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Content

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BROADBAND EVOLUTION IN PIEDMONT

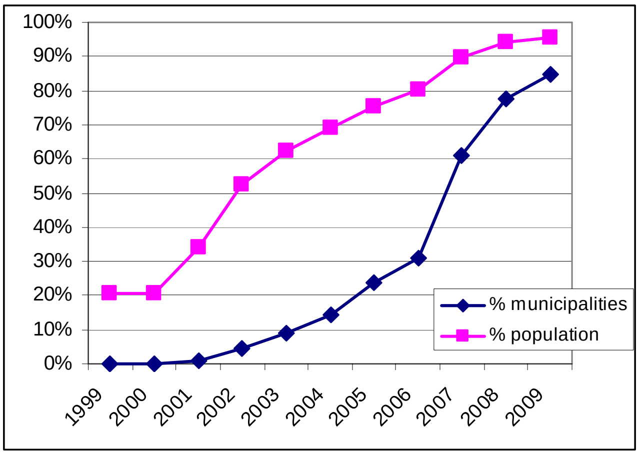
2) COVERAGE AND ICT DIFFUSION IN THE REGION

This edition of Piedmont in Focus summarizes the main findings of the PICTO yearly report "The role of ICT in Piedmont Information Society" (Le ICT nella costruzione della Società dell'Informazione in Piemonte). Attention is paid to:

- The situation of broadband coverage at sub-regional levels (Provinces and municipalities) in autumn 2009;
- Broadband uptake by households and firms between 2007 and 2008;
- 2007-2008 ICT diffusion among citizens, enterprises and local governments;
- ICT policy initiatives.

1. BRODABAND DIFFUSION IN PIEDMONT IN SEPTEMBER 2009

As the first phase of Wi-Pie Program came to completion in autumn 2009, the percentage of municipalities having access to xDSL connections stood at 85% up from 77% in autumn 2008. As a result, almost all the regional population (95%) has an access to a wired broadband connection.



Source: PICTO

Figure 1 – Broadband evolution (xDSL connections) in Piedmont, 1999-2009 (*)

(*) Data about broadband access are collected by means of a survey on the web site of the main Italian, telecom operator (www.alice.it), which makes it possible to assess wired broadband connectivity by telephone number. For each of the 1206 municipalities, three randomly selected telephone numbers are tested. A municipality is said to be fully covered if all the tested telephone numbers have a positive hit. It is partially covered if only one telephone number has a positive return. Investigation is carried out regularly and makes it possible to monitor the progress in the delivery of xDSL services. For 2009, however, the percentage shown in the figure has been directly provided by Telecom, as this turns out to be less positive than the one obtained from the web survey. This value, therefore, differs from that published in the June edition of Piedmont in Focus.

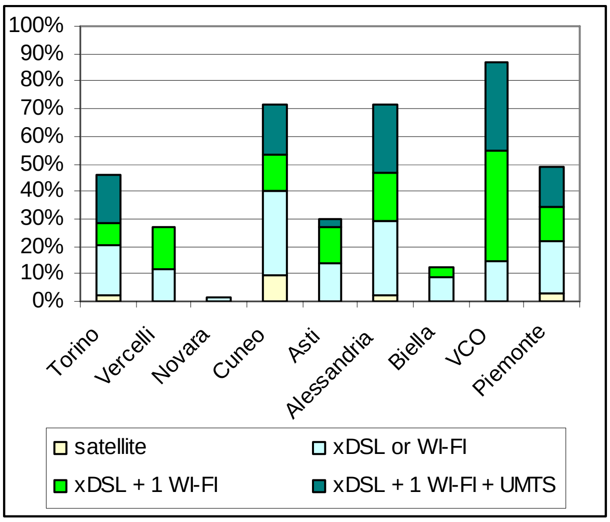
As already pointed out in the last edition of Piedmont in Focus, the progress in broadband roll out has also been accompanied by an increase in the variety of the delivered services. Besides those provided by the main incumbent, Telecom, a number of telecom operators exist who supply wireless broadband services (Wi-Fi and UMTS).

In September 2009, only 19% of the municipalities, less than 5% of population and firms can access broadband by means of either xDSL or Wi-FI connectivity. As shown in Fig.2 and Tab.1, in fact, more than one third of population and firms are offered a variety of broadband services, provided by telecoms operating on wired (xDSL), wireless (WI-FI) and mobile (UMTS) networks.

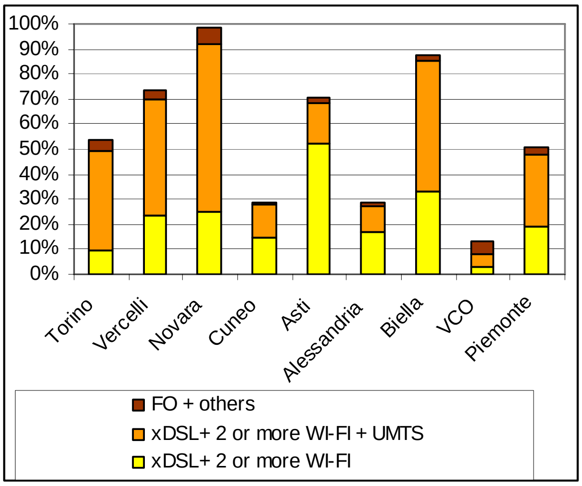
Table 1 – Broadband coverage by connectivity types by municipalities and percentages of population and firms potentially served, September 2009

	Municipalities	*Population*	*Firms*
satellite	2.9%	0.2%	0.2%
xDSL or WI-FI	18.7%	4.8%	4.1%
xDSL + 1 WI-FI	12.9%	3.0%	2.3%
xDSL + 1 WI-FI+ UMTS	14.6%	11.6%	11.2%
xDSL+ 2 or more WI-FI	19.4%	5.0%	3.9%
xDSL+ 2 or more WI-FI + UMTS	28.6%	35.3%	32.5%
FO+others	2.8%	40.1%	46.0%

Source: PICTO, Wi-pie and ISTAT



a) Municipalities with the following service bundles: satellite, xDSL or WI-FI, xDSL+ WI-FI , xDSL+ WI-FI +UMTS



b) Municipalities with the following service bundles: xDSL+ 2 or more WI-FI , xDSL+ 2 or more WI-FI + UMTS, FO +others
Source: PICTO

Figure 2 – Broadband connectivity bundles in the Provinces and in Piedmont, September 2009 (*)

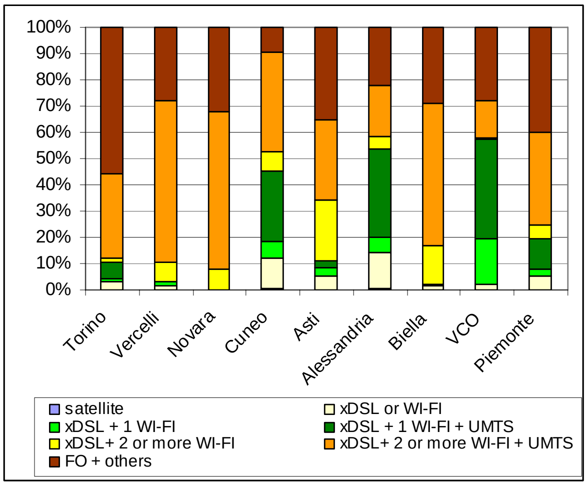
(*) As for the speed of the available connectivity, by November 2009, 50.9% of the population had access to 20Mbps connections, 29.9% to 7Mbps, 8.4% to 5Mbps, 1.9% to 650kbps and 0.26 to2 Mbps(satellite).

Although fibre connectivity is available only in 34 municipalities, the population potentially served is as high as 40%. As shown in Fig. 2, this percentage is even higher in the Turin province where it reaches 55%. Fig.2b, in particular, reveals that in more than half of Piedmont municipalities a user can access a bundle of broadband services, delivered by wired connectivity (xDSL) and by two or more wireless operators (WI-FI).

For about 30% of the municipalities, in addition, the bundle also includes broadband services provided on mobile network (UMTS).

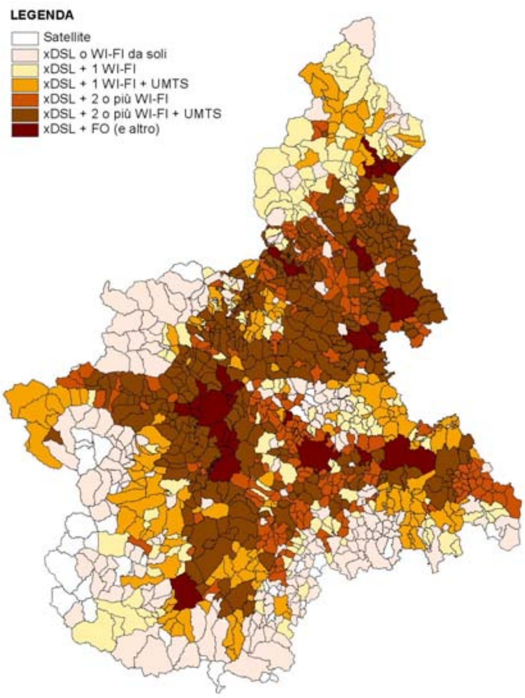
At sub-regional level, Novara and Biella are the Provinces where the range of available services is the highest. VCO, Alessandria and Cuneo, instead, are those where the variety is the lowest, Fig.2a.

In four out of eight provinces nearly 75% of the population can access a relatively rich service bundle, consisting of xDSL, 2 or more WI-FI and UMTS, Fig. 3.



Source: PICTO

Figure 3 – Potentially served population by broadband connectivity bundles in the Provinces and in Piedmont, September 2009

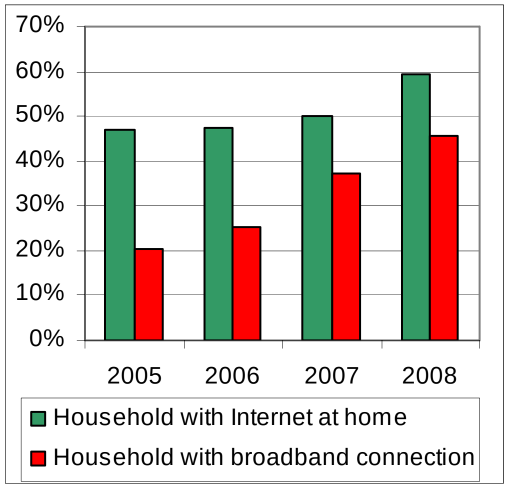


Source: PICTO

Figure 4 – Broadband connectivity bundles in Piedmont municipalities, September 2009

2. BROADBAND ADOPTION BY HOUSEHOLDS

By 2008, 59% of Piedmont households have Internet at home (the value for UE 15 was 64%). Households with a broadband connection stood up at 45% from 37% in 2007, although the growth was less appreciable than that recorded one year earlier, Fig.5. Compared with UE15, where broadband users increased from 46% to 52%, through 2007 to 2008, Piedmont performed slightly better.



Source: PICTO

Figure 5 – Households with an Internet and a broadband connection at home in Piedmont, 2005-2008

In 2008, only one out of five Internet users at home have a narrow band access. When asked why they do not have broadband at home, 40% say that it is not necessary.
A comparison between broadband (YES) and not broadband (NO) users shows that the former use the Internet more intensely. In particular, home broadband users are more likely to use new communication means, Tab.2.

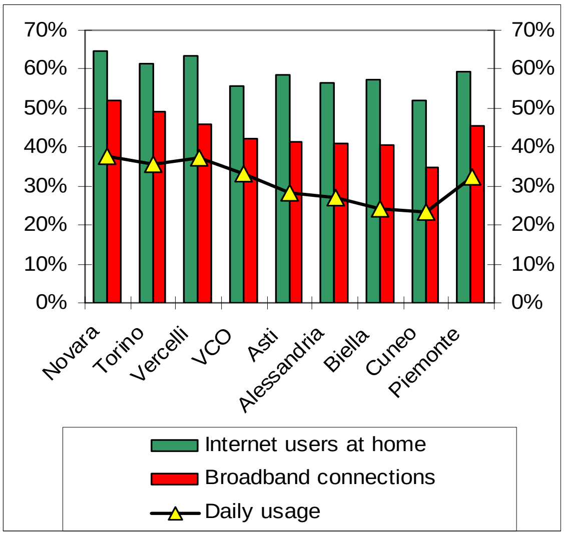
Table 2 – Internet usage by households with a broadband (YES) and a narrow band (NO) connectivity, 2008

	YES	*NO*	*YES/NO*
e-mail	88.2%	76.5%	1.15
online auction	59.9%	49.7%	1.21
online purchase	43.5%	35.8%	1.22
health information	59.5%	47.3%	1.26
online banking	41.6%	32.3%	1.29
blog access	47.6%	33.3%	1.43
SMS communication by PC	9.6%	5.9%	1.63
videoconference	8.1%	4.8%	1.69
chat	36.0%	18.3%	1.97
Voip	18.0%	8.0%	2.25

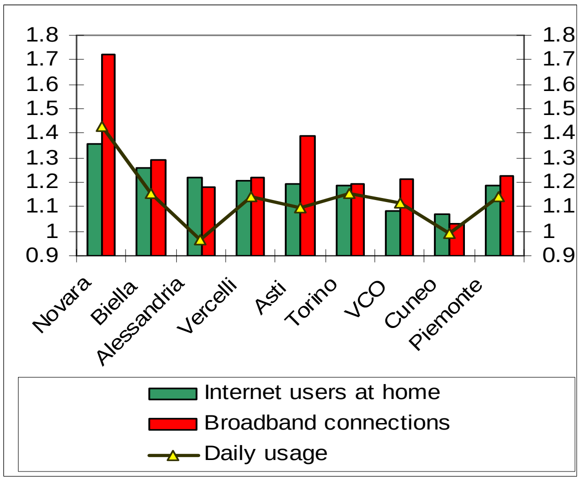
Source: PICTO

Progress was particularly significant in the Province of Novara. Between 2007 and 2008, in fact, Internet and broadband users in this area outnumbered those in the metropolitan province. Internet daily usage by citizens was also the highest.

A high penetration rate of the Internet and broadband was observed in the Province of Biella and Asti, respectively, Fig. 5. Cuneo is the area where progress in broadband penetration was relatively slower.



a) 2008 situation



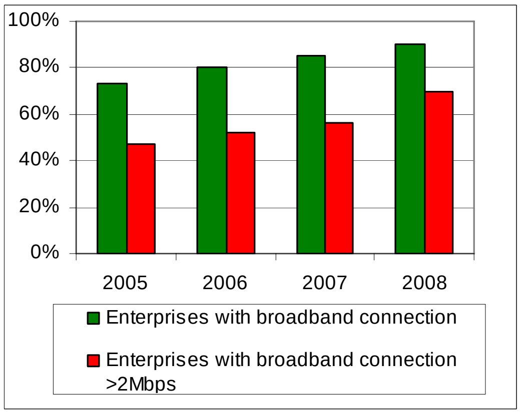
b) 2008/2007 variation

Source: PICTO

Figure 6 – Broadband users, Internet users and daily Internet users in Provinces and in Piedmont, 2008 and 2008-2007 variations

3. BROADBAND ADOPTION BY FIRMS

By 2008, Piedmont enterprises with broadband connection (xDSL, optical fibres or satellite) were as high as 90% (in EU15 the value was 86%). Those with connection speed higher than 2 Mbps were 70%, Fig.6.



Source: PICTO

Figure 7 – Enterprises with broadband connections and with connection speed higher than 2Mbps in Piedmont, 2005-2008

High speed connections (between 2 and 20Mbps) increased significantly above all for the firms located in the areas further away from the metropolitan core (from 48% in 2007 to 64% in 2008).

Very high speed connections (more than 20Mbps) grew more appreciably in the Province of Turin.

Table 2 – Enterprises with broadband connections by connectivity speed, in Piedmont, Province of Turin and the rest of the Region, 2008 and 2007-2008 variations

a) 2008 situation

	Piedmont	*Turin*	*Rest of the Region*
< 2 Mbps(*)	20.3%	21.6%	19.0%
2 - 20 Mbps	62.9%	62.0%	63.8%
> 20 Mbps	7.1%	6.0%	8.2%
Total	90.3%	89.7%	91.0%

b) 2008/2007 variation

	Piedmont	*Turin*	*Rest of the Region*
< 2 Mbps(*)	0.7	0.72	0.67
2 - 20 Mbps	1.23	1.15	1.32
> 20 Mbps	1.45	3.19	1.08
Total	1.06	1.04	1.08

(*) It includes the firms who reported to have a broadband connectivity but did not indicate the speed.

Source: PICTO

4. ICT USAGES BY HOUSEHOLDS, ENTERPRISES AND LOCAL GOVERNMENTS (PA)

Although Piedmont Internet users increased remarkably by 2008, there wasn't a comparable effect on their daily log to the Web.

The improved broadband connections however had a positive impacts on many Internet usages. Examining the main usage categories, working, learning, leisure, and pursuing personal interests, distinguished by intensity level, the greatest change occurred for the highest level.

In particular, online purchase raised from 31% in 2007 to 41% in 2008, health information searchers grew from 43% to 56%, and the percentage of tele-workers doubled (from 4% in 2007 to 9.5% in 2008). The 2008 financial crises is likely to have had an effect on online banking as it slightly decreased between 2007 and 2008.

Visitors to local government web sites were as high as 68%, compared with 53% in 2007.

Differences were observed in the pattern of Internet usage between young people, who prefer to use the Internet to communicate, and adults who mainly use the Internet for practical purposes. Overall, there was a reduction in the number of both occasional and not occasional users. In addition, an improvement in the type of on-line activity undertaken by citizens was also observed: in 2008, 40% accessed the Internet for "advanced" purposes, whereas in 2007 they were only 32%.

In 2008, ICT uptake by enterprises showed a noticeable acceleration. The number of enterprises buying online grew from 40% in 2007 to 52% in 2008. The increase in communication over Internet was particularly significant: +17,4% for telephone conferences, +9,4% for video conferences and +9,2% for forum/chat. Also online collaboration with partners and suppliers developed appreciatively, involving 28% of the firms surveyed, compared with the 10% in the past years. ICT and broadband can play a role in contrasting the pending recession.

In 2008, about 20% of Piedmont enterprises reduced their ICT expenses, while 13% increased them. The availability of suited technology and the opportunity to improve firms' own processes were the main factors influencing ICT expenses over the past three years. The need to keep up with competitors and to maintain a competitive advantage were additional factors considered relevant for decisions. As far as the expected effect of ICT investments on firms' own competitiveness is concerned, more than 50% believe that they would have a positive impact on firm internal management; one out three report that they would most benefit the operational departments, such as planning, production, marketing.

In Piedmont, enterprises who use ICT more intensely showed a better reaction to the financial-economic crisis of the last year: for example, their turnover per employee was 1.3 times higher than the regional average.

The enactment of Digital PA Law Code in 2005 gave an important stimulus to the development of e-government services. On the back office side, a lot of municipalities had to cope with the management of the digitalization process. It resulted in a noticeable rise in the number of municipalities with an IT manager or an IT office (they grew from 25% in 2007 to 40% in 2009). Outsourcing of ICT activities also multiplied (in 2009, about 90% of the local governments outsource some ICT activities).

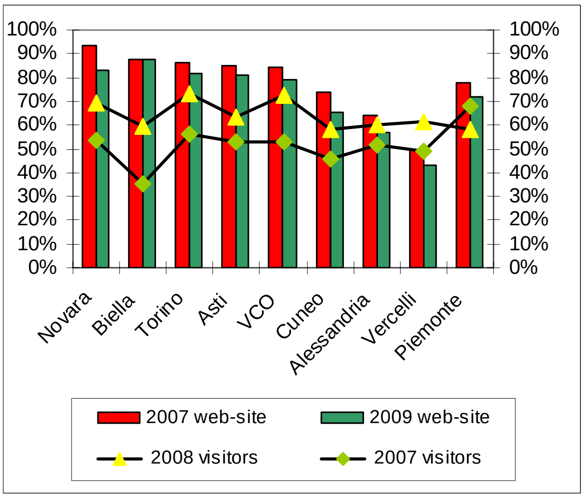
On the front office side, in 2008 the percentage of municipalities with a web site was as high as 77% (one year earlier it was 72%).

At sub-regional level, the most relevant changes in the number of web-sites occurred in the Province of Vercelli, which however remained below the regional average. In 2008, Novara was the leading province, Fig. 8.

It is worth noting, however, that a better endowment of web-sites in a province does not necessarily correspond to a relatively greater number of visitors. As shown in Fig.8, in fact, VCO and Turin are the areas where it happens.

One major problem for e-government development in Piedmont is caused by the small size of most municipalities. However in the last couple of years, a considerable progress took place in all the regional sub-areas, although the range of service actually delivered by the municipality web-sites is narrow.

In 2008, 62% of e-government web-sites delivered at least one service on-line (55% in 2007), although they were still limited to information or downloading documents. Only 17,6% of web-sites have at least one service for filling forms in or making transactions (service level >=3), Fig.9.



Source: PICTO

Figure 8 – Municipalities with an official web-site and Internet users visiting them, in Provinces and in Piedmont, 2007-2008 (*)

(*) Provinces ranked according to decreasing value of the web-site availability in 2008

Source: PICTO

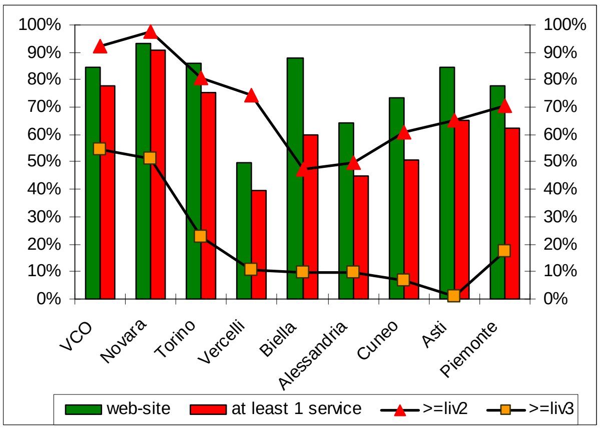


Figure 9 – Municipalities with a web-site and at least an online service allowing transactions (service level >=3) in Provinces and in Piedmont, 2008 (*)

*) Provinces ranked according to decreasing value of the availability of level >=3 transactional services

Only in the Province of Novara almost all the municipality web-sites can deliver at least one service online, Fig.9. In this area the availability of transactional online services was also appreciatively high.

5. ICT POLICY INITIATIVES

By 2010 the overarching objectives of the Lisbon strategy should be attained and the global economic crisis overcome. To face these challenges, Piedmont developmental strategy aims at industrial reorganization and territorial regeneration. Environmental sustainability and human resources are additional core objectives along with an increased capability of Public Administration. The regional strategy considers ICT as a general leverage for local development. The ICT regional strategy is developed by means of a variety of international and local actions, within the so called e-Government and Information Society Development Plan. This builds upon the material and immaterial infrastructures created by the WI-PIE broadband programme. The priority themes of the regional projects concern health and welfare, technological transfer and re-use of existing ICT applications in deprived areas and small municipalities. Piedmont participation in international networks and European projects is focused on good practices exchanging, interoperability and standard development and living lab approach. In the European Year of Creativity and Innovation, Piedmont Region puts into the field its excellences in ICT applications to creative industry, a binomial key for economic development and social cohesion.

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DATA SOURCE

PICTO. http://www.sistemaPiedmont.it/innovazionetecnologia/osservatorioICT/

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Informazioni

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