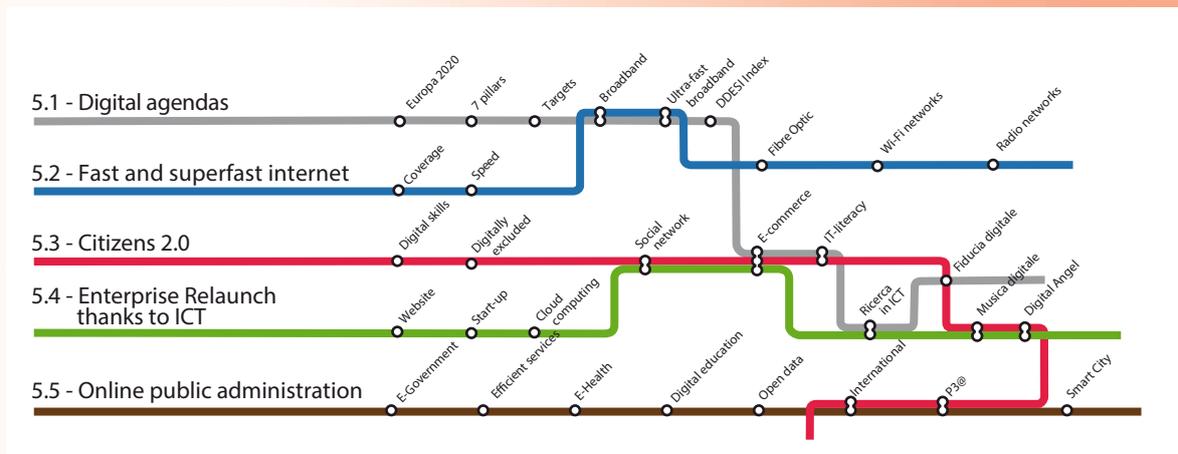


The digitalization process currently underway and the investment in telecommunication networks and digital infrastructure aim to bring about an increase in economic development, competitiveness and social inclusion. The EU's 2010-2020 Digital Agenda represents an important opportunity for development and innovation in all its variations, whether they be economical, structural or social; it has drawn up a series of specific goals with deadlines for their achievement to be monitored over the next few years. Like other Member States of the European Union, Italy, and consequently the Veneto Region, have taken on the commitment to promote digital innovation as stated in the Agenda. It is, however, worthwhile noting that Italy is expecting a certain structural delay in the development of the network, due to the still poor digital literacy of its citizens and businesses.

Not only does the Digital Agenda of the Veneto Region represent an important planning document, but also a real opportunity to make influence Veneto economy and society. With this, the Region intends to carry out a strategy for intelligent, inclusive and sustainable growth. There are three main objectives: to encourage the technological innovation so that it contributes to improving the quality of life for people, to support the competitiveness of Veneto economic and productive fabric and to promote the current digital change within Public Administration bodies.

In Veneto, around 100 million euros have already been invested in implementing structural interventions as well as in developing a digital culture among its citizens, enterprises and public administration.



# Open to the digital revolution





## 5. Open to the digital revolution

In a period focused on relaunching the economy and discovering new ways of development, the policies for innovation and the information society, intent on modernising the local territory and making up for the loss of competitiveness on the market, are determining factors for growth. The wide availability of digital technology encourages a virtuous circle of economic development, stimulates employment opportunities, renews production and business systems of companies, offers the community a better standard of living in terms of transport, health and justice, provides new means of communication and easier access to public services. It is important to note, however, that our country is expecting a certain structural delay with regards the development of the network which, linked to the poor IT literacy of its citizens and companies, may halt the economic and social recovery. A study carried out by the World Bank states that a 10% increase in access to broadband would increase GDP by 1.21%<sup>1</sup>.

The ICT sector is not only strategic for the country's economy: especially in the last few years, digital is becoming more and more important role in our social life, revolutionising routines, interpersonal relationships and communication.

The Internet is a window that looks out onto the world accessible anywhere and at any time. With a simple click it is possible to obtain any type of information, to communicate and to keep in touch with friends and relatives even if they are far away, share ideas and opinions, buy and sell products, work from home, pay taxes, get documents or certificates directly from home without having to queue.

Following on from certain European countries that have already declared the Internet to be a constitutional right and others that are going to do so, last July Italy presented a draft of the 'Declaration of Rights to the Internet' too, a sort of Magna Charta for the web, drawn up by a study commission set up by the Chamber of Deputies. The starting point is to accept the internet as a new public, private and economical space with its own characteristics, that requires specific rules and regulations.

In the introduction, it was said that 'the internet has contributed in a decisive way in building up relation-

ships among people and institutions. It has eliminated borders and has created new ways of producing and using knowledge. It has made the possibility of communicating directly with people in the public domain easier. It has changed the way work is organised. It has allowed the development of a more open and free society. The Internet can be considered as an increasingly important place in which people and groups organise themselves and as an essential tool that promotes individual and group participation in democratic processes and substantial equality. The Internet ought to be considered as a global resource that responds to the principle of universality'. Article 2 of the Declaration introduces the right of access, i.e. 'the right, for all, to access the Internet with the adequate and most up-to-date technology, thus removing any economical and social obstacle'. A clear declaration of the intention to overcome digital, infrastructural, economical and cultural differences which require also adequate public intervention for the effective protection of this right.

### 5.1 5.1 The Digital Agendas

#### Europe, Italy and Veneto's commitment to digital action

In the last years, in Europe attention has been turned to innovation and a knowledge-based society. The EU's Digital Agenda is one of seven flagship initiatives identified in the broader Europe 2020 strategy in order to generate smart, sustainable and inclusive growth

of the European Union and has identified key objectives and concrete action to promote the development of new technology and the digital economy. To achieve these objectives, the Agenda is focussed on seven pillars.

#### The seven pillars of the EU's Digital Agenda

The first, 'Digital Single Market', aims to reduce the fragmentation of digital markets by developing electronic commerce; the second, 'fast and superfast Internet', relies on consistent investment in infrastructure in order to speed up access to the Internet for citizens and businesses; the third, 'Interoperability and standard', addresses the interoperability, cooperation and

<sup>1</sup> Qiang, Rossotto (2009), Economic Impacts of Broadband in information and communications for development 2009. Washington DC, World Bank



standardisation of processes and of public digital applications, including web services for the citizens; the fourth, 'Trust and IT security', is intended as an answer to online criminal activity and to the public's dislike and mistrust of online shopping and payment. The fifth, 'Research and Innovation', relies on increased investment in research, innovation and digital creativity. The sixth, 'Computer literacy', aims to overcome the digital divide and the lack of digital skills in order to guarantee online opportunity for all. Finally, the latest, 'ICT for society', intends to make the most of IT potential in order to support new social and environmental challenges as for example the aging population and climate change. The term 'Agenda' is usually associated with an everyday tool such as a calendar. To have an agenda means to schedule commitments and put them in a diary to remind oneself

that, by a certain date, they are due. The seven pillars established by the EU's Digital Agenda represent actions that need to be carried out by the EU Member States with certain concrete targets set within specific timeframes in order to be able to reach the more ambitious objectives of the European strategy. The chart detailing the Agenda's objectives in order to monitor progress of the digital challenge, is made up of data for Europe, Italy and the Veneto region and highlighted in green are the objectives that have already been reached.

**Italy's Decree for growth 2.0**

Italy has implemented European recommendations and is committed to promoting digital technology: in the 'Decree for growth 2.0' which contains 'Additional urgent measures for the growth of the country'<sup>2</sup>, there are the measures adop-

**Tab. 5.1.1 - Objectives of the EU's 2010-2020 Digital Agenda: where are we? Veneto, Italy and 28EU countries – Year 2014**

Action area	Objective	by	Target	Veneto	Italy	UE28
1. Broadband	<b>Basic broadband:</b> coverage of basic broadband for 100% of citizens (e)	2013	<b>100%</b>	95,7	98,6 (a)	97,2 (b)
	<b>Fast broadband:</b> coverage of fast broadband of at least 30Mbps for 100% of citizens (e)	2020	<b>100%</b>	15,9	20,8 (a)	61,8 (b)
	<b>Ultra-fast broadband:</b> at least 50% of domestic European users with a subscription for services with a speed exceeding 100Mbps	2020	<b>50%</b>	n.d.	0 (a)	5,3 (b)
2. Digital Single Market	<b>Online shopping:</b> online purchases for at least 50% of the population	2015	<b>50%</b>	26	22	50
	<b>Cross-border online shopping by citizens:</b> selling or purchasing online internationally for at least 20% of the population	2015	<b>20%</b>	10 (a)	10	18
	<b>Online shopping for businesses:</b> online purchases for an amount exceeding 1% of total purchases for at least 33% of SME	2015	<b>33%</b>	n.d.	15 (a)	18 (a)
	<b>Online shopping for businesses:</b> online sales for an amount exceeding 1% of the total sales by at least 33% of SME	2015	<b>33%</b>	n.d.	5	15
	<b>Single market for telecommunication services:</b> no difference between roaming and national tariffs.	2015	<b>0</b>	n.d.	n.d.	0,13 (c)
3. Digital inclusion	<b>Regular use of the internet:</b> for at least	2015	<b>75%</b>	61	59	75
	<b>Internet use for disadvantaged categories:</b> bring the regular internet use for disadvantaged communities to	2015	<b>60%</b>	45 (a)	47	60
	<b>Internet use:</b> reduce to 15% the number of people who never used the internet	2015	<b>15%</b>	30 (a)	32	18

<sup>2</sup> Law decree of 18 October 2012, no. 179, converted into Law 221/2012.



## coverage of basic broadband for 100% of citizens (e)

4. Public services	<b>Using e-gov websites:</b> use of e-gov' by at least 50% of the population.	2015	<b>50%</b>	36,7	36,0	58,6
	<b>e-gov forms completed:</b> at least 25% of the population submits online public administration forms	2015	<b>25%</b>	17,2	18,0	33,0
	<b>Cross-border public services:</b> to put online all essential international public services	2015	<b>100%</b>	n.d.	n.d.	n.d.
5. Research and innovation	<b>Increase in ICT R&amp;D spending:</b> two fold increase in public investment taking it to 11 billion Euros	2020	<b>11 mld €</b>	n.d.	0,53 (c)	6 (c)
6. Economy based on low CO2 emissions	<b>The favouring of low consumption energy lighting:</b> global reduction by 20% of energy used for lighting	2020	<b>-20%</b>			n.d.
<p>(a) Year 2013 (b) EU27, data, 2013 (c) Estimate (d) % var. 2013/10 energy consumption for public lighting (e) For Italy and EU the coverage is calculated per family n.a. = not available Source: Veneto Region Processing – Regional Statistical System Section on Commissione Europea, Eurostat, Infratel, Istat e Terna</p>						

ted by the Italian Digital Agenda. In order for these measures to be implemented, the Minister for economic development and the Minister for education, university and research have set up a control system to coordinate the 6 work groups.

The first 'Infrastructure and security', whose aim is to set out, on the one hand, a strategic plan for ultra-fast broadband in terms of high priority areas, identification of the necessary resources and formulation of a regulatory framework to ease the development of infrastructure; and, on the other, the realisation of cloud computing services. The 'Online shopping group' intends to promote e-commerce in the population and businesses, while the 'e-government' aims to improve the services to citizens and businesses by promoting an open and transparent administration and by preparing a plan for 'digitalisation' of the services supplied by the Public Administration with a particular focus on the health, education and justice systems. The group 'IT literacy' .

is committed to encouraging the use of ICT in various professional sectors, to extending the programme of an IT school and to dealing with the issue of social inclusion also of disadvantaged categories and to making people aware of the security and knowledgeable and critical use of the network. Whilst the table 'Research and Development' relies on increasing private investment in the ICT research and development sector. Finally, the sixth group 'Smart communities'

aims to realise the 'Smart communities national plan', ensuring the implementation of the digital infrastructure which is vital for the development of projects that improve the lives of citizens.

**100 million Euros in Veneto for digital development**

Individual regions have also implemented European and national measures linked to the expansion of digital technology. Veneto has drafted

some planning documents, of which the most important is 'Guidelines for the Digital Agenda in Veneto'<sup>3</sup>, in which the state of the art in Veneto on digital innovation, the monitoring of objectives and planned actions is contained.

The realization of the Agenda has already seen an investment of 100 million Euros for structural development as well as for the expansion of digital culture among citizens, businesses and public offices

### Italy's Digital Profile

In order to evaluate completely the pace at which the EU Member States are advancing towards a digital society and economy, the European Commission has used the Digital Economy and Society Index (DESI), that takes into consideration a wider series of indices compared to the EU's Digital Agenda targets which refer to five main dimensions: 'connectivity', that is the expansion and the quality of the broadband infrastructure. 'Human capital' that monitors whether the

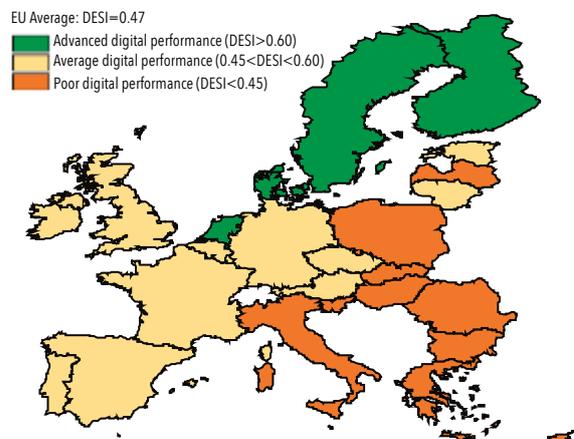
<sup>3</sup> Document approved with Regional Council Decree no. 554 of 3 May 2013



population owns the necessary skills to take advantage of the possibilities offered by digital society; “the use of the inter-net”, that is, what do people go online for; ‘the integration of digital technology’ means the ‘digitalisation’ of businesses and the use of online sales channels, ‘digital public services’. According to DESI, that uses values from 0 to 1, where the higher the score the better the digital services of Italy, the EU is progressively continuing its digital development (in 2015, the EU score was 0.47 compared to 0.44 in 2014) and it is on course to achieve its objectives for 2015. With regard to connectivity, it performs quite well, it has improved regarding basic digital skills of its citizens, considering, for example, the percentage of those regularly using the internet, the level of digital inclusion for disadvantaged categories, and the users’ ability to buy online and to use the e-government services have already reached the target set. Enterprise digital services, especially e-commerce usage, were less impressive; also the use of the web for international online purchases has failed to achieve the target set.

A comparison with the rest of Europe results in a situation of a significant disparity between those countries being ahead and those being not, displaying different levels of development and going ahead at different speeds. Denmark, Sweden, Netherlands and Finland (DESI=0.62) are the countries that best digitally: undisputed leaders in the EU but also among the best in the world.

**Fig. 5.1.1 - Digital Economy and Society Index (DESI): synthetic index concerning digital services in EU countries - year 2015**



(\*) The synthetic index DESI and the categories of which it is comprised can take on a value between 0 and 1: the higher the score, the better the digital services of Italy. Source: Veneto Region Processing – Regional Statistical System Section on European Commission data.

Despite the small steps observed in the last year, Italy’s technological development is still lagging behind (DESI=0.36), finding itself among countries with poor digital performance, far behind the European average. It actually finds it-

**Italy too is among the countries with low digital performance**

**Tab. 5.1.2 - Digital Economy and Society Index (DESI): value of the synthetic index and the categories of which it is comprised. Italy and EU28 – Years 2014/2015 (\*)**

	Italia				UE28	
	2014		2015		2014	2015
	punteggio	posizione	punteggio	posizione	punteggio	
<b>DESI</b>	<b>0,33</b>	<b>25°</b>	<b>0,36</b>	<b>25°</b>	<b>0,44</b>	<b>0,47</b>
Connettività	0,35	27°	0,37	27°	0,51	0,55
Capitale umano	0,38	24°	0,41	24°	0,52	0,54
Uso di internet	0,28	27°	0,31	27°	0,39	0,41
Integrazione della tecnologia digitale	0,21	23°	0,29	22°	0,30	0,33
Servizi pubblici digitali	0,40	14°	0,42	15°	0,45	0,47

(\*) The synthetic index DESI and the categories of which it is comprised can take on a value between 0 and 1: the higher the score, the better the digital services of Italy. Source: Veneto Region Processing – Regional Statistical System Section on European Commission data.



self in 25th place out of the 28 EU countries, ahead only of Greece, Bulgaria and Romania (0.32), and will not achieve any of its forecast objectives for 2015. It is in last but one place for connectivity, needing to bridge the big gap with regards to fast and ultra-fast broadband. Around a third of the population is not connected to the network and the population's level of digital knowledge is quite low (category 'internet use'). The integration of digital technology in enterprises performs a bit better, even if the use of e-commerce remains very limited. However, it finds itself at the front line in the e-business sector, in particular due to the adoption of cloud solutions. The digitalisation of public administration is the category in which Italy performs best (15th place), given that there is certain availability of online public services, even if they aren't wholly exploited yet, especially due to the population's poor digital skills.

## 5.2 Fast and ultra-fast internet

### The extension of the network

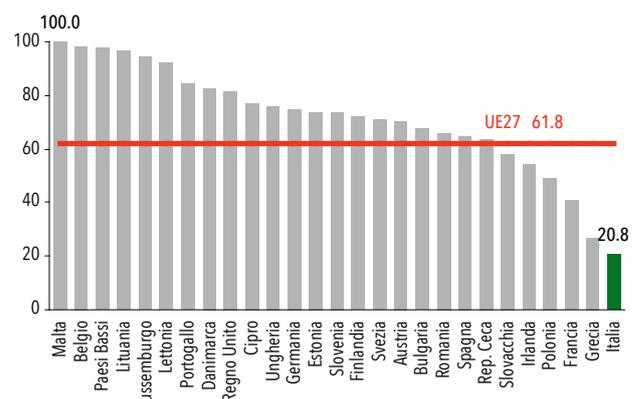
The issue of broadband connectivity for an increasingly faster internet access must be considered a priority, because it is essential in order to enable advanced digital services to citizens, businesses and, generally speaking, the territory. Financing broadband infrastructure is a fundamental challenge for Europe. The aim is to reduce or wipe out completely the infrastructural digital divide, with the intention of ensuring that the whole population can access broadband at even greater speeds. Having been already achieved in nearly the whole of Europe, the first and most important aim of providing universal basic broadband coverage (connection to the internet with speeds no less than 2Mbps), the attention is now turned to fast and ultra-fast broadband. The Digital Agenda for Europe has set itself two rather ambitious goals for 2020 regarding infrastructure: to ensure that all European citizens have much faster connection, of at least 30Mbps (fast broadband) and that at least 50% of European families subscribes to an internet offer for a connection of at least 100Mbps (ultra-fast broadband). The first objective regards coverage, or, more precisely, the availability of a fast connection, the second refers to whether or not a family chooses

to subscribe to ultra broadband for even faster extra services.

The attainment of these objectives requires the making of a global policy that takes into consideration the combination of different technology. Extending fast internet connection is only possible by encouraging the use of the new generation access (NGA), being much faster and safer. In addition to the fixed network, terrestrial or satellite wireless broadband can also play a crucial role in ensuring that all areas are covered, including those that are in the most remote and rural areas. In order to avoid the concentration of broadband networks in few areas with high population and business density, public intervention becomes crucial in order to promote investments in market failure areas i.e. those areas that are not interesting for private providers, they do not guarantee any adequate economic return.

Italy is behind in all the European rankings relating to digitalisation processes, but what is particularly worrying is the situation of telecommunication infrastructure. In the last few years, attaining basic broadband connection required considerable effort: up to now, only 2% of the Italian population is excluded from it, and is unable to access broadband.

**Fig. 5.2.1 - Percentage of families with fast broadband coverage (at least 30Mbps) EU27 – Year 2013**



Source: Veneto Region Processing - Regional Statistical System Section on Eurostat data

The significant gap with the rest of Europe regarding fast connection remains. In 2013, only 21% of Italian families had access to broadband coverage of at least



30Mbps, the lowest level in Europe and 40 points less than the EU28 (62%) average. According to private providers' industrial plans, only by 2016 will Italy achieve the current European average when Europe will have extended a little bit its level of coverage<sup>4</sup>. Moreover, no provider has any official plan to launch a project for extensive coverage of 100Mbps. The demand expresses an interest, which is still too low to warrant investment in this type of infrastructure.

#### Italy's ultra-fast broadband objectives

With the project 'Italian strategy for ultra-fast broadband'<sup>5</sup>, adopted in March 2015, the Italian government wants to bridge the infrastructural gap, focusing its efforts especially on building 100Mbps networks which is the most difficult result to attain for market operators.

The project is expecting public investment for<sup>6</sup> billion Euros up to 2020, with the aim of creating the best conditions for building fast networks, through fiscal incentive schemes, access to concessional credit and tax exemption on investments or non-returnable grants.

The aim is to achieve coverage for up to 85% of the population by 2020, with a connection of at least 100Mbps. The reached percentage will vary according to the shares of private investment that the project will succeed in mobilising and attracting.

For the remaining 15% of the population that is still excluded from broadband, the aim is instead to guarantee access to services with speeds equal to, at least 30 Mbps. The intention is to reach the universal fast broadband coverage, as stated in the EU's Digital Agenda.

For ultra-fast broadband the Italian plan envisages a coverage level of up to 85%. However, how many Italians will subscribe effectively to 100Mbps packages? In addition to the digital infrastructure offer, it is necessary at the same time to stimulate the demand in order to increase subscriptions to ultra-fast broadband, to achieve 50% in domestic usage, in line with what is provided for in the EU's Digital Agenda in relation to broadband.

First of all, Italy needs to bridge a significant gap in internet usage, rather than for infrastructural development: the demand for connection services presents considerable lower market penetration rates compared to other main European countries. For example, although basic broadband coverage is completed

in the territory, only 51% of Italian families is subscribed to broadband, while in Europe this figure is 70%. Among these, only 2% has a fast broadband contract (22.5% in Europe).

There is a certain number of users, albeit still rather limited, that would be ready to pay a higher price for ultra-fast connection and make use of more efficient digital services compared to those currently on offer. The users' answer to the price of ultra-fast broadband will depend on the actual increased performance and the new services that will concretely be provided.

In conjunction with 'Ultra-fast broadband plan', the Italian project 'Strategy for digital growth 2014-2020' is aiming to promote the creation and offer of services in order to make subscribing to ultra-fast broadband even more interesting. The intention is to create a virtuous cycle for developing ICT. The building and adoption of faster networks pave the way for innovative services that need higher speeds; in turn, the offer of interesting contents and services will promote demand for greater speeds, creating an opportunity to invest in faster networks.

The infrastructure strategy defines certain development driving forces in order to try to increase as much as possible internet use. It is crucial to focus one's efforts on infrastructure projects in areas with greater demographic concentration and higher business potential as well as where main public administration buildings can be found. All schools will have to be connected at a speed of 100Mbps as will health and justice facilities. Not only will this allow the plans for digitalization of the public administration, which are fundamentally socially relevant, to be set in motion, but it will also involve nearly the entire Italian population in the process of digitalization.

### Veneto - bridging the gap

In the last few years, the Veneto Region has done everything it could to bridge an extremely disadvantageous gap affecting the citizens and the businesses, since in 2010 around a fifth of the Veneto territory did not have broadband coverage. Consequently, the Region has invested nearly 85 million Euros in infrastructure for a series of projects, starting with the installation of one thousand kilometres of optical fibre. The broadband development project is made up of two phases. The first consists of the installation of backhaul optical fibre infrastructure in those areas of Veneto which are lacking in connectivity means. The

<sup>4</sup> According to the results of the public consultation carried out by Infratel on behalf of the Italian Minister for Economic Development and completed in July 2014

<sup>5</sup> Italian Council of Ministers Presidency, Italian strategy for ultra-fast broadband, Rome, March 2015

<sup>6</sup> Italian Council of Ministers Presidency, Strategy for digital growth 2014-2020, Rome, 3 March 2015



project involves 268 municipalities, for a total of 332 planned actions and an overall commitment of over 53.5 million Euros. As of January 2015, 240 works had been completed, while 37 were still being worked on and 55 were due for completion imminently.

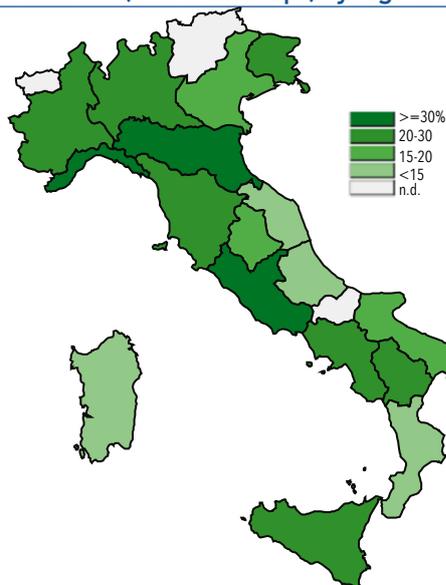
The second phase, launched at the beginning of 2015, saw the activation of broadband services in 'digitally divided' areas, characterised by market failure, through a system of incentives offered to telecommunication operators.

Total financing expected is of 14 million Euros and the project involves 703 places in Veneto, over 7 provinces, with an involvement of 215 municipalities.

Therefore, by the end of 2015, the entire regional territory will have basic broadband coverage.

In Veneto, fast broadband coverage, however, will be confined to 15.9% of the population, less than the national average level, according to Infratel data. An experimental project for the development of ultra-fast broadband is still being developed. It will begin with pilot projects in specific areas that currently present a potential strong demand for connection. In the first three months of 2015, this experimental project began, following a notice of call for expression of interest. Total financing amounts to about 6.1 million Euros.

**Fig. 5.2.2 - Percentage of population with access to fast broadband (at least 30Mbps) by region – year 2014**



Source: Veneto Region Processing - Regional Statistical System Section on Infratel data

### Promotion of Wi-Fi

As part of the digital infrastructure interventions, of particular note is the project 'Veneto Free Wi-Fi' favouring the expansion of open Wi-Fi networks in urban areas with the aim of promoting mobile connection available to all users in a territory.

People nowadays are expecting, more and more, to have network access 'anytime, in any place' because online they manage work as well as personal activities. The expansion of mobile technology and economy is obviously at the base of such demand.

There often remains, however, the obstacle of being practically unable of accessing the mobile network (no 3G/UMTS coverage), but also of the connection cost. Moreover, tablets, portable devices which are more and more widespread, are often only able to link to Wi-Fi and not directly through a telephone connection.

The creation of public Wi-Fi networks constitutes, therefore, an important public service that local organizations can take on. This will be advantageous for local residents who, due to personal choice or technical inability, do not have access to another type of connection as well as tourists and city workers.

The action promoted by the Regional Administration is supported by the municipalities and their aggregations, with a variable grant between 15,000 and 18,000 Euros for the realisation, the expansion, the development and the upgrading of public Wi-Fi networks, that must guarantee free access to all, with local hotspots in public areas and/or open to the public in the municipal territory.

In reply to the notice of call, there were 307 applications out of a total of 404 municipalities involved (99 grouped in 11 associations) for a financial request of over 6 million Euros.

There are 232 municipalities that are benefitting from this programme, spread in various provinces: 67 in Padua, 42 in Rovigo, 33 in Verona, 29 in Treviso, 26 in Vicenza, 20 in Belluno and 15 in Venice. From February 2015, the first Wi-Fi networks are active in the aforementioned municipality territories with a total of 594 Access Points (additional APs will be available in the coming months). In view of the large number of applications received, the availability of resources has increased from the initial 2 million to about 3.75 million Euros.



**The evolution of radio networks**

The Region's commitment consists also of the development of public radio networks. Communicating in every place and under any circumstance is crucial in case of emergency and protection of the security of citizens in order to guarantee efficient and well coordinated intervention by of public utility services providers.

Aware of this need, the Veneto Region is among the first to arrange and put into place a complex radio communication system supporting the emergency and security services. The Region has available and manages its own radio telecommunication infrastructure in order to support the regional public utility services such as the medical emergency service, the civil protection service, the woodland fire service, local and province police services for communication with the relevant operating centres.

Today, there are over 3,000 radio terminals supported by this infrastructure: 1,073 used within the emergency health sector, 633 by the woodland fire service and 1,491 by the local and province police forces. The project, under regional control, provides the technological upgrade of regional radio connection services and the evolutionary maintenance of the network in order to ensure the highest supported level of service and reliability. The project involves a total investment of around 7 million Euros.

### 5.3 Citizens 2.0

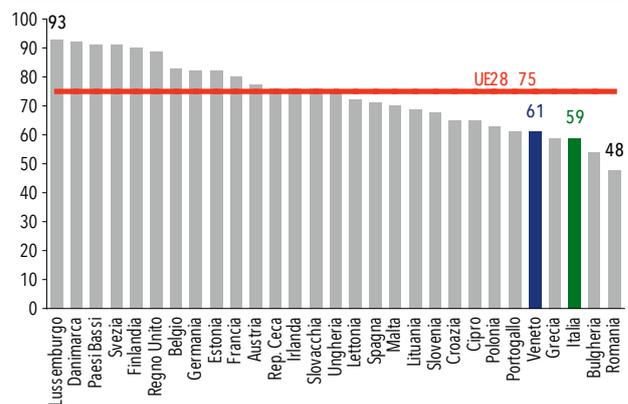
#### Is the Internet really for everybody?

Familiarity with the Internet and the opportunities offered by the network can deliver fast, efficient and cheaper results depending on the various needs of the citizens, with a tangible improvement in the quality of life.

The case of IT literacy and improving digital skills is a process of social inclusion. To this end, the EU's Digital Agenda has set , two main objectives to be achieved by 2015: on the one hand, to reduce to 15% the number of people that have never used the internet, and on the other, to increase to 75% regular users, i.e. those using it at least once a week, particularly with regard to the most disadvantaged categories, such as the unemployed, the elderly, people with poor levels

of education and disabled people (target of 60% by 2015).

**Fig. 5.3.1 - Percentage of people who regularly use the Internet (at least once in the last three months). Veneto and 28EU countries – Year 2014**



Source: Veneto Region Processing - Regional Statistical System Section on Eurostat data

In Italy, in 2014 59% of the population between 16 and 74 were regular internet users (56% in 2013), the third lowest figure in Europe after Romania and Bulgaria, compared to an EU average of 75% and over 90% in certain Northern European countries.

Around half of the 28 EU countries already achieved the European objective, while Italy is lagging behind and will not reach the target, despite demonstrating an encouraging upward trend in the percentage of regular internet users, that has nearly doubled over the last 8 years.

The poor use of online services is due to a delay in the adaptation of infrastructure. There are also strong generational, cultural issues as well as geographical problems: the Italian population, a large part of which is elderly, does not use the internet due to a lack of skills or interest. Both businesses and citizens of the 'Mezzogiorno' have fewer skills compared with the rest of Italy.

In Veneto 61% of the population (around 2.24 million people) uses the internet regularly, steadily increasing in the last few years (34% in 2006), but to achieve the target of 75% it is necessary to open the web up to the other 500,000 people, up to now excluded. Whilst the very young use the internet on a regular basis like their European peers, as they grow older



this becomes less so: in the 45-54 age group, the figure is not more than 60% and plummets to 38% for those who are 10 years older, with a 16 point difference compared to the European average. Among the older people, only 15% is familiar with the Internet (34% in EU28).

**In Veneto, 15% of the population is an advanced user**

More men than women go online; other differences emerge when taking into consideration the professional status: Regular internet use is applicable to nearly all students, sufficiently high for the employed, while very low for homemakers and retired people. The shortfall is evident for the disadvantaged categories<sup>7</sup>, for which the percentage of regular users stands at 45% compared to 61% of the whole population.

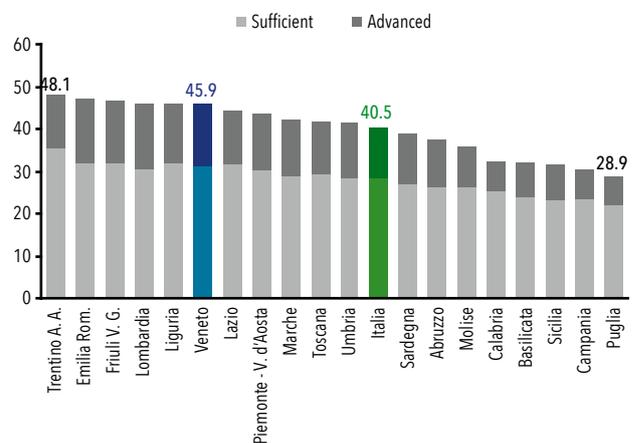
**Tab. 5.3.1 - Percentage of people aged 16-74, using the Internet regularly (at least once a week in the last three months) by some social demographic features. Veneto, Italy and UE28 – Year 2013**

	Veneto	Italy	UE28
Total	61	56	72
Type			
Male	67	61	74
Female	55	52	69
Age			
16-19 years	95	87	95
20-24 years	88	82	92
25-29 years	89	78	91
30-34 years	79	75	89
35-44 years	76	68	82
45-54 years	60	55	71
55-64 years	38	39	54
65-74 years	15	16	34
Employment status			
Employees	75	70	83
Seeking employment	64	56	66
Student	94	90	97
Homemaker, withdrawn from work etc.	26	24	42

(a) For disadvantaged groups are considered the people who belong to at least one of the following categories: persons aged 55-74 years, with a low level of education (at most a high school), unemployed, retired from work or inactive (housewives and unable to work). Source: Veneto Region Processing – Regional Statistical System Section on Istat data

ries<sup>7</sup>, for which the percentage of regular users stands at 45% compared to 61% of the whole population. In addition to the delay in using the internet, Italy shows a lack of IT and digital skills in the population. The 'Digital Skills Indicator' proposed by the European Commission in the Digital Agenda Scoreboard 2014 makes reference to a series of skills and PC and the internet knowledge, ranging from basic to the most advanced ones, in order to define the citizens' digital profile according to four levels: no skills, basic skills, average and advanced. Considering that, to fully benefit from the advantages that a digital society offers, one needs to have skills of a certain level and not just basic skills, it turns out that 41% of Italians prove to have adequate technological knowledge and skills, compared to 53% of the European average. Among the Italian regions, Veneto is in a relatively better position: even if most of its citizens show either basic or no skills, regarding PC and Internet use, the percentage of those getting by quite well is equal to 46% of which a third are deemed advanced users<sup>8</sup>.

**Fig. 5.3.2 - Percentage of people aged 16-74 having advanced or adequate digital skills, by region – Year 2012 (\*)**



(\*) The 'Digital Skills Indicator' is a synthetic indicator that defines the citizens' digital profile according to four skill levels (no skills, basic skills, adequate or advanced) Source: Veneto Region Processing – Regional Statistical System Section on Istat data

The 'Digital Skills Indicator' is a synthetic indicator that defines the citizens' digital profile according to four skill levels (no skills, basic skills, adequate or advanced). It has been determined starting from the

<sup>7</sup> Disadvantaged categories are considered individuals belonging to at least one of the following categories: people in the 55-74 age group, with low education qualification (no higher than lower secondary school), unemployed, withdrawn of work or inactive (homemakers and incapacitated).

<sup>8</sup> The 'Digital Skills Indicator' is a synthetic indicator that identifies an individual's digital profile relating to four skill levels (no skills, basic skills, adequate or advanced). It has been determined starting from the skills declared in a series of 20 activities regarding PC and Internet use: the 20 activities are grouped together in 4 sections: information (knowing how to find information online, reading newspaper,



skills declared in a series of 20 activities regarding PC and Internet use: the 20 activities are grouped together in 4 sections: information (knowing how to find information online, reading newspaper, magazines etc.); communication (sending/receiving emails, posting chat messages), creating contents (electronic presentations, creating websites, the ability to programme), problem solving (connecting or installing devices or operating systems, using internet banking, buying and selling online...).

For more details on how these calculations were made, consult 'Measuring Digital skills across the EU: EU wide indicators of Digital Competence' - May 2014, on the EU's Digital Agenda site: <https://ec.europa.eu/digital-agenda/>

Additional differences are observed in the type of internet services used, compared to the other European countries. The diversification index of online activities is calculated considering 12 possible activities and is less than 5 for Italy compared to the European average of 6.2. Activities linked to communication and information are quite widespread in line with the European average: 85% of Italians send or receive e-mails (87% for EU28), 60% read online newspapers or magazines (67% for EU28) and 58% use social networks (EU28 58%). Less widespread, however, are online transactions such as home banking (42% compared to 57% of the European population) or online purchases (35% compared to 63% of EU28)<sup>9</sup>.

Online activities as well as digital skills obviously are age dependent. The network is an important source of information and a powerful means of communication for around 90% of the Veneto population of all ages, whereas the frequency of use for other activity steadily reduces as the age increases. Social networks, i.e. virtual platforms where to exchange opinions, share ideas, track down far away friends, are used by 9 out of 10 under 30 year olds, while 47% of the 55-74 age group use it. Even if the figure is lower, the young use also the other recreation functions of the network, such as reading or downloading e-books, online travel services, and buying and selling. However, on the other hand, the over 30 year olds, that is, those who are more likely to be busy with work and family, are increasingly using the net for Internet banking and

for contacting public administration offices.

The web is establishing itself as an alternative means

**Internet is much used for information purposes ...**

**Tab. 5.3.2- Percentage of people aged 16-74 having used the internet in the last three months by type of activity and age group. Veneto – Year 2013**

	16-29 anni	30-54 anni	55-74 anni	Total
Researching information, reading newspapers, magazines etc.	92.7	91.6	89.9	91.6
Sending/receiving emails	91.9	86.9	83.8	87.8
Social activities (participation in social networks,	91.3	66.0	47.1	69.9
Recreational activities (downloading e-books, travel services)	59.3	53.5	51.5	54.7
Online banking	36.4	48.5	46.0	45.0
Online buying and selling	40.9	36.3	26.0	36.0
Contacting public administration offices	25.1	33.0	36.8	31.5
Job search	35.5	23.6	n.s.	24.2

*n.a. = insignificant estimate Source: Veneto Region Processing - Regional Statistic System Section on Istat data*

for the widespread use and availability of cultural contents. New multimedia platforms are making access to newspapers, magazines and books faster and more easily available, when compared with the paper format of only a few years ago.

In view of the constant reduction in the number of daily newspapers sold, the Italians' propensity to inform themselves through other channels is increasing. In 2014, 31% of the over 6 year old Veneto population states that they read online newspapers, news or magazines, a figure in line with the national average and increasing over time (13% in 2005).

Even books are becoming digital: in 2013, in Italy over 24% of books published, the equivalent of nearly 15,000 titles, were also accessible to the public in digital format. The modest data regarding digital readers is set within a context of general reading crisis, where only one Italian out of two reads at least one book a year and taking into account the poor IT familiarity of Italian population: only 8.1% of the

magazines etc.); communication (sending/receiving emails, posting chat messages), creating contents (electronic presentations, creating websites, the ability to programme), problem solving (connecting or installing devices or operating systems, using internet banking, buying and selling online...). For more details on how these calculations were made, consult 'Measuring Digital skills across the EU: EU wide indicators of Digital Competence' - May 2014, on the EU's Digital Agenda site: <https://ec.europa.eu/digital-agenda/riviste>, ...);

<sup>9</sup> Eurostat publishes all the percentages by taking into consideration those aged between 16-74 that used the internet in the last three months, with the exception of online shopping which refers to the last 12 months.



Veneto population uses the internet to read books or download e-books (Italy 8.7%).

The availability of e-technology and the ease with which one can locate information online leads more and more Italians to turn to the internet, also for medical advice. In Veneto nearly one out of three looks up health information online. This habit will no doubt lead to a new doctor-patient relationship. It is not unusual, in fact, for the advice found online to be discussed with one's doctor, at times even used to call into question the accuracy of his diagnosis. If, on the one hand, the Internet allows us to obtain many information on the illnesses that afflict us, to find good doctors or better treatment centres, on the other, one risks being overwhelmed by so much information where it is not always easy to choose the most accurate and trustworthy.

**... but still less for online purchases**

In the online marketplace, it is now easy to find any type of product, from the comfort of one's own home and often saving money compared to traditional shopping. Despite this, Italians are still hesitant and rather wary of online shopping.

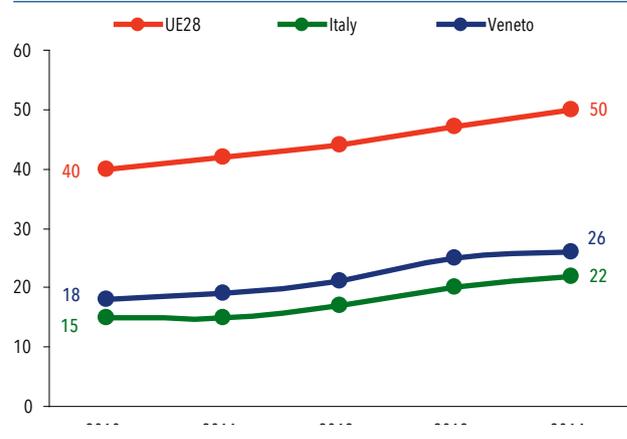
In Veneto, only 26% of people aged between 16 and 74 frequently orders and buys online (22% in Italy), far from the target set by the EU's Digital Agenda aimed to encourage at least 50% of the population to shop online by 2015. Yet, online shopping is also taking off in Italy and in only 5 years the percentage of online buyers has increased by 7 points (8 in Veneto).

Men are more likely to buy online than women (30% against 20% women), young people (40% of under 30 year olds), students (40%) and individuals with a high qualification on average (46% of graduates compared to 9.5% of those having lower secondary school qualification). Generally, online one can book trips, holidays or spa breaks (48.9%), buy clothes or sports equipment (28.2%), books (25.1%) or household items (20.5%).

Most of those who buy online goods and services contacts Italian (77%) rather than international vendors; this is due also to technical reasons, since a large number of cross-border orders are not accepted, being not national credit cards declined.

The realisation of a European digital single market, wished by Europe, still has its limitations, needing precise interventions to eliminate legal obstacles which prevent European businesses to trade internationally and to simplify the cross-border e-payments.

**Fig. 5.3.3 - Percentage of people aged 16-74 having ordered online goods and services for private use in the last 12 months. Veneto, Italy and EU28 – Years 2010:2014**



Source: Veneto Region Processing - Regional Statistic System Section on Istat data

Internet has no boundaries, but the online markets aren't quite there yet: Fragmentation stifles competition in the European digital economy. Moreover, it prevents consumers from enjoying the benefits that the digital single market can offer, in terms of price and choice.

In order to achieve a digital single market, cross-border e-commerce plays a significant role in the EU's Digital Agenda. Europe fully intends to increase this, bringing the percentage of the population making international online purchases to 20%. It is a practice that is becoming more and more widespread in the European population, since in 2014 18% of them turned to the international online marketplace (12% in 2011), while Italy is struggling to gain a foothold: only 10% of the population buys from the international online marketplace, which is one of the lowest figures in Europe. For Veneto, the latest data available goes back to 2013 and stands at 10% of the population, compared to 7% in Italy.

### Music: from CDs to streaming

The music sector, more than most, has had to seriously adapt to new technology. The world of music transcends generations, bringing children, young people, adults and the elderly together, even if, above all other age groups, it is the younger generation which is more interested in using music digitally. Ac-



According to a recent research<sup>10</sup>, in Italy only around half of young people state that they listen to music on a CD player (52.7%). Nowadays, many are using new digital channels: YouTube (75.5%), the computer (71.5%) or new music streaming services such as Spotify or Deezer (44.3%). Radio, favoured by 72.7% of young people, continues to hold its own. Technology is not making music just to be listened to: in order to communicate thoughts and feelings, 66.6% choose to share music videos through social networks and digital devices.

In the last few years, one of the big problems for the record market was the illegal downloading of music, which for some time was having a strong, negative effect on artists and record companies, with the risk of discouraging research and investment. Piracy obviously results, in fact, in discouraging the consumer to buy music legally. Today, music is undergoing a series of transitions that can be put in three categories: from physical to digital format, from pc to mobile, from download to streaming. Downloading music has represented the first step towards the distribution of music digitally. There was a time when users listened to a smaller number of songs, since the only way to do it was to buy CDs or listen to the radio. Now the same users can listen to hundreds of songs each year, also thanks to the possibility of accessing music anywhere, or more precisely having the opportunity of creating quickly and with ease personalised compilations that can be listened to on a portable device, on a mobile phone or in the car.

Especially the growth in music streaming has changed the way the market offers music from the traditional use to the introduction of new services which can be accessed through a special subscription. 41 million people worldwide pay for a subscription; in 2013 there were 28 million and barely 8 million in 2010.

There are truly many ways in which one can listen to music on the net. There are over 25 million songs available for Italian consumers to download and stream. Today, in Italy, there are 12 online music shops where one can legally download music (such as I-Tunes and Amazon). There are 16 sites that allow access to music content by streaming in exchange for a monthly subscription charge (such as Spotify, TimMusic, Deezer), while there are 7 that allow people to listen to music for free by streaming with advertising slots (such as YouTube and Vevo).

**Tab. 5.3.3 - Change in the music market: music earnings by physical or digital format (percentage values) Italy - Years 2009-2014 (%)**

	2009	2010	2011	2012	2013	2014
Physical (CD)	86	84	79	72	68	62
Digital	14	16	21	28	32	38
of which:						
Digital download				19	20	16
Streaming				9	12	22
di cui:						
servizi in abbonamento				2	6	10
servizi sostenuti da pubblicità				7	7	12
<b>Totale fisico e digitale</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>
Fonte: Elaborazioni Regione Veneto - Sezione Sistema Statistico Regionale su dati Fimi						

Observing data from the Italian Industry Musical Federation, it comes out that this new way of selling and listening to music has allowed the Italian record market to increase in 2014, after 2013 initial positive data. Last year drew to a close with an increase by 4% and a turnover of 122 million Euros. Over the years, the growth involved, above all, the digital sector, which today represents 38% of the market (14% in 2009). The growth is driven, above all, by streaming services whose total impact on sales went from 9% in 2012 to 22% in 2014 while download figures fell. As a whole, the physical format in Italy still represents, however, more than half (62%) of the market.

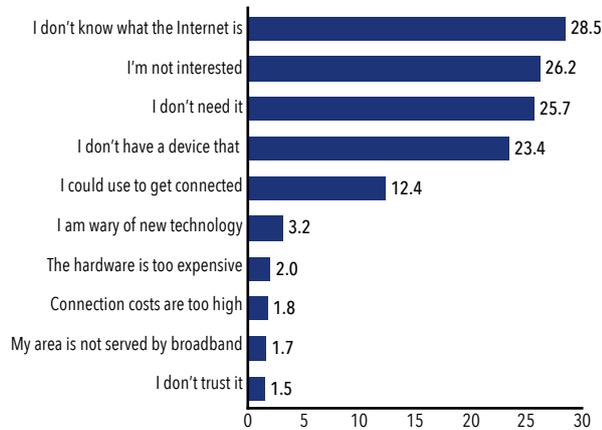
### Those excluded from the net

While more and more people chat on Whatsapp, post photos on Facebook, are distance studying or working, find information online, in Italy nearly one out of three people, however, is literally cut out of the digital world, either through choice or lack of opportunity. There are still too many of the 'digitally excluded' in Italy: 32% have never been online, despite the European average being 18%, which is close to the target of 15% to be achieved by 2015. The Italian percentage is far from Denmark's 3% figure, a country with the lowest number of people who are 'digitally excluded'. In Veneto, there are over a million people who have

<sup>10</sup> Research into the relationship between young people and music, by 'Squadri per Coca Cola', July 2014. The research was based on a poll of 600 Italians aged 13-35.



never used the Internet, 30% of the population aged between 16-74, and if one were to add those who



**Fig. 5.3.4 - ig. 5.3.4 – Percentage of people aged 6 and over who have never used the internet by reasons for non-use. Veneto – Year 2014 (\*)**

Source: Veneto region Processing – Regional Statistical System Section on Istat data

use it occasionally, the percentage further increases (32.6%)<sup>11</sup>. At risk of exclusion are women more than men, mostly the elderly and above all homemakers and the retired, that is, those categories that are disadvantaged.

Many do not know anything about the Internet (29%), others state that they are not interested and claim that they do not need it, a small number are wary of it. For 26%, a lack of skills is the main contributing factor as to why they don't use the internet while 12% reports to not having a PC or a device that would allow them to get connected. On the other hand, the financial barrier, i.e. the high cost of services or devices, is not so important.

Believing in the potential of digital technology as a powerful instrument for social inclusion, the Veneto Region is seeking to aid certain disadvantaged categories, those that are socially weaker, by putting in place a series of initiatives aimed at improving IT literacy and at increasing the population's digital skills. From 2010, it has been financing the creation of free internet public access points in the region, called 'p3@', where the 3@ mean 'access' 'acculturation' and 'assistance'. These are places that have been made available by the Municipalities and are operational thanks to local volunteer groups. It is a place where

**p3@ - an aid for those who want to enter the net**

citizens can go and use the internet for free, familiarise themselves with the pc, improve their IT skills or use online services of the public administration.

The centres are open to everyone, but are aimed above all to those groups of the population that statistically use the internet less (the elderly, immigrants, unemployed people) or do not have a pc and, therefore, run the risk of being excluded by society. Up to now, 349 centres in 327 Municipalities in Veneto have been financed with a total investment amounting to 3.9 million Euros. In the first year the p3@ centres had already over 200,000 users: 21% were foreign, over a fifth were over 50 and 11% was made up of retired people.

## 5.4 Business relaunch in the digital world

### Web opportunities

The introduction of the most recent digital technology ensures that businesses save on costs, a real improvement in production efficiency, paving the way for new business channels, thus proving itself to be an important competition trigger. From a European viewpoint, with regard to digital services, Italian businesses positively stand out for having adopted integrated management applications (ERP<sup>12</sup>), based on the computerisation of all its internal business processes, rather than using 'Customer relationship management' (CRM) applications aimed at managing customer relations. Websites are quite widespread, whereas e-commerce is still limited.

The ever increasing adoption of ERP solutions as part of internal business processes also involves small and medium enterprises and is probably prompted by the need to be prepared as innovations in external business processes are being heralded.

In 2014, in Veneto nearly all businesses with at least 10 employees had internet connection (98.5%) in line with the national average. An increase has been made from 2011, when the percentage stood at 95%. Fixed broadband connection is the most widespread connection (93.1% of businesses), often accompanied

<sup>11</sup> 2013 data.

<sup>12</sup> 'Enterprise resource planning' maps out the management system (information system) that within an enterprise integrates all the business processes



by a mobile connection for mobiles, tablets, internet keys etc.

Less prevalent is the penetration of the digital technology into smaller businesses with fewer than 10 employees. 79% of them are connected to the net, a figure which is higher than the national average (77%). This figure was from 2011, the latest data available for small enterprises, which had been gathered following the 'Industry and services Census' in 2011. In the last few years, there must have certainly been a change even in this type of businesses, taking into consideration the fact that a certain number of processes have to be completed online. There remains, however, an obvious disparity with larger businesses.

It is undeniable that smaller businesses have to deal with more difficulties when integrating ICT technology in their production processes, but it is also true that it is a strategic necessity to involve smaller businesses in the innovation process, given the fundamental role that each business plays in Italy's production system, representing over 90% of Italian and Veneto businesses.

**Tab. 5.4.1 - Digitalisation indexes for businesses by size. Veneto - Year 2014**

	3-9 Employees (a)	10 or more employees
<b>Percentuale di imprese</b>		
con connessione a internet	79.0	98.5
con connessione fissa in banda larga	64.9	93.1
con sito web	36.6	74.3
che usano internet per accedere a servizi bancari o finanziari	66.6	91.4 (b)
che utilizzano i social media	11.5	34.8
che ricorrono al commercio elettronico (vendite e/o acquisti on-line)	26.0	42.0
che acquistano servizi di cloud computing	13.1	42.0
che usano internet per interagire con la P.A.	27.3	86.3 (c)
<i>(a) Anno 2011 (b) Anno 2012 (c) Anno 2013 Fonte: Elaborazioni Regione Veneto - Sezione Sistema Statistico Regionale su dati Istat</i>		

**Promote ICT in smaller businesses**

Below, in addition to dealing with large businesses having sufficient IT systems in place, it seems important to clarify the digital journey of small businesses, among difficulties and targets achieved.

Generally, in larger businesses more is invested in ICT and in research and development and there is an availability of employees having more advanced digital skills. The reverse is true for smaller businesses, where digital and technological expansion comes up against financial constraints and lack of knowledge as well as a certain lack of confidence in new technology, especially in those businesses where the owner is older. Of the micro businesses that are not connected to the Internet, 40.6% thinks that the internet is not necessary for job, while 10.1% states that they do not have a direct need for it, because they have chosen to outsource management of online services offered by the public administration.

The unavailability of a good connection and/or the lack of internet security (10.6% of micro enterprises) and poor internal digital skills (7.6%) are cited among the main deterrents. Even among micro enterprises, there are some more dynamic sectors that are moving towards digital technology: around 95% of businesses operating in professional, scientific and technical sectors alongside those offering information and communication services are connected to the internet. 87% of businesses in the manufacturing sector are connected, especially those active in the mechanical and metalwork industry, while the figure stands at 85% for small enterprises in the building sector. Micro enterprises use the internet to access banking and financial services (66.6%) or to obtain information (43.1%) but also to carry out administrative tasks fully online (29.2%).

**Raising a business profile: from websites to social media**

Having an easy to find, eye-catching website that gets one known and advertises their business as well as being on social networks in order to communicate with customers, have now become key factors in order to ensure that a company is successful. Such opportunities are, however, only partially seized upon, since only 74.3% of businesses in Veneto with over 10 employees and only 36.6% of those with fewer than

<sup>13</sup> For businesses with at least 10 employees the latest data available is from 2014 and come from the annual Istat survey 'ICT in Business'. For smaller businesses, with 3-9 employees, however, the latest available data was collected during the 'Industry and Services Census' in 2011.



10 have a website or at least an internet page. At the average national level, for businesses that are on the web the figure is lower, 69.2% and 33% respectively. Businesses decide to maintain their own website, first and foremost, for marketing purposes but also to improve communication with current and future partners or to manage customer's questions and comments. For micro enterprises, in particular, the services offered above all by websites are linked to advertising (28.5%), while fewer are those which allow customers to book or order online (8.7%), to make online payments (5.7%) and after-sales services (4%).

The use of social media also by small enterprises, as a new way of communicating and interacting with the customer, is a positive sign. In Veneto, 35% of businesses with more than 10 employees (more than the national average (32%)) and 11.5% of small enterprises (in line with the national average of 11.6%)

### The economic and work-related impact of social network

are using at least one social media network. This involves more dynamic businesses that want to collaborate with other enterprises, access

new markets and extend their range of products/services offered.

The sectors in which the use of social media is most widespread are the information and communication services (28.1% Veneto's micro enterprises), accommodation and catering services (19%), hire services, travel companies and business support services (16.7%). Micro enterprises that are active in international markets use social media more (13.9%) compared to those operating nationally (10.8%).

Other factors that set apart those businesses that make use of social media and those that choose not to do it, are some features of the entrepreneur: women use these tools more often than men (13.4% and 11.1% respectively), as well as entrepreneurs with a degree compared to those who haven't (15.3% and 11% respectively).

Everyone is aware of the way the internet and social networks have changed people's habits, to which is also added the big impact that social networks have on the economy. The use of social networks and Facebook in particular, the most used platform founded by Zuckerberg, involves completely also business organizations, by changing the way they communicate and potentially make profit.

According to a report by Deloitte<sup>14</sup>, that, for the first time on a European scale calculated the economic impact Facebook has and its effect on employment, in 2014 the world's most common social network made 227 billion dollars in business activity and created 4.5 million jobs worldwide. In Italy, the impact that Facebook has is of 60 million dollars and 70,000 jobs.

The study employs econometric models to calculate the effects that Facebook has on the business of those using the platform, starting with people connected (in 2014, there were 1.4 billion people worldwide who logged on at least once a month to the social network). More than 30 million businesses created a web page, 1.5 million use advertising services to promote their posts and there are 500,000 advertisers.

There are effects also from a marketing viewpoint, since being on Facebook creates values for a brand in terms of communication and advertising exposure. Moreover, one has to take into account the effects deriving from the possibility arising through Facebook to offer services linked to, for example, downloading apps that connect to the social network in order to access online traffic and users platform effect): from the report, it come out that around 8 out of 10 Usa iOS and Android apps are integrated with Facebo-

**Tab. 5.4.2 - Impatto complessivo di Facebook in termini economici e di posti di lavoro in alcuni Paesi - Anno 2015**

	Dollari (miliardi)	Posti di lavoro (migliaia)
Mondo	227	4,540
Usa	100	1,076
UE28	51	783
Regno Unito	11	154
Germania	7	84
Francia	7	78
Spagna	4	52
Italia	6	70
di cui (Italia):		
1) effetto di marketing	3	36
2) effetto di piattaforma	0,7	10
3) effetto di connettività	2,1	24

Fonte: Elaborazioni Regione Veneto - Sezione Sistema Statistico Regionale su dati Deloitte

<sup>14</sup> Deloitte, Facebook's global economic impact, January 2015.



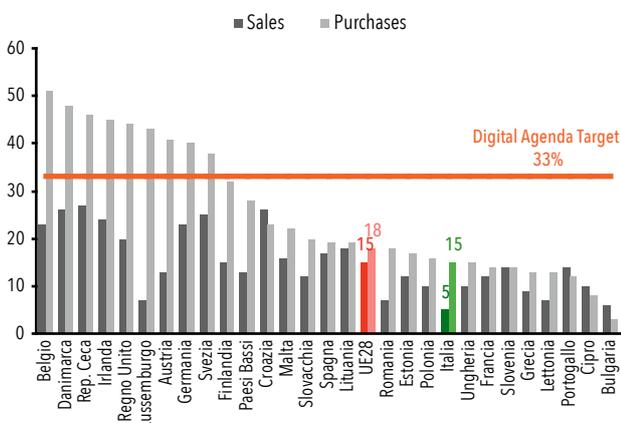
ok. Finally, also the effects of connectivity have to be considered, since a Facebook user has to use the internet, and therefore is prompted to purchase other IT devices such as smart phones, tablets etc.

### E-commerce – a flywheel for economic recovery

E-commerce in business is undoubtedly a primary factor in driving development, it is a significant channel for export, through which Italian enterprises can make the most of opportunities emerging from the change in global demand. However, this potential has yet to be adequately exploited. The EU's Digital Agenda has set rather challenging objectives: by 2015, 33% of businesses should make at least 1% of its total purchases online and at least 1% of its total sales online. To date, no country has reached the target set for online sales and only few achieved the target for online purchases.

On average in Europe, 18% of businesses with more than 10 employees buy online and 15% sell. For Italy, the percentage is lower: 15% of businesses buy online at least 1% of their total purchases, while only 5% sell online at least 1% of total sales. Italy's ranking is all the more critical if one considers that the data refers only to businesses with at least 10 employees that are more likely to favour technological innovation while micro enterprises that have a higher than European average impact on the national production economy, are excluded.

**Fig. 5.4.1 - Percentage of businesses with at least 10 employees that sell/buy online at 1% of total sales/purchases. EU 28 – Year 2014 (\*)**



(\*)data for online sales are up to 2014, For Croatia, Estonia, Latvia,

France and Cyprus data for purchases refers to 2010 and 2011 for Romania Hungary and Slovenia and 2013 for the other countries. Source: Veneto Region Processing - Regional Statistical System Section on Eurostat data

For Veneto, the indices proposed by the EU's Digital Agenda are not available, since there is data missing on the incidence of online sales/purchases compared to the total amount (which should at least be equal to 1%). However, in our region, e-commerce continues to remain a poorly exploited channel which should be reinforced. 42% of businesses with at least 10 employees use it and the figure is only 26% for businesses between 3 and 9 employees. It is used mainly to make purchases (39.3% for businesses with at least 10 employees and 23.9% for micro enterprises), significantly less than when selling their own products (7.8% and 5.9% respectively).

Focussing the attention on micro enterprises that use e-commerce, 21.8% operates it exclusively on the national market, while 41% extends it into the international market.

### Cloud Computing

As an alternative to developing their own ICT physical technology, businesses can buy cloud computing services and technology, usually as a service offered by the provider to a client, available on the web, through which it is possible to save, file and process data. This is a new way of developing and supplying IT services allowing businesses to make IT management less complicated and to make access to new technology easier with economic advantages.

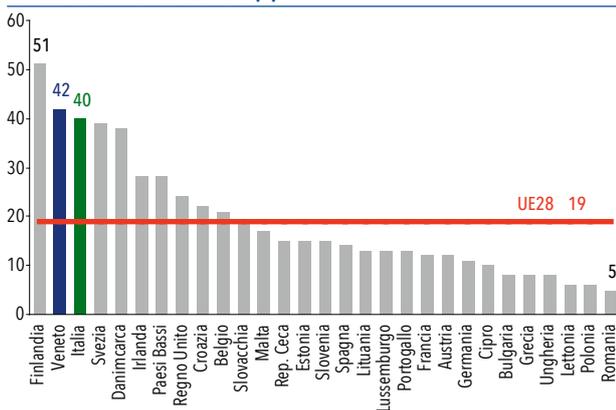
In Italy, in 2014, the use of these tools was considerable, as it regarded 40% of businesses with at least 10 employees, more than the European average (19%). The most purchased services are electronic post, office software, software apps for finance and accountancy, file and hosting systems for company's database. In Veneto the use of such services is further highlighted by 42% of businesses with at least 10 employees in 2014: less common, however, was the purchase of cloud computing services by smaller businesses (13% in 2011).

The Veneto Region is promoting, through a series of initiatives, the development and adoption of IT cloud computing services for small and medium enterprises, in line with the requirements and typical features of businesses in Veneto.



Between 2011-2014, 5.7 million euros were invested in the 'Cloud Computing' project for businesses. During the first phase of the project, which is already complete, the Region contributed to the planning and development of 22 projects at 22 ICT enterprises in Veneto, with a total investment of 2 million euros. The second phase of the project, which is still underway, aims to offer support to small and medium enterprises that want to use cloud-computing services also provided by different suppliers. A grant of up to 75% of the allowed expenditure, that varies from 2,500 to 20,000 euros is given to these businesses. Out of 592 applications received, 302 obtained financing for a total grant of 3.7 million euros.

**Fig. 5.4.2 - Fig. 5.4.2 – Percentage of businesses that bought cloud-computing services. Veneto and 28 EU countries - Year 2014 (\*)**



Anno 2014 (\*) (\*) Companies with at least 10 employees with the exception of the financial sector

### Digital Angels

Veneto Region is promoting a project called 'Digital Angel' which aims to place young last-year university students in subjects relating to IT, in businesses with the aim of providing them with new digital skills, so that businesses, especially smaller ones, are able to increasingly get familiar with basic digital technology. The digital angel will help the business to discover the technology's potential and its advantages; it will take on the challenge of introducing new logics and tools that could increase turnover and make the business more competitive through, for example, managing websites, promoting business online, e-commerce,

web marketing, business communication, research and development for Smartphone, tablet, web and social media applications.

The aim is to overcome the gap that can be identified in IT skills, to modernise businesses and get them online in order that they become more modern and competitive in the marketplace.

Thanks to the collaboration with universities in Veneto, during 2015 the project encompasses the employment, through work experience programmes, 420 university students specialising in ICT, with a total investment of 840,000 euros.

The project is aimed at small and medium enterprises operating in Veneto, which are set up as a sole proprietorship and are registered with the business register. Businesses and universities will have to draw up a training programme involving a 3-month apprenticeship and every business will receive regional funding of 1,500 euros to pay the student for the work carried out. There are two advantages because on the one hand, the business will be able to enjoy new skills and on the other, young people will be acquiring experience in business.

Moreover, this scheme could well give a new lease of life to technical and scientific disciplines at university, as the number of students graduating in this field in Veneto is lower than the European and national average: only 12 out of 1,000 from the 20-29 age range in Veneto compared with 13.2 in Italy and 17.1 in Europe.

### Boom in innovative start-ups: new ideas for Veneto

One of the pillars of the EU's Digital Agenda is the ICT research and innovation to encourage greater use of digital technology in various sectors, from scientific research to industrial applications in everyday life.

From this perspective, Italian policies come into play to promote innovative start-ups. That is, companies that are less than 48 months old and with special requirements, whose aim is mainly to develop, produce and sell products and services considered, to all intents and purposes, innovative and having a high technological value. The 'Decree for growth 2.0'<sup>15</sup> has introduced for the first time in the Italian law system the definition of new innovative business (start-up) and has identified the steps to encourage the setting up and growth of these type of businesses: a reduction in costs and administrative procedures required to start up a new business, the drafting of new types

<sup>15</sup> Decree Law of 18 October 2012 no.179 converted into Law 221/2012.



of contracts, the availability of funding, various types of incentives and new forms of funding, support given to innovative start-ups through business incubators or accelerators and the promotion of initiatives in order to make the culture of start-up businesses more widespread.

The development of such businesses, in fact, is essential in order to encourage economic growth, technological development and employment, especially youth employment, of an area. In addition, supporting an innovative entrepreneurship will lead to increased social mobility and fairness, reinforce the relationship between university and business, promote an increased likelihood in business risk taking and attract new talents, foreign innovative businesses and capital.

By 19 January 2015 there were 3,185 Italian innovative start-ups registered with the special section of the Chamber of Commerce's Business Register, an increase by 85.3% compared to February 2014. In Veneto, too, there was a strong increase in start-ups, which last year went from 144 to 246, marking an increase by 71%. They represent 7.7% of all start-ups in Italy,

**Veneto makes up 7.7% of Italian start-ups**

the relationship between university and business, promote an increased likelihood in

Padua is the province in Veneto with the highest number innovative start-ups (73) followed by Treviso (51) and Verona (47); less dynamic are the provinces of Rovigo (6) and Belluno (3).

With regard to the macro sector, more than 70% of innovative start-ups operate within the service sector, mainly in the production of software and related activities, 22.8% in industry/crafts and only 4.5% in trade. Certified incubators are responsible for accompanying and supporting innovative start-ups from the conception of the business idea to their initial development. These are limited companies able to facilitate contact between investors and business ideas, which are deemed able of potentially producing a high return, but not ready for the capital market. Such organizations allow new innovative businesses to launch their business onto the market efficiently and within short timescales. There are a total of 33 certified incubators in Italy, 3 of which are located in Veneto: Parco scientifico e tecnologico VEGA (Venice), H-Farm S.r.l (Treviso) and M31 Italia S.r.l (Padua).

## 5.5 Online Public Administration

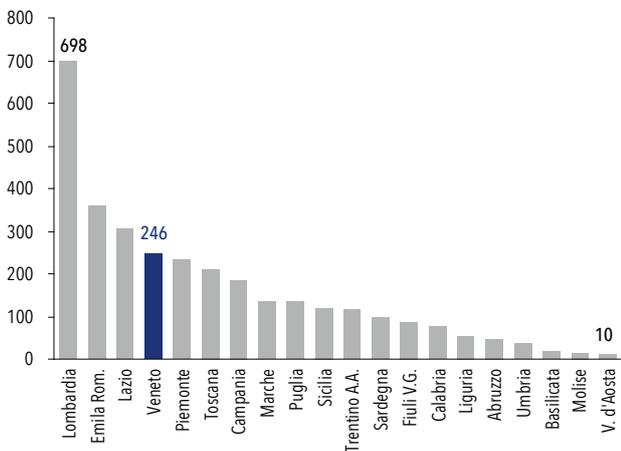
### Access to citizens and businesses

E-government services are an economical way of improving services to the citizens and businesses by encouraging participation and promoting transparent and open administration. Costs can be reduced and they allow public administration, citizens and businesses to save time.

Among the targets set by the EU's Digital Agenda one finds objectives regarding digital services in public administration. The main aim is that by 2015, 50% of the population will be using digital services when communicating with public administration.

Despite there currently being a high level of e-government service availability in Europe, there still exist considerable differences among different countries. Italy and Veneto find themselves a distance away from the target set, which has already been reached by many others.

The availability of public administration online interactive services is in the process of expanding and developing and in the last few years, in Veneto, too, significant progress towards the target has been made. In 2014<sup>16</sup>, 36.7% of people aged 16-74 said they used



fourth highest after Lombardy, Emilia Romagna and Lazio.

**Fig. 5.4.3 - Number of start-ups by region – Year 2015 (\*)**

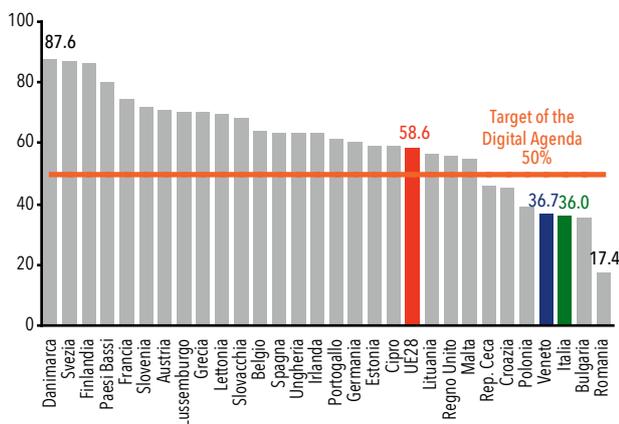
(\*) data refers to 19 January 2015 Source: Veneto Region Processing – Regional Statistical System Section on data from Business Register

<sup>16</sup> Data available from February 2014 to January 2015.



the internet to communicate with public administration, in line with the national average. The main online activities range from booking medical appointments to paying taxes, from registering for school places to accessing public libraries or requesting personal certificates and documentation.

**Fig. 5.5.1 - Percentage of people aged between 16-74 who in the last 12 months communicated online with public administration. 28 EU countries and Veneto – Year 2014**



Source: Veneto Region Processing – Regional Statistical System Section on Eurostat and Istat data

**Tab. 5.5.1 - Percentage of people who use the Internet to communicate with public administration offices by activity. Veneto and Italia - Year 2014**

	Veneto	Italia
Book medical appointments	24.0	16.7
Pay taxes	21.7	26.3
Applying for school places	19.5	21.4
Booking tests	19.3	10.6
Accessing public libraries	15.8	16.9
Requesting social security services	11.9	11.9
Requesting personal documents	8.3	10.2
Requesting certificates	5.6	6.5
Notifying about a change of address	1.4	1.9

Source: Veneto Region Processing – Regional Statistical System Section on Istat data

17.1% of those communicating with public administration offices via the internet do not only search for information, but also send completed forms in order to dispatch paperwork, in line with national data. The percentage is, however, still below the EU28 average of 33% and still a far away from the 25% value set by the EU’s Digital Agenda. As a whole, satisfaction in public administration and public service provider websites seems to be good: 63.4% state that they can use the online services available relatively quickly, 65.8% scores it favourably in relation to the ease with which information can be found and 74.4% find them useful; 53.8% state that they are very or sufficiently satisfied with the availability of information as much as the job progress in the dispatching paperwork is concerned.

The level of satisfaction for online services offered is greater in relation to school than to health, public record and work services. The difficulty in communicating digitally with public administration offices can be, in part, due to the population’s lack of confidence with new technology, especially for the most disadvantaged categories as well as due to certain technical hitches that one comes across in digital services. Among those who in 2013 stated that they had used online services offered by public administration bodies, nearly half in Veneto (47.6%) stated coming across problems with the site, ranging from technical issues to not having access to support or simply not having enough current information. To this one

can add a cultural element relating to a certain lack of mistrust in the security of online processes, still preferring to deal directly with a human being.

According to a survey by Istat in 2012, 64% of all contact with public administration offices was at the counter and 18% by phone.

In the last few years businesses too have tried to communicate more and more with public administration offices through new technology, as stated by 86% of Veneto businesses with at least 10 employees (85% Italy, 88% EU28), mainly to get information and download forms or to send them electronically once completed (58.3%, an increase of 4 percentage points in a year). What could be improved on, however, is the

**Businesses that communicate with public administration offices**



policy of offering online outsourcing services to the public administration (e-procurement) (7.1%). So that citizens and businesses can communicate with public administration bodies, it is vital that public offices adapt their own technology in order to improve the efficiency of their processes. 30% of the

**Tab. 5.5.2 - Percentage of businesses with 10 or more employees that in the last year have used on-line services offered by the public administration by type of service Veneto and Italy - Year 2013**

	Veneto	Italia
Request information	78.3	77.7
Download forms	73.4	73.0
Submit completed forms online	58.3	58.0
Submit electronically VAT receipts and tax returns for employees	30.3	30.9
To offer goods and services to the public administration (e-Tendering) within the online subcontracting public system (e-Procurement)	7.1	8.9

*Source: Veneto Region Processing – Regional Statistical System Section on Istat data*

municipalities in Veneto have services that are completely interactive, that is to say, services which allow entire service processes from beginning to end to be completed online, more than the national average (18.9%), a particularly pleasing result that finds Veneto in second place after Emilia Romagna.

### Digitalising key services

The national programme 'Strategy for Digital Growth 2014-2020' confirms the importance of modernising public administration offices and the progressive moving towards online services which represent an important incentive to increase digital demand in Italy. The activities cover above all the health, justice, school, tourism and agricultural sectors.

#### E-Health<sup>18</sup>

As much as healthcare is concerned, there is a move in the direction of e-Health. Digital innovation of health processes is fundamental in improving the cost-quality relationship of health services, controlling waste and inefficiency and reducing the differences among regions. Digital health in Veneto is based on a long experience which in the past, especially in 2000, bo-

asted an excellent reputation but at the same time was also known for the lack of homogeneity in the solutions offered.

With the aim of bringing all services in line with each other, thus offering to all the citizens in Veneto the same possibility of accessing care, in 2007 the general directors of 23 health and social care facilities launched 'Arsenà.IT, Veneto Research and Innovation Centre for Digital Health. The purpose was to create an entity which, thanks to their advanced skills and know how, would be able to bring about a technological, infrastructural and organizational network for the application of ICT solutions in Veneto's health system, relying particularly on the interoperability of systems and on the use of internationally recognized standards.

In the last decade, the consortium has taken on the role of coordinating the main e-health and telemedicine initiatives that today are the basis for the realisation of digital health services: online services for citizens (e.g. download medical reports online), operator services (network of GP doctors) and telemedicine (teleconsultation and telemonitoring of chronic patients). In 2013, the level of digitalisation of services in Veneto's healthcare system was evaluated. The data collected on the level of services and infrastructure was analysed with the support of HIMSS Analytics Europe, an international organisation specialising in the assessment of health services. The analysis was made in conjunction with the EMRAM method (Electronic Medical Record Adoption Model), an international assessment system that measures the degree of digitalisation in health services by using a precise dataset and that allows, on the basis of a ranking system defined by HIMSS, to rank a service on a well-defined scale that ranges from 0 to 7, with 7 being the highest level of digital services.

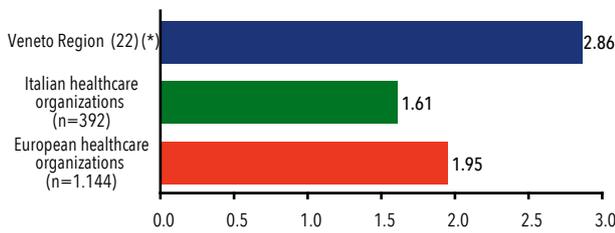
In this context, Veneto's businesses place themselves on an average of 2.86 points which is higher than that of Italian services (392 were examined) equal to 1.61 points, and also higher than health services in Europe (1,144 examined) that find themselves with 1.95 points.

The Digital Agenda sets out as one of its targets the creation of an electronic health report that the Regions must implement. According to regulations, the report is a combination of citizens' data and digital health record, produced on different occasions: stay in hospital, ambulatory specialised medical care,

<sup>18</sup> By Arsenà.IT - Veneto Research and Innovation Centre for Digital Health



Fig. 5.5.2 - EMRAM score obtained by Veneto Region,



**Italy and Europe – Year 2013 (\*)**

(\*) The EMRAM method (Electronical Medical Record Adoption Model) provides a ranking system defined by HIMSS and rank services on a scale of 0 (poor) to 7 (excellent). (\*\*) Data from A. Ulss 16 of Padua and the healthcare facility have been aggregated. Source: Arsenà.IT

pharmaceutical services, residential and home care, access to A&E. In 2012, before the introduction of the corresponding national regulations, Veneto Region approved<sup>19</sup> the creation of the Electronic Health Report (Fascicolo Sanitario Elettronico, FSEr), entrusting the management coordination, work supervising and introduction assistance to Arsenà.IT.

The FSEr in Veneto represents the review of health and social processes, which thanks to the sharing of patients' clinical and administrative records among operators regardless of the admission healthcare facilities, allows the citizen to take advantage of more efficient and economically sustainable services with the ability to access their personal records at anytime, anywhere. The FSEr will guarantee that citizens in Veneto will have timely and complete digital access to their own medical records efficiently, eliminating the digital divide when accessing health services; moreover, it will provide patients and health and social care facilities complete digital information, avoiding delays and IT irregularities and ensuring that appropriate and efficient health and social services are provided, irrespective of the admission facility. Veneto's FSEr model guarantees the sharing of clinical data among facilities with the aim of improving the care process on a regional scale. The innovative aspect of this model is the sharing of information among operators in a bottom-up logic that aims to make the report a work tool which efficiently meets the operators' requirements. The advantages of this tool, once implemented, will derive from the ability to retrieve resources in order

**The Electronic Health Report**

to make future assistance sustainable. This will be realised by the opportunities offered to the public to access their records securely, thanks to the introduction of new organisational models that will ensure the introduction of innovative processes for continuity of care, by saving costs and introducing efficiency. The creation of this report has taken advantage of the local best practices in digital health and extending services throughout the region. Let us see which are the individual elements which it is composed of.

From 2012 users of all health and social care facilities in Veneto have been able to download their medical results of laboratory tests via the web. The latest survey (2012) puts at 60% the percentage of medical reports downloaded, equal to 6 million a year. The project that has allowed this to happen is Veneto ESCAPE, that has pledged to cut costs in the health service for 56 million euros and for 120 million euros to the citizens, who no longer need to leave the comfort of their homes thanks to the online medical record service.

**Downloading online medical records for all**

**The e-Prescription**

The e-Prescription occupies an important place in the report, representing one of its cornerstones. From September 2014, in Veneto, the doctor's prescription on red paper became digitalised thanks to the telematics connection of doctors, pharmacies, healthcare and social facilities, the Region and the Ministry of Economic affairs and Finance together. In 2014, 11,732,342 e-Prescriptions were handed out. From 1st April 2015, all medical and specialist prescriptions and diagnostic and laboratory testing are now online. The new system provides for a single regional system with the availability in real time of verified data relating to doctor prescriptions and prescription requests.

Veneto was the first region in Italy to begin digitalising its prescriptions through the activation of a regional welcoming programme in addition to the one established by law by the Ministry of Economic Affairs and Finance. In order to achieve this target, Arsenà.IT coordinated training for over 5,000 operators.

**Plans in Europe for telemedicine**

With the e-Prescription, the health system makes a saving of 3 million euros a year. Currently 99% of doctors in the region and pa-

<sup>19</sup> Regional Council Decree no. 1671 of 2012.



pediatricians and 100% of pharmacies are linked up to the system.

From 2010 to 2013 the European project RENEWING HEALTH allowed 3,332 patients affected by the most common chronic illnesses (diabetes, respiratory illnesses and heart disease) to be telemonitored, collecting over 68 million pieces of data and offering a better quality of life for patients with chronic illnesses.

From 2007, thanks to the HEALTH OPTIMUM project, a neurosurgical teleconsultation service was launched by using a hub&spoke network for hospital facilities. It also intends to extend the service to suburban hospital centres. Every year 3,181 neurosurgical consultations are carried out, cutting the number of avoidable transportation to hospital by 84%. Neurological consultations for stroke patients and the management of oral anticoagulant therapy have been tried, validated and implemented too.

## Digital School

Italy finds itself at the bottom of the European ranking for school connection to the web: young people live in a world where they can get connected anywhere, except for where they are learning or training. A study carried out by the European Commission found that for the 2011/2012 academic year there were on average, in Europe in secondary schools, 4 students per computer, whilst the figure rose to 12 in Italy, thus finding itself among those at the bottom of the ranking<sup>20</sup>. According to a more recent study by the Ministry for Education, University and Research (MIUR) relating to the following school year, in Veneto State schools, there were on average 7.5 students per computer (9.5 in primary and 5.4 in secondary schools), compared with a national average of 7.8<sup>21</sup>.

Moreover, equipping schools with computers with fast and stable connection is necessary not only for modern teaching but also to avoid cases of deprivation and exclusion. E-learning, distance learning and virtual classrooms provide a way of including those students for whom being physically present in class is difficult, for example for hospitalised students or students living in suburban schools or a way of benefiting from university e-lessons.

Like other Member States of the European Union, Italy too in the last few years has set in train initiatives and projects with the aim of renewing the national school system and extending digital innovation to schools. Particularly starting from 2008, the MIUR im-

### La telemedicina nei progetti europei

plemented the Digital School programme, that focussed on three key objectives: the widespread introduction of multimedia interactive whiteboards (LIM) in schools, developing advanced technology classes (project CI@ssi 2.0), the realisation of an advanced teaching model in territorially disadvantaged areas through the project Isole in rete (islands online). The plan of action was further supported by the eGov 2012 plan and by the Italian Digital Agenda that set out the Digital School National Plan. This plan envisages the establishing of digital school centres that offer training opportunities even in territorially disadvantaged areas as well as introducing digital school text books from the academic year 2014/2015<sup>22</sup>.

Such projects have allowed schools to make progress in the last few years, although being aware that further progress needs to be made. MIUR's technology watchdog is carrying out a study to assess the true extent of multimedia equipment in schools. More specifically, the study's aim is to collect information on the tools schools are using as a substitute for traditional teaching methods, on the use of websites in teaching, the number and quality of interactive projectors and multimedia equipment in laboratories and libraries. The electronic document filing system in schools is still not so widespread but online communication between the school and home is increasing (50.2% in Veneto schools) as are class e-registers (55.8% in Veneto). In schools, traditional learning methods are still favoured with for the moment only a small number of schools favouring digital services, although the situation in Veneto is generally better than the national average. Many laboratories are connected to the internet (76.7% in Veneto) but only a small number of classrooms and laboratories have interactive multimedia whiteboards and projectors.

### The Region's plan of action

Among the steps taken by Veneto with regard to promoting the use of new technology in public offices and bringing public administration up to date, particular attention was paid to making them more IT-ready, by promoting paperless environments and sharing and accessing data from public administration bodies.

An Istat study<sup>23</sup> dealing with the digitalisation of public offices discovered that the provision of ICT in

<sup>20</sup> European Commission, Survey of Schools: ICT in Education, February 2013

<sup>21</sup> Ministry for Education, University and Research – Statistical Service, Le dotazioni multimediali per la didattica nelle scuole A.s. 2013/14, January 2014.

<sup>22</sup> Prime Minister's Office, Strategia per la crescita digitale 2014-220, Rome 3 March 2015, pages 24-25.

<sup>23</sup> Istat, Le tecnologie dell'informazione e della comunicazione nella Pubblica Amministrazione locale, year 2012.



**Tab. 5.5.3 - Digital Services Indicators in State schools. Veneto and Italy- School Year 2013/14**

		Veneto	Italia
Digital services (out of 100 schools)	E-register	55,8	58,2
	Electronic filing of documents	36,7	31,2
	Online communication school/home	50,2	50,4
E-learning facilities (out of 100 schools)	E-books	8,8	10,7
	Lessons and material	29,9	27,7
	Exercises and tests	25,9	24,2
	Resources for lesson planning	18,5	18,2
Equipped multi-media laboratories (out of 100 laboratories)	Web connection	76,7	77,7
	Equipped with interactive whiteboard	27,9	37,8
	Equipped with interactive projector	21,1	18,4

*Source: Veneto Region Processing - Regional Statistical System Section on MIUR data*

Veneto local authorities was sufficiently widespread. Operators in the public sector have a good range of technology available to them: 90% have access to the Internet and there are over 104 desktop PCs, nearly 11 laptops and 5 wireless devices such as tablet, Smartphone or notebook per 100 employees.

Significant progress has been made also with regard to technology that could reduce public spending. Going paperless has a positive effect on the amount of paper used. From 2011 to 2013 the purchase of paper for Veneto main cities decreased by 26% (9% nationally).

Reducing paper usage has also important effects on the environment, with the advantage of reducing raw materials used in its production and the reduction in use and disposal of print products that are bad for the environment such as toner and laser cartridges. Finally, to encourage access and sharing of data among public administration bodies, the Region has set up Open data divulgation initiatives, i.e. a new approach in managing and making data and information held by public offices available online. With Open data, information held by public offices becomes available and accessible online to everyone with the aim of becoming more transparent and of having the opportunity to develop valuable applications and services. Total investment for the Region up to now is of 150,000 euros for 4,000 Open data sets, which have been set up and made available.

### Steps towards an intelligent, inclusive and green city

Cities represent an important leverage for the sustainable growth of the territory and for achieving the targets set by Europe 2020, especially if the economical opportunities are enhanced and an integrated approach to urban development is planned.

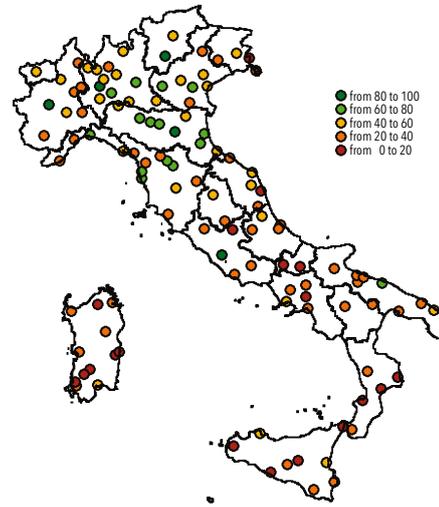
Cities are the economy's engine, a breeding ground for technology, innovation and creativity; yet it is also a place where problems emerge and social inequalities are magnified. For this reason, they request particular attention to be paid among the governance priorities. The European vision for tomorrow's city is that of a place which has a good level of social cohesion and environment protection as well as maintaining high levels of productivity.

New technology and innovation can contribute towards the regeneration of the city and improve its quality of life. Cities should be aspiring towards the 'smart' model which encompasses Europe's vision of what an intelligent city should look like. The Smart City Index measures the level of 'smartness' of all the main Italian municipalities taking into account various theme-based areas, ranging from broadband infrastructure to digital services (health, school, mobility, government, justice, tourism and culture), and including the sustainable development of the cities. In 2014, out of Veneto's 7 main cities, Verona, Padua and Vicenza found themselves in the top 25 cities in the national ranking, Venice and Treviso in the midd-



le range (31st and 36th place, respectively), Belluno and Rovigo were further down. Performing particularly well are the broadband, smart mobility, smart culture & tourism and renewable energy sectors. The excellence of Venice must be pointed out, which has the 'smartest' library in Italy. The individual cities will be responsible for turning into smart cities; the Region's task will be to promote and monitor the various phases of development, as it is currently doing through the implementation of the regional Digital Agenda whose purpose it is to guarantee standards in technology in all its cities.

Fig. 5.5.3 - Scores for the Smart City Index for the main cities - Year 2014 (\*)



(\*) Smart City Index is a composite indicator. It varies from 0 to 100 depending on the level of smartness of a city, taking into consideration 12 theme-based areas Source: Veneto Region Processing - Regional Statistical System on Between data

Tab. 5.5.4 - Smart City Index: main cities ranked by theme-based area. Veneto – Year 2014 (\*)

National ranking	Broadband	Smart health	Smart mobility	Smart education	Smart government	Smart culture&travel	Smart security	Smart justice	Alternative mobility	Renewable energy	Energy efficiency	Natural resources
Verona	8	Prima fascia	Prima fascia	Prima fascia	Prima fascia	Prima fascia	Prima fascia	Prima fascia	Prima fascia	Prima fascia	Prima fascia	Prima fascia
Padova	18	Prima fascia	Prima fascia	Prima fascia	Prima fascia	Prima fascia	Prima fascia	Prima fascia	Prima fascia	Prima fascia	Prima fascia	Prima fascia
Vicenza	25	Prima fascia	Prima fascia	Prima fascia	Prima fascia	Prima fascia	Prima fascia	Prima fascia	Prima fascia	Prima fascia	Prima fascia	Prima fascia
Venezia	31	Prima fascia	Prima fascia	Prima fascia	Prima fascia	Prima fascia	Prima fascia	Prima fascia	Prima fascia	Prima fascia	Prima fascia	Prima fascia
Treviso	36	Prima fascia	Prima fascia	Prima fascia	Prima fascia	Prima fascia	Prima fascia	Prima fascia	Prima fascia	Prima fascia	Prima fascia	Prima fascia
Belluno	77	Prima fascia	Prima fascia	Prima fascia	Prima fascia	Prima fascia	Prima fascia	Prima fascia	Prima fascia	Prima fascia	Prima fascia	Prima fascia
Rovigo	86	Prima fascia	Prima fascia	Prima fascia	Prima fascia	Prima fascia	Prima fascia	Prima fascia	Prima fascia	Prima fascia	Prima fascia	Prima fascia

Prima fascia
  Seconda fascia
  Terza fascia

(\*) Smart City Index is a composite indicator. It ranges from 0 a 100 and measures a city's smartness level taking into account 12 theme-based areas. Source: Veneto Region Processing - Regional Statistical system on Between data



Open to the digital revolution