



European Union  
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MINISTRY FOR THE COORDINATION OF EUROPEAN POLICY  
FOR ECONOMIC DEVELOPMENT, EDUCATION,  
VOCATIONAL TRAINING, UNIVERSITY, RESEARCH AND LABOUR



**ER** Education  
Research  
Emilia-Romagna

Learning is growing





# Education, training and research for a high value-added region

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The social and economic fate of a region depends on the quality and quantity of education and training available to its inhabitants. Globalisation, the increase in the geographical reach of markets and the technological revolution have deeply undermined the continuous series of gradual innovations that characterised a significant period of our growth. Today, to be able to compete effectively, a community must invest in its people.

In Emilia-Romagna we have created an educational and training infrastructure for development called **ER Education and Research Emilia-Romagna**. The infrastructure plays a key role in the promotion of skilled jobs and sustainable growth. **Inclusive** because accessible to everyone, the various branches of the infrastructure have the same overall objectives, based on **complementary** specialisations, the integration of educational institutions, collaboration with enterprise, and synergy between European, national and regional resources.

The ER Education and Research Emilia-Romagna is made up of four branches: **Vocational Education and Training, the Polytechnic Network, Higher Education and Research, and Employment and Skills**. Each of these branches has specific educational objectives and is designed to guarantee the right of individuals to participate in the growth processes, to develop expectations and potential, and to strengthen their technical, critical and relational skills required to grow, work and compete in an increasingly internationalised world.

The objective of the educational and training infrastructure is to provide people and the region with strategic knowledge aimed at **specialisation, internationalisation**, and social, organisational and economic **innovation**. This not only concerns technology but all its varied related forms, brought together by an "intense use" of creativity and resourcefulness. Achieving this goal involves a number of priorities: combined planning with European, national and regional resources; greater integration between schools, training institutions, universities and research organisations; and an increased role for enterprise in educational processes so as to meet requirements and generate innovative skills by trying out a twofold model of regional training, also through agreements with the various industries. In addition to these priorities cutting across the planning of all actions, an **Active Labour Network** is being constructed. Together with the Regional Employment Agency, it will become the mainstay of a new generation of active policies able to meet the needs of individuals and businesses.

Education, training and the future of a community

An educational and training infrastructure for development

## People first

Priority is given to people, their rights, aspirations and skills. This decision was shared in the **Labour Pact**, signed by the Region, local authorities, unions, business organisations, the third-sector forum, the universities and the Regional Education Office. The legislative pact is meant to guide our actions and all public and private investment in work and growth.

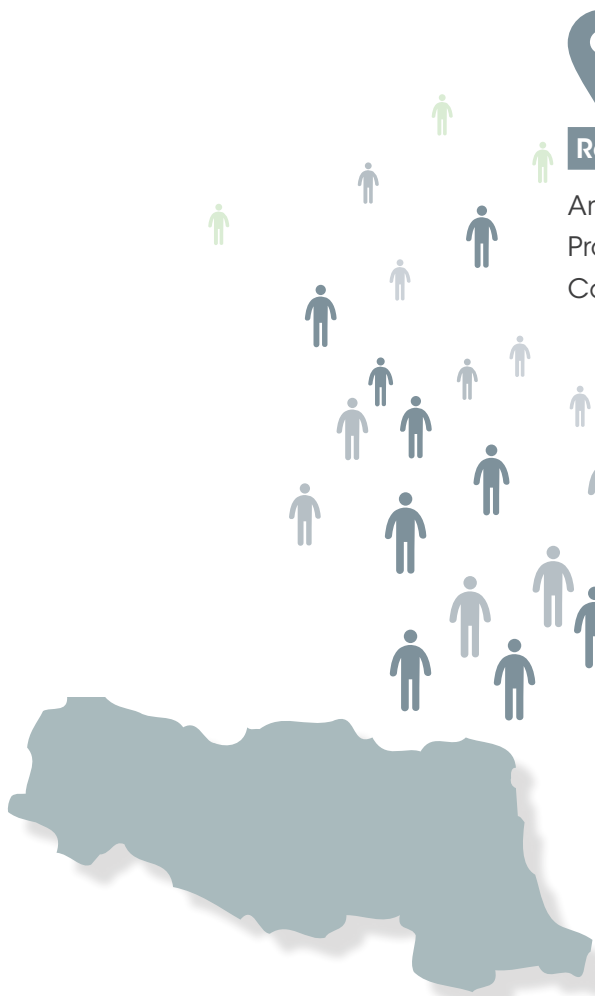
Signed on 20 July 2015, the pact is a **strategic plan** for the future of the region, based on an interpretation of the local context and the regional, national and international situations, a careful survey of resources, and the sharing not only of objectives, but also the indispensable conditions required to generate a new growth for greater social cohesion in our region.

Since 2000 the competitive context has acquired a global dimension, which together with the re-organisation of the production cycles, has created a greater market for high value-added goods and services. It has contributed to the rise of new organisational models, sometimes called **Industry 4.0**, which require closer interrelations between **industry, research**, skills and the big-data infrastructures supporting their long-term goals and development.

## A new generation of public policies

The changed structural situation has been accompanied by a growing gap, at least in Europe, between political geography and real geography: the differences between regions, especially in terms of the capacity to innovate, continue to grow rather than diminish, whereas the differences between countries tend to become slighter. The infrastructures for education, training and research thus become the key elements in boosting those capabilities of the system driving innovation and development, and in making Emilia-Romagna a region with a high value-added economy. This objective was shared in the Labour Pact, which primarily committed the Region to launching a new generation of **public policies** based on various actions: the recognition of the value of **local areas**, their **production, labour force** and **people**; the systematic interaction between the various institutional levels; the integration of regional, national and European funds; and the strategic coordination of regional actions.

We are committed to generating growth and creating a future to guarantee the younger generation the possibility of flourishing in a European region which, at a time of crisis and transformations, has grasped the potential for identifying with the best practices in the ongoing change.



## Region

Area: **22,452.78** sq. km.

Provinces: **9**

Communal Administrations: **340**

## Inhabitants

Population: **4,457,115**

Males: 2,158,651

Females: 2,298,464

0-14 years: 601,846

15-64 years: 2,811,604

Over 65: 1,043,665

Non-EU citizens: **180,806**

Males: 90,249

Females: 90,557



## Primary and Secondary Education

Schools: **545**

Teachers: **42,507**

Special education teachers: **5,892**

Pupils: **545,000**



## Training system

Accredited training institutes: **156**

Staff: **5,500**

Trainees every year: **100,000**



## University system

Universities: **6**

Students: **138,288**

Males: 61,828

Females: 76,460

Teachers and researchers: **4,500**



## Labour market

Jobs: **1,922,000**

63.2% in services

33.6% in industry

3.2% in agriculture

Women: 850,000

Men: 1,071,000

Employment rate: **66.9%**

Italy 56.3% - EU-27 64.7%

Female employment rate: **59.5%**

Italy 47.4% - EU-27 59.7%

Unemployment rate: **7.7%**

Italy 12.1% - EU-27 10.2%

# Emilia-Romagna in figures



## Economy

GDP: **€ 144,257.3** million

GDP per capita: **€ 32,531.4**

Businesses: 372,719

Agriculture: 64,480

Industry: 39,731

Building: 49,964

Commerce, transport  
and hotels: 125,746

Other services: 157,278

# European Social Fund

## Europe's way of investing in its most valuable resource

### European Social Fund programmes

A key contribution to opportunities provided by ER Education and Research Emilia-Romagna comes from the **European Social Fund (ESF)**, one of the European Union Structural and Investment Funds.

Created in 1957, the year that the European Economic Community was founded, the Social Fund has been the principal financial instrument used by Europe to **invest in people** for over fifty years. By means of the ESF, Europe allocates member states **resources to improve people's skills** and strengthen the capacity to adapt to changes in the labour market, as well as to enhance the quality of employment and increase the geographical mobility of workers.

The careful use of these funds, which each state allocates to its regions for programmes honed to the specific local features, is a fundamental lever in implementing policies for innovative, coherent and sustainable development. In this sense Emilia-Romagna is one of the most virtuous regional administrations in the whole EU.

### Operational Programme 2014-2020

The ESF resources are allocated for seven-year periods. For **2014-2020** Emilia-Romagna has elaborated its own programme strategy for the available resources, amounting to **786 million euros** of European, national and regional funds. The strategy underlying the Regional ESF Operational Programme (OP) was **shared with the institutions and social partners** in the region, starting from a twofold priority: guarantee that all citizens have an **equal right to acquire innovative, wide-ranging knowledge and skills**, and the right to grow and work expressing their full potential. At the same time, the educational offer financed by the ESF must increasingly closely reflect the **requirement of skills** needed for innovation and improvements in Emilia-Romagna businesses.

The Operational Programme is developed in the framework of the ESF **thematic objectives**, which the region has defined according to the priorities in the local context.

### Objective: employment

The first objective is to **create jobs** and sustain the professional mobility of workers, especially those on the fringes of the labour market (i.e. the long-term unemployed and young people not in education, employment or training) and with a specific effort aimed at guaranteeing equal opportunities for women. After the long crisis we have just come through, tackling the employment emergency means promoting actions that help people and businesses to face up to change, whether through corporate restructuring or ways to relocate workers. Strictly correlated to this objective, the modernisation of **services for job-seekers** involves adapting those services to the users' new needs.

The second objective is the **social inclusion** of people suffering from disadvantaged conditions, especially disabled people, to combat poverty and prevent discrimination. Schooling, training and assisting job entry are priority tools to contrast marginalisation and to achieve social inclusion.

**Objective:  
social inclusion**

The third objective is to invest in **education and training**, while guaranteeing equal access, preventing school dropout, and enhancing skills by means of continuous learning. To encourage the inclusion of people in the world of employment after completing education, two learning systems are being promoted: traineeships and apprenticeships.

**Objective:  
education  
and training**

Projects financed with ESF resources are selected by the Region through a clear, public procedure guaranteeing high standards and transparency. This is where the Operational Programme becomes a practical opportunity for people and businesses and it is the way the Region invests in the future of its citizens and community.

<b>Operational Programme European Social Fund 2014/2020</b>	<b>Resources €</b>	<b>%</b>
<b>Thematic priority 8 - Axis 1 - EMPLOYMENT</b>		
Priority 1. Access to employment for job seekers and inactive people	147,808,787	18.8
Priority 2. Sustainable integration into the labour market of young people (YEI), in particular those not in employment, education or training	257,103,810	32.7
Priority 4. Equality between men and women	11,800,000	1.5
Priority 5. Adaptation of workers, enterprises and entrepreneurs to change	55,037,513	7.0
Priority 7. Modernisation of labour market institutions	18,870,000	2.4
<b>TOTAL</b>	<b>490,620,110</b>	<b>62.4</b>
<b>Thematic priority 9 - Axis 2 - SOCIAL INCLUSION</b>		
Priority 1. Active inclusion	143,883,783	18.3
Priority 4. Enhancing access to affordable, sustainable and high quality services	13,366,255	1.7
<b>TOTAL</b>	<b>157,250,038</b>	<b>20.0</b>
<b>Thematic priority 10 - Axis 3 - EDUCATION AND TRAINING</b>		
Priority 1. Reducing and preventing early school leaving	29,091,256	3.7
Priority 2. Improving the quality and efficiency of, and access to, tertiary and equivalent education	33,808,758	4.3
Priority 4. Improving the labour market relevance of education and training systems	45,602,510	5.8
<b>TOTAL</b>	<b>108,502,524</b>	<b>13.8</b>
<b>Thematic priority 11 - Axis 4 - INSTITUTIONAL AND ADMINISTRATIVE CAPACITY</b>		
Priority 2. Capacity building for all stakeholders delivering education, lifelong learning, training and employment and social policies	1,572,500	0.2
<b>Axis 5 - TECHNICAL ASSISTANCE</b>	28,305,010	3.6
<b>Total Operational Programme 2014/2020</b>	<b>786,250,182</b>	<b>100</b>



VOCATIONAL  
EDUCATION AND  
TRAINING

POLYTECHNIC  
NETWORK

HIGHER EDUCATION  
AND RESEARCH

EMPLOYMENT  
AND SKILLS

**ER** Education  
Research  
Emilia-Romagna



## Objectives

## Means

## Educators-Partners

Increase the number of young people with qualifications and provide an educational pathway for entry to the world of work

Three-year courses with qualification

Vocational institutes  
Accredited training providers

Develop the scientific, technological, technical and vocational skills required for jobs in the driving sectors of the economy

Courses in Higher Technical Institutes  
Courses in Higher Technical Education and Training  
Courses in technical training and specialisation

HTI Foundations  
Accredited training providers  
Schools  
Businesses

Train highly qualified professionals to drive innovation in the economic and production system

Specialist higher education  
Research grants  
PhD scholarships  
Courses for business start-ups

Universities  
ASTER  
Research bodies  
Accredited training providers  
Businesses

Promote employment and enable people and businesses to adapt to changes; encourage social inclusion through work

Career guidance and assisting job entry  
Training for entry or re-entry to work  
Traineeships  
Apprenticeships  
Training to remain permanently on the labour market

Accredited training providers  
Active Labour Network  
Businesses

Learning is growing

# Vocational Education and Training

An infrastructure for growth must be designed to increase the number of people who share in the collective well-being. On this basis, **social cohesion and local development** can grow hand in hand. The first branch of ER Education and Research Emilia-Romagna is the regional **Vocational Education and Training system**, which offers further study to school-leavers at the end of compulsory secondary education enabling them to embark on a three-year programme to obtain a **vocational qualification**.

Italian national legislation establishes that the school system – consisting of vocational institutes, technical institutes and high schools – may only award higher education diplomas at the end of a five-year programme. To offer differentiated educational programmes in line with the requirements, specific features and nature of the local economic and production system, Emilia-Romagna passed **Regional Law no. 5/2011**, creating the Vocational Education and Training system. Its strongly work-based three-year courses are designed and implemented jointly by **training providers**, accredited by the Region, and by **vocational institutes**.

In operation since the academic year 2011-12, the system has equal status with senior high school education and is fully part of the second stage of the Italian secondary education system.

Characterised by a high level of methodological and didactic experimentation and interaction with local businesses, the three-year programme is designed to provide not only the technical and professional skills required by the labour market but also linguistic, mathematical, scientific, technological, social-historical and economic skills indispensable in empowering young people to construct their own future as citizens.

After the first introductory year enabling students to consolidate basic skills through **individual personalised pathways**, they can decide whether to further their studies at a vocational institute or an accredited training institute, and thus choose the most suitable route to a vocational qualification. This twofold opportunity offered to young people is also a way of combating school dropout and giving Vocational Education and Training a strategic role in the growth of the region.

The Vocational Education and Training system is the first branch of the ER Education and Research infrastructure not only because it is addressed to young people leaving first-level secondary schooling, but also because it is aimed at translating compulsory education into an effective right. To guarantee this right, in fact, the system does not diminish educational objectives but places the emphasis on different models of learning for inclusion with no discrimination, thus extending opportunities and prospects for young people.

Three-year  
work-based  
education  
and training

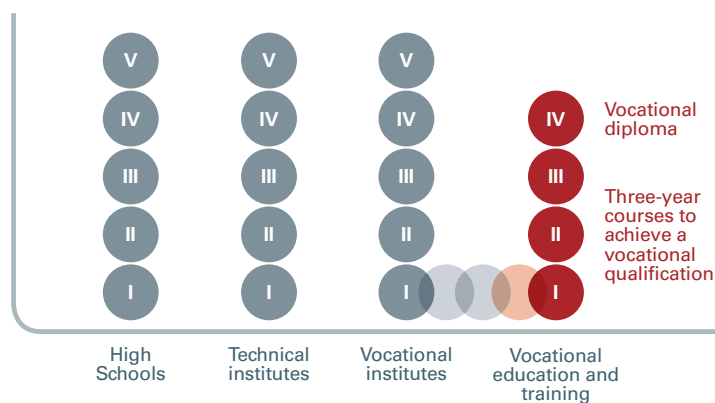
An effective right

The three-year courses in Emilia-Romagna offer the possibility to choose from **23 vocational qualifications**.

The qualifications provide access to the world of employment but the choice of a three-year pathway does not exclude the possibility of pursuing further studies and **continuing in education**. To obtain a diploma, students who have attended the three-year programme at a vocational institute can continue in secondary school until a fifth year. Students who have obtained the qualification at accredited training providers, and pass an examination of acquired skills, can return to secondary school to complete the last two years.

**More opportunities,  
a better future**

Alternatively, having obtained the three-year diploma, students can specialise and improve their professional skills through various other opportunities offered by ER Education and Research Emilia-Romagna.



# Polytechnic Network

Global competition, the reorganisation of production processes and the explosion of social networking technologies have led to a deep structural change in economies. Faced with this change, not all regions and businesses have been able to respond by introducing processes for innovation.

In this context the systematic capacity to generate and transfer new skills has become crucial. Emilia-Romagna thus chose to invest in the **education of specialised professional** figures trained in operational, critical and relational skills. Required for innovation, such skills can also contribute to the processes of developing, raising standards and digitalising the industries of strategic importance for the growth of the country.

The above objectives are pursued primarily through the **Polytechnic Network**, a crucial branch in the regional educational infrastructure for the purposes of developing scientific, technological, technical and vocational skills.

The Region designs the Polytechnic Network programmes starting from the priorities identified in the **Regional Smart Specialisation Strategy**. This strategy aims to guarantee networks of skills meeting the requirements of the leading and emerging sectors of the regional economy. At the same time it also consolidates the driving forces of change and supports innovation and modernisation of services and the environmental sustainability of production systems.

The Polytechnic Network offers various opportunities – including the courses of the foundations managing the Higher Technical Institutes and those of Higher Technical Education and Training – based on the comparison, synergy and integration of varied, complimentary learning worlds and experiences.

The **HTI Foundations** – there are seven in our region – are technical colleges that offer highly specialised, two-year, post-school diploma programmes to educate and train **expert technicians**. Once they enter the various strategic sectors of the economic and production system, these highly skilled technicians will have the capacity to innovate and support their chosen businesses in the production system through high performances, personalisation, environmental awareness, and the use of ICT-based production with new technologies.

Technology for growth

Higher Technical Institutes

The Higher Technical Institutes offer a tertiary, non-university education with classroom learning and long training periods in businesses in Italy and abroad, leading to an **advanced technical diploma**.

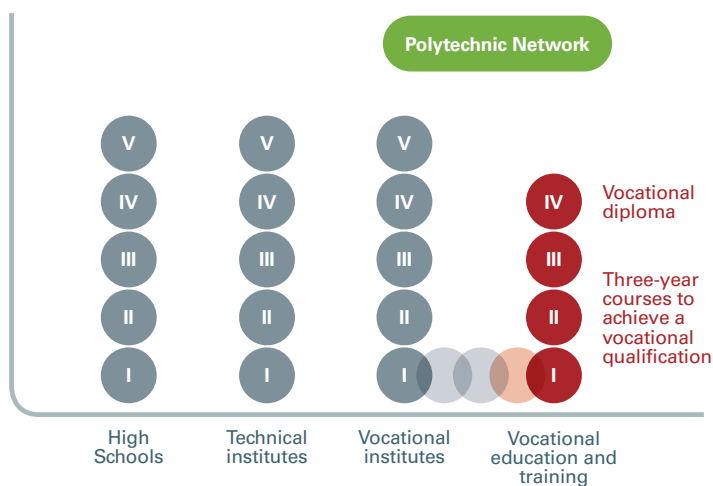
Higher  
Technical  
Education  
and Training

**Higher Technical Education and Training** courses produce specialised technicians capable of managing the organisational and production processes in businesses also associated with technological innovation and market internationalisation. The programmes lasting **800 hours** are designed to meet the labour market demand for technical, professional, scientific, technological, legal, economic, organisational, communicational and relational skills, especially for the purposes of small and medium-size enterprises. On completing the Higher Technical Education and Training programmes, students are awarded a certificate of advanced technical specialisation, recognised nationwide.

In addition to those courses, the Region devises educational programmes to meet the specific needs of the various areas (cities, rural areas, and areas affected by the 2012 earthquake) and to respond to the requirements of the industrial sectors, entrepreneurial systems or individual businesses with a high potential for growth and job creation.

Technical  
training and  
specialisation  
courses

The Polytechnic Network is a crucial investment which the Region intends to consolidate also through a greater interaction with the regional policies for innovation and research. This will provide the region with the indispensable skills to understand, anticipate and guide the deep structural changes in the production systems, as well as lay a solid foundation for growth.



# Higher education and research

In the coming years competition will be increasingly based on the capacity of a region to attract businesses, human capital and innovative, high value-added projects. The possibility for an economy to reposition at global level will be the result of investments in knowledge, research and innovation plus its capacity to spread and transfer the benefits to institutions, businesses and society.

## Towards a new kind of manufacturing

Together with all the stakeholders in regional society, the regional government has set itself an objective reflecting the potential, the specialisations and the excellent skills that the region already possesses. That objective is to occupy a leading position in the **new production system** now emerging globally. This means manufacturing linked up to highly specialised services, capable of combining environmental sustainability, the production of knowledge and the development and transfer of research results, while crossing over cultural and creative skills with technological expertise to transform ideas into **high added-value** products.

## An integrated plan for advanced skills

In innovating manufacturing, priority must be given to **higher education and research**. To strengthen the relevant part of the regional educational and training infrastructure, also through greater integration with the regional policies for innovation and industrial research, the Region has approved a **three-year plan**: "Advanced skills for research, technology transfer and entrepreneurship". This document brings together the resources of the European Structural and Investment Funds (ESF, ERDF and EAFRD) in terms of priorities, objectives, procedures and implementation schedules. The plan is one of the first instruments in the **new generation of policies for integrated development** that the Region committed to launching by signing the Labour Pact.

## The regional innovation ecosystem

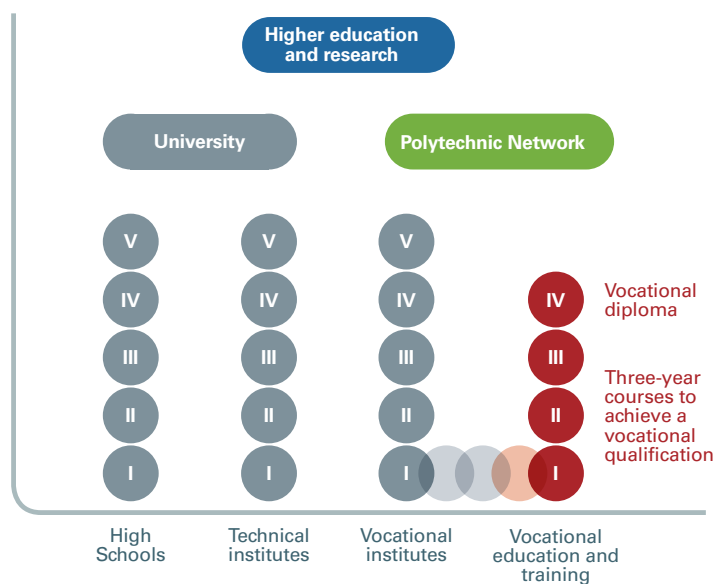
The complementarity and synergy of the European Funds – ESF, ERDF and EAFRD – are meant to guarantee a regional entrepreneurial growth trend within a highly integrated and dynamic **regional innovation ecosystem**, based on the interaction between the research world and the production world. This is intended to attract investments, entrepreneurial initiatives and creative talents capable of jointly promoting innovation in technological spin-offs, start-ups and mature industries.

## Actions for higher education

In implementing the plan with the support of the European Social Fund, the Region aims to promote and finance various actions. They include bursaries and other financial aids to help people entering higher education; grants for research projects in line with the **Horizon 2020** strategic objective to support the conversion of new scientific knowledge into products and innovative services to meet social challenges; **research grants and doctorate scholarships** consistent with entrepreneurial traditions in the region and the paths indicated by Smart Specialisation Strategy; actions to accompany processes creating **new innovative or consolidative enterprises**, and the growth and internationalisation of newly created businesses.

All of the described actions rely on strengthening a **networking system** of increasingly specialised and expert advisory desks situated in the regional technopoles. Adopting a multidisciplinary approach, indispensable in launching innovation processes, the advisory desks have the task of fostering opportunities for people and businesses by encouraging contact between supply and demand of technologies and skills. They also spread and develop research results and support the process of internationalising excellent skills by creating a bridge between Emilia-Romagna and the more forward-looking, innovative businesses at global level.

**The services network**



# Employment and Skills

The crisis lasting several years has lengthened the average time it takes for young people to enter the labour market and has also increased the number of adults forced to look for new employment. This means that more than ever before there is a need to support people in building their careers. The fourth branch of ER Education and Research completes the regional plan with **active policies** aimed at: guiding people in the transition from school to work and from one job to another; enabling workers to update skills; and sustaining the creation of new businesses.

## Measures for employment

To support people seeking work and to supply skills meeting the requirements of the economic and production system, the Region funds **personalised pathways**, implemented in collaboration with businesses, and made up of various actions, such as guidance, classroom and workplace learning, and assistance in starting a job. These opportunities are also structured as a response to situations of corporate or sectoral crisis, such as the building industry crisis, in order to combat long-term unemployment of workers and to encourage their possible relocation.

## Measures for social inclusion

Education aimed at enabling people to **enter the world of work** is a priority tool in contrasting inequality and poverty, which the crisis has not only increased but also diversified. Guidance for personalised career pathways, classroom and workplace learning, and assistance in starting a job are some of the actions designed for more vulnerable people, including the disabled. To make these measures more effective in tackling the complex needs of more vulnerable people and to reach the objective of integration in the world of work, through **Law no.14/2015**, the Region assigned the integrated care of these categories to social, health and labour services.

## Traineeships

The Employment and Skills branch also includes **traineeships** and apprenticeships. Traineeships are crucial in encouraging the acquisition of skills through direct learning in a real work situation and in reducing the time required for entry or re-entry into the labour market. On these grounds, the Region passed **Law no.7/2013** establishing new rules for this instrument with four different types of training. The first type is addressed to young people leaving school, university or vocational training; the second has the objective of enabling the unemployed, unoccupied, and laid-off or redundant workers to enter or re-enter the world of work; the third concerns people with disabilities, asylum-seekers, people entitled to international or humanitarian protection, and people requiring social protection; and the fourth type, introduced with Regional Law no. 14/2015 aims to encourage the social inclusion, independence and rehabilitation of particularly vulnerable people, who are excluded from the labour market and currently cared for by the social or health services.

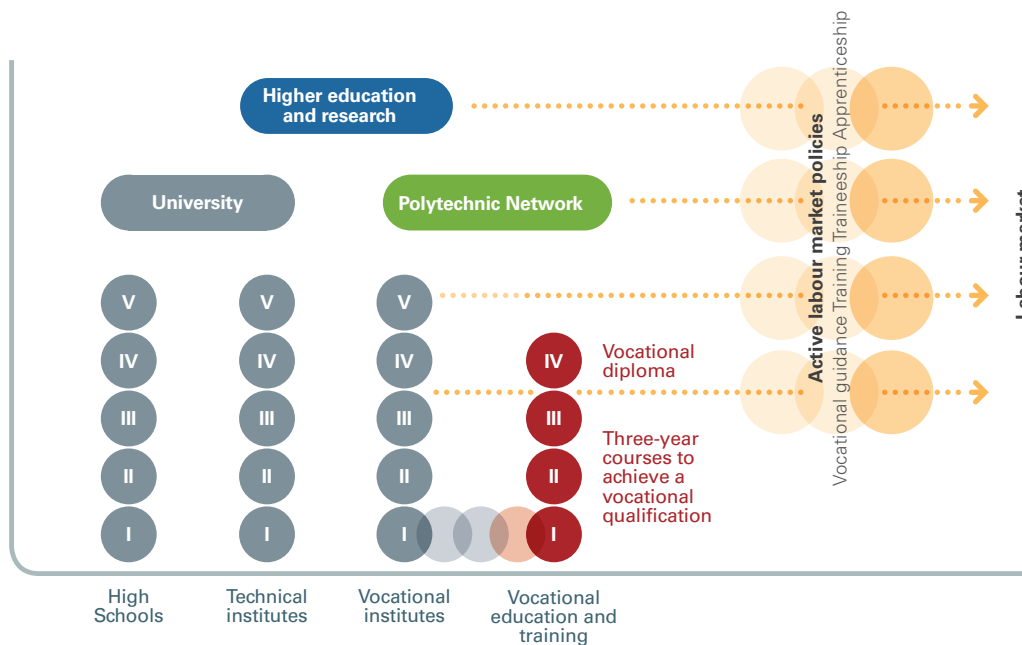


The Region has chosen **apprenticeship** contracts, on the grounds of their considerable educational value, as the best way of encouraging high-qualified entry for young people into the labour market. There are three different forms: **apprenticeships for qualifications, apprenticeships for vocational purposes, and higher education and research apprenticeships**. The Region supports apprenticeship contracts enabling young people to obtain a qualification while working: from a vocational qualification to a diploma, degree, master's degree and Ph.D. There is a twofold benefit: young people are assisted in gaining further qualifications, even at the highest academic level, and strategic skills for innovation reach the SMEs.

Apprenticeships

So-called **continuous or longlife learning**, lastly, concerns all the courses offered to employees, the self-employed, and entrepreneurs, aimed at supporting individual professional development and creating new businesses. Other goals include promoting safety in the workplace, improving the competitive profile of businesses and supporting productive and organisational innovation in the regional economic system.

Continuous learning in the workplace





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