La transizione industriale nel quadro del POR FESR

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1. PIEMONTE IN INDUSTRIAL TRANSITION

2. THE ERDF PROGRAMME CURRENT POLICIES

3. PERSPECTIVES

PIEMONTE IN INDUSTRIAL

TRANSITION

Strong **R&D and industrial competences** and deeply rooted value chains (but high number of **SMEs not innovating** and **insufficient level of collaboration** of SMEs with education and research organizations)

Employment in medium/high tech technology-intensive manufacturing above EU average (…but also **high rate of employment potentially challenged by industrial change**)
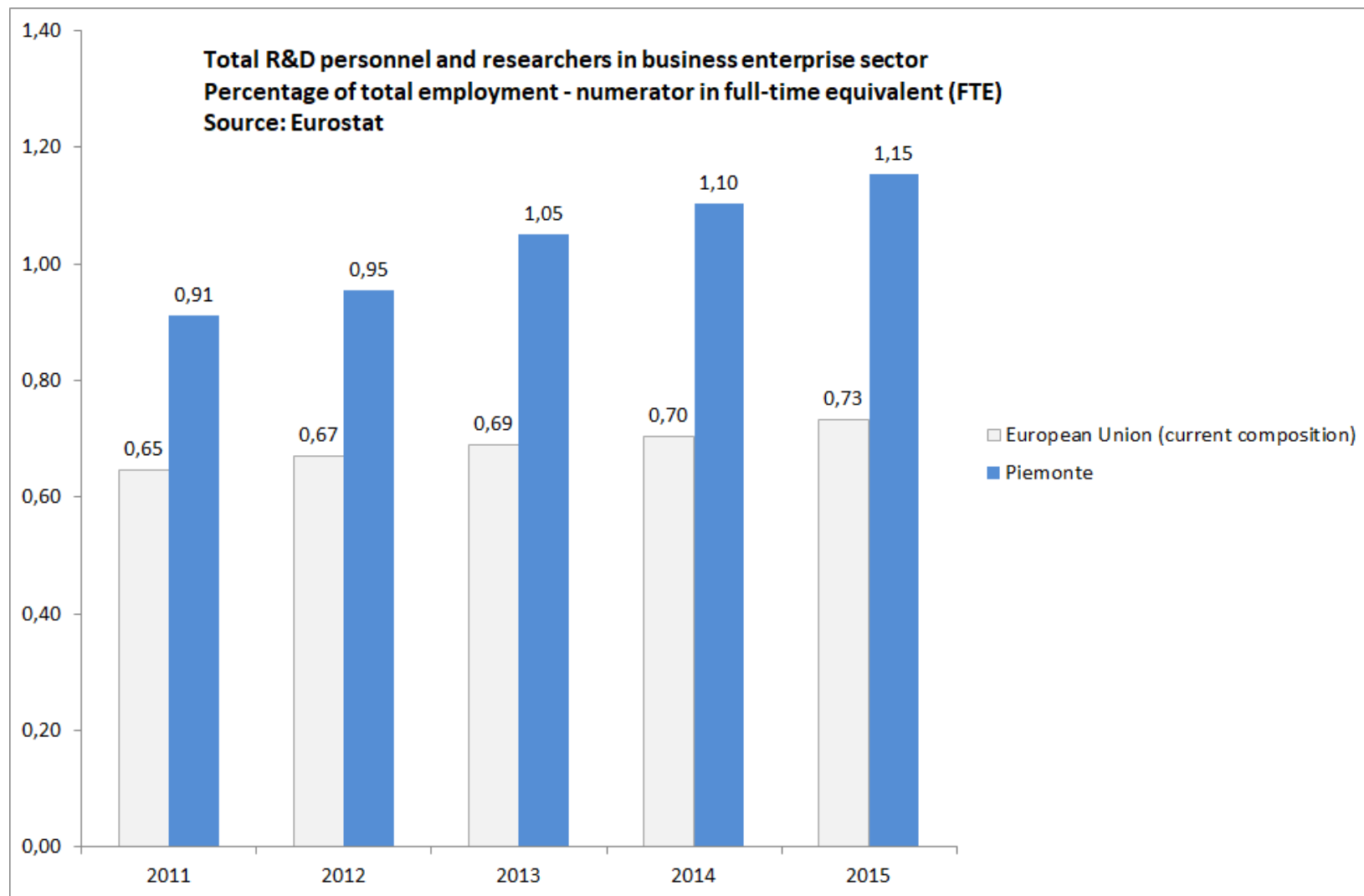
- Industry 4.0 can have heavy **impact on jobs**, esp. Artificial Intelligence (impact on a wide range of intermediate job profiles) and Advanced Robotics (impact on jobs in manufacturing)

- **Servitization** as a potentially disruptive trend for a manufacturing region like Piemonte

High rate of **youth unemployment** (with polarization between top and very low education levels), and high rate of **aged workers with low qualifications**
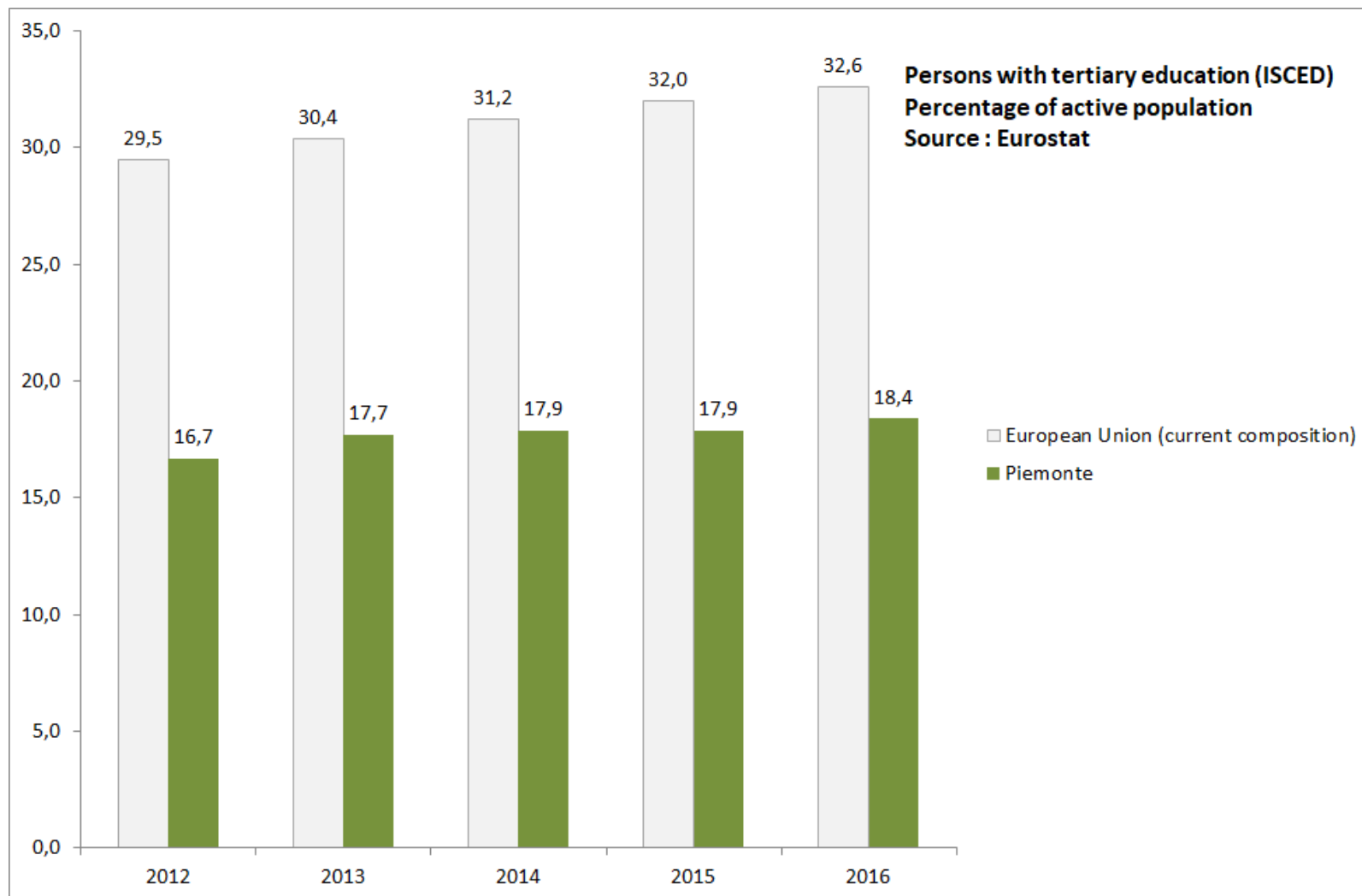
High level of education and training offer, but **tertiary educated people below EU average**

General issue related to **ageing and generational replacement, demographic decline, urbanisation**
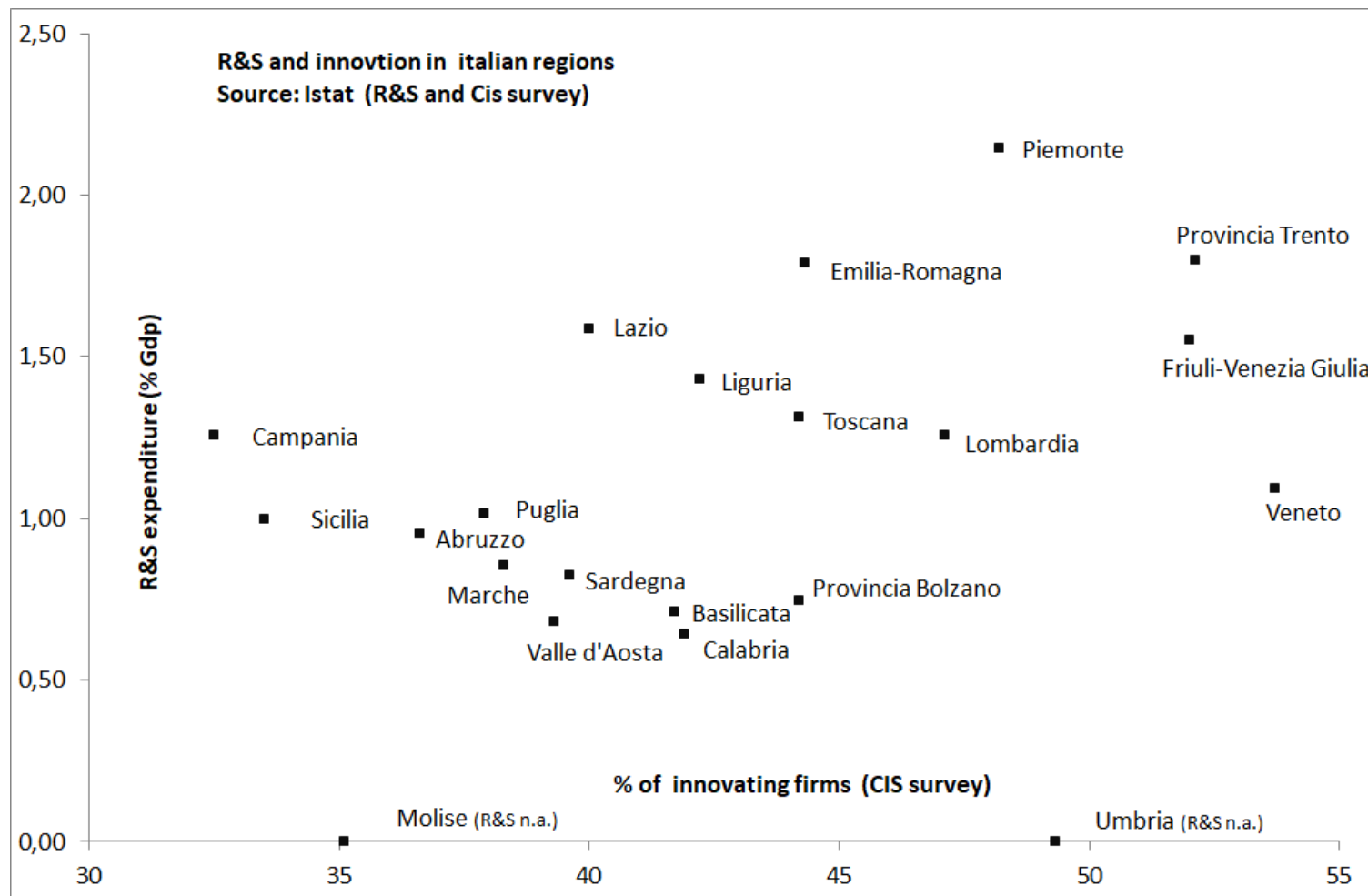
High level of R&D (employment and investment) in business sectors

Total R&D personnel and researchers in business enterprise sector
Percentage of total employment - numerator in full-time equivalent (FTE)
Source: Eurostat

Year	European Union (current composition)	Piemonte
2011	0,65	0,91
2012	0,67	0,95
2013	0,69	1,05
2014	0,70	1,10
2015	0,73	1,15

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Below average education attainment

R&D engagement and innovation diffusion

R&S and innovtion in italian regions
Source: Istat (R&S and Cis survey)

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Negative balance births/deaths
of enterprises (over 2008-2018 period)

Iscrizioni e Cessazioni(*)
Dati al I trimestre di ogni anno

(*) Al netto delle cancellazioni d'ufficio effettuate nel periodo
Fonte: elaborazione Unioncamere Piemonte su dati InfoCamere

Start ups:
Piemonte 5th Region
but very low
density quotient

Torino 3rd Province
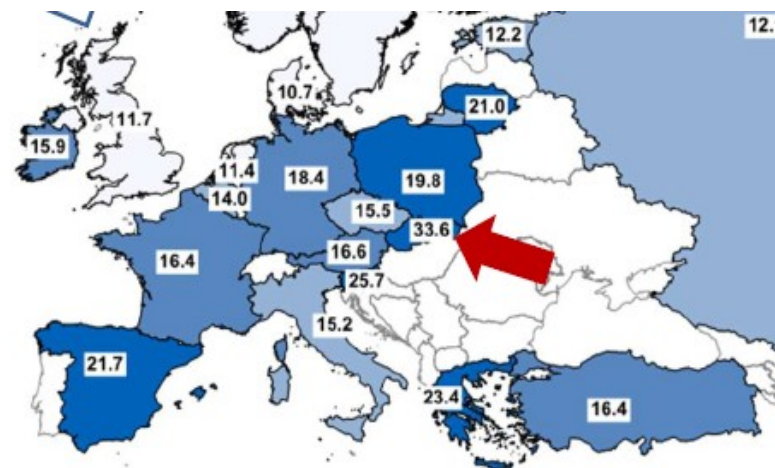(urban polarization)

Innovative SMEs:
Piemonte 2nd Region

Fonte: Rapporto Comitato Torino Finanza, 2018

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JOBS AT RISK OF
AUTOMATION

Evidence across European regions

David Bartolini, Senior Economist LEED Programme

2018

OECD
BETTER POLICIES FOR BETTER LIVES

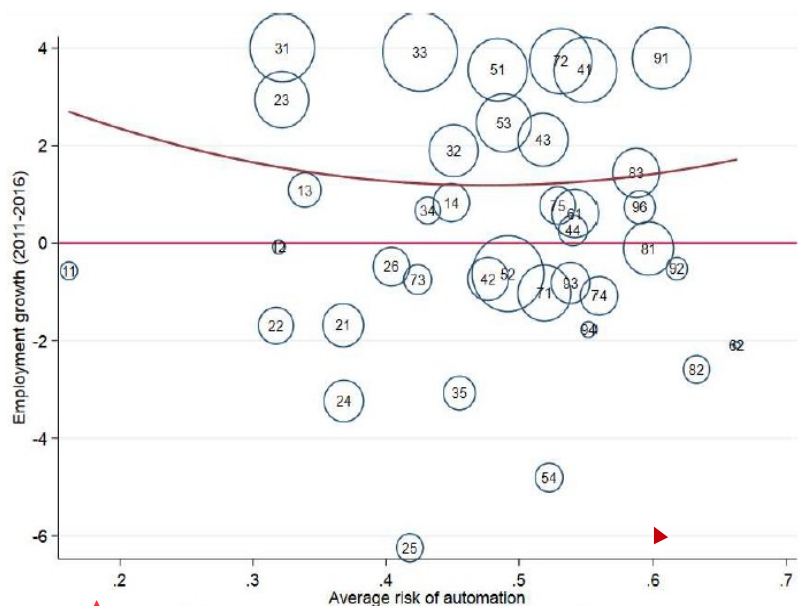**Impact of automation
Italy: 15% of workers at risk
(18% in Germany, 16% in France)**

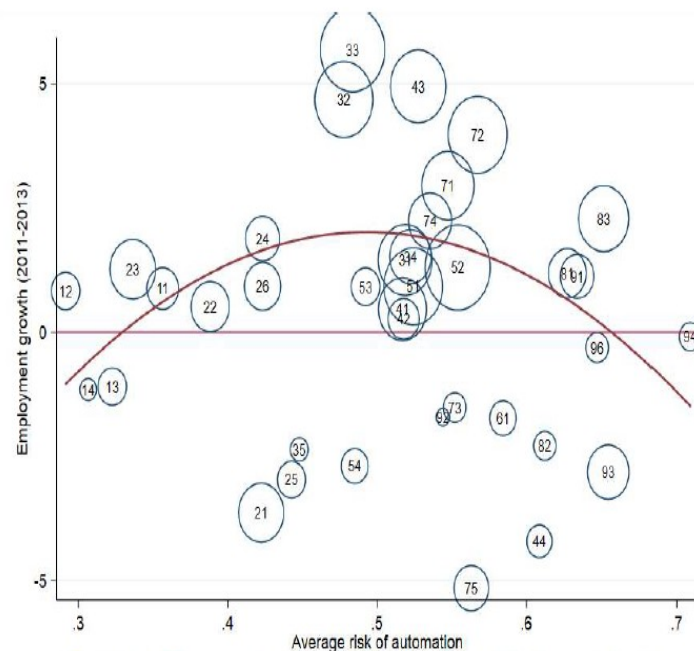**Piemonte is above national
average (16%)**

Piedmont

Saxony

23: teaching professionals

31-33: Technicians and associate professionals

51-53: service and sales workers

82: Assemblers
83: drivers and mobile plant operators

91: Cleaners and helpers
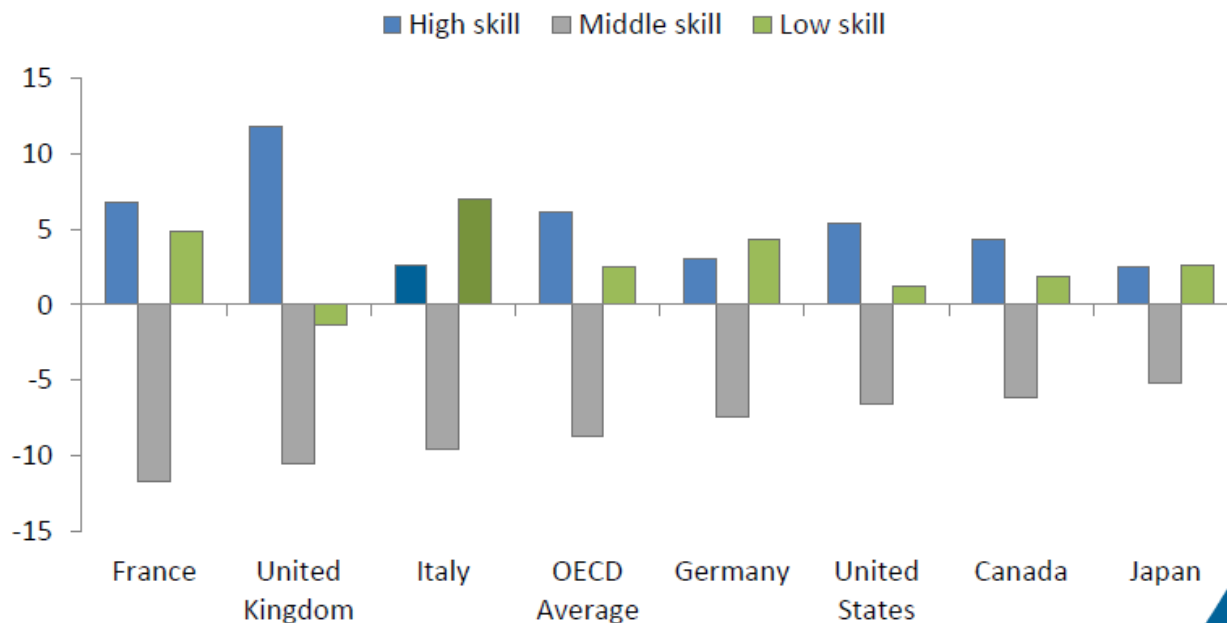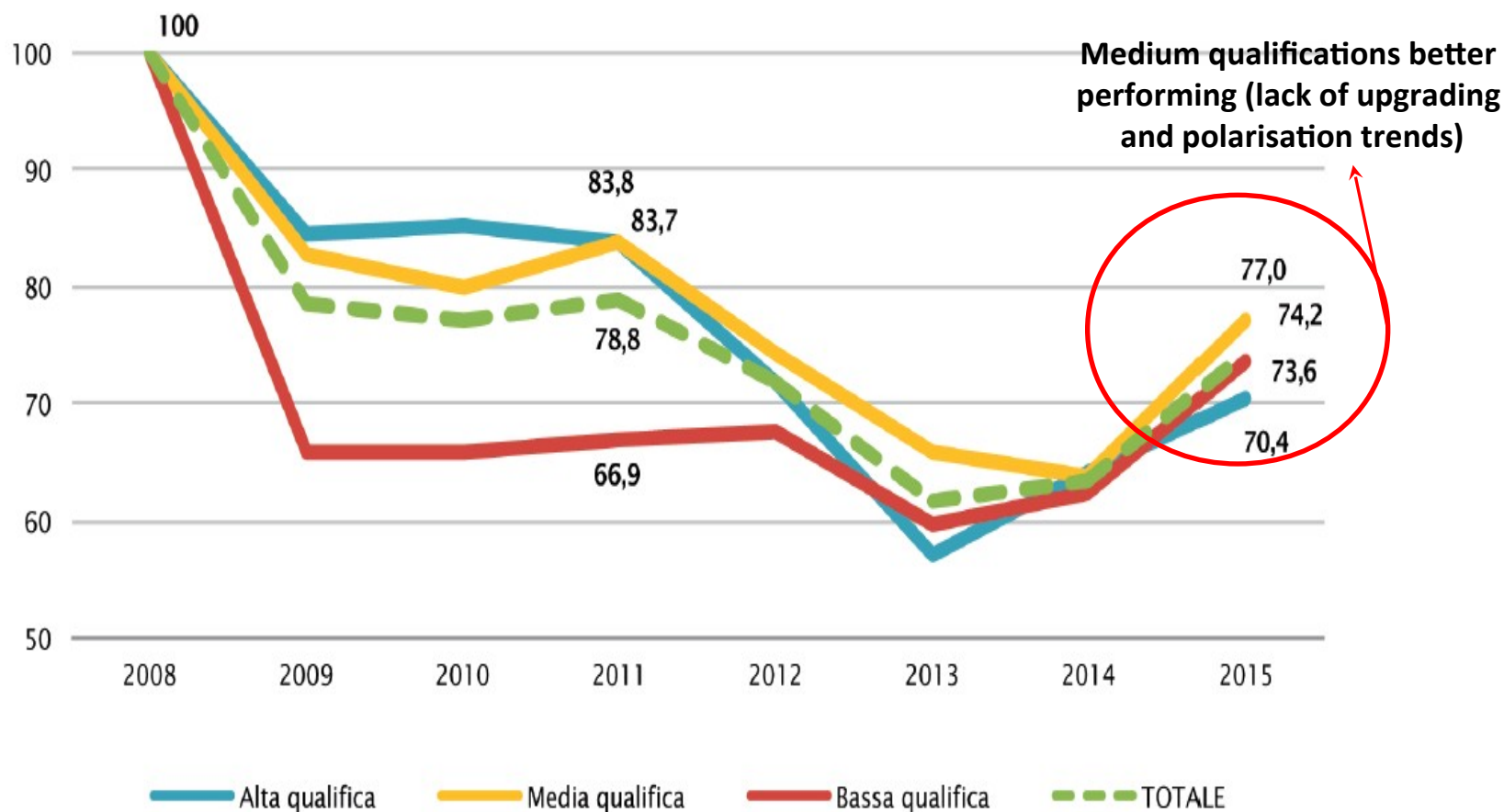
Jobs growing

Jobs at grow. risk

A key impact: job polarisation

Labour market polarisation, selected OECD countries, 1995-2015

Percentage point change in share of total employment

■ High skill   ■ Middle skill   ■ Low skill

Relative trend of FTE jobs by qualification level in Piedmont 2008-15 (2008=100)

Fonte: dati SILP, elaborazione ORML Regione Piemonte e IRES Piemonte

New policy models to keep pace of radical changes of economy/society; better integration of labour/training and innovation/growth policies

Increasing **SMEs innovation capacity**, collaboration with research organizations and use of research infrastructures

Invest in **competences**: top level competences (e.g. AI) and skills updating of low qualified workers

Create a **favourable ecosystem**: increase networking and collaboration attitude and stimulate open innovation processes, build on territorial assets to attract investors and support scaling up

Support integration of regional R&D and industrial specializations in European and global **value chains**

What supports catching up and employment growth

- **Diversification**

  – Specialised regions more productive, diversified ones grow faster
  Manufacturing important, but tradable services are gaining

- **Local strengths**

  – Linking investment in skills, FDI, and knowledge from the supply chain
  Taking advantage of opportunities for territorial branding

- **Well-functioning cities**

  – Home to knowledge-intensive (traded) sectors
  Larger markets can support economic diversity and dynamism
  Agglomeration economies (beyond borders)

- **Tradable sectors** (that could be traded)

  – Face competition even if they are not traded
  Might overcome market size and institutional constraints
  Avoid economic imbalances from excessive expansion of non-tradables

- **Integration** across actors and policies

  – Skills development for place-based needs is a shared responsibility
  But skills policies might not be enough: trade shocks vs automation

THE ERDF PROGRAMME
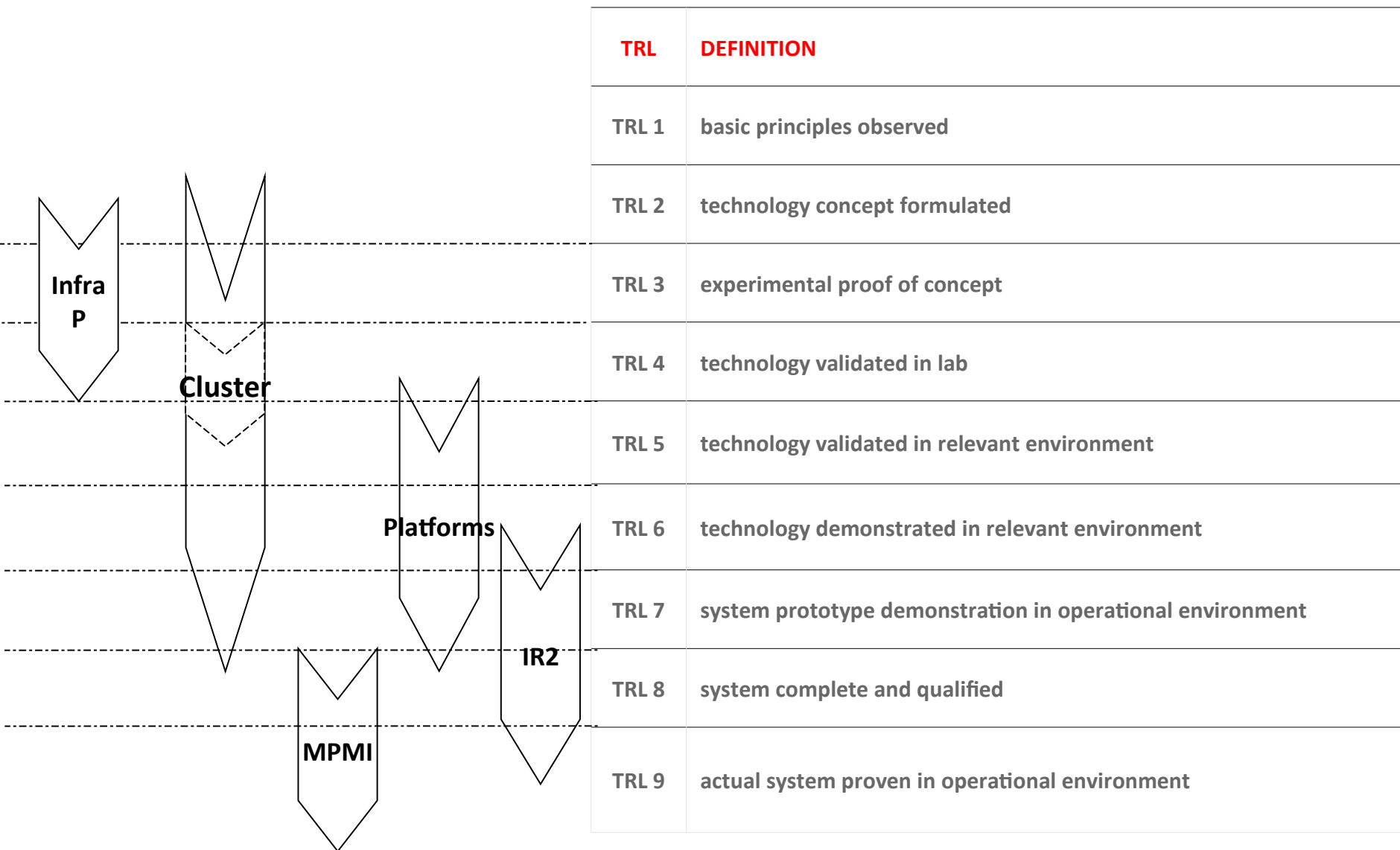
CURRENT POLICIES

Focus on S3 innovation areas and on horizontal trajectories (Smart and Resource efficiency)

Different schemes covering different TRLs

Technology Transfer and collaborative R&D, at regional and interregional level

Support to SMEs innovation processes

Integration of policies

Infra P

Cluster

Platforms

IR2

MPMI

TRL	DEFINITION
TRL 1	basic principles observed
TRL 2	technology concept formulated
TRL 3	experimental proof of concept
TRL 4	technology validated in lab
TRL 5	technology validated in relevant environment
TRL 6	technology demonstrated in relevant environment
TRL 7	system prototype demonstration in operational environment
TRL 8	system complete and qualified
TRL 9	actual system proven in operational environment

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Technology Platforms (large collaborative projects on relevant areas >250 partners):

 Smart Factory: 8 projects supported; total investments 78m€, ERDF contribution 34m€

 Life Sciences: 5 projects supported; total investments 38,7m€, ERDF contribution 19,3m€

 Bioeconomy: 11 projects submitted, under evaluation

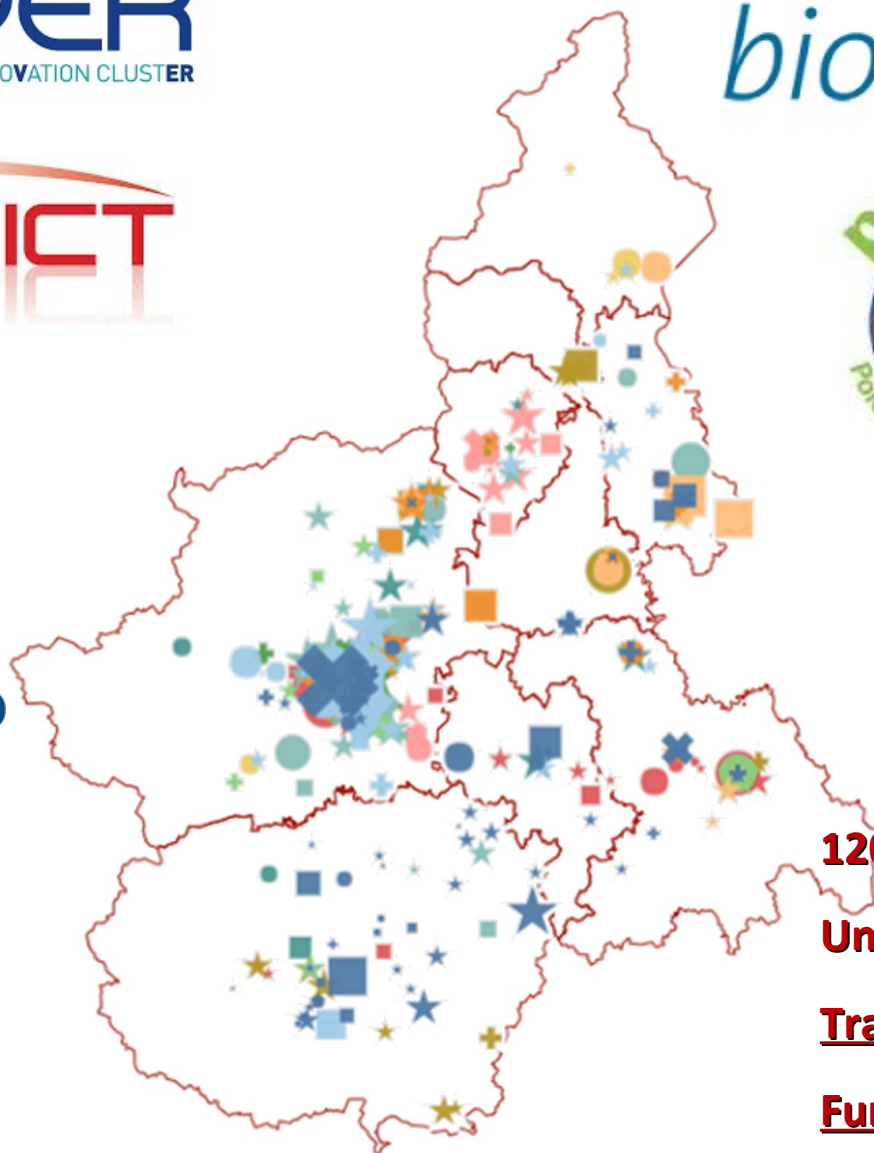**IR2 - Industrialization of R&D results** (focus on large enterprises and investments): 36 projects supported (out of 65 proposed); total R&D investments in Piemonte 300m€, total industrial investment committed 1b€, ERDF contribution 88m€

Research Infrastructures: 13 RI supported (+6 from regional funds), total investments 40m€ (+15m€), ERDF contribution 19,5m€; voucher scheme to be launched

ERA-NET – Manunet, Incomera and EME schemes: 23 projects (with 39 regional partners), 5,2m€ ERDF contribution

Scheme to support **Start ups** to be launched soon (10m€ allocation)

… and **INNOVATION CLUSTERS**

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CLEVER
CLEANTECH & ENERGY INNOVATION CLUSTER

POLOICT

mesap

POLO AGRIF
REGIONE PIEMONTE

bioPmed

po.in.tex
Polo Innovazione Tessile

CGreen
GREEN CHEMISTRY
AND ADVANCED MATERIALS

1200 enterprises (mainly SMEs)

Universities and RTO

Training institutions

Funding entities (banks)

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2007-2013 period: 12 innovation clusters launched in 2009 (first region in Italy)

2014-2020: revision to better match S3 (currently **7 clusters**)

Mission of cluster organizations:

 expand the membership base

 provide high quality innovation **services** to cluster members

 promote **partnerships** at national and international levels

 Elaborate **research agendas** and support the regional policy maker with updated data on technology trends and cluster evolution

 helping cluster members to **access regional public funding** for collaborative R&I projects

Total **fund allocation** 2014-2020: 110m€ (including 5,65m€ allocated to direct operational support to cluster organizations)

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Key figures on 2014 - 2020 Calls
(Linea A – Associated Members + Linea B – Potential new members)

Projects supported: **106**

Companies supported: **285**

Total investments: **68,5m€** (out of which for research contracts: **11m€**)

Regional ERDF contribution: **33,25m€**

RTOs not eligible but
R&D contract mandatory
(up to 20%)

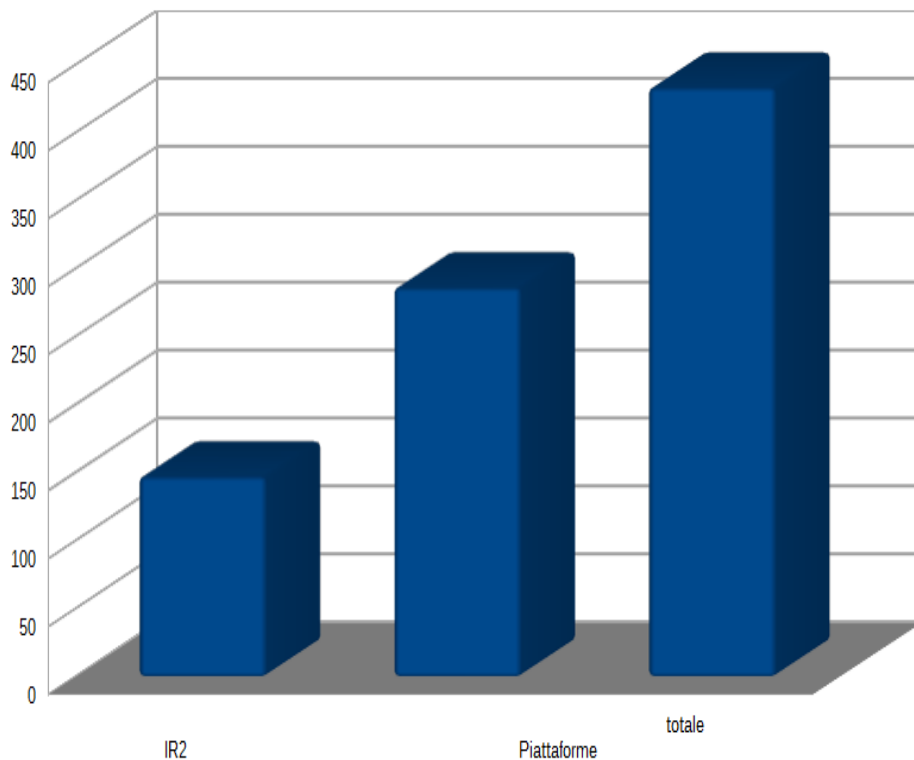**Interclusters projects: 25** (considering only those officially declared)

Classification of projects per transversal thematic areas:

Eco-innovation (circular economy and resource efficiency): **36**

Industry 4.0: 54

Health and wellness: 16

Apprenticeship on higher education and research (ESF scheme)

Mandarory on IR2 and Technology Platforms ERDF schemes

Total number of apprentices as of call obligations: 471

Successful beyond call obligations
(Merlo +20%, ITT +40%, Comau +40%, Denso +50%, FCA +100%, Michelin +150%)

Scheme applied also to call PRISM-E (SMEs)

PERSPECTIVES

Data, insights and lessons learnt of Pilot Action as inputs for relevant regional R&D and development initiatives:

Manufacturing Technology Competence Centre

Integration of R&D services, demonstration, education, reskilling, etc. for advanced manufacturing

Park for Health, Research and Innovation (R&D Programme)

New product and services development for health, ageing, de-hospitalisation, ...

Dossier on "Area di crisi complessa"

A national (Ministry of Economic Development) programme for SMEs and local value chain alignment to new industrial paradigm

Challenge: to maintain, reinforce, maturing and scale up of innovation clusters

Proposal of an experimental call to test a new approach in supporting clusters in view of the next programming period (under negotiation with DG Regio)

Key features:

Strengthening clusters role as system integrator

Rewarding performances on assigned targets

**Industrial transition challenges targeted
(e.g. digitalisation, circular economy, skills)**

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Opening S3: from sectors to **transversal drivers**

Societal challenges as innovation drivers

Strengthening innovation **ecosystem**

"Internationalize" S3: **interregional value chains**

Ensure **continuity** of regional support mechanisms

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