.
ETÀ MEDIA (23-60ANNI)

35%
PROVENIENTI DA PMI

40%
PROVENIENTI DA GI

25%
RICOLLOCAMENTO

Project Manager
Engineering department manager
Operational&Planning Manager
Process Development
Industrial Controller

Senior SW Engineer
Technical Specialist
General Manager/CEO
IoT integration Specialist
Sales Director

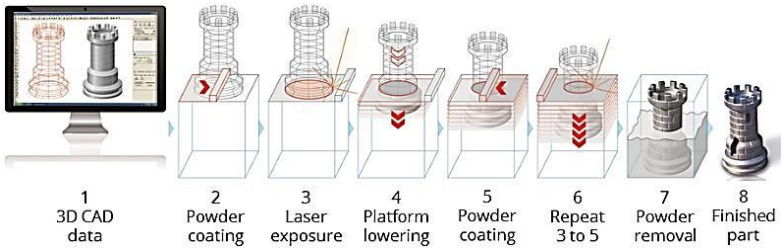
Logistic Manager
Quality Manager
Business Development Manager
Data Analyst

CIM 4.0

SERVIZI ALLE IMPRESE
esempi

OVERVIEW ON AM INDUSTRY

Analysis of the offer and demand side



"AM is the process of joining materials to make objects from 3D model data, usually layer upon layer, as opposed to subtractive manufacturing methodologies."

MARKET SIZE

Global AM market size in **2021** was valued at **USD 13.84 billion**, expected to expand at a compound annual growth rate (**CAGR**) of **20.8%**

OFFER

+ 200 players competing to offer:

- Faster and easier AM systems
- Lower fixed setup costs
- Ever-widening list of materials

DEMAND

Main customers from **automotive**, **aerospace**, **healthcare** and **consumer goods** industries

Medtronic NASA AIRBUS L'ORÉAL equinor adidas VOLKSWAGEN + CIM 4.0

AM OPPORTUNITIES

PRE-PRODUCTION | PRODUCTION | AFTER-SALES

DESIGN

- ❑ Acceleration and simplification of product innovation
- ❑ Customization
- ❑ Increase of design complexity
- ❑ Topological optimization
- ❑ Parts integration

ENGINEERING

- ❑ Prototypes
- ❑ Fast pre-series
- ❑ Development flexibility

TOOLING

- ❑ Additive tools to improve performances

PRODUCTION

- ❑ Less scrap and fewer raw materials required
- ❑ Low volumes production
- ❑ Reduction of assembly work

MARKETING

- ❑ Low energy consuptions (green economy)

SPARE PARTS

- ❑ Local production enabled
- ❑ Wharehouse cost reduction

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AM LIMITATIONS

PRE-PRODUCTION | PRODUCTION | AFTER-SALES

DESIGN | ENGINEERING | TOOLING | PRODUCTION | MARKETING | SPARE PARTS

- ❑ Lacking design tools and guidelines to fully exploit possibilities of AM
- ❑ Training efforts required
- ❑ Limited “printable” materials

- ❑ Missing quality standards
- ❑ Size of build volume
- ❑ Support structures required

- ❑ Skilled labor and strong experience needed
- ❑ Low surface quality
- ❑ Low production throughput speed
- ❑ AM Business model vs conventional

- ❑ No economies of scale
- ❑ High raw material cost

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ADDITIVE MANUFACTURING BENEFITS

- PRODUCT DEVELOPMENT CYCLE SIMPLIFICATION
- PRODUCT SUPPLY DYNAMICITY
- WEARHOUSE COSTS REDUCTION
- ADVANCED GEOMETRIC COMPLEXITY
- PHYSICAL PERFORMANCE IMPROVEMENT
- PARTS CONSOLIDATION & REPAIR

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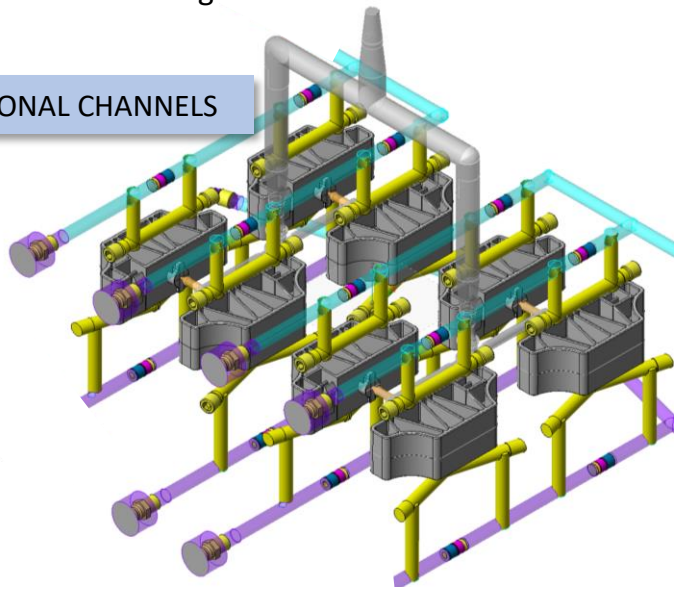
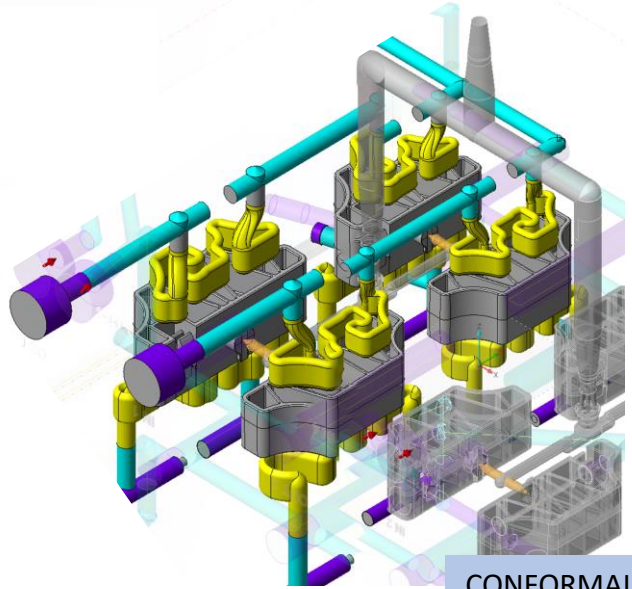
EXAMPLE PROJECT: CONFORMAL CHANNELS

_ADDITIVE PRODUCTION OF INSERTS FOR TRADITIONAL PRODUCTION

In the field of plastic injection, we are working on the redesign of an insert using the Design for Additive Manufacturing (DfAM) and studying the possible yields and improvements compared to the mold produced with traditional technologies.

TRADITIONAL CHANNELS





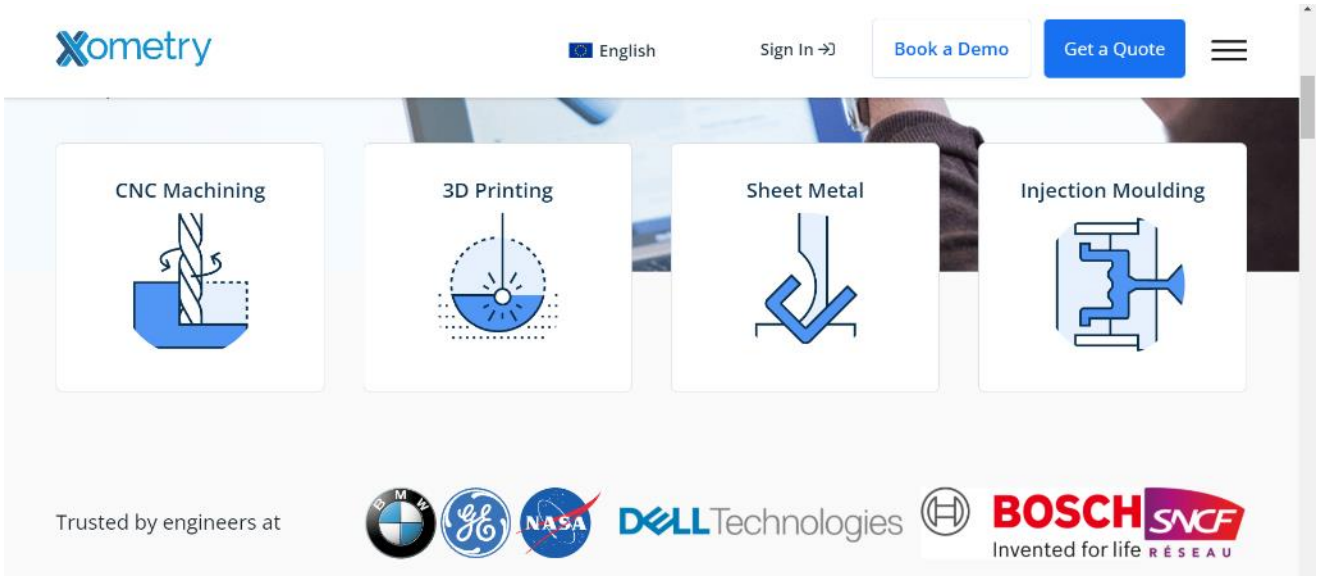
CONFORMAL CHANNELS

Involved partner

- Politecnico di Torino – centro IAM
- Reply Protocube

ADDITIVE MANUFACTURING PILOT LINE ACHIEVEMENT

The German company Xometry Europe (https://xometry.eu) has accredited CIM4.0 as a partner for the realization of pieces and samples made in AM: according to their indications, at CIM three samples with different contents and difficulties, the quality of the product was verified through an ad hoc check list, the pieces sent to their headquarters for certification and now, having obtained the positive opinion, we will be able to access their online platform and agree to perform some work for third parties, depending on the price offered, the technology and materials required.



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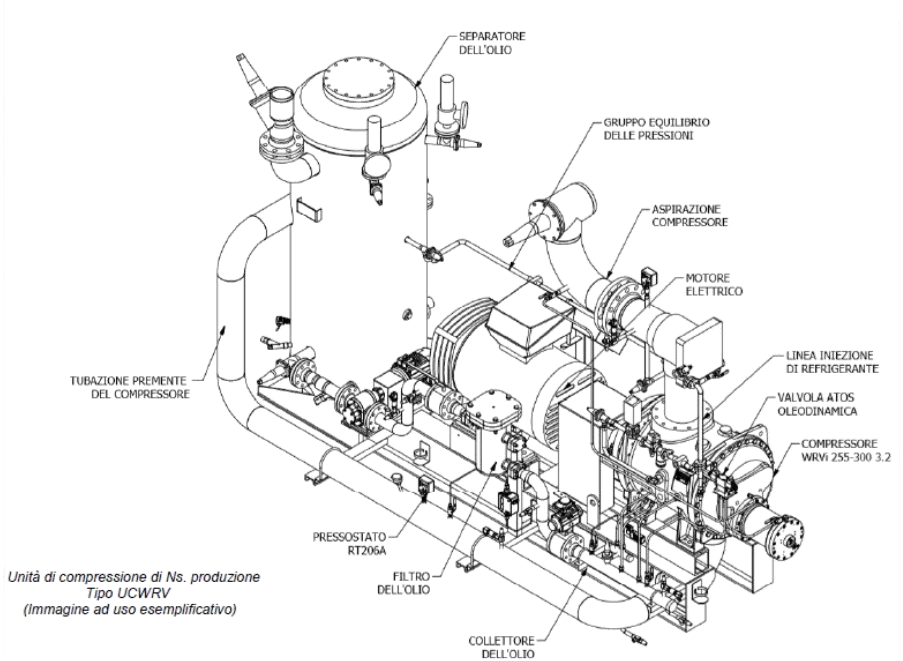
EXAMPLE PROJECT: TORINO FILM FESTIVAL AWARD

CHALLENGE:
CREATION OF UNIQUE AND PUCLIARI OBJECTS

From the collaboration with CIM4.0 and the Politecnico di Torino, the new Torino Film Festival award was born. The award is a tribute to the city of Turin and its symbolic building, the Mole Antonelliana. Through PBF technology, a scale version of the star placed on its top was recreated and a base was designed that recalls its structure.

EXAMPLE PROJECT: SMART REFRIGERATORS

_SMALL MEDIUM ENTERPRISE CHALLENGING PRODUCT INNOVATION



Unità di compressione di Ns. produzione
Tipo UCWRV
(Immagine ad uso esemplificativo)

+ Action 1 – Development of an experimental data collection and analysis solution towards for predictive maintenance

+ Action 2 – Personalized training on maintenance management and condition monitoring

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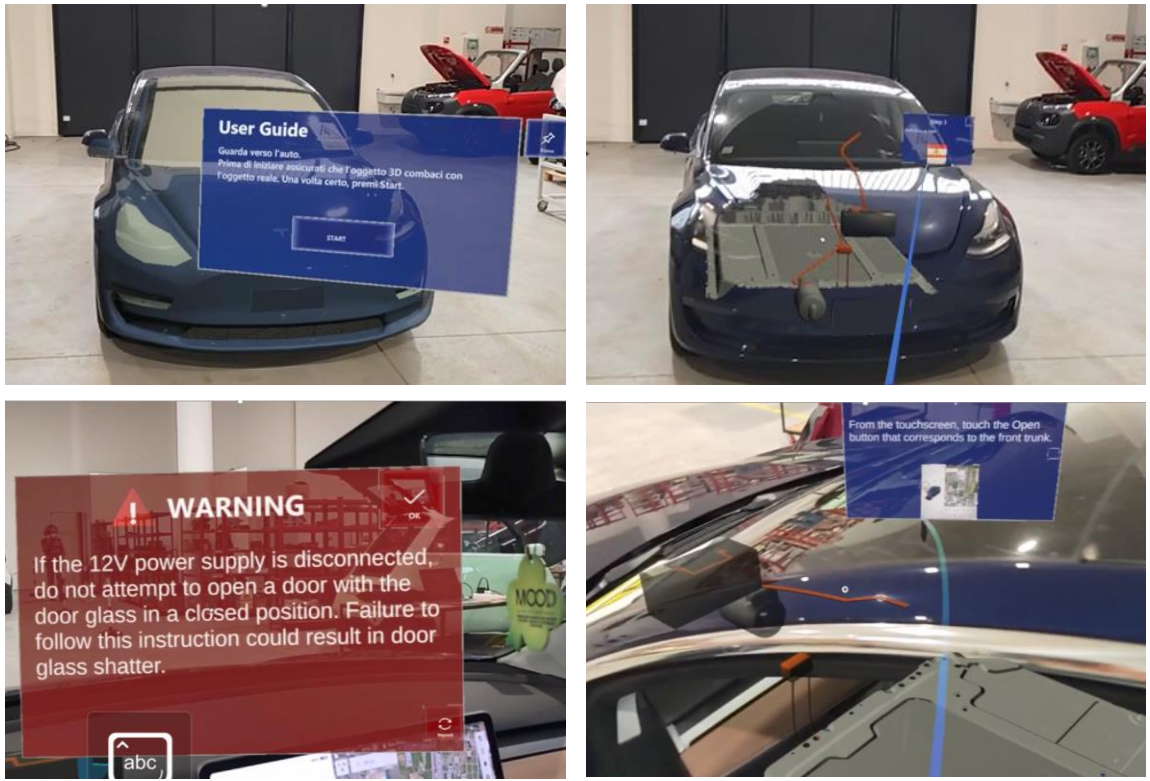
EXAMPLE PROJECT: SMART MAINTENANCE

CHALLENGE:

AUGMENTED REALITY SYSTEMS DEVELOPMENT (AUGMENTED OPERATOR)



Procedura Tesla Model 3 - AR

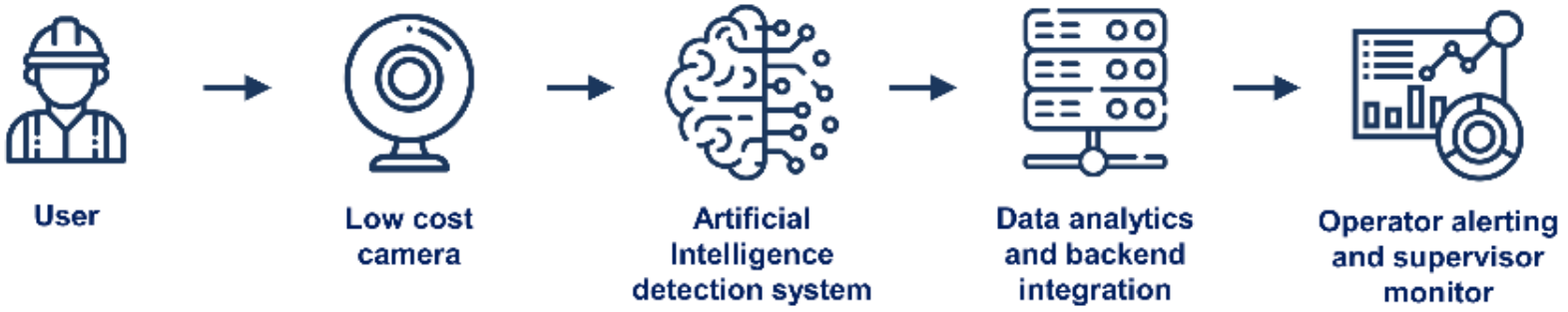
Using AI to train algorithm that recognizes objects in the scene

Flexible and easily re-trainable system for maintenance, assembly, training applications with augmented reality

EXAMPLE PROJECT: COLLABORATION WITH A LE ON AI

_CONSIDERING REAL PLANT ISSUE TOWARDS A LARGE-SCALE ADOPTION

- AI driven PPE wearing application
- User interfaces
- KPI assessment



ROVER SENZA PILOTA PER L'ISPEZIONE DI AMBIENTI CRITICI

webuild

csc webuild group

+CIM 4.0

MERLO

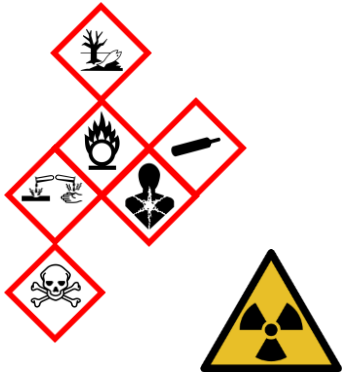
REPLY CONCEPT

iren

Obiettivi

Sviluppo un **sistema a guida remota innovativo**, finalizzato alla sostituzione dell'uomo **nell'esplorazione** di tratti **di cunicoli** o gallerie di cui non sono noti i **rischi per la salute dei lavoratori**

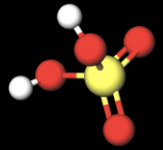
Raccolta dei parametri ambientali (temperatura, umidità, gas) per individuare le aree in cui gli operatori possono intervenire in sicurezza



Gas da monitorare:

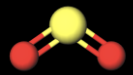
Monossido di carbonio

CO



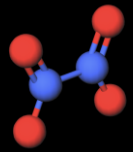
Acido solfidrico

H_2S



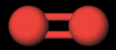
Anidride solforosa

SO_2



Biossido di azoto

NO_2

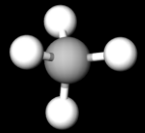


Ossigeno

O_2

Radon

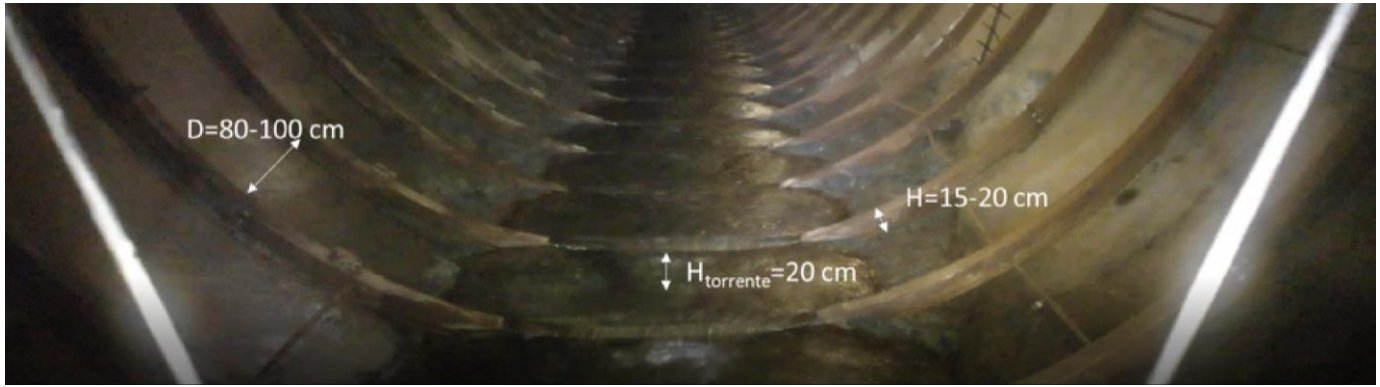
Rn

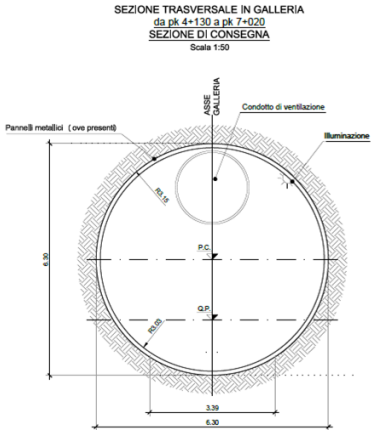


Gas infiammabili

CH_4

Definizione requisiti





Caratteristiche Del Sito	Requisiti Del Prototipo
Il cunicolo ha **diametro di circa 6m**	Larghezza max 1.600mm
Il **fondo** del cunicolo è **irregolare** Sono presenti **centine metalliche** per circa il 70% dello sviluppo longitudinale aventi altezza **di 15-20cm** dal fondo galleria e spaziatura longitudinale variabile	Ruote con pneumatici runflat, tassellatura specifica Hmin >25cm D ruote >60cm Passo circa 2m Trazione integrale
La **temperatura** all'interno del cunicolo è stimata in circa **40 gradi** con **elevato tasso di umidità (95%)**.	Batterie al Pb (no Li per maggior rischio incendio)
Vi sono copiose **venute d'acqua** che ruscellano sul fondo dello scavo per un'altezza almeno pari a quella delle centine	Protezione IP di centraline e cablaggi Preferibile batteria basso voltaggio (48V)
Il tratto da esplorare inizia a circa 4km dall'ingresso. La **tratta** da esplorare è **di circa 3000m complessivi**, da suddividere in sotto-tratte di massimo 500m ciascuna	Range comunicazione: 1.000m Capacità batterie >20kWh

+CIM 4.0

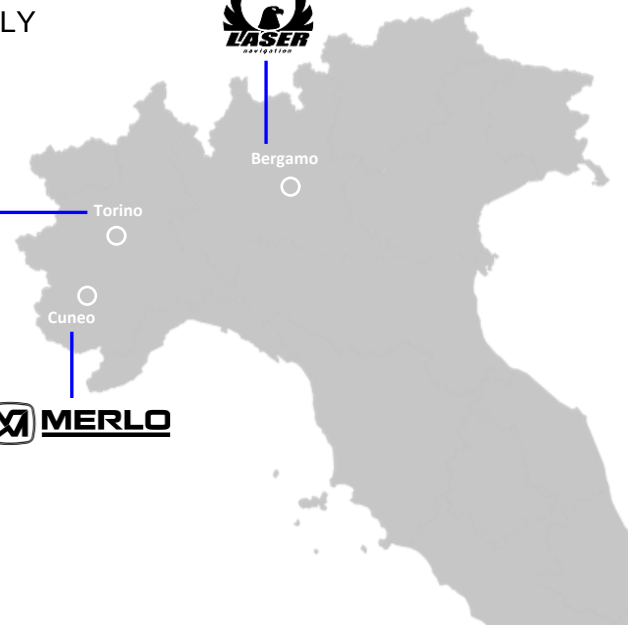
Project Management

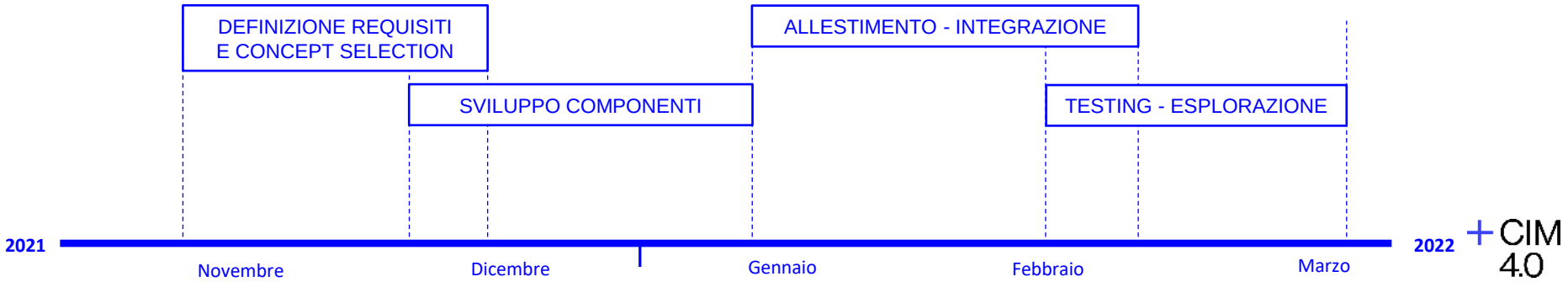
Challenge: 4 mesi da avvio a operatività

➔Concept selection basata su hard points
➔Selezione partner in base a competenze
➔Approccio modulare alla progettazione
➔Sviluppo in parallelo (*concurrent engineering*)
➔Sviluppo in laboratori remoti (collaborazione 4.0)
➔Pre-test in galleria per taratura sensori e comunicazione
➔Testing su simulacro di galleria

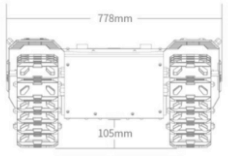
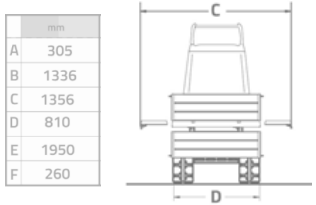
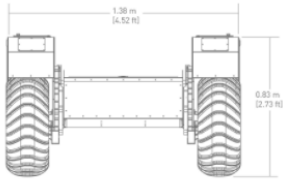
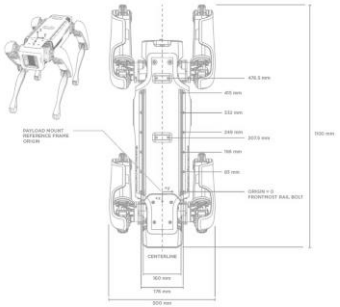
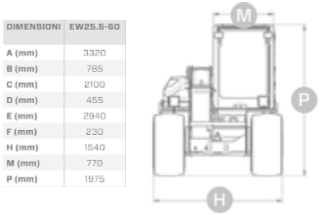
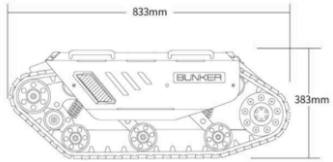
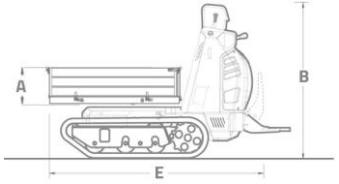
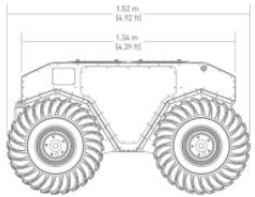
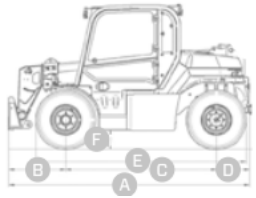
MADE IN ITALY

+CIM4.0
iren
REPLY CONCEPT
ThalesAlenia Space
LASER navigation
MERLO

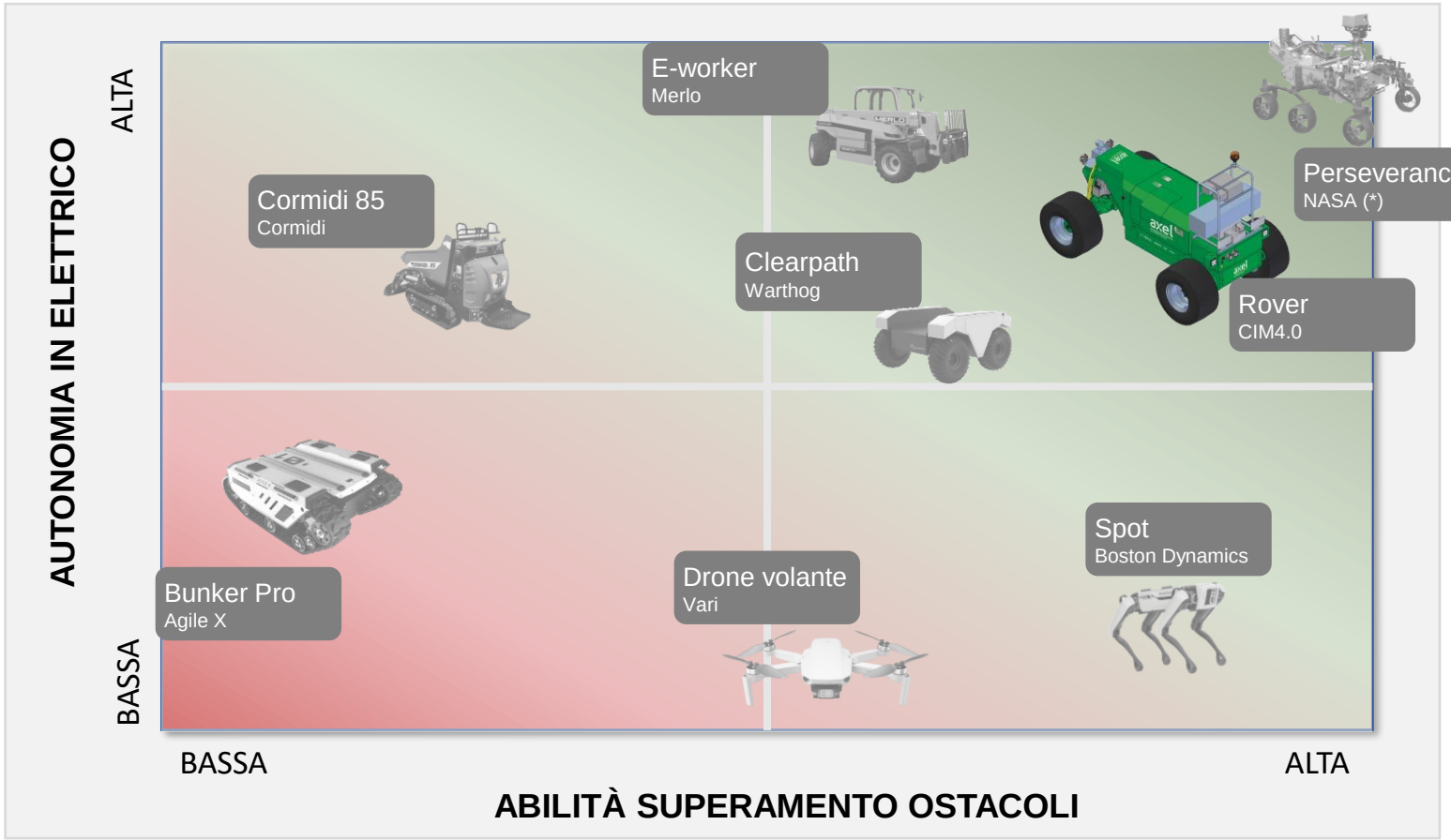




Concept selection

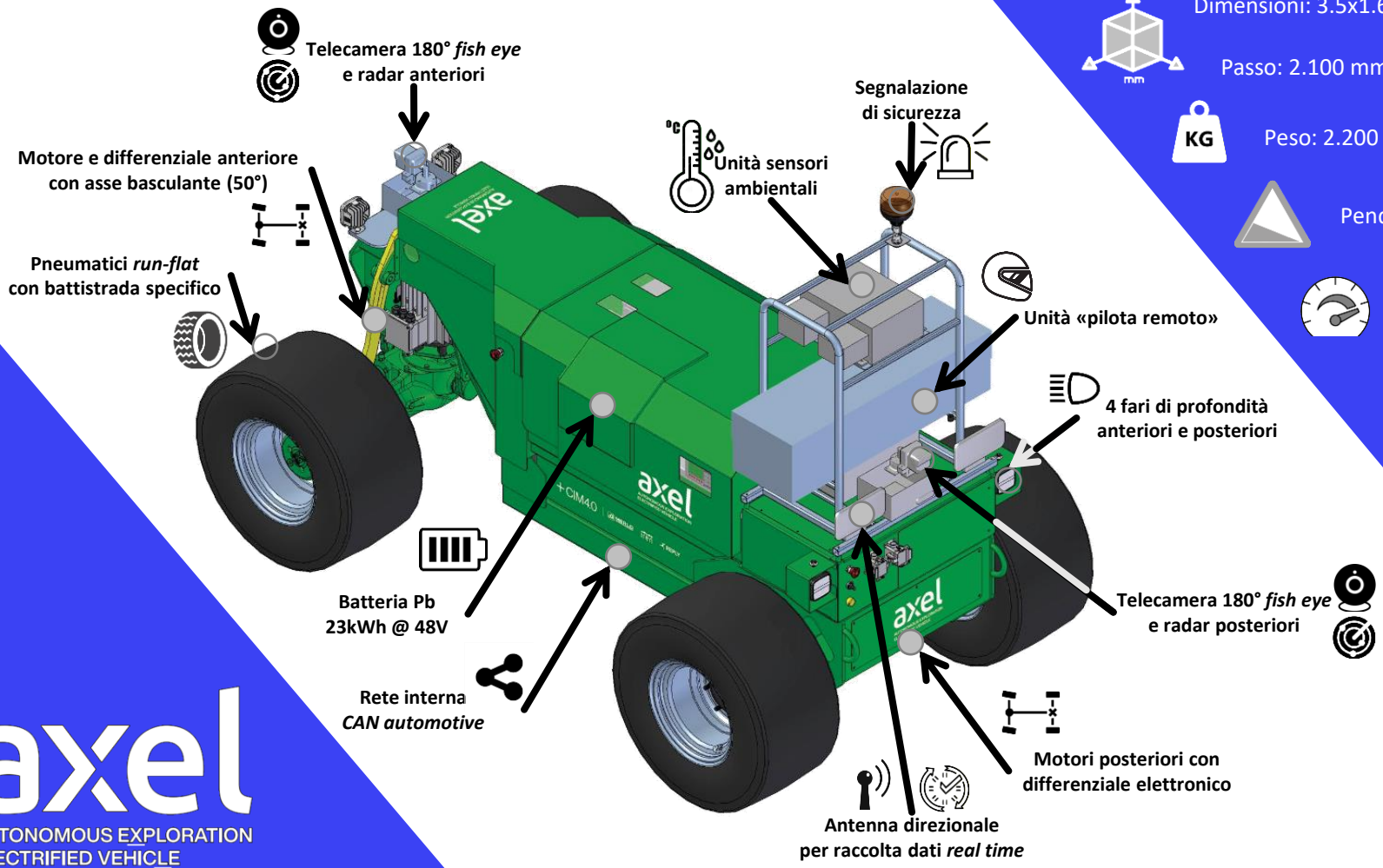
☑ Disponibile ☐ Non supera l'ostacolo ☐ Autonomia insufficiente	☑ Disponibile ☐ Non supera l'ostacolo ☑ Autonomia sufficiente	☐ Non disponibile ☑ Supera l'ostacolo ☑ Autonomia adeguata	☑ Disponibile ☐ Non supera l'ostacolo ☐ Autonomia insufficiente	☑ Disponibile ☑ Supera l'ostacolo ☑ Autonomia adeguata
				
 	 	 		
 	 	 		
Bunker Pro ① Agile X	**Cormidi 85** ② Cormidi	**Clearpath** ③ Warthog	**Spot** ④ Boston Dynamics	**E-worker** ⑤ Merlo

Concept selection



(*) Non disponibile

+CIM 4.0



Dimensioni: 3.5x1.6x1.8 m

Passo: 2.100 mm

Peso: 2.200 kg

Pendenza: 60%

Vmax: 5km/h

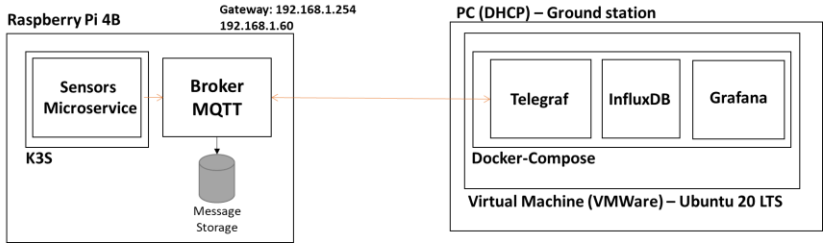
Guado: 25 cm

Protezione acqua IP55

axel
AUTONOMOUS EXPLORATION ELECTRIFIED VEHICLE

+CIM 4.0

Sviluppo ground station e piattaforma sensori



Architettura acquisizione dati

VERIFICHE SU CONTROLLO E SENSORI

- ➔ Angolo max di sterzata, centratura sterzo
- ➔ Conformità messaggi su rete CAN
- ➔ Trasferimento dati verso ground station
- ➔ Lettura dati ambientali – taratura in galleria e camera climatica
- ➔ Funzionamento telecomando

PROVE DI FAULT

- ➔ eliminazione alimentazione su controllo, perdita di connessione

+CIM 4.0

Il prototipo

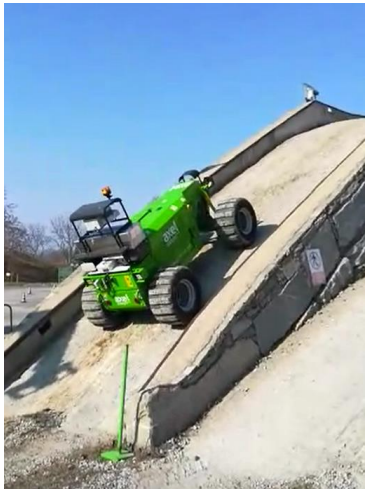
+CIM 4.0

Testing su proving ground

Superamento ostacolo su simulacro centine ad altezza e passo variabili
- ➔ Lunghezza percorso:12m
- ➔ Altezza: 14-20 cm
- ➔ Passo 80-100 cm
- ➔ Ripetizioni per sessione: >20 cicli

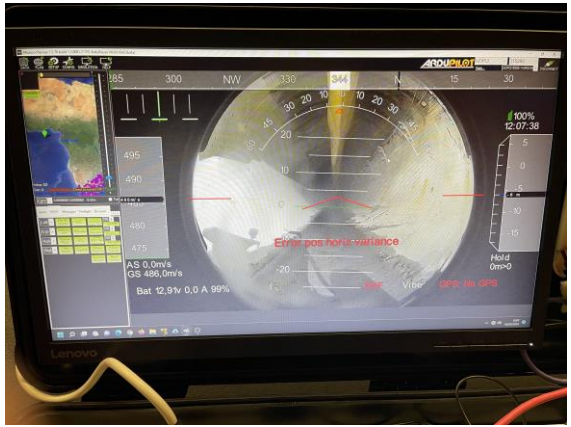
Accelerazione Zmax: <3g
Campo visivo delle telecamere
Pendenza max superabile: ~60%
Mantenimento posizione:
- ➔ con motore elettrico
- ➔ con freno di stazionamento
- ➔ spunto in salita

Prove durata batteria: >6km su fondo sconnesso



+CIM 4.0

Esplorazione in galleria



+CIM 4.0

[Axel, il rover al lavoro nel tunnel della Tav (rainews.it)]

webuild

csc webuild group

+CIM 4.0

MERLO

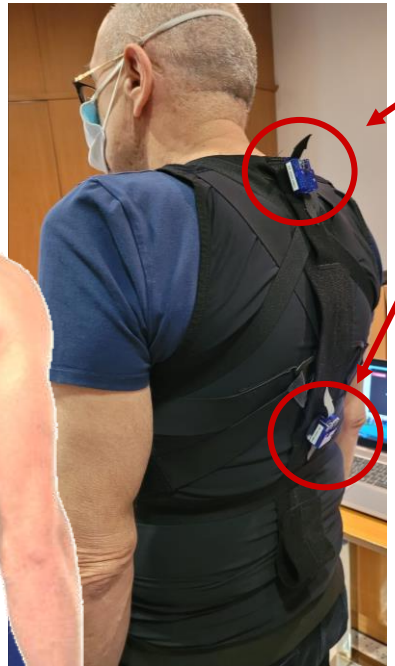
REPLY CONCEPT

iren

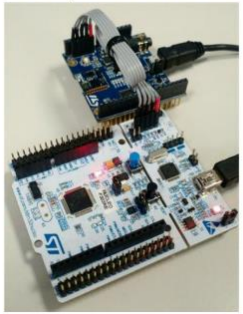
EXAMPLE PROJECT: PROGETTO POC CORSETTO IOT K1

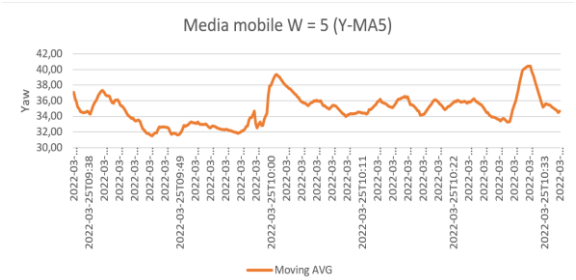
CHALLENGE:

TO TRANSFORM AN EXISTING PRODUCT INTO SMART CONNECTED ONE



Cradle eXpansion SWD connection

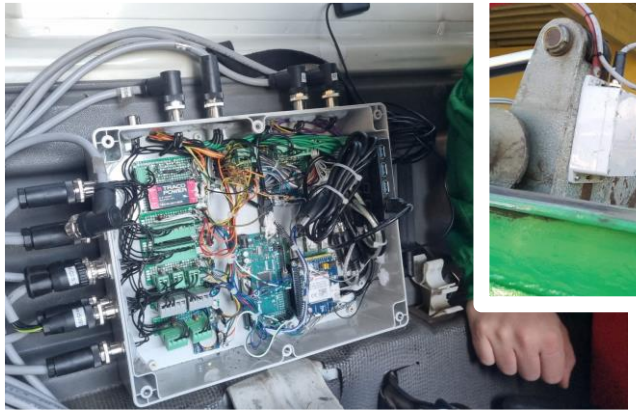




PROGETTO WASTE COLLECTION ANALYTICS

SEA, CIM4.0, AIZOON

- **Implementazione prototipo Predictive**
  - Definizione variabili, architettura e algoritmo di riferimento
  - Implementazione architettura HW
  - Implementazione architettura SW con interfaccia raccolta dati
  - Sviluppo algoritmo di machine learning
  - Analisi risultati algoritmo predizione comportamenti componenti
- **Scatola nera virtuale**
  - Definizione variabili di riferimento e modello di valutazione
  - Sviluppo SW
  - Analisi risultati
- **Ottimizzazione percorsi**
  - Definizione variabili di riferimento e modello di valutazione
  - Verifica database statistico
  - Sviluppo algoritmo artificial intelligence
  - Analisi risultati algoritmo ottimizzazione percorsi



CIM 4.0

EXAMPLE PROJECT: EFFICENCY THROUGH MACHINE LEARNING

CHALLENGE:
PREDICT THE QUALITY AND MAINTENANCE OF MACHINERY
PARTNER:
CIM40, SKF, ALTEN

Development of a system that, through **machine learning**, can predict the quality and maintenance of machinery, correlating all the production data available continuously with the result of the process. **Today in use in an SKF factory in Italy!**

STRUMENTI CONSOLIDATI DI RACCLTA DATI

DIAGNOTICA REMOTA

FUNDED PRJECT (EU)
ECOFACT

ECOFACT

Demonstration Cases

FOOD

AUTOMOTIVE

BEVERAGE

WHITE GOODS

Enabling manufacturing industries to optimize the energy performance of their production systems in line with their relevant production constraints (time and resources)

Introducing a novel green marketing approach through the concept of energy and environmental signature of the manufactured products from a life-cycle

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement no. 958373.

www.ecofact-project.eu

+CIM 4.0

Co-funded by the European Union

EMOTOR-VTB

Design for recycling

- Evaluate recycled e-motor performance
- Encourage e-motor usage with recycled parts
- Redesign e-motor for sustainability

Supply Chain

- Automotive manufacturers
- Magnet manufacturers
- Recycling and dismantling companies

REPLY SANTER · DAYCO · Politecnico di Torino · +CIM4.0 · IMAGNETI LJUBLJANA, d.d. · MONDRAGON UNIBERTSITATEA · EMOTOR VTB

GreenSME EU PROJECT

_Driving manufacturing SME transformation towards green, digital and social sustainability

- SME capacity for advanced technologies adoption to become competitive and **climate neutral**
- Support SMEs to develop a **strategic approach to sustainability** (SME sustainability Roadmap)
- A knowledge sharing community that gathers manufacturing ecosystem stakeholders
- GreenSME sustainability assessment tool and **Advanced Sustainability Action plan (ASAP)** definition methodology
- SME Sustainable pathway and good practices white book

To help set up the tool, here is the link to fill in the questionnaire

Project Information

GreenSME
Grant agreement ID: 101058613

DOI
10.3030/101058613

Start date
1 June 2022

End date
31 May 2025

Funded under
Digital, Industry and Space

Total cost
€ 4 897 921,25

EU contribution
€ 4 897 920

Coordinated by
FUNDACION TEKNIKER
Spain

CTE NEXT (CASA DELLE TECNOLOGIE EMERGENTI)

_a widespread technology transfer center on emerging technologies leveraging to 5G

- A generative environment for **start-ups** and **SMEs**
- CTE NEXT **provides places** and **assets** for **applied research** and **testing** will create a multi-service technological infrastructure that is usable on-demand for **development and demonstration needs** of innovative solutions

STRATEGIC SECTORS

Smart Road

Urban Air Mobility

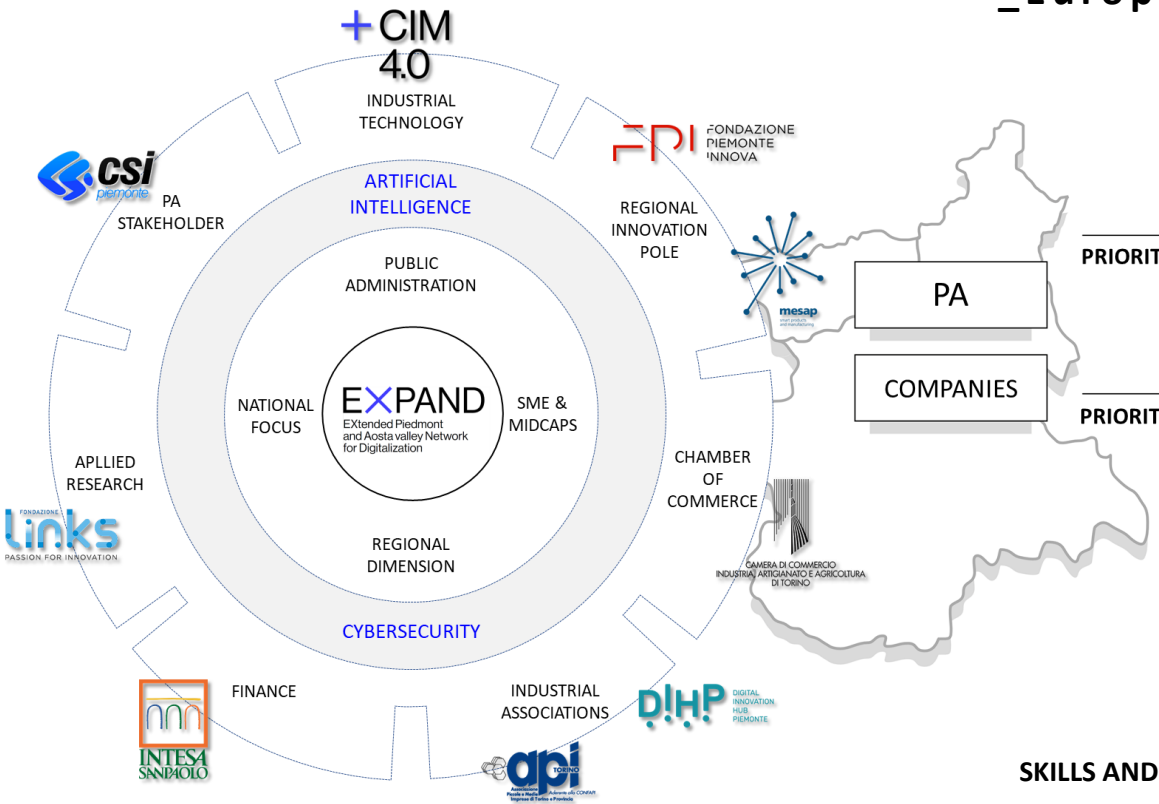
Industry 4.0

Innovative Urban Services

+CIM 4.0

EXPAND EXtended Piedmont and Aosta valley Network for Digitalization

_European Digital Innovation Hub



	SECTOR	APPLICATION AREA	CORE TECHNOLOGY
PRIORITY 1	Smart factory & Made In	Aerospace Automotive Manufacturing systems Textile Agrifood & smart farming	Artificial intelligence Cyber security
PRIORITY 2	Smart & Clean	Energy & environmental sustainability Citizen services Smart communities Circular economy	

TEST BEFORE INVEST

SKILLS AND TRAINING **INVESTMENTS SUPPORT**

INNOVATION ECOSYSTEM

HORIZON EUROPE DIGITAL-2021-EDIH-01

+CIM 4.0

SUSTAINABLE MOBILITY FLAGSHIP PROJECT

_Turin & Piedmont at the forefront of new urban mobility and decarbonisation

ROAD

RAIL

WATERBORNE

POWERTRAIN
INTELLIGENT AND EFFICIENT

CONNECTIVITY
AUTONOMUS DRIVING

SUPPLY CHAIN
CIRCULAR ECONOMY

SERVICES
FOR THE MOBILITY

MOBILITY
DESIGN

SMTC
Sustainable Mobility Technology Center

- To create proof of concept of mobility, integrating technical / technological aspects
- To demonstrate applicability for product supply chains
- To consider the life cycle of products (reduce, repair, reuse, recycle)
- To accelerate development and / or stimulate the interest of new businesses

Università degli Studi di Torino · Politecnico di Torino · +COMPETENCE INDUSTRY MANUFACTURING 4.0 · api TORINO · UNIONE INDUSTRIALE TORINO · CITTA' DI TORINO · CAMERA DI COMMERCIO INDUSTRIA ARTIGIANATO E AGRICOLTURA DI TORINO

AVL · ADLER PELZER GROUP · ALSTOM · AZIMUT · CNH INDUSTRIAL · Cornaglia · DAYCO · DENSO · EDISON · ELDOR CORPORATION · Eni

Ferrari · FEV · Italgas · iren · MARELLI · MERLO · PUNCH Torino · REPLY · Sabelt · STELLANTIS · TIM · Westport Fuel Systems · +CIM 4.0

+ COMPETENCE
INDUSTRY
MANUFACTURING
4.0

Grazie per l’attenzione!