Ministero dello Sviluppo Economico

Presidenza del Consiglio dei Ministri – Palazzo Chigi

MEF Ministero dell'Economia e delle Finanze

ITALY'S NATIONAL PLAN IMPRESA 4.0

Results from 2017 – Actions for 2018

MACROECONOMIC CONTEXT AND FINANCE FOR GROWTH

Macroeconomic trends

GDP
(€ mln; chain-linked volumes, ref. year 2010)

Impact of the crisis	**- 9,5%**
2017 upswing	**+ 4,3%**

Industrial production[1]
(Average for 2010 = 100)

Impact of the crisis	**- 26,1%**
2017 upswing	**+ 8,0%**

Employment
(in thousands of employees)

Impact of the crisis	**- 1,057,000**
2017 upswing	**+ 953,000**

1. non-seasonally-adjusted data

Source: ISTAT; analysis: MISE

Finance for growth

ACE

Purpose > increase companies' capitalisation

Results > **302,700 limited companies** used the tax credit in 2015, totalling €18.9 bn (claimable ACE)

Individual Saving Plans (Piani Individuali di Risparmio – PIR)

Purpose -> spur households' investments in equity of SMEs

Results > over **€10m** collected during the first year; sharp increase in trade on Italian AIM (2017), i.e. **+530%,** daily average grew from €1.2 to €7.9m

Going public

Purpose > encourage firms to enter capital markets

Results > around **40 companies** decided to go public in 2017, more than 80 are expected to do so in 2018. Exchanges of shares registered a daily average of around **€2.5bn** in 2017

Innovative SMEs

Purpose > sustain innovative firms in their scale-up phase through incentives and ad-hoc measures

Results > **728 registered innovative SMEs** at present. The group is steadily and rapidly growing

Patent Box

Purpose > reward «knowledge-intensive» firms through a deduction on taxable income deriving from IP use

Results > **435 agreements**, of which 431 in 2017; tax incentive applied on **€320m**, for **620 firms**

Minibonds and crowdfunding

Purpose > provide companies with more alternative finance channels

Results > **≈€850m** collected in 2017: *crowdinvesting* (€41.4m), *minibonds* (€810m)

Measures for the financing and growth of enterprises

PIR – An incentive to go public and to finance unlisted companies

- Channel resources collected by PIR («individual saving plans») towards **firms that are going to become listed on the stock market** and **unlisted companies,** by creating securities perceived as adequate by market operators.

Alternative finance

- **Keep on strenghtening** different sources of financing, as alternatives to bank loans
- **Securitisations –** enhance the usage of **safe and transparent derivative securities**
- **Simplify existing tools** such as *crowdfunding* and *peer-to-peer lending*
- **Sustain the development of alternative finance**, such as *fintech* services. An official roundtable has been launched to enhance the growth of the firms in this sector

Governance

- New initiatives aimed at increasing **transparency** in firm management, **improving quality of governance** and **cultural change**, **especially in SMEs**, also by acquiring new financial competencies and developing new relationships with investors

IMPRESA 4.0
RESULTS FROM 2017

Impresa 4.0: objectives for 2017 - 2020

Innovative Investments

+ €10bn
private investments grew from 80 to 90 €bn between 2017 and 2018

+ €11.3bn
Private R&D&I expenses focusing on I4.0 technologies for 2017-2020

+ €2.6bn
private early-stage investments mobilised for 2017 – 2020

Skills

200,000 university students,

3,000 managers specialised in I4.0-related fields

+100% students enrolled in Technical high schools specialised in I4.0-related fields

≈1,400 PhDs on I4.0 topics

National Competence Centres

Enabling infrastructure

100%
of Italian companies with a 30Mbps connection before 2020

50%
of Italian companies with a 100Mbps connection before 2020

6 consortia
on IoT standards,
+ institutional roundtables starting from 2017

Other support measures

+ €1bn
Refinacing and reform of the SME Guarantee Fund

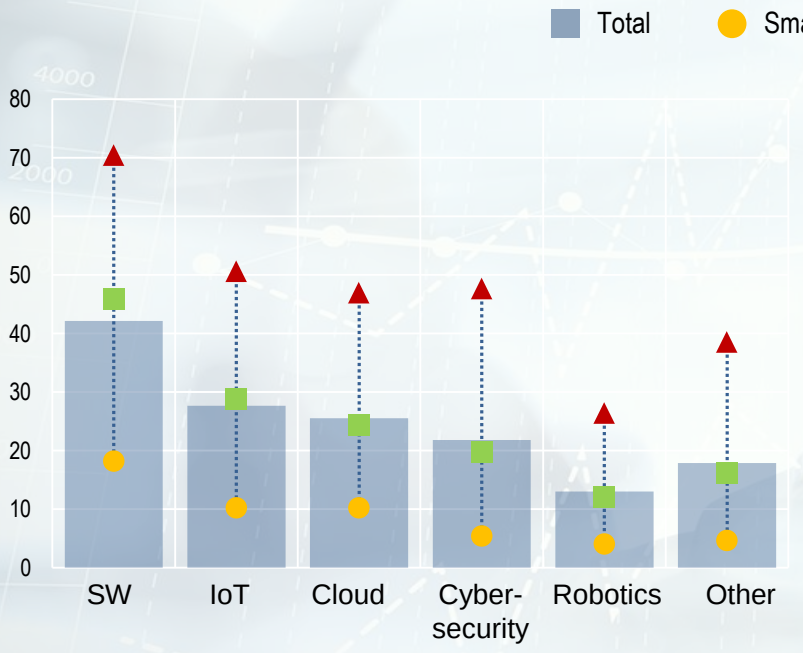
+ €1bn
Development contracts («contratti di sviluppo») for I4.0 investments

+ €0.1bn
Strong investment in sales chain (Made in Italy Plan)

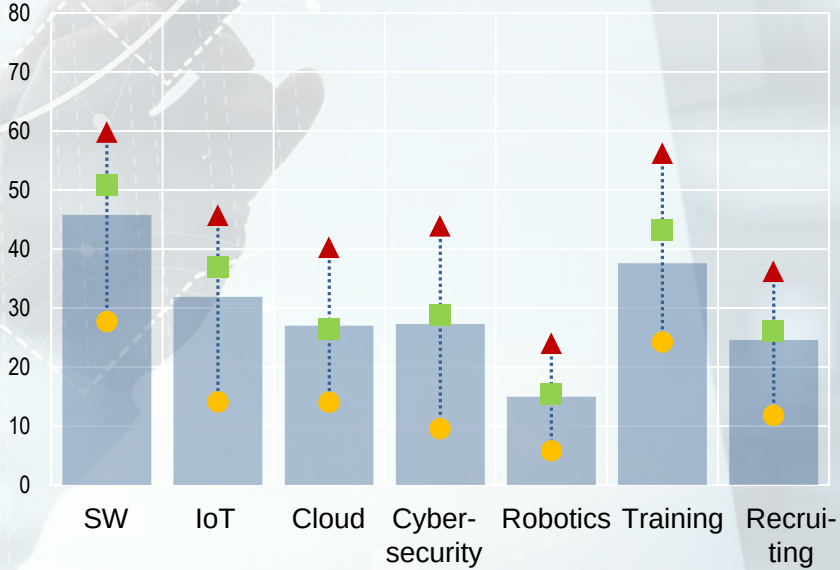
Exchange salary – productivity

Investments in digital technologies

New investments in 2017
(% manufacturing firms, size class)



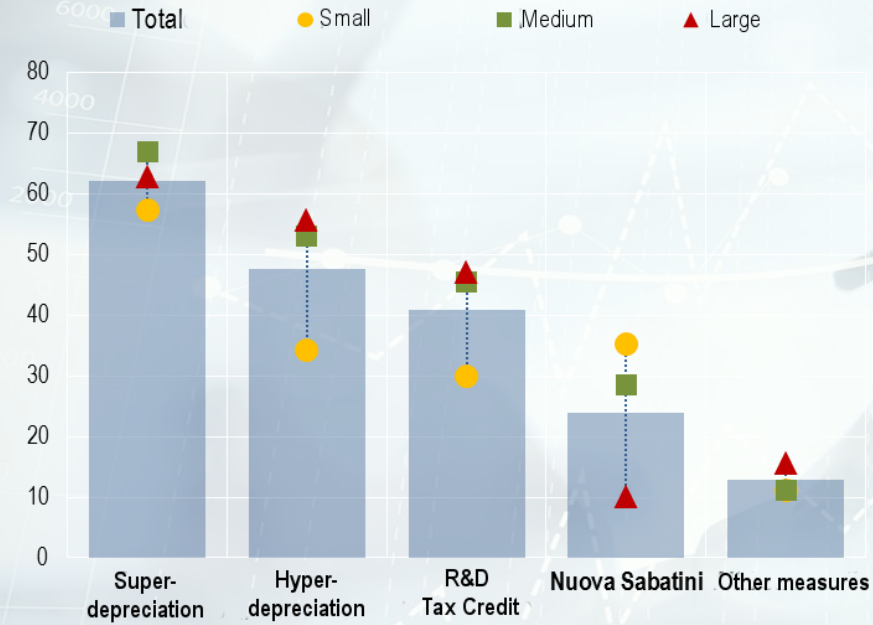
New investments in 2018
(% manufacturing firms, size class)

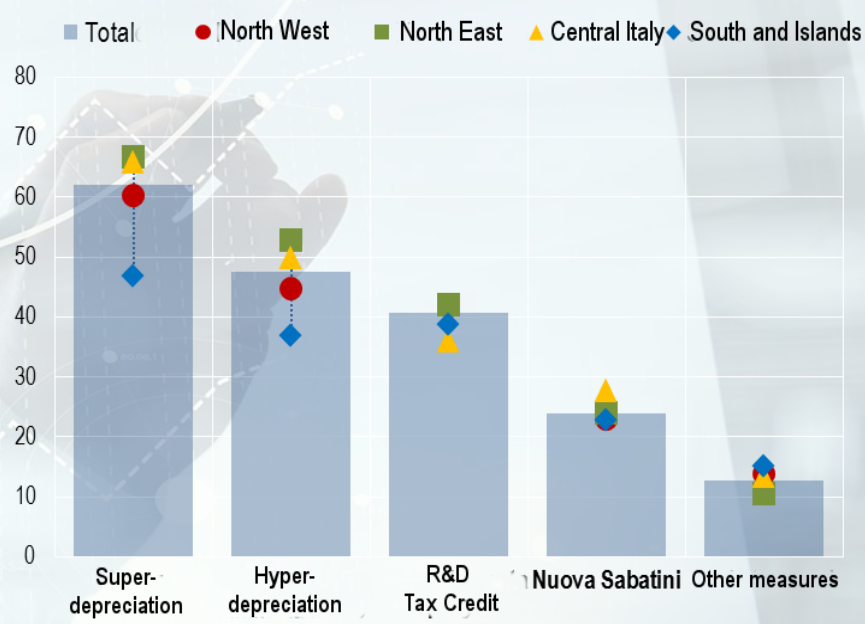


Source: Istat, «*Indagine sul clima di fiducia delle imprese manifatturiere*» ad hoc form (November 2017)

The role of incentives in 2017

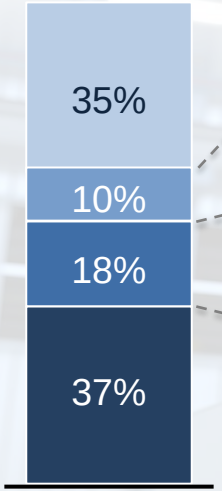
Incentives considered «highly» or «fairly» relevant for making new investments
(% manufacturing firms that invested in 2017, breakdown by size and geographic location)





Source: Istat, «*Indagine sul clima di fiducia delle imprese manifatturiere*» ad hoc form (November 2017)

Impact of Super-depreciation and «Nuova Sabatini»



Gross fixed capital inv.[1]	Main categories	Δ Domestic orders '17 vs '16
	Machinery and other equipment	+ 13%
	Electric and electronic equipment[2]	+ 7%
	Upkeep and installation of machinery	n.a.
	Other categories	+ 10%
	Total [3]	**+ 11%**

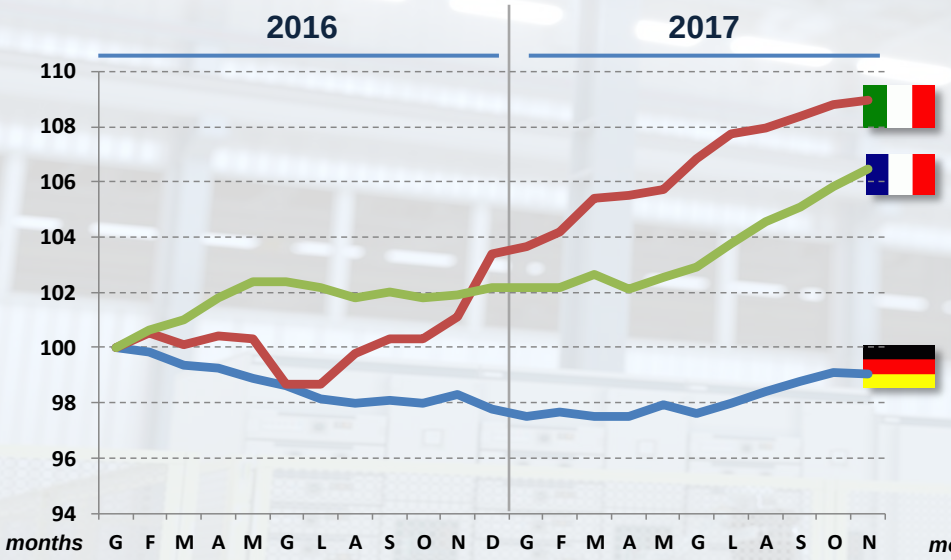
1. Automotive not included;
2. Includes codes 261 and 27 of Italy's Ateco classification of economic activities;
3. Weighted average, excluding repairs, upkeep and installation costs.

Source: MISE analysis of ISTAT data (January – November 2017 vs same period in 2016)

Domestic sales volume for machinery and electric or electronic equipment

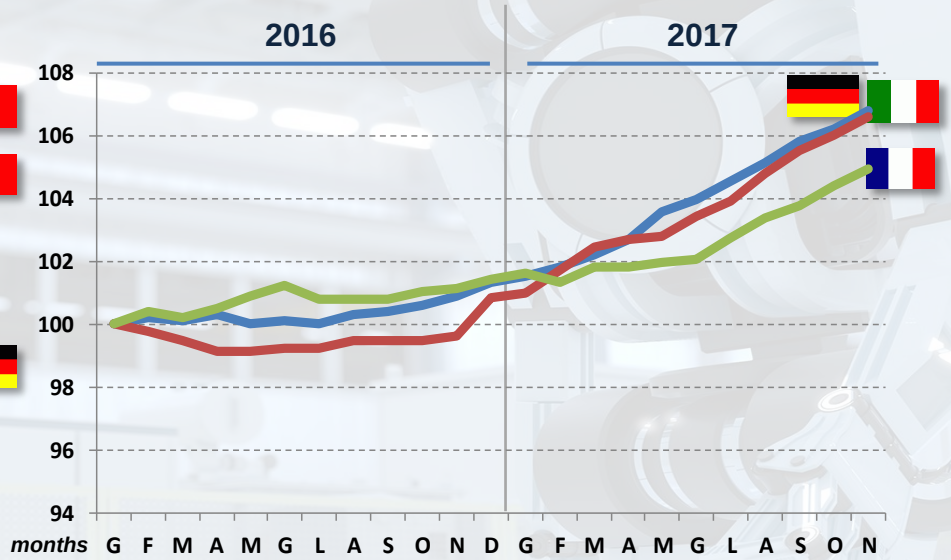
Machinery and other equipment

Jan 2016=100



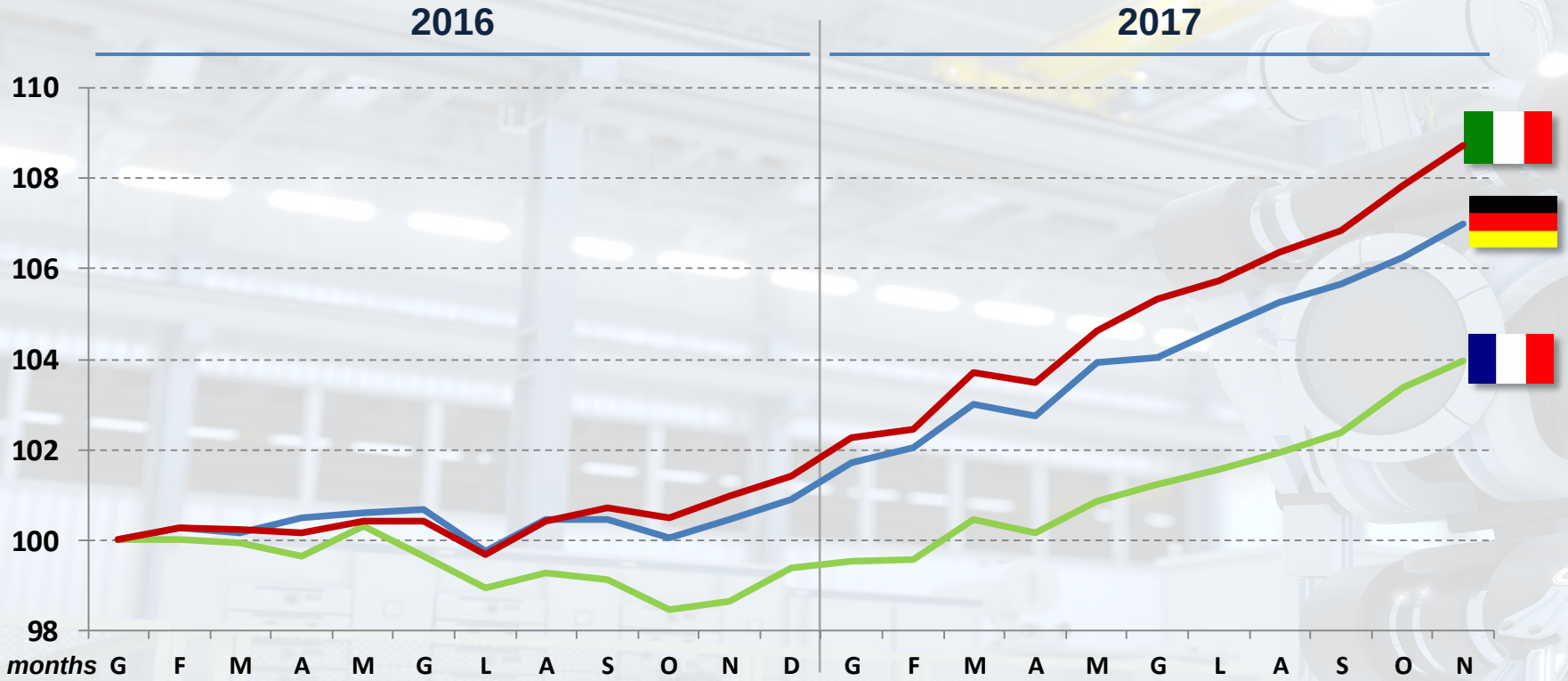
Electric and electronic equipment

Jan 2016=100



Source: MISE study on Eurostat data

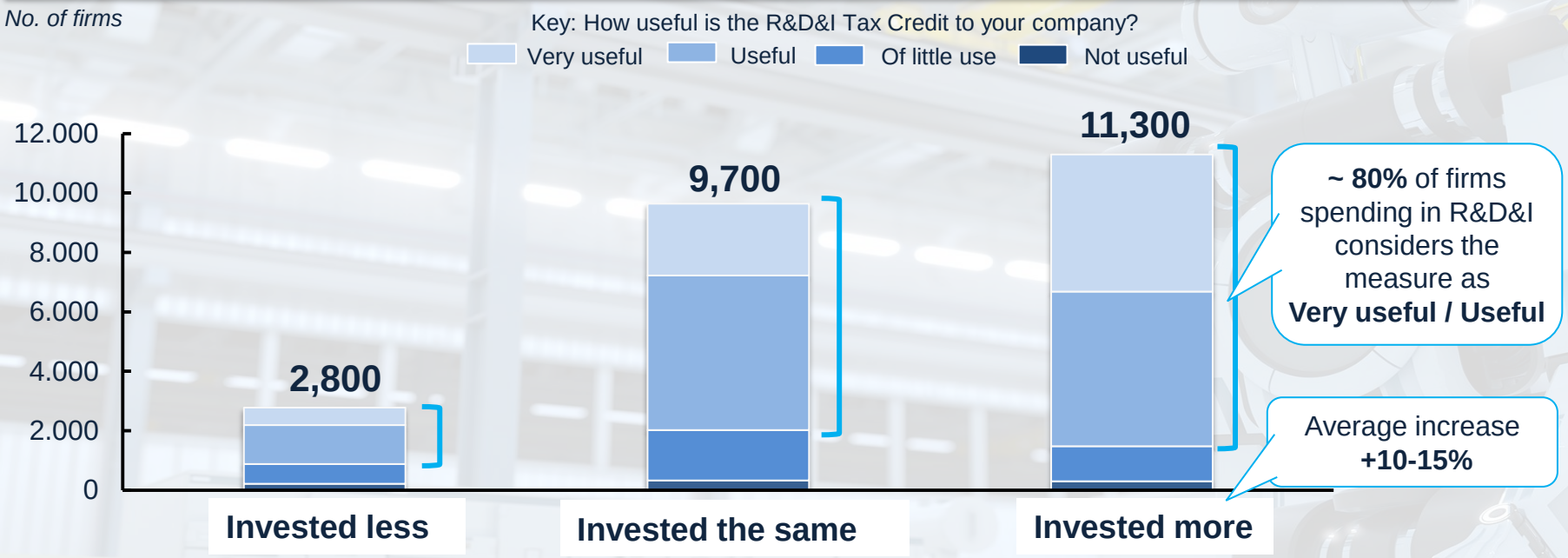
Exports of goods



Source: MISE study on Eurostat data

Firm expenditure in Research, Development, and Innovation

Expenditure in R&D&I in 2017 vs 2016 – sample of 24,000 companies

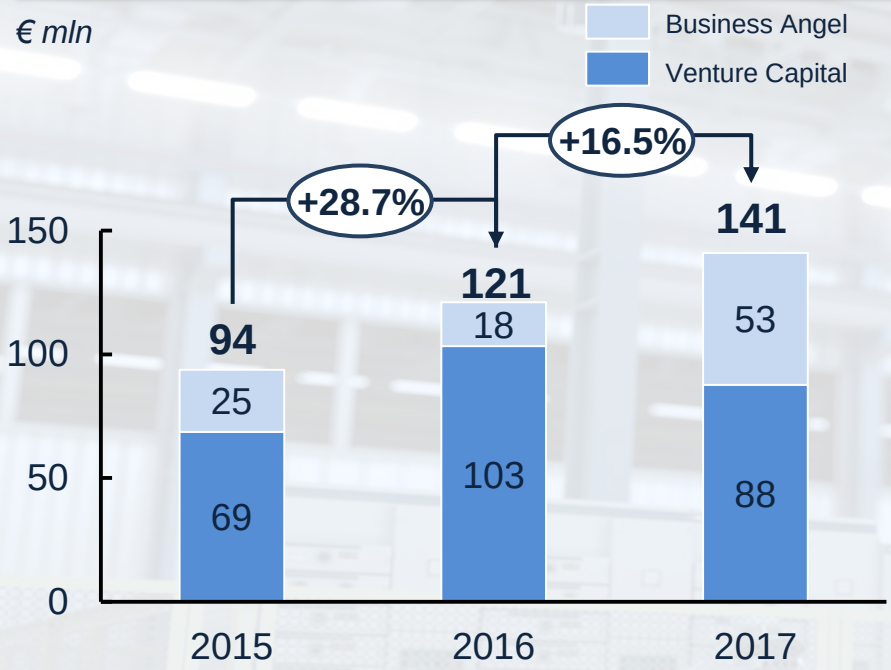


In 2017 the number of companies that benefited from the R&D&I Tax Credit increased by +104% compared to 2016

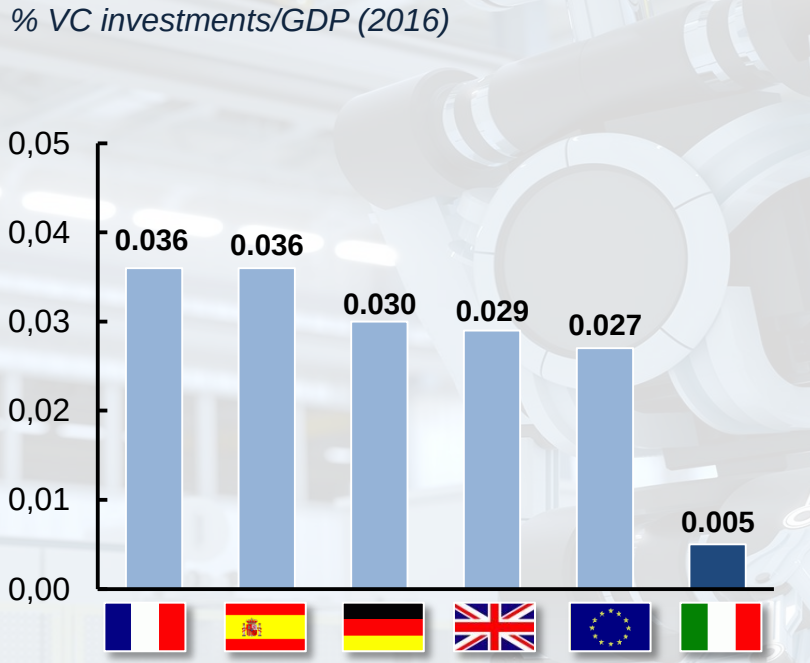
Source: Survey Unioncamere-InfoCamere, August 2017, on a sample of 68,000 firms (24,000 recorded expenditure in R&D); Ministry of Finance

Early stage investments

Early stage investments are increasing in Italy…



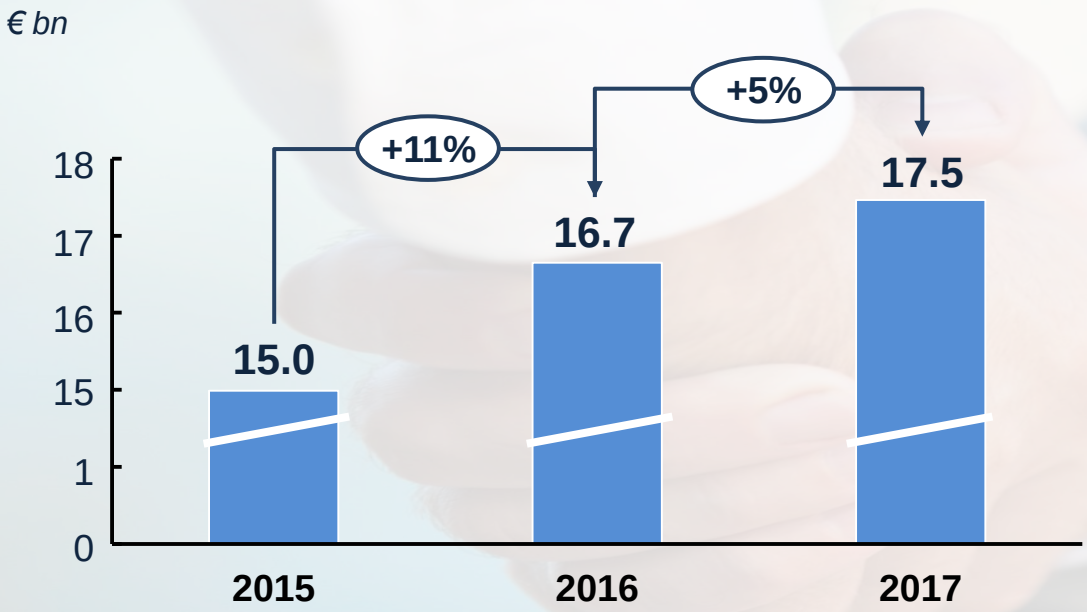
…but their level is still much lower than in the other main European economies.



Source: MISE study; Bureau van Dijk 2017; Invest Europe 2016 Report

SME Guarantee Fund

Amount financed to SMEs covered by the SME Guarantee Fund

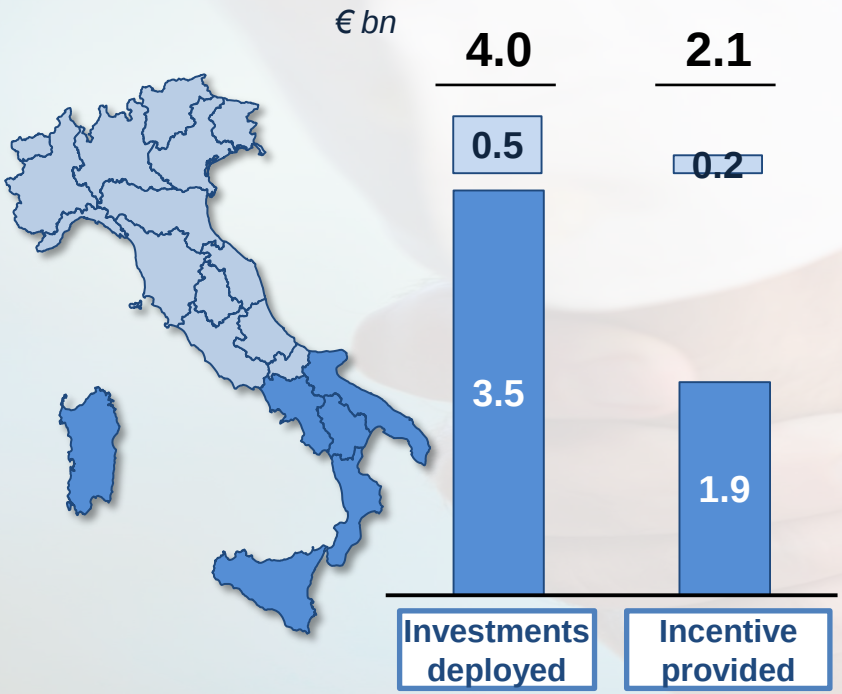


- Goal: to favour the access to finance for SMEs, through the issuing of a public guarantee on loans
- In 2017, the refinancing of the Guarantee Fund for ≈€1bn allowed to issue guarantees towards SMEs for €17,5bn.

Source: MISE

Development contracts *(«contratti di sviluppo»)*

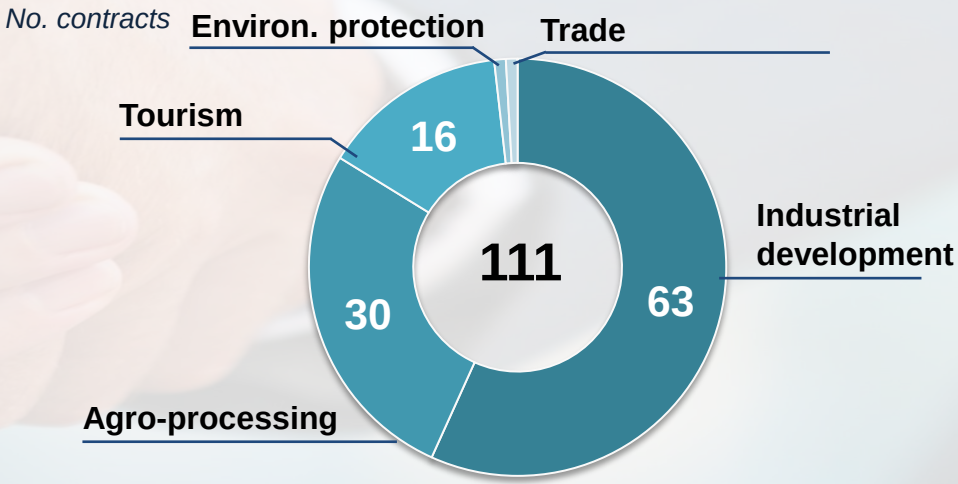
Economic results



Impact on employment

Creation / preservation **≈58,000 jobs**

Sectoral breakdown of financed contracts



Source: Invitalia data from September 2011 to January 2018

«Ultrabroadband Plan» – Housing units covered

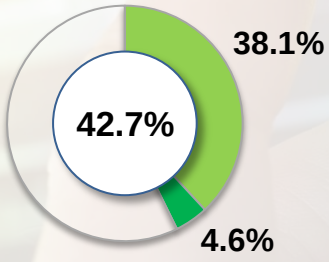
2017 → 2018 → 2020

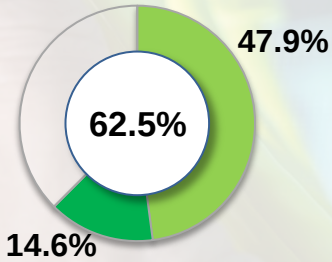
National coverage
(% housing units)

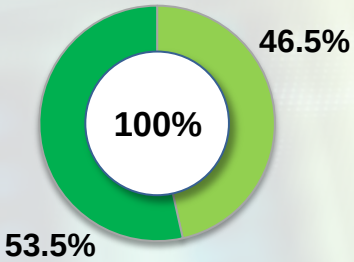
- < 30%
- 30% < x < 45%
- 45% < x < 70%
- 70% < x < 100%
- 100%

Coverage and Speed

- % a 30 Mbps
- % a 100 Mbps



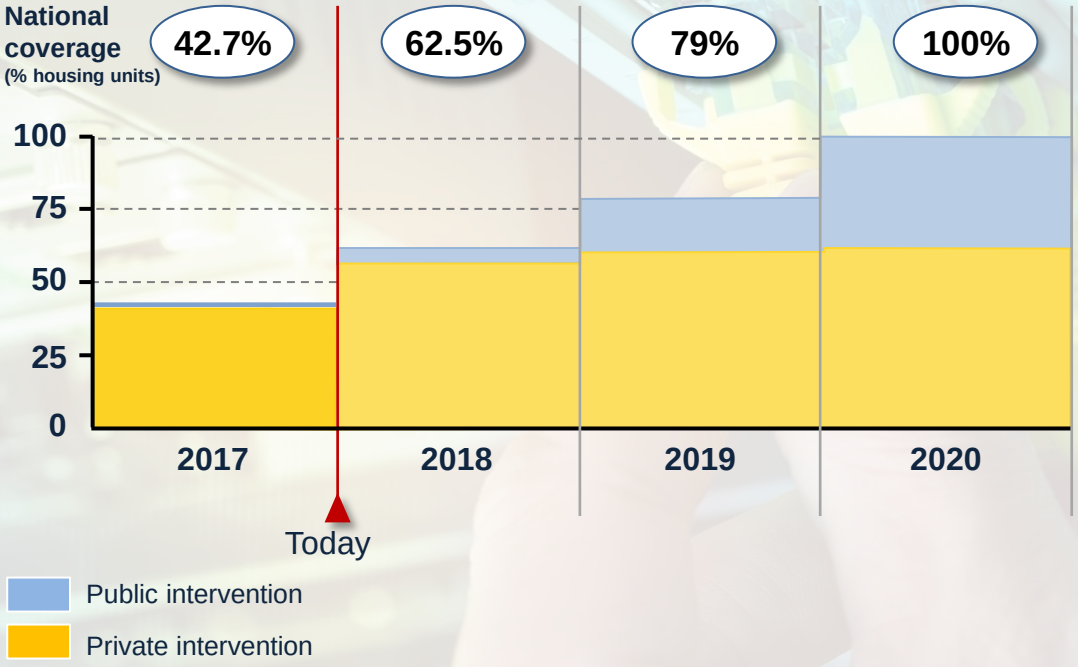




Source: Infratel, «Piano Banda Ultralarga»

«Ultrabroadband Plan» - Investments

Distribution of private and public investment



Details on public investments

- **Over €5 bn in public resources** allocated to finance the introduction of ultrabroadband networks in areas classified as «white» (high market failure) and «grey»
- Tenders held in **17 regions,** which will gradually launch public investments in the next 12-36 months

Source: Infratel, «Piano Banda Ultralarga»

National Network «Impresa 4.0»

«Punti Impresa Digitale»

- Their aim is to spread awareness and basic knowledge of Industry 4.0 technologies

UNIONCAMERE
CAMERE DI COMMERCIO D'ITALIA

Innovation Hubs

- Advanced training on solutions specific of the area of expertise of the promoter organisation
- They coordinate digital transformation and tech transfer structures

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CONFESERCENTI
cdo

Competence Centres

- Advanced training and development of research projects on industrial research and experimental development

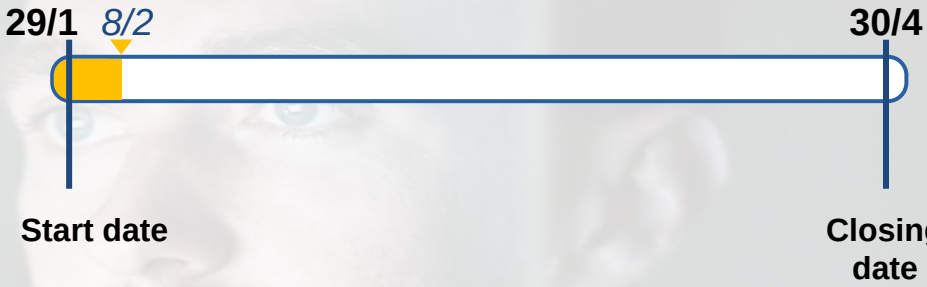
Tender in progress

«Highly specialised Competence Centres»: the tender

Public resources allocated

- **€40m** to support the start-up costs of the centres, and to finance projects proposed by other firms
- Each centre may receive public support on their expenditures up to 50%, with specific ceilings:
  - **€7.5m** to set up and launch the centre;
  - **€200,000** for each project proposed by client firms

Timeline for the tender process



Aim: Create a national network of excellent centres supporting Italian firms for technology transfer.

IMPRESA 4.0
Actions for 2018

Impresa 4.0 Plan for 2018

≈ €9bn concern measures valid for 2018 and affecting cash flow for multiple years

	Measures of Impresa 4.0 Plan[1]	2018	2019	2020	2021-2028	Total
Consolidate investments in innovation	Hyper- and Super-depreciation	-	903	1.712	5.211	**7,826**
	Nuova Sabatini	33	66	66	165	**330**
	SME Guarantee Fund	823	-	-	-	**823**
	Extraordinary plan for Made in Italy	130	50	50	-	**230**
Strengthen investments in human capital	Tax Credit on Training 4.0	-	250	-	-	**250**
	Fund for intangible capital	5	125	125[2]	-	**255**
	Istituti Tecnici Superiori – Current expenses	10	20	35[3]	-	**65**
	Istituti Tecnici Superiori – Capital expenditures	-	15	15	-	**30**
	Total Impresa 4.0 Plan	**1,001**	**1,429**	**2,003**	**5,376**	**9,809**

1. Does not include structural or multi-annual measures financed in Budget Law 2017 (e.g. R&D Tax Credit, valid until 2020, and structural measures to support equity investments in startups);
2. Endowment of €250m for each year between 2021 and 2024, of €210m for each year between 2025 and 2030, and of €200m for years after 2031;
3. From 2020.

Investments in human capital

Challenges for employment posed by Industry 4.0

«The 10 professions in highest demand on the market did not exist 10 years ago»

«Employment will increase in the very countries that have invested in digital skills, and will reduce in those where such skills were not adequately acquired by the labour force»

Investments in human capital

Schools, Universities and Research
Innovate study curricula to train student on new digital skills and Industry 4.0

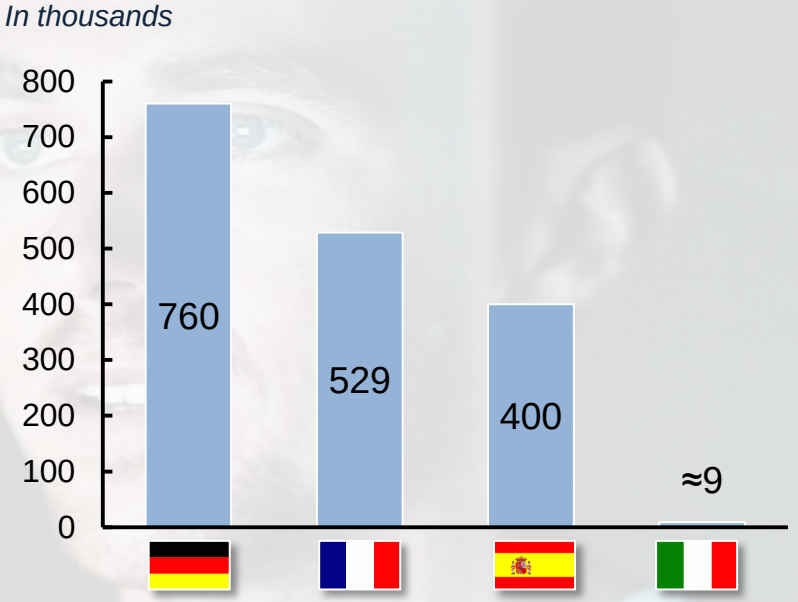
Labour:
manage the risk of technological unemployment and maximise new employment opportunities spurred by the 4th Industrial Revolution, developing new digital skills

Strengthen the ITS system («Technical High Institutes»)

Mission and results of the ITS

- Confer high technological specialisation
- Introduce technicians in strategic sectors of the economic and productive system
- Develop methods for innovation and tech transfer to SMEs
- Prioritise a teaching methodology based on practical experience
- ≈80% of students find a job within one year from diploma

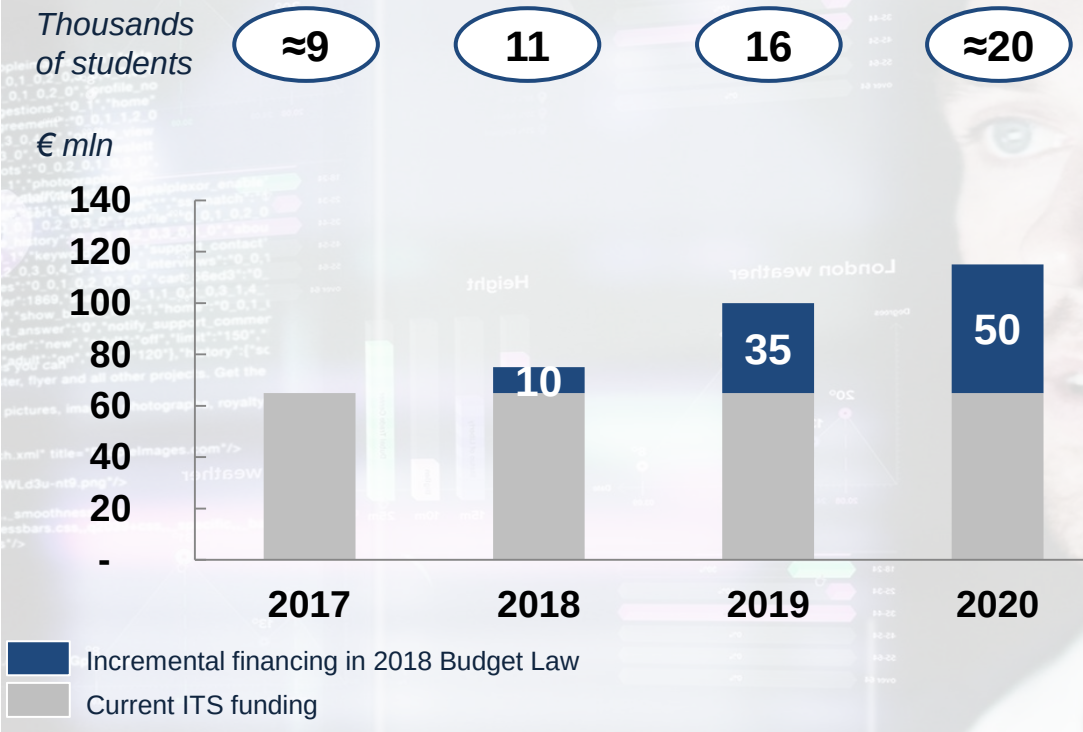
Number of students enrolled



Source: ITS system; MIUR

Training 20,000 ITS students before 2020

Plan to reinforce resources to ITS



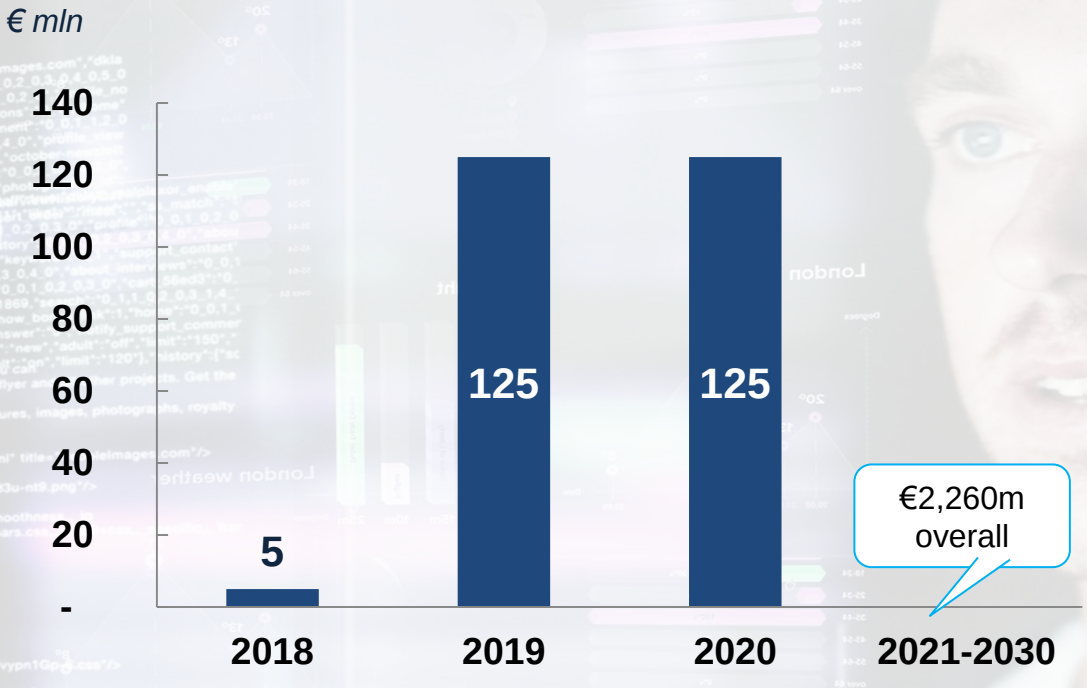
Source: Budget Law 2018, MISE

Objective

€95m between 2018 and 2020 to increase the number of **students enrolled** in the ITS system, from current 9,000 to **about 20,000**

Fund for intangible capital, competitiveness and productivity

Public financing for the Fund



Fund objectives

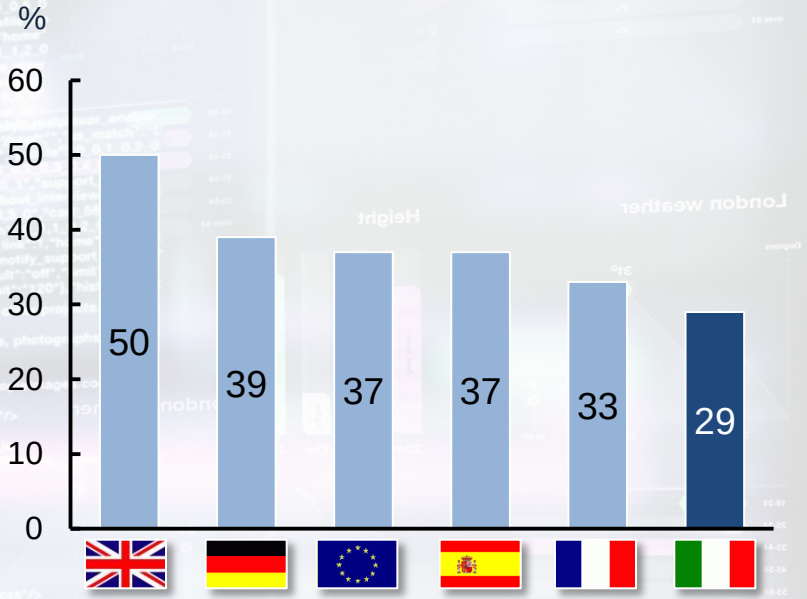
- Financing research and innovation projects in strategic domains for the development of intangible capital, conducive to Italy's competitiveness
- Enhance the value of the results of research project, and favour tech transfer towards the economic and productive system

Source: Budget Law 2018

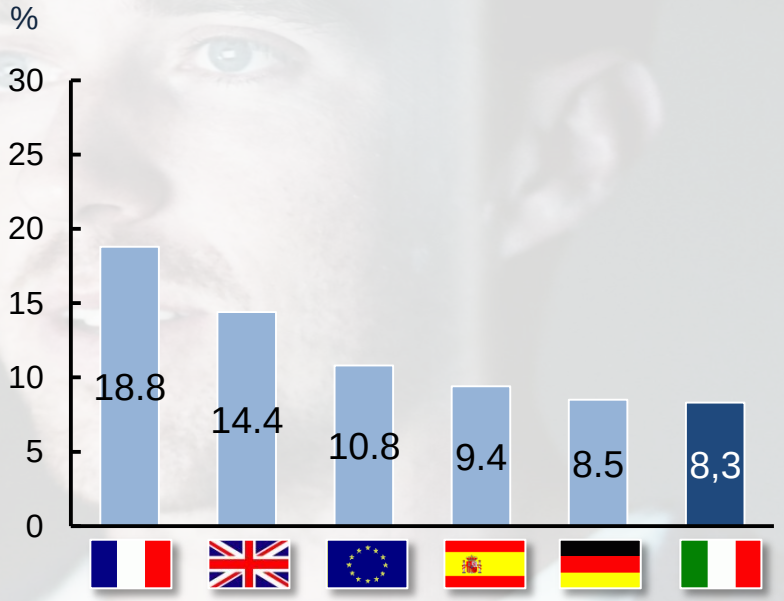
Fill the knowledge gap of the labour force

Digital skills gap to cover

% high digital skills in the labour force
(employed and unemployed; 2016)



Total workforce taking part in training courses, 24-65 years old



Source: Eurostat

Incentivise Training 4.0 to protect and reinforce employment

Tax Credit for Training 4.0

- **40%** tax credit on labour costs of personnel following training courses in Industry 4.0 topics
- Maximum incentive per firm: **€300,000 / year**
- Applicability: experimental measure for year **2018**

Source: Budget Law 2018

Topics of «Training 4.0»

1. Cooperative robots
2. Additive manufacturing
3. Augmented reality
4. Simulation
5. Digital integration
6. Industrial Internet
7. Cloud
8. Cybersecurity
9. Big Data - Analytics

	Sales and marketing	IT	Production methods and technologies
1 Cooperative robots			
2 Additive manufacturing			
3 Augmented reality			
4 Simulation			
5 Digital integration			
6 Industrial Internet			
7 Cloud			
8 Cybersecurity			
9 Big Data - Analytics			

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