



READY TO BUILD  
THE FUTURE?  
**YES.**

June 27, 2018 – Brussels - #YESbxl



GIOVANI SI



Regione Toscana



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# Vocational Education and Training 4.0 in Tuscany Region

**Paolo Baldi**

**Head of Regional Department for Education and Vocational Training**

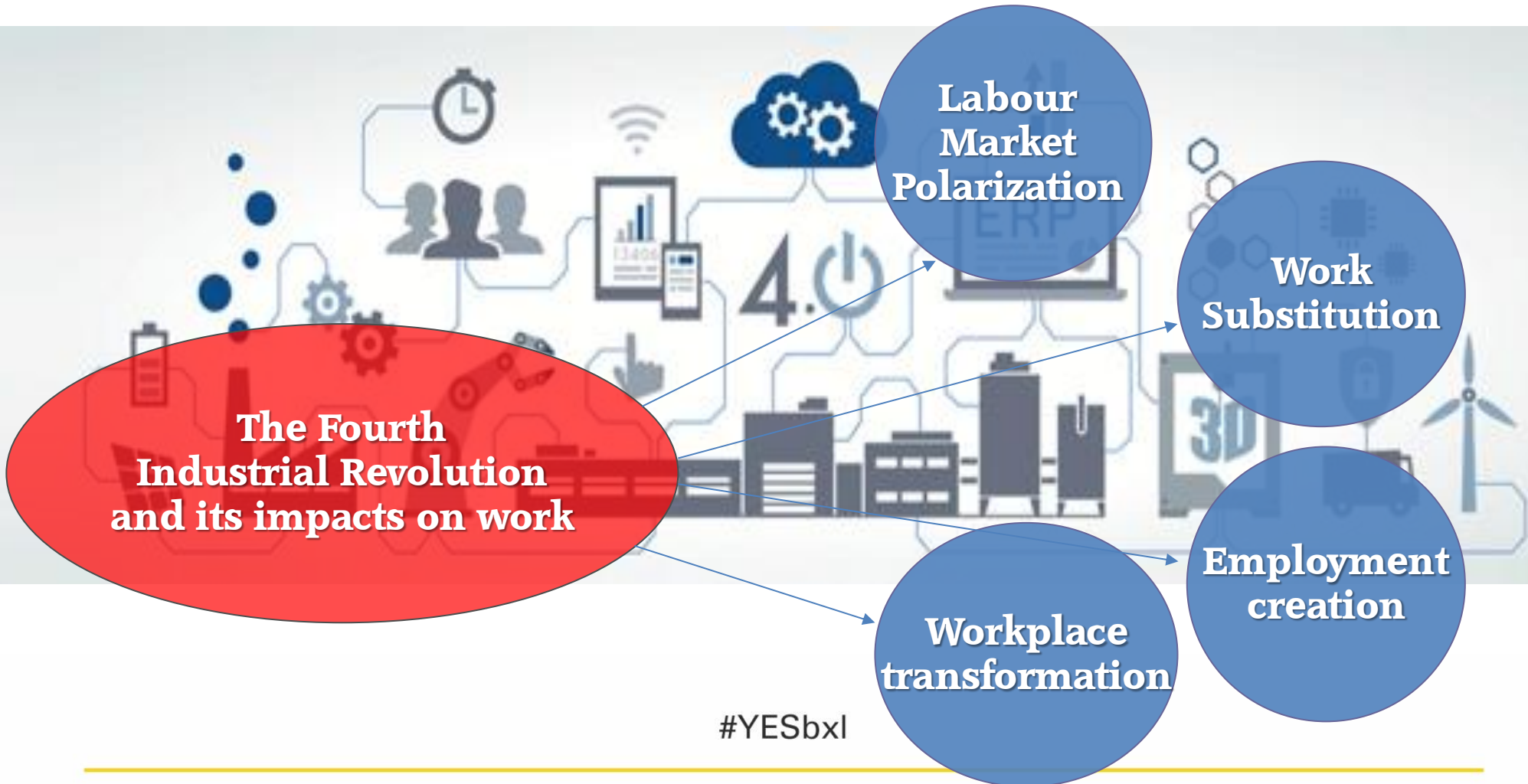
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# Digital Transformation and its impact on work



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**Changes in  
production systems  
and business models**

**Changes in  
the skill sets required  
for each professional profile**

**Digital skills**

**Soft skills**

**Inter  
disciplinary  
skills**

**Technical  
and  
Specialized  
Skills**

**Generic skills**

**Complementary  
skills**

**Specialized  
skills**

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# Industry 4.0 Regional Strategy

## Industry 4.0 Platform

### Industry 4.0 Portal

Automation machine

DIH

Cantieri 4.0

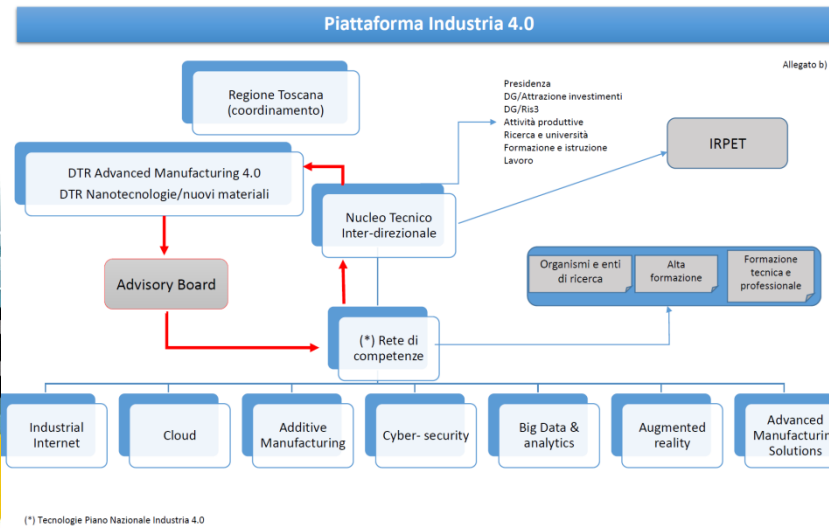
Digital Innovation Hub

Normativa

Turismo

Formazione

Ricerca



### «Cantieri 4.0»



### Quanto sei i40?

ottenere una valutazione dei punti di forza e di debolezza nella gestione della tua industria 4.0 e muovere di conseguenza i primi passi verso il nuovo paradigma

è a disposizione delle imprese e sviluppati grazie al sostegno di Regione Toscana, Dipartimento di Ingegneria Civile ed Industriale dell'Università di Pisa e del Dipartimento di Informazione e Scienze Matematiche dell'Università di Siena e alla collaborazione di IRPET.

Il terzo modello, relativo all'audit, è disponibile in formato PDF. Per saperne di più sul servizio di audit consulta il [bando di prossima pubblicazione per il sostegno all'acquisizione di servizi di audit](#).

Ricordiamo che per compilare il questionario è necessario effettuare il login cliccando sul bottone LOGIN in alto a destra.

[i40 check-up](#)

[i40 assessment](#)

[i40 audit](#)

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# Vocational Education and Training 4.0

Decision of the Regional Council n. 9 of January 31, 2017  
Regional Strategy Industry 4.0. Skills for the digital economy: first guidelines for training 4.0

Decision of the Regional Council n. 11 of 12 February 2018  
Regional Strategy Industry 4.0. Skills for the digital economy: guidelines for training 4.0. Year 2018

**Primary objective:  
reduce the digital divide**

between digitally literate workers and workers without adequate digital skills

between large companies and SMEs

**Role of training:  
supporting integrated human capital development, a strategic asset for the transition to the new paradigm**

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# Vocational Education and Training 4.0

## Strategic lines of intervention



WORK – SCHOOL ALTERNATION

IFTS

ITS

PRACTICAL TEACHING

VET 4.0

WORKERS TRAINING

DISTANCE LEARNING

MAMAGERS TRAINING

REGIONAL QUALIFICATION FRAMEWORK

ENTREPRENEURS TRAINING

## The role of training for managers and entrepreneurs

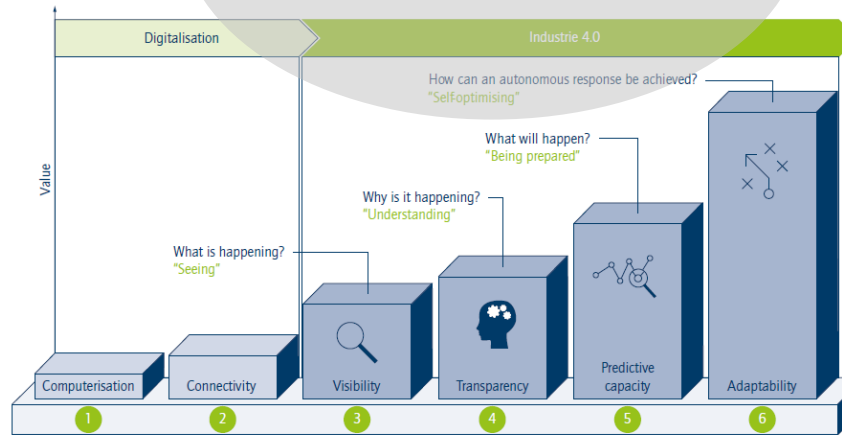
updating the skills of managers and entrepreneurs is fundamental because their choices have impacts on

the adaptation of the production process and the quality and quantity of employment

How and when new technologies will be adopted

exploitation of the productive potential of new technologies

Toolbox Industry 4.0	
Industria 4.0	
Production	
<b>Data processing in the production</b>	<ul style="list-style-type: none"> <li>No processing of data</li> <li>Storage of data for documentation</li> <li>Analyzing data for process monitoring</li> <li>Evaluation for process planning / control</li> <li>Automatic process planning / control</li> </ul>
<b>Machine-to-machine Communication (M2M)</b>	<ul style="list-style-type: none"> <li>No communication</li> <li>Fixed bus interfaces</li> <li>Industrial ethernet networks</li> <li>Machines have access to internet</li> <li>Web services (SaaS software)</li> </ul>
<b>Company-wide networking with the production</b>	<ul style="list-style-type: none"> <li>No networking or connection with other connect. units</li> <li>Information exchange via email / telecommunication</li> <li>Machine data transfer and inter-organizationally linked data servers</li> <li>Common data servers and inter-organizationally linked data servers</li> <li>Inter-organizational, fully integrated into the production</li> </ul>
<b>ICT infrastructure in production</b>	<ul style="list-style-type: none"> <li>Information exchange via mail / telecommunication</li> <li>Central data servers in production</li> <li>Interconnected people with data sharing</li> <li>Automated information exchange in a order process design</li> <li>Supplier / customer are fully integrated into the production design</li> </ul>
<b>Man-machine interfaces</b>	<ul style="list-style-type: none"> <li>No information exchange between user and machine</li> <li>Use of fixed user interfaces</li> <li>Centralized, decentralized production monitoring / control</li> <li>Use of mobile user interfaces</li> <li>Augmented and assisted reality</li> </ul>
<b>Efficiency with small batches</b>	<ul style="list-style-type: none"> <li>Rigid production systems and a small quantity of identical parts</li> <li>Use of flexible production systems and control units</li> <li>Flexible production systems and modular design for new products</li> <li>Component-driven, flexible production of modular products within the company</li> <li>Customer-driven, modular production in value-adding networks</li> </ul>





## Training for managers and entrepreneurs

With action A.4.1.1.b of the ESF 2014-2020 and with State funds, there are three interventions designed in a complementary way in order to ensure a training offer tailored to the needs of managers of entrepreneurs

### 1. Training courses for entrepreneurs, including

- territorial animation actions,
- training courses,
- personalized accompanying actions.

### 2. Training vouchers for entrepreneurs

- to face innovation paths
- to adopt models of work organization and management of human resources aimed at combine innovation with wellbeing and participation of workers.

### 3. Training vouchers for managers

- with priority for training courses on the innovations necessary to compete in the digital economy.

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# Synergies with other regional actions

## «Cantieri 4.0»

On “Cantieri 4.0”, the operational tool of Tuscany Industry 4.0 Platform, managers and entrepreneurs can verify their level of maturity compared to I4.0 technologies through online assessment tests



Home

Laboratori

Expertise i4.0

Survey i4.0

Toolkit i4.0



## Quanto sei i4.0?

In poco tempo potrai ottenere una valutazione dei punti di forza e di debolezza nella gestione della tua impresa in ottica di Industria 4.0 e muovere di conseguenza i primi passi verso il nuovo paradigma industriale.

Tre i modelli di valutazione a disposizione delle imprese e sviluppati grazie al sostegno di Regione Toscana, al supporto scientifico del Dipartimento di Ingegneria Civile ed Industriale dell'Università di Pisa e del Dipartimento di Ingegneria dell'Informazione e Scienze Matematiche dell'Università di Siena e alla collaborazione di IRPET.

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Ricordiamo che per compilare il questionario è necessario effettuare il login cliccando sul bottone LOGIN in alto a destra.

## TRIO

On the web learning portal of the Tuscany Region, financed by ESF, managers and entrepreneurs can find online training Modules on the Industry 4.0 paradigm and on new technologies



Il sistema di web learning della Regione Toscana

INFOTECA



HOME CATALOGO CORSI PROGETTI TERRITORIO COMMUNITY FAQ

Home > Novità ed Eventi > Aggiornamenti > Nuove iniziative di TRIO su Industria 4.0

## Notizie

### Nuove iniziative di TRIO su Industria 4.0

Publicato: Martedì, 13 Marzo 2018 14:29



Chi ha detto che il nostro territorio non offre opportunità per i giovani imprenditori?

Il sistema TRIO lancerà a breve una serie di iniziative e contenuti sul tema **Industria 4.0** destinate al mondo dei giovani e delle imprese. Un progetto che rientra nelle priorità di Regione Toscana, che ha da tempo avviato numerose attività in questo ambito, come la survey i4.0 per le imprese (<http://www.businessintuscany.com/i40/surveyi40.php>).

Se sei un imprenditore o hai un progetto di azienda, potrai presto ricevere una formazione sul nuovo modo di fare impresa. Seguici e riceverai presto informazioni più dettagliate!

Tweet

## The Tuscan model of education and training

**Alliances of training agencies with companies, with educational institutions and universities**

**Concentration of interventions on strategic training supply chains**

**Development of the dual system and apprenticeship**

- To analyze training needs
- To co-design the interventions.
  
- To counteract school drop-out trends,
- to encourage inclusion and reintegration into the Labour Market
- to develop fundamental skills for the development of the territories and the competitiveness of companies.
  
- to help students achievement of a professional qualification and / or diploma,
- To enhance the educational and training potential of work,
- To encourage young people entry and stay in the labor market

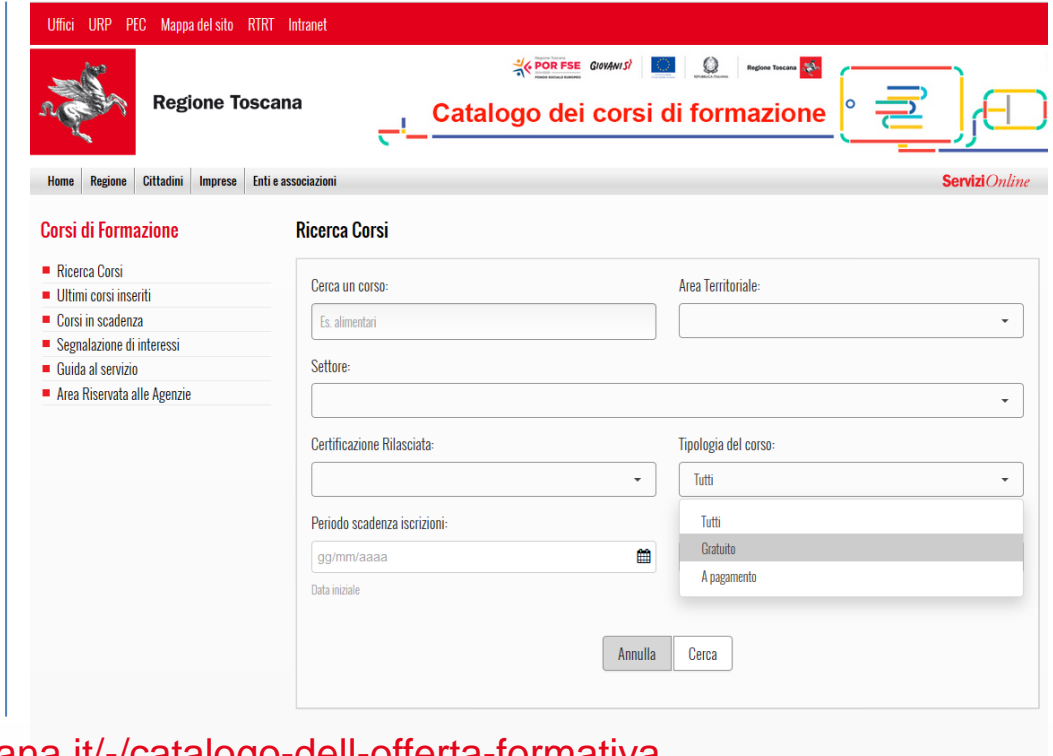
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## Training opportunities for citizens: the catalog of the training offer

The catalog of the training offer is a tool for:

- to know the courses, free or paid, available within the Tuscan territory and register to them
- to stay tuned and receive information on courses activated in one or more sectors, by subscribing to the newsletter
- to contact the training providers and let them know interest to participate in a specific training course



The screenshot shows the 'Catalogo dei corsi di formazione' website for Regione Toscana. The page features a search form with the following fields and options:

- Cerca un corso:** Text input field with placeholder 'Es. alimentari'.
- Area Territoriale:** Dropdown menu.
- Settore:** Dropdown menu.
- Certificazione Rilasciata:** Dropdown menu.
- Tipologia del corso:** Dropdown menu with options: Tutti, Gratuito, A pagamento.
- Periodo scadenza iscrizioni:** Text input field with placeholder 'gg/mm/aaaa' and a calendar icon.
- Data iniziale:** Text input field.
- Buttons:** 'Annulla' and 'Cerca'.

Navigation links at the top include: Uffici, URP, PEC, Mappa del sito, RTTR, Intranet. The page also displays logos for POR FSE GIOVANI SÌ, Regione Toscana, and ServiziOnline.

<http://www.regione.toscana.it/-/catalogo-dell-offerta-formativa>

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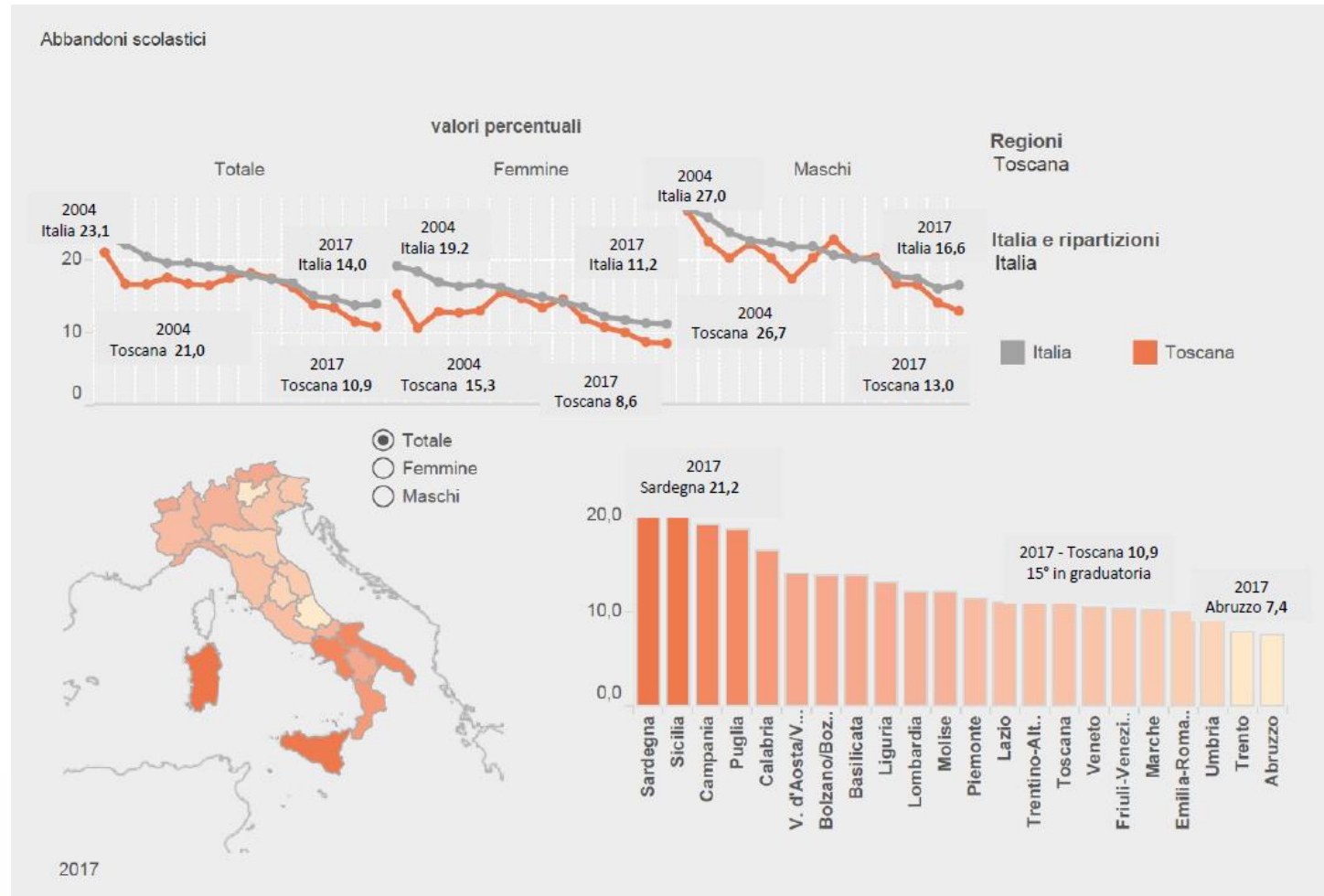


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# First results: the school dropout rate

From 2014 to 2017, the percentage of young people who abandoned their studies prematurely has passed

- in Tuscany, from 13.4% to 10.9%
- in Italy, from 14.7% to 14%
- in Europe, from 11.2% to 10.6%



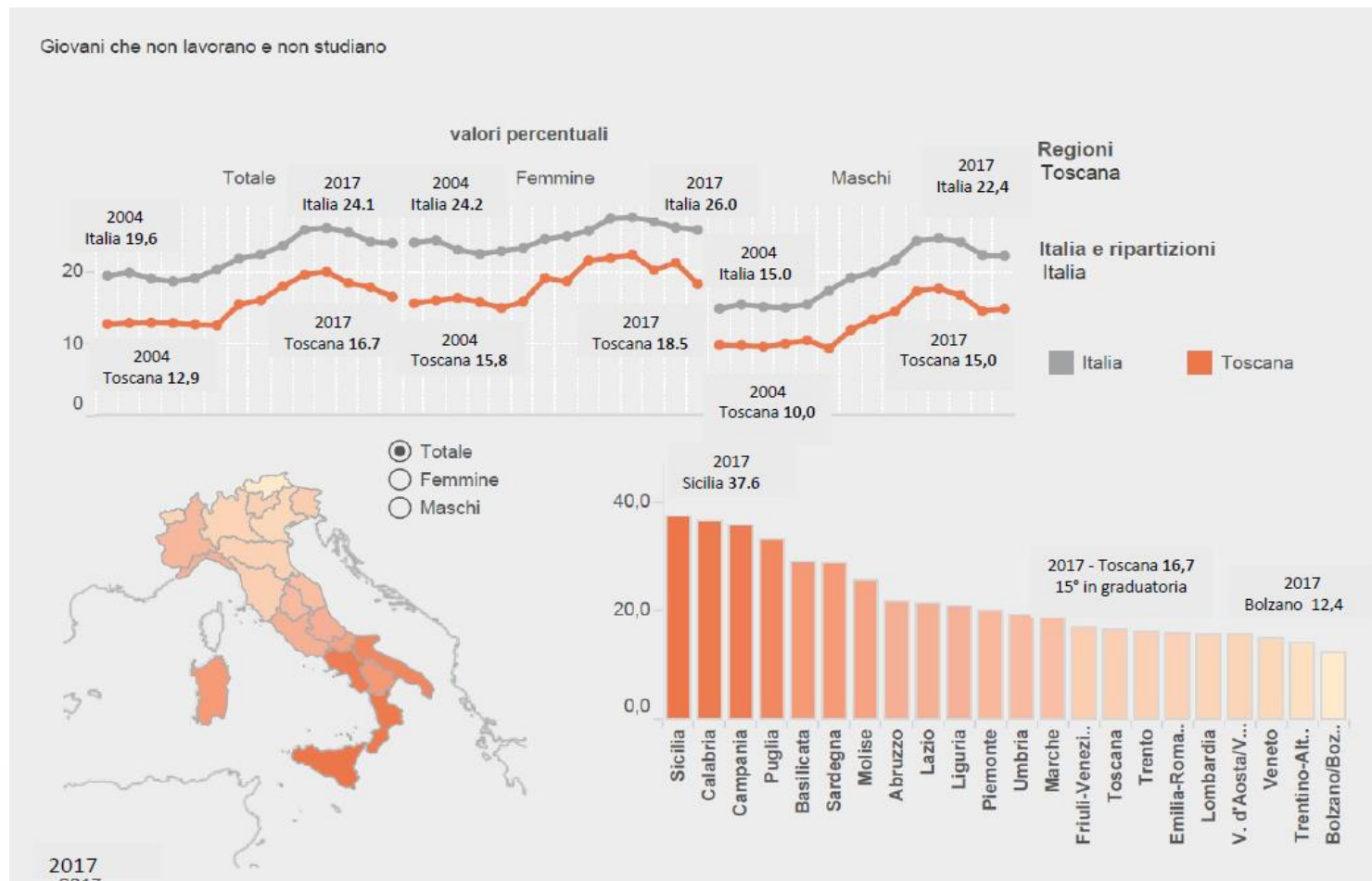


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# First results: the NEET rate

From 2014 to 2017, the percentage of young people who do not study and do not work has passed

- in Tuscany, from 20.1% to 16.7%
- in Italy, from 26.2% to 24.1%
- in Europe, from 15.4% to 13.4%







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**Thanks for your attention!**

Info:

<http://www.regione.toscana.it/cittadini/formazione-professionale/formazione-4.0>

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