PARITÀ DI ACCESSO
Organo di Vigilanza

2014 Annual Report

2013 ACTIVITIES AND RESULTS

TELECOM ITALIA

Contents

This Report has been prepared in accordance with the provisions of Undertakings Group No. 7, proposed by Telecom Italia S.p.A. and approved with AGCom Resolution no. 718/08/CONS of the National Regulatory Authority for Communications (AGCom). The assessments made in this Report take into account information and data received by the Supervisory Board by 31 January 2014, in accordance with AGCom Resolution no. 718/08/CONS.

1 Executive Summary

The Supervisory Board's monitoring and investigation activities continued in 2013, as envisaged by Resolution no. 718/08/CONS regarding checks on effective compliance with the Undertakings given by Telecom Italia to guarantee access to the network, with a view to providing increasingly more observation of the principles of equality of treatment and transparency of information supplied to the market to protect Other Licensed Operators.

As part of this appraisal and analysis work, in order to tangibly apply the brief received, numerous studies and in-depth investigations have been initiated with the aim of ascertaining application of the principles guaranteeing equality of access and various other aspects related to compliance with the Undertakings given voluntarily by Telecom Italia, a brief summary of which is given below, while greater details are provided later in this Report.

A significant focus point that the new Members of the Supervisory Board decided to pursue, from when they took up office, is the development of a continuous and lasting relationship with Other Licensed Operators in the firm belief that constant dialogue and regular relation may bring numerous important benefits to the work conducted by the Board. The full belief in the need to attentively and permanently listen to the experiences of the most representative OLOs is deemed to be a necessary condition to making the Supervisory Board aware of the lines of priority action to be tackled and strengthened during their three-year period of office.

Based on this belief, in addition to repeated meetings with Telecom Italia management, with the intention, amongst other things, of understanding future areas of development of the various projects for the access network, new and more frequent discussions were begun with the major Other Licensed Operators and with the Italian Association of Internet Providers (AIIP).

In line with these statements, during the course of the year all aspects related to actual implementation and related functioning of the New Delivery Process, created by Telecom Italia to fulfil the Undertakings related to Group 1, continued to be verified.

During 2013, the Supervisory Board checked the effective opening of the so-called *single queue* in the cases envisaged involving lack of network resources when activating a system for a *Retail* customer or an OLO. The purpose of these checks, conducted directly in the field on management systems created by Telecom Italia, was to ascertain full operation of the automatic response as well as the general performance of system developed to guarantee compliance with the new process. In particular, to ensure the full involvement of the Other Licensed Operators on such an important issue, the Board considered it advisable to immediately consult the various market players, requesting that they should provide information on any critical elements of the process, and to direct the related verification and supervisory action accordingly.

Assessment of the correlation of Telecom Italia's management incentive system with the content of the Undertakings was another point on which the Members of the Supervisory Board focussed. A constantly open exchange of opinions with the company made it possible to analyse and examine a number of changes to the logic used for attribution of the 2013 MBOs to executive personnel with reference to the Open Access and National Wholesale functions. The discussions, positive and realistic, made it possible to lay the foundations for a new phase of collaboration between the two parties, with the aim of an increasingly better measurement of the results to be assigned to the management in correlation with wider compliance with the principle of equality of treatment.

A great deal of attention was also given by the Supervisory Board to the process of functional separation of the access network, begun by Telecom Italia on 30 May 2013 and focussed on achieving Equivalence of Input, in this way developing equivalent starting conditions for all operators on the market.

At the same time, before the summer break, preparatory investigations were initiated with a view to conducting a full analysis of Telecom Italia's delivery and assurance processes, in order to permit the Supervisory Board to express its opinions on the suitability of the existing processes and thus propose the most appropriate recommendations to the Company, also in the light of the possible adoption of an Equivalence of Input model for supply of wholesale network services, as mentioned above.

The Supervisory Board monitored with great interest and constant attention the work of a select committee of three independent experts set up by the Prime Minister on 18 November 2013, with the task of analysing the current status of the broadband infrastructure in Italy, the investments made to that date and the development plans of the major operators, with a view assessing the possibility of achieving the goals for coverage indicated by the EU by 2020. The results of the Report, presented on 30 January 2014, gave the Board much food for thought on the current state of the access network and on the future outlook for next generation networks.

In strictly operational terms, developments in the content of technical plans for the quality and development of the fixed access network also continued to be monitored. The Supervisory Board devoted particular attention to the long-term and quarterly technical plans related to the development of the next generation fixed access network, guaranteeing a constant attention to the issue, given the technological importance that it has and the effects that will evolve over the coming years for other Operators too.

The complaint by the Operator Fastweb S.p.A. "*S01/13 - Fastweb/Network access discrimination in the installation of LLU and Bitstream systems*", discussion of which has not revealed any breach of the Undertakings by Telecom Italia, nevertheless provided an opportunity to put forward a number of Recommendations to the Company, with a view to finalising the cases for which the complaint was made, at the same time starting a much broader and detailed enquiry into the causes for rejection of Work Orders (so-called KOs) by Telecom Italia due to the presence of network multiplexing equipment.

In support of the importance that discussions with Other Licensed Operators may have, reference is made to a further complaint by Fastweb "*S02/13 - Fastweb/Malfunctions of the CRM system for Wholesale customers"* and the one filed by another operator, Welcome Italia S.p.A. "*S03/13 - Welcome Italia/Physical deterioration of access lines, handling of fruitless service interventions, SLA compliance and related bitstream service assurance penalties*". Based on the facts reported, two formal enquiries were begun to ascertain the actual behaviour of Telecom Italia, but at the time of writing this report, these investigations are still on-going.

With a view to the disclosure and transparency of its actions, the Supervisory Board, acknowledging the need to change its procedure for dealing with reports and complaints dating from 2009, launched its first Public Consultation on the proposal for changing the said procedure. The decision to disclose in advance a document that is still being finalised, before arriving at the final decision, reflects the specific wishes of the SB to obtain

the maximum agreement and transparency for its actions. A number of Operators responded positively to the Consultation by submitting their contributions, which are still being analysed and assessed, in concert with the Regulatory Authority, which has been asked to give its opinion on the proposed changes.

The Supervisory Board also commenced specific trade analyses to study and prevent the "KO" phenomenon, which is still an important issue even after the analysis conducted in previous years by the SB and the recent rulings on the subject by the Antitrust Authority.

At the end of 2013, the Board arranged for a separate specific check on all Work Orders of all the OLOs that had been rejected by Telecom Italia and which regard multiplexing equipment, with the aim of assessing the effectiveness of the action recommended to close the aforesaid Complaint no. "S01/13" and ascertain, in this way, if there has been any breach of the Undertakings. The purpose of the check that has been arranged, lasting twelve months, will be to ascertain the correctness of the rejections sent back by Telecom Italia in response to requests to activate LLU systems in areas served by the equipment.

Within Undertakings Group no. 4, related to guarantees for transparency of the monitoring system, the Supervisory Board considered that it was advisable to initiate specific monitoring operations on a number of indicators that during the year had given results, showing that the treatment received by Telecom Italia retail customers tended to be better than that received by other Operators' customers. The need to ensure a detailed check on the level of quality offered and compliance with the principle of internal-external equality of treatment in the handling of SMP service supply processes by Telecom Italia has led to the need for a thorough analysis of the causes that have determined the aforesaid inequality.

At the same time, on the same subject, the Supervisory Board notified the National Regulatory Authority for Communications (AGCom) that, in its opinion, some of the indicators currently in use require revision and that correlated KPOs are needed, in order to permit a transparent and effective comparison between Indicators and Objectives.

The Supervisory Board also had regular meetings with National Regulatory Authority for Communications (AGCom), at which the numerous problems related to compliance with the principles of non-discrimination and equality of treatment and to systems of equivalence of access to the fixed network were discussed, identifying the priority aspects to be dealt with and thoroughly investigated, which were subjected to a joint analysis in a spirit of mutual collaboration.

In particular, the hearing on 8 July 2013 was important. On that occasion, the results that had emerged during the proceedings related to the aforesaid Complaint "*S01/13 - Fastweb/Network access discrimination in the installation of LLU and Bitstream systems*" were discussed at length, after which the SB communicated the results of its investigation regarding similar proceedings, initiated by the same Operator and lodged with the Authority.

Numerous meetings were also held with Telecom Italia to further investigate a number of subjects related to various Undertakings Groups, as well as with Other Licensed Operators, and exchange of correspondence connected with the investigations in progress.

2 Network governance and the work of the Supervisory Board

The Supervisory Board was established on 1 April 2009 in accordance with the Undertakings set forth by Telecom Italia pursuant to Law 248/06 and approved by the National Regulatory Authority for Communications (AGCom) through Resolution 718/08/Cons.
The new Board - composed of Prof. Antonio Sassano (chairman), Prof. Marco Lamandini and Prof. Michele Polo (Members) - took office on 1 December 2012.

Antonio Sassano
Full Professor of Operational Research at the University of Rome "La Sapienza", Antonio Sassano has carried out research in the areas of Combinatorial Optimisation and Network Design. He has served as Chairman of the Italian Interuniversity Center for Operations Research (CIRO) and as editor of the journal "Mathematical Programming". He has consulted for Italy's National Regulatory Authority for Communications (AGCom), Italian Competition Authority and Ministry for the Economy and Finances on issues concerning the electromagnetic spectrum planning. A former Executive Director of the "Ugo Bordoni" Foundation, he is now a member of the Board of the Italian Space Agency (ASI). He was one of the Italian Government's advisors on Tender procedures for GSM and UMTS licenses. He is a member of the Advisory Board della Florence School of Regulation (European University Institute).

Marco Lamandini
Marco Lamandini has been Full Professor of Commercial Law at the University of Bologna's Faculty of Economics since 2001. He has written extensively on corporate, banking, securities and antitrust law. He is co-editor of the "RDS-Rivista di Diritto Societario Interno, Internazionale, Comunitario e Comparato" and the "European Company Law Review". He is also on the editorial board of "Giurisprudenza Commerciale", "Banca, Borsa e Titoli di Credito" and "Il diritto industriale". Since 2002 he has served as a High-Level Expert for the European Parliament on corporate law and finance. He has consulted for Argentina's Ministry for the Economy under an international cooperation programme funded by the Italian Ministry for Foreign Affairs. He acted as legal advisor to the Monitoring Trustee of Alitalia, as appointed by the European Commission. Since December 2012 he has served on the appeal boards of three European financial supervisory authorities. Since 1992 he has been a qualified lawyer specialising in corporate, banking, securities and antitrust law.

Michele Polo
Michele Polo is Full Professor in Political Economy and holds the ENI Chair in Energy Markets at Università Bocconi. He gained his undergraduate degree from Università Bocconi before undertaking postgraduate study at the London School of Economics and at Bocconi. His research interests are focused on industrial organisation, antitrust, regulation, energy, and network industries. He has published many books and articles in international journals. He was a member of the Economic Advisory Group on Competition Policy at the DG Competition of the European Commission. He was director of the Center of Energy and Environmental Economics and Policy (IEFE) at Università Bocconi.

General Secretary of the Supervisory Board

The General Secretary of the Supervisory Board is Fabrizio Dalle Nogare, appointed by Telecom Italia with the approval of the Authority. The General Secretary supports and coordinates the activities of the Supervisory Board, helping to plan its operations and providing assistance to the Chairman. He ensures that the Supervisory Board is kept informed of all relevant information and liaises with the Supervisory Office in order to carry out his role.

The Supervisory Office

The Supervisory Office, headed by Luca Regoli, supports the Supervisory Board in fulfilling its role, provides operating support and, where requested or instructed by the Board, carries out preparatory and collateral tasks when dealing with reports and complaints. The Supervisory Office is made up of: Marco De Grandis (responsible for technical issues), Alessandro Mauro (responsible for economic issues), Alessandro Alongi (responsible for legal issues) and Diana Stefani (secretary).

The Supervisory Board

The Supervisory Board acts with complete autonomy and independence and is tasked with supervising the proper performance of the Undertakings. Acting on its own initiative or following reports from third parties, it verifies whether the Undertakings have been violated. It then reports its findings to the National Regulatory Authority for Communications (AGCom) and Telecom Italia's Board of Directors following the procedures and timeframes set forth in its Internal Regulation, gathering the required information and data from all Telecom Italia departments involved in the process.

Members of the Supervisory Board remain in office for three years. In 2012 the term-in-office of the previous Board, chaired by Prof. Giulio Napolitano, came to an end and on 1 December 2012 the new three-member Board took office.

The Chairman of the Board is Prof. Antonio Sassano, who was appointed by the Board of Directors of Telecom Italia together with the other members of the Board: Prof. Marco Lamandini (selected by the Authority) and Prof. Michele Polo (selected by Telecom Italia).

The Board meets at least once each month and is required to send the Authority and Telecom Italia a quarterly report on its activities, which focuses in particular on any complaints about anomalies and deficiencies that have been found, any inquiries that have been opened, and cases of non requested services being activated. The Board also submits an annual report on its activities and results to AGCom and Telecom Italia.

The Supervisory Board is supported in its work by a General Secretary (Fabrizio Dalle Nogare) and a Supervisory Office (led by Luca Regoli). It has its own annual budget, within the limits assigned by Telecom Italia in accordance with the threshold set forth in Resolution 718/08/CONS.

The Supervisory Board verifies the proper performance of the provisions set forth in the Undertakings and, in the course of its activities, adopts Decisions and Recommendations designed to stimulate greater compliance with said Undertakings by Telecom Italia.

It also receives complaints from operators regarding alleged violations committed by Telecom Italia. If Telecom Italia fails to remedy any confirmed violations in accordance with the deadlines and procedures set forth, the Supervisory Board reports this to the Authority and to the Board of Directors of Telecom Italia.

In accordance with the transparency requirements set forth in article 21 of the Internal Regulation, a special Supervisory Board website (http://organodivigilanza.telecomitalia.it/) - which is also available in English - has been created so that all concerned parties can access information regarding: i) its role and mandate; ii) the composition of the Board; iii) the procedures and methods for reporting and handling complaints; iv) the content of Resolutions and Recommendations.

As well as the information described above, the site also contains press releases summarising the decisions taken by the Supervisory Board. This helps make the work of the Board accessible to the market and all other interested parties.

THE GOVERNANCE OF THE SUPERVISORY BOARD

OPEN ACCESS

In February 2008, Telecom Italia reorganised its management structures, creating within the Technology & Operations Department a new Department of Open Access, whose purpose is to deal with the following issues with the emphasis on efficiency, quality and equality of treatment:

- all development and maintenance services for access network technological infrastructures;
- processes for the supply of access services to both Telecom Italia and of other Operators' customers and the relevant technical assistance.

The creation of Open Access and the implied internal reorganisation represent the foundation basing on which the negotiation with AGCOM started to end with the approval of the Undertakings.

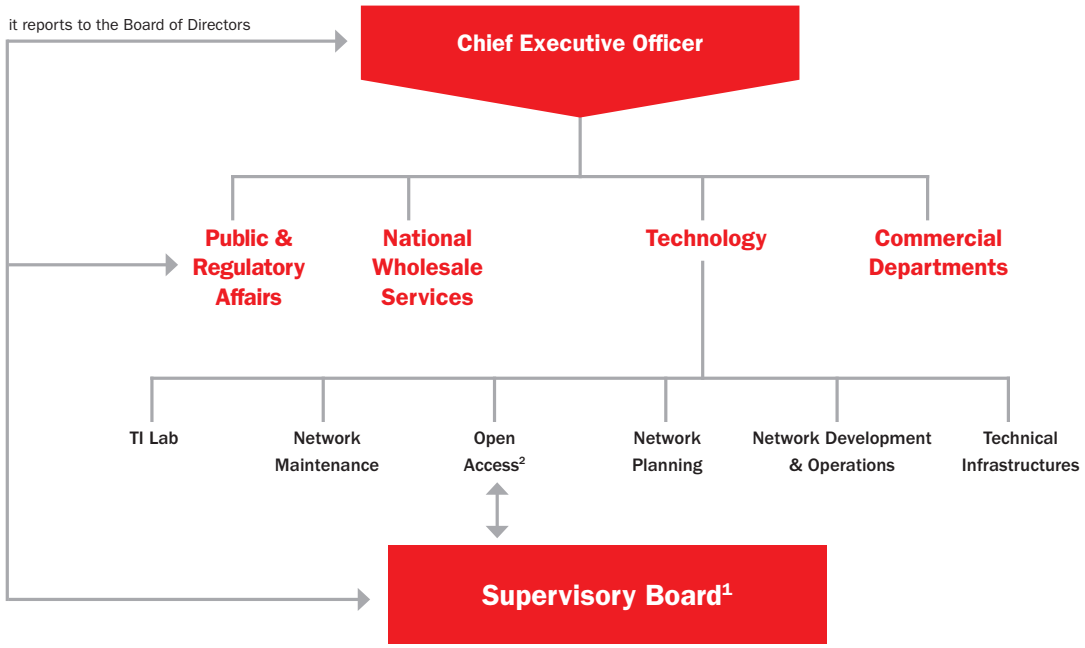
Open Access provides its access services to the Retail Sales department of Telecom Italia and to the other licensed Operators through the National Wholesale Services department, which is the main reference point for Operators for dealing with commercial and technical requests (from the offer, to planning, sales, technical assistance and billing) relating both to access services provided by Open Access and to other wholesale services.

The Open Access model is characterised by the supply of services in terms of "Equivalence of Outputs" (EOO), basing on which the services offered to the commercial departments of Telecom Italia and to the other licensed operators respect the principle of equality of treatment, but are not necessarily identical.

The solution adopted was to specify that Telecom Italia's *Retail* department deals directly with Open Access, while the OLOs deal with TI Wholesale. In this regard, it must be noted that in the month of April 2012, as part of a broader company reorganisation, the Service Management duties (including Delivery and Assurance Operations) of the National Wholesale Services department became part of Open Access.

The activities of Open Access and National Wholesale Services, for the production of access services, are separate from the other commercial departments of Telecom Italia and managed independently. Telecom Italia is organised according to the diagram shown below, which shows a direct and separate hierarchical structure whereby the managers in charge of Technology, National Wholesale Services and Public and Regulatory Affairs report directly to the Chief Executive Officer. Open Access reports directly to the director of Technology; the department of Technology also includes the TI Lab, Network Planning, Network Development & Operations, Network Maintenance and Technical Infrastructures departments.

THE GOVERNANCE OF TELECOM ITALIA



1 In case of reports and complaints, the Supervisory Board can gather information from Open Access and interact with the Public & Regulatory Affairs Department

2 The manager of the Open Access department reports to the manager of the Technology Department

3 Changes in the relevant Italian and EU legal and regulatory framework

3.1 - NATIONAL REGULATORY FRAMEWORK

This chapter provides an overview of legislative reforms and key national regulatory developments concerning electronic communications that have had most impact on the overall situation of the reference market.

Defence of strategic national interests

First, Decree no. 21, 15 March 2012, converted with amendments into Law no. 56, 11 May 2012 should be mentioned, in that it concerns: "Regulations relating to special powers regarding ownership structure in the national defence and security sectors, as well as for activities of strategic importance in the energy, transport and communications industries".

This provision, the subsequent acts of which extended into 2013 too, are part of a number of legislative actions adopted in recent years to defend the assets owned by companies operating in sectors considered to be strategic and of national interest, through the introduction of special powers of corporate governance and means of protection against hostile takeover bids.

In particular, the decree rephrases the conditions and the scope of intervention of the State's special powers on companies operating, amongst others, in the electronic communications industry.

The decree redefines the objective and subjective scopes, the type, the conditions and the procedures whereby the Government may exercise such special powers, its faculties for dictating specific conditions for acquisition of shareholdings, for vetoing the adoption of certain corporate resolutions and for opposing the acquisition of shareholdings.

Article 1 of the said provision concerns the new rules for the special powers that may be exercised by the executive with regard to companies operating in the national defence and security sectors. The article precisely states the requirement for exercising the special powers in these strategic sectors, identified as the existence of an effective threat of serious damage to the essential interests of national defence and security.

The subsequent Article 2 governs the special powers related to strategic operations in the energy, transport and communications sectors, providing for special powers of veto for all corporate operations, deeds and resolutions which may give rise to an exceptional situation of effective threat of serious damage to public interests related to security and to operation of the networks and lines and to the continuity of provision of such services.

After issue of the said provision, the complex procedure began for the definition of the four regulations implementing the decree.

1. A regulation pursuant to Article 1 paragraph 1 for the identification of activities having strategic relevance for the National defence and security system);
2. A regulation pursuant to Article 1 paragraph 8 for the identification of the procedures for implementation of special powers in the national defence and security sectors;

3. A regulation pursuant to Article 2 paragraph 1 for the identification, by Presidential Decree, strategically relevant operations in energy, transport and communications sectors;
4. A regulation pursuant to Article 2 paragraph 9 for the identification of the procedures for activating special powers in National defence and security sectors.

In particular, after approval of the Prime Minister's Decree no. 253, 30 November 2012, on the regulation identifying activities having strategic relevance for the National defence and security system, as later amended by the Prime Minister's Decree no. 129, 2 October 2013, networks and lines used for supplying access to services included in the obligations for universal service and broadband and ultra-broadband services by end users are included in the aforementioned strategically relevant operations and therefore are protected by special powers.
The regulation for identifying the procedures for activating special powers in National defence and security sectors, pursuant to article 1, paragraph 8 of Decree Law no. 21, 15 March 2012, was approved by the Council of Ministers on 31/1/2014.
The other regulations are currently under definition.

The regulatory framework in the Equivalence of Input process

With reference to the activity of the National Regulatory Authority for Communications (AGCom), during 2013 it passed several resolutions covering most part of the topics of the subject matter, which also have an impact on the activities conducted by the Supervisory Board.

The Members of the Supervisory Board, right from the moment they took office on 1 December 2012, sought to work closely with the Regulatory Authority, as confirmed moreover at the meeting with the Authority's Chairman and Officers held on 21 February 2013. During the hearing, the Members of the Supervisory Board explained the future developments of monitoring of the current Telecom Italia Equivalence of Output model. In this regard, the Regulatory Authority, acknowledging the role played by the Supervisory Board in the steps taken to ensure equality of treatment, once again expressed hope for the future work on the complex and many-faceted task entrusted to it by the Undertakings of monitoring equality of access.

An innovative topic in the regulatory scenario dealt with by the Authority during 2013 was the willingness of Telecom Italia to start the planned separation of the access network pursuant to article 50 ter of the Electronic Communications Code, a process begun on 30 May 2013 by the Company's Board of Directors. The proposal, based on the principle of Equivalence of Input, was intended to be achieved by a spinning off its access network.

Following several discussions between Telecom Italia and the Regulatory Authority, the latter started to analyse the possible impact of the operation on market and on competition, as well as on regulation of the access markets and, at the end of July 2013, the Authority deemed the Telecom Italia compliant with the requirements set forth in the BEREC guidelines on functional separation.

Lastly, during the month of November, Telecom Italia declared to the Authority that it intended to focus the said project essentially on achieving Equivalence of Input, developing, in this way, equivalence of initial conditions for all Operators on the market.

It will be up to the Authority to decide on timing and methods for the subsequent coordinated analysis on access markets, as envisaged by the Electronic Communications Code if an Operator with significant market power presents a proposal for separation of the access network.

Evolution of regulation in next generation networks

With regards to novel regulatory provisions on next generation networks which were passed during the year, it appears appropriate to recall the regulatory framework within which all the provisions in 2013 were shaped, that is the innovative importance of Resolution no. 1/12/CONS aiming to regulate NGN access services. The new rules conclude the procedures initiated under Resolution No. 731/09/CONS, Resolution No. 1/11/CONS and Resolution No. 301/11/CONS, and in general introduce the requirements detailed below.

Based on the aforesaid provision, Telecom Italia is required to submit a Reference Offer for passive services, such as the "end-to-end service" (unbundled access to compatible fibre with the current network architecture of the incumbent), its individual building blocks and access to civil works (such as cable ducting), and for active services, such as fibre bitstream, offered at various network levels, as well as the innovative virtual unbundled local access (VULA) service supplied directly in the exchange.

At the same time, the Resolution provides for the start of procedures needed to establish regulations for advanced VDSL technologies (vectoring and bonding), determine whether symmetrical obligations for access to infrastructure are required, set the risk premium, and, more generally, the economic terms and conditions for these services.

More specifically, with regard to provisions which were passed during 2013 in favour of regulation of next generation networks and following the line of the aforesaid Resolution no. 1/12/CONS, the Authority began the following procedures:

1. approval of the Telecom Italia Reference Offer for Year 2012 regarding NGAN end-to-end access service (market 4) provided for by Resolution no. 15/13/CIR;
2. approval of the Telecom Italia Reference Offer for Year 2012 regarding NGAN access services (cabling infrastructure, approach section, primary and secondary optic fibres, optic fibre termination segments) - market 4, approved by means of Resolution no. 9/13/CIR;
3. approval of the Telecom Italia Reference Offer for Year 2012 regarding NGA bitstream services, VULA service and related accessory services (market 5), ordered by means of Resolution no. 10/13/CIR;
4. approval of the guidelines for assessing the replicability of retail offers for ultra-broadband on optic fibre, approved by means of Resolution no. 604/13/CONS;
5. start-up of the Public Consultation on the draft provision on supplements and amendments to the procedures set forth by Resolution no. 274/07/CONS for cases of use of Telecom Italia NGAN access services (unbundled access to the local sub-network, FTTCab-FTTH VULA, naked and shared FTTCab bitstream, FTTH bitstream , end to end, access to the optic fibre termination segment) and wholesale resale of access services, provided for by Resolution no. 31/13/CIR and by the subsequent Resolution no. 611/13/CONS;

On the same topic, on 23 May 2013, the Authority launched three Public Consultations with Resolution nos. 34/13/CIR, 35/13/CIE and 36/13/CIR regarding the Reference Offers for optic fibre ultra-broadband proposed by Telecom Italia, according to the provisions of the aforementioned Resolution no. 1/12/CONS.

The three consultations concern:

1. approval of the Telecom Italia Reference Offer for Year 2013 regarding NGAN access services (cabling infrastructure, approach section, primary and secondary optic fibres, optic fibre termination segments) - market 4, approved by means of Resolution no. 34/13/CIR;
2. approval of the Telecom Italia Reference Offer for Year 2013 regarding NGAN end-to-end access service (market 4) approved by means of Resolution no. 35/13/CIR;
3. approval of the Telecom Italia Reference Offer for Year 2013 regarding NGA bitstream services, VULA service and related accessory services (market 5), approved by means of Resolution no. 36/13/CIR;

In addition to the above, by means of Resolution no. 332/13/CONS the proposed provision related to the guidelines for assessing the replicability of retail offers for ultra-broadband on optic fibre were put to public consultation.

Provisions regarding copper networks

With regard to services offered on the copper network, AGCom adopted the following provisions:

1. Resolution no. 239/13/CONS whereby it started the Public Consultation regarding the symmetric regulation on access to physical network infrastructure (subsequently approved by means of Resolution no. 538/13/CONS on 30 September 2013);
2. Resolution no. 356/13/CONS whereby it started the Public Consultation regarding the creation of a cost model for setting the prices of interconnection services on fixed network for Years 2013-2015;
3. Resolution no. 187/13/CONS defining the prices for Year 2012 of fixed network termination services offered in TDM mode by notified Other Licensed Operators;
4. Resolution no. 537/13/CONS whereby it started up the procedure concerning “Non-discrimination obligations: update of the replicability test methodology”;
5. Resolution no. 324/13/CONS providing guidelines on Regulatory Accounting and service contracts: traffic interconnection services (subsequently approved on the outcome of the Public Consultation provided for by Resolution no. 641/12/CONS on 9 January 2013);
6. Resolution no. 603/13/CONS starting the procedure for identification and analysis on the market of wholesale terminating segments of leased lines, irrespective of the technology used to provide leased or dedicated capacity (Market no. 6 of European Commission Recommendation no. 2007/879/EC)

In particular, with the approval of Resolution no. 238/13/CONS on 21 March 2013, the Authority started the Public Consultation on the draft regulations concerning identification and analysis of fixed network access services (markets nos. 1, 4 and 5 of those identified by Recommendation 2007/879/EC), for the years 2014-2016.

The draft provision, subjected to consultation, deals with definition of relevant markets for wholesale and retail services for access to fixed network both in copper and in optic fibre, assessment of their current and potential level of competition, as well as the regulatory steps to be taken. The implicit objective of these steps will be to provide the market with a single framework for the technical conditions and economic terms and conditions for supply of physical and virtual access services over a longer time period up to 2016, in order to guarantee the regulatory certainty required by Operators for planning their investments.

Regarding economic terms and conditions for unbundling services on Telecom Italia copper network, by means of Resolution no. 747/13/CONS the AGCom Board approved the economic terms and conditions and technical conditions for the Telecom Italia Reference Offer for Year 2013 regarding wholesale unbundled services for access to metallic loops and sub-loops and to collocation services (market 4), a provision adopted as a result of the procedure set forth in article 7B of the Framework Directive.

Lastly, by means of Resolution no. 91/13/CONS, the Authority grouped together the two procedures set up by Resolutions no. 41/12/CONS and no. 42/12/CONS regarding, respectively, definition of a cost model for setting the prices of wholesale access services to the Telecom Italia optic fibre network, and assessment of the regulatory impact of introduction of new transmission techniques such as vectoring on development of next generation networks into a single procedure. The procedure was previously started with Resolution no. 390/12/CONS concerning identification and analysis of markets for fixed network access services, market nos. 1, 4 and 5 of those identified by Recommendation 2007/879/EC.

Action by the Antitrust Authority (AGCM)

On 9 May 2013, the Antitrust Authority concluded the inquiry into abuse by Telecom Italia of its dominant position on the market of network infrastructures.

Following a long and complex investigation that began on 23 June 2010, the Authority inflicted a total penalty of € 103.794 million on the company, charging it with two separate instances of irregular conduct which permitted the former monopolist to defend its market shares by obstructing, on the one hand, offers by competitors to the end customers preventing, on the other hand, the replicability of that offer for major business customers.

Following the investigation, Telecom Italia was found guilty of exploiting the dominant position it held in supply of wholesale access services to the local network and to broadband, thus impeding the expansion of competitors in the market for voice telephony and internet access services. More specifically, the two conducts found to be unfair by the Antitrust Authority were:

- opposition to competitors of an unjustifiably high number of refusals for activation of wholesale services (KOs).

  The data found during the investigation showed that Telecom Italia dealt with orders submitted by other Operators in a discriminatory way as compared to those coming from its own internal sales divisions, giving preference to the latter. When exercising its discretionary powers, the Company prevented access by competitors to the infrastructure, effectively making the activation process for network access services considerably more difficult for other Operators than it was for customers directly acquired by Telecom Italia. The Antitrust Authority ruled that this conduct damages the principle of equality of treatment which the Company undertook to comply with. For this violation, the Authority ruled payment of a penalty of € 88.182 million.

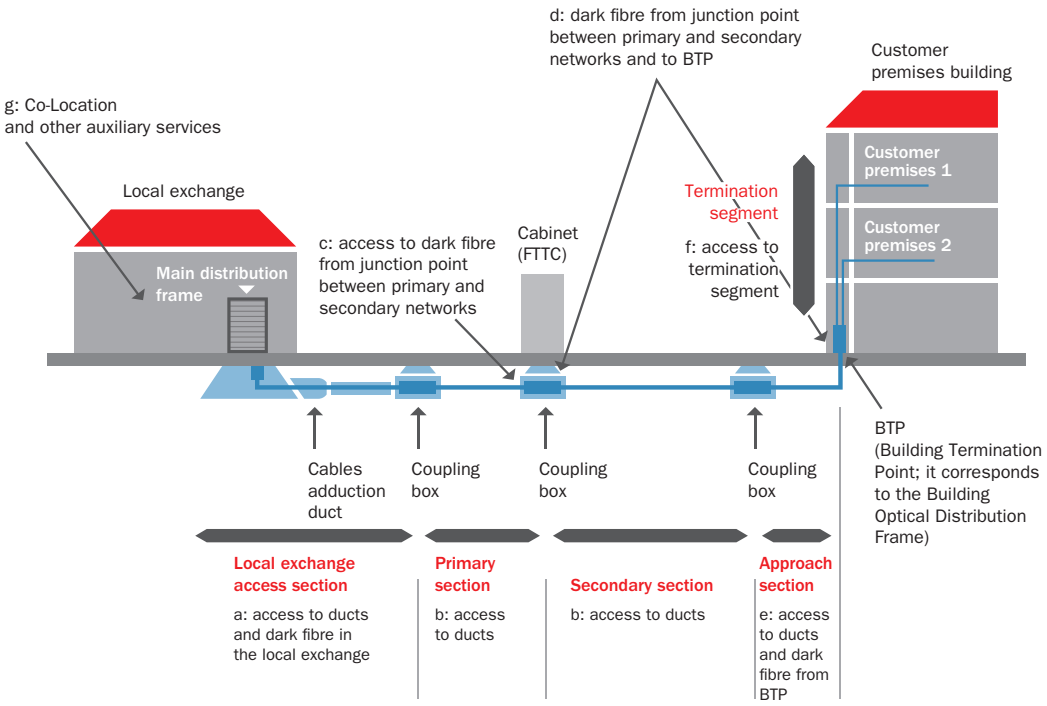
- in the second charge, Telecom Italia was found to have implemented a policy for discounts to major business customers for the retail service for access to the fixed telephone network, which was capable to prevent equally efficient competitors from operating profitably and on a long-term basis on the same market.

Over the time span covered by the inquiry (2009-2011), the Company under investigation devised a tariff policy suitable, given the costs for network access charged to the other Operators, to reduce the margins of equally efficient competitors, with restrictive effects on the competitiveness of the retail market for access services to major business customers.

In the opinion of the Antitrust Authority, the discounts granted by Telecom Italia to customers were addressed selectively to customers using supplier selection procedures and located in areas open to competitors, where the access service supplied by other Operators is available (local loop unbundling, LLU). The final analysis by the Antitrust Authority showed that Telecom would not have been able to offer the retail services at the prices charged without suffering losses if it had sustained the wholesale costs charged to competitors. For this conduct, the Authority ruled payment of a penalty of € 15.612 million.

Regarding wholesale accessory technical services to the fixed network, in March 2013 the Italian Competition Authority ordered an investigation to check whether the companies Alpitel, Ceit Impianti, Sielte, Sirti, Site and Valtellina implemented a conduct that was able to restrict competition in this specific market. Said decision, taken in response to a complaint by the Operator Wind, aims to ascertain the existence of an agreement to jointly fix the prices for corrective maintenance of network faults (assurance service).

The following diagram illustrate the NGAN infrastructure model as defined in Resolution no. 1/12/CONS.



NGAN infrastructure model as defined in Resolution no. 1/12/CONS

3.2 - THE EU LEGAL AND REGULATORY FRAMEWORK AND THE MOST SIGNIFICANT ACTIONS DURING 2013

The general regulatory framework

The "Telecom Package"

The so-called "Telecom Package", finally approved in 2009, consists of a number of regulations which revised the European legal and regulatory framework on electronic communications, which was formerly defined mainly by the 2002 Directives. The new rules govern many aspects ranging from strengthening the rights of telephone and internet users - for the first time including freedom of access to the internet among fundamental human rights - to new policies on definition of rules regarding radio spectrum management. In particular, it takes the form of the following legal acts:

1. Directive no. 2009/140/EC, modifying the "Framework Directive" (no. 2002/21/EC), the "Access Directive" (no. 2002/19/EC) and the "Authorisation Directive" (no. 2002/20/EC).

2. Directive no. 2009/136/EC, modifying the "Universal Service Directive" (Directive no. 2002/22/EC), the "E-Privacy Directive" (Directive no. 2002/58/EC) and the regulations on cooperation between national regulatory Authorities (Regulation (EC) no. 2006/2004)

3. Regulation (EC) no. 1211/2009, establishing the Body of European Regulators for Electronic Communications (BEREC).

The "Package" assigns new tools to national Regulatory Authorities more specifically with regard to issues related to fixed network access (possibility of defining sub-national markets, and of requiring Operators "*to share network elements and associated resources*", as well as measures designed aid elimination of the so-called digital divide, principally in rural areas). In particular, Directive no. 2009/140/EC introduced two new articles into the Access Directive:

- Article 13a, granting to national Authorities the possibility of calling for the functional separation of the access network of the vertically integrated dominant Operator. This measure, however, must be used only in exceptional circumstances, within the limits set by the principle of proportionality, and only after it was ascertained that the "typical" regulatory obligations (such as the obligation for transparency, non-discrimination, accounting separation, etc.) have proved to be ineffective in guaranteeing internal-external equality. The supply of wholesale access services/ products should be transferred to a commercial entity operating in a totally independent way. The Authority must submit this draft provision to the European Commission, stating the grounds for the provision and performing an in-depth analysis of the impacts that a functional separation of the access network may have on the market and on all the stakeholders involved.

- Article 13b, providing the possibility for an SMP Operator to voluntarily opt for separation of its fixed access network ("voluntary" separation). The national Regulatory Authority "*must assess the effect of the intended*

transaction on existing regulatory obligations" and, following an analysis of the markets, decide whether to impose, amend or withdraw the obligations charged to the Operator.

Italy implemented the "Telecom Package" into its own national legislation on 28 May 2012, through the Legislative Decree no. 70, modifying the Electronic Communications Code.

The Europe 2020 Strategy and the Digital Agenda

In 2010 the European Council approved the "Europe 2020" programme, which aims to revive EU economy by seeking to achieve goals in employment, innovation, education, social integration and climate/energy. These goals must be reached by action both at European and at National level.
One of the initiatives of the Europe 2020 Strategy is the "Digital Agenda for Europe", comprising goals and actions that the Commission intends to promote for the development of electronic communications and digital technologies. Among the latter, creation and mass use of broadband and ultrabroadband networks plays a key role, according to the following goals:

- Basic broadband coverage of the whole European Union territory by 2013 (with no specification as to speed);
- By 2020:
    - Broadband coverage of the whole European Union territory at a speed exceeding 30 Mb;
    - Subscribing by at least half the population of the Union to broadband services at speeds over 100 Mb.

The Digital Agenda Scoreboard of 2013, that is the document providing an update of progress in the work to achieve the goals set, depicts however a not so encouraging State of the Art; indeed, on 31 December 2012:
- 54% of the territory proved to be reached by a coverage exceeding 30 Mb;
- A mere 2% of the population subscribed to services whose speed is at least 100 Mb.

The recent Recommendation of the Commission on Non-discrimination and Costing (see below) includes a number of contents that cannot be interpreted as preparatory or as incentives for achieving the aforesaid goals of the Digital Agenda, in particular with regard to the proposal of measures designed to promote investments in next generation access networks.

The Connecting Europe Facility (CEF) Project

The aim of the Connecting Europe Facility project, launched by the Commission, is to provide appropriate funding for European projects in transport, energy and electronic communications sectors.

In September 2012, the European Parliament published a report that agreed with the overall view of the Commission, but deemed it advisable that the funding of broadband networks should take place "on a demand driven deployment".

In November 2012, the European government leaders did not reach an agreement on the EU budget for the 2014-2020 seven year period; the funds to be allocated to the CEF project were not therefore decided.
The decision passed in February 2013, and it was for a market cut in European funds to support electronic communications services, as part of a more general situation of economic crisis: in fact, the sums allocated for ICT as part of the CEF project total € 1 billion, as opposed to the € 9.2 billion initially sought by the Commission. The CEF regulation was approved in December 2013 by the European Council.

Digital Agenda Commissioner Neelie Kroes, extremely disappointed, stated that this decision will jeopardise achievement of the goals of the Agenda, in particular with regard to 30 Mb coverage of the whole population of the Union by 2020.

Digital single market

The proposal to adopt a regulation that defines a digital single market in the EU was presented in June 2013; an initial draft document began circulating within the Commission in the following month, and over the summer several changes were proposed.

In the intentions of Digital Agenda Commissioner Kroes, creating a digital single market could lead to an increase in PIL in the region of 1% per year, and could stimulate, due to creation of innovative digital services, the competitiveness of European companies as well as employment. Some of these expectations meet the wishes of the European electronic communications industry, which by and large favourably views measures that may foster creation of a European market, and the birth of large sized Operators which are able to do business at transnational level.

The final draft of the document was presented to the Commission in September.

The document raised numerous critical opinions above all from the Parliament and from BEREC, both on the contents and on the timing, deemed to be wrong in that it is too close to the Parliament elections (in 2014).

The European Council meeting discussed the proposal at the end of October 2013 and in December the Member States officially expressed their positions on the subject[1]: while the agreement on the basic goals is virtually unanimous, there are on the other hand deep differences on the methods for achieving them. Some Countries, among which France, urge to postpone the date for adopting such important provisions, while Italy and Germany declared their willingness to proceed immediately. Certainly, issues such as elimination of roaming, single authorisation for electronic communications Operators, or transfer to the Commission of powers with regard to frequencies and for veto on National decisions are not viewed favourably by several Countries, not only due to the loss of National sovereignty that this would imply, but also due to the fear of giving rise to confused and contradictory processes. In any case, it appears unlikely that the new package will be approved before the end of the current Europarliament's term of office, which expires in the spring of 2014.

NOTES

[1]http://www.consilium.europa.eu/uedocs/cms_Data/docs/pressdata/en/trans/139939.pdf

Summary of the main contents of the single market proposal

TOPIC	CONTENT
Authorisations for supply of electronic communications services	Each European Operator may provide electronic communications services in all the Member Countries basing on the authorisation granted in its own Country. In cases of serious or repeated offences, the Authority in the host country may ask the Authority in the Operator's country of origin to suspend or withdraw the authorisation. It is stressed that this decision can be taken only by the Authority in the Country of origin. In cases of dispute between Operators, the Authority in the host country will have jurisdiction on the matter.
Market analyses	The Commission acquires veto power on the remedies proposed by the Authorities for application to SMP Operators. When analysing relevant markets, competitive constraints practised by Over the top (OTT) players - and no longer only those practised by electronic communications Operators - must also be taken into account.
Standardised "European" wholesale broadband products	Wholesale virtual broadband access products - VULA - sold within the Union must comply with certain minimum parameters (detailed in Annex I of the document) common to all Countries. The minimum levels of quality with which European Operators must comply when offering their services are then defined. This is to attempt to remove the barriers that transnational Operators such as AT&T and BT Global Services encounter when offering their services in the various Countries.
Spectrum	Spectrum leases must be approved in advance by the Commission, which will also request the national Authorities to coordinate them in order to obtain licence expiry dates that are harmonised at European level (a common timetable for the EU). The Commission acquires veto power regarding assignment of electromagnetic spectrum bands by national Authorities and Institutions.
Net neutrality	Consumers must be free to make use of services without any form of restriction of access by the Operators. Practices such as slowing of browsing or blocking of access to certain contents are prohibited.

Issues regarding internal-external equality: non-discrimination, costing methodologies, functional separation

Functional separation: public consultation by BEREC in 2010

In 2010, BEREC published a public consultation on functional separation of the access network of vertically integrated SMP Operators, with a view to defining guidelines that would be capable to support national Regulatory Authorities with regard to the new tool the "Telecom Package" of 2009 reserves to them.

A flexible approach was considered to be preferable, and in this perspective the consultation did not aim to detail assessment criteria or complete lists of parameters to be followed for the National Regulatory Authorities (NRA). At the same time, BEREC acknowledged that purely qualitative criteria may be considered to be sufficient to decide whether or not to order functional separation.

The document cited the model of functional separation adopted by Telecom Italia, together with the British, Polish and Swedish models, as useful reference examples when examining the procedures for applying the new Articles 13bis and 13b of the Access Directive. In particular, BEREC reiterated that the model introduced by Telecom Italia, including the monitoring role played by the Supervisory Board, is to be considered a valid example of functional separation to all intents and purposes. Moreover, it was also specified that these experiences were gained within the context of the previous legal and regulatory framework", and therefore were operations peculiar to a specific reference national context, voluntarily launched by the *incumbent* operators, outside a structured European legal and regulatory framework.

On the result of the public consultation, BEREC released a final document; in this document it was pointed out that, when forcing dominant Operators to accept forms of functional separation, the Authorities would have to thoroughly and prudently consider the non-reversible nature, the costs, the profound effects on the industry and the complexity implied by such an operation.

The Commission's public consultation on the principle of non-discrimination and costing methodologies

In 2011, the Commission launched two public consultations:

- one regarding application of the principles of non-discrimination in access to electronic communications networks (*Non-Discrimination Obligation under Article 10 of the Access Directive, including Functional Separation under Article 13bis*);
- the other on the method of calculation used to define the costs for the purpose of determining the prices of wholesale products (*Costing Methodologies for Key Wholesale Access Prices in Electronic Communications*).

These consultations were functional to definition of a new package of measures which were intended to be included in a Recommendation (a tool preferred over Directives in that their approval and implementation procedures are more rapid) regarding the issues of non-discrimination and definition of costing methodologies.
The Commission was concerned about the increasing fragmentation of laws and regulations not only with reference to issues connected with investments in new technologies, but also with regard to the general evolution of the single European telecommunications market. With reference to upholding the principle of non-discrimination, the document pointed out that the different national Regulators construe in a different way the exact scope and application of the obligation for equality of access to the network and non-discrimination, therefore calling for

more thorough discussion into the level of detail required in the Commission's instructions, for the purpose of making the overall reference framework sufficiently harmonised within the Union.

The consultation document examined the different discriminatory behaviours that an SMP Operator may implement; particular attention was devoted to the subject of defining indicators that can provide details about the actual compliance with the principles of equality of internal-external treatment by vertically integrated Operators. The document dealt as well with the issue of functional separation introduced by the new article 13bis of the Access Directive, with the aim of specifying which market circumstances may justify adoption of such a measure.

The Recommendation on Non-Discrimination and on Costing Methodologies

European Digital Agenda Commissioner Neelie Kroes declared in July 2012 that an easing of the remedies imposed on SMP Operators would facilitate the reaching of the goals set by the Agenda; this would however only happen provided that a series of rules are set and followed in order to ensure compliance with the principle of non-discrimination, with particular reference to conditions of access to the fixed network, and that a sufficiently uniform framework is defined at European level with regard to the costing methodologies employed to determine the prices of wholesale services. The Commissioner also doubted that a reduction in prices of services on copper lines will be an incentive for switching to optic fibre and on the contrary was open to the possibility of exempting the incumbents from the obligation for cost orientation when determining the prices of the wholesale access services on optic fibre (thus partially contradicting what was stated in the previous NGA Recommendation) provided however that equality of access to the network is guaranteed to all Operators through a system of Equivalence of Input[2].

In December 2012 the Commission submitted a draft Recommendation on non-discrimination and the definition of costing methodologies to BEREC and to the Communications Committee (COCOM).
In March 2013, BEREC sent its opinion to the Commission: the Body of European Regulators agreed with the Commission on the general principles contained in the document. and on its basic goals. BEREC, however, made numerous adjustments to the text, and proposed that they should jointly rewrite the whole section related to the definition of costing methodologies from scratch.

May 2013 was characterised by a debate within the Commission, in which the DG Competition and the DG Financial Affairs criticised a number of points in the document of the DG Connect. The latter therefore asked COCOM for its opinion on a document containing two important new developments compared to the previous draft:
- the € 8-10 band within which the unbundling charge must fall may be exceeded, provided that the BU-LRIC methodology is correctly applied;
- the Authorities may decide to apply prices that are not cost oriented in other cases too, in addition to those already envisaged in the initial document (and that is adoption of an Equivalence of Input system and passing of economic and technical replicability tests).
In July COCOM gave the go ahead, and in September the Recommendation was finally adopted.
The following is a summary of the main contents of the document.

NOTES

[2] On this point, the following is the definition of Equivalence of Input given by BEREC: "*the downstream access product retailed by the incumbent consumes exactly the same physical upstream inputs as the downstream product supplied by competitors, e.g. same tie-cables, same electronic equipment, same space exchange etc. The product development process is therefore exactly equivalent as their provision in terms of functionality and price*" (see *BEREC Guidance on functional separation under Articles 13bis and 13b of the revised Access Directive and national experiences*, page 7 (February 2011).

Main contents of the Recommendation

Equivalence of Input, Equivalence of Output and Technical Replicability

The best way to guarantee compliance with the principle of non-discrimination is to adopt *Equivalence of Input* (EoI) models. If the Regulatory Authority deems that it is appropriate to impose obligations for non-discrimination, it is in any case required to request the SMP Operator to provide wholesale services *"on an Equivalence of Input basis"*.

The Commission nevertheless specified that such an obligation may prove to be disproportionate, in particular with reference to situations where the costs connected with achieving EoI turn out to be higher than the related benefits. In such cases, the SMP wholesale services must be supplied to Other Licensed Operators at least "on an Equivalence of Output (EoO) basis". In this regard, two different situations may arise:

- on copper network, EoI would be excessively costly, in that it would require modifications to the systems and processes in use;
- on optic fibre networks, on the contrary, it is reasonable to suppose that a request to provide services on an EoI basis may be proportioned in consideration of the limited extra costs connected with system modifications, for the most part still to be carried out, and well balanced in particular when considering that in return, the dominant Operator could be exempted from the requirement for cost orientation when determining the prices of next generation services. It is clear that all types of optic fibre services (*wholesale inputs consisting wholly or partly of optical elements*) would fall into this second category.

The general principle ratified by article 13bis of the Access Directive, whereby national Regulatory Authorities may impose functional separation of the dominant Operator's access network if the remedies adopted prove to be ineffective, still remains valid even with reference to the case in point in which EoI was imposed.

If EoI was not achieved, SMP service replicability from a technical point of view must in any case be guaranteed by the Authority. OLOs must be guaranteed access to all the technical and sales data to which the retail division of the incumbent operator has access (points 15, 16 and 17). The Authority should ask the dominant Operator to conduct a technical replicability test and to report its results before launching new sales offers. Alternatively, the incumbent Operator must notify the new offers to the Authority sufficiently in advance of the expected launch to permit the OLOs to prepare competitive offers. In this case, the technical replicability test will be conducted by the Authority itself.

In cases where it is deemed that replicability is not guaranteed, the Authority may ask the incumbent to modify the wholesale products to make them such that the possibility of replication of the retail offers by the Other Licensed Operators is guaranteed. In the most serious cases, the Authority may prohibit the offer.

Exemption from the requirement for cost orientation for optic fibre services

Point 51 states:

"an NRA is deemed to impose Equivalence of Input (…) when it includes this remedy (…) in the same final measure in which it decides not to impose or maintain regulated wholesale access prices (…) The measure shall include the details and the timing of the implementation of Equivalence of Input (the 'roadmap')."

The requirement must therefore be contained in a document - submitted for national public consultation, and notified to the Commission - which releases the SMP Operator from the cost orientation requirement and at the same time contains the details and timing for application of the measures envisaged in it (the 'roadmap', which must be countersigned by the incumbent). It should be noted that the expression cost orientation used in the text presented in December 2012 was replaced by the broader regulated wholesale access prices.

In particular, then, the Recommendation identifies two different baskets of wholesale inputs for which the EoI model must be applied, referable to the following:

- baskets of active and passive wholesale NGA inputs;
- baskets of passive and virtual wholesale NGA inputs;

The NRA should decide not to impose or maintain regulated wholesale access prices for active wholesale inputs on NGA

when, in the same provision, it calls the SMP operator to comply with non-discrimination requirements related to active and passive wholesale inputs on NGA, consistent with:

- (a) EoI
- (b) the requirements regarding technical replicability when EoI is not yet fully applied; and
- (c) the requirements related to economic replicability tests

providing that the actual penetration of passive wholesale upstream inputs, or of non-physical or virtual wholesale inputs offering equivalent functionalities, or even the presence of alternative infrastructures that create a demonstrable constraint on retail prices.

The NRA should decide not to impose or maintain regulated wholesale access prices for passive wholesale inputs on NGA or for non-physical or virtual wholesale inputs that offer equivalent functionalities if, in the same provision, the NRA calls the SMP operator to comply with non-discrimination requirements related to passive wholesale inputs on NGA or to non-physical or virtual wholesale inputs offering equivalent functionalities, consistent with:

- (a) EoI
- (b) the requirements regarding technical replicability when EoI is not yet fully applied; and
- (c) the requirements related to economic replicability tests

providing that

- the NRA can prove that a product offered by the SMP operator on the existing access network and subject to a require ment for cost-oriented price control can exercise a constraint on retail prices which can be proven;
- the NRA can prove that the operators offering retail services on one or more alternative infrastructures not controlled by the SMP operator can exercise a constraint on retail prices which can be proven.

The regulated prices must in any case be maintained on the civil access infrastructures

KPIs

The Authority should require the incumbent to use a basket of performance indicators to monitor compliance with the non-discrimination requirement. These KPIs must allow a comparison between the services supplied to the OLOs and the same services supplied to the incumbents retail division. The Authority should require the SMP Operator to define suitable SLAs and SLGs.

Economic replicability Test

The National Regulatory Authority is deemed to have effectively imposed the economic replicability requirement only if it has provided a document stating details of an economic replicability test, the procedures for application of the test and the provisions to be adopted if the test gives a negative result. Nevertheless, a paragraph was included in the final version which envisages that the conditions stated in the text (EoI, technical and economic replicability) should not be held to ultimate conditions, but rather that the Authorities have margin for manoeuvre when suitably defining others according to the market context.

Costing methodology

The Authorities should, no later than 31 December 2016, adopt a BU-LRIC+ type cost model, with assessments of assets at current costs using the MEA methodology. This methodology and the figures used for the calculations should remain stable for a period of at least six years. A series of exceptions which mitigate the importance of this requirement have however been specified.

LLU prices on copper networks

Showing a particular attention the principles of predictability and stability, the Commission deemed that the prices of monthly fees for unbundling services on copper networks should, by 2016 and for the whole European Union, fall within a range of € 8 and € 10, as a result of application of the said methodology. An exception is however envisaged if the Authority uses the recommended BU-LRIC+ cost model. In such cases, in fact, prices may fall outside that band. Furthermore, the expressions contained in the final text approved in September 2013 appear to be more vague than those of the text proposed in December 2012 (the phrase *"the Commission expects the price to fall within a band" was replaced by "the recommended*

costing methodology is likely to lead to average monthly rental price within a band…").
Countries where the prices already fall within the price range: for the period of time from effective date of the Recommendation and the adoption of the new methodology, the Authorities should continue to apply the existing methodology.
Countries where the prices DO NOT fall within the price range: the Authorities should adopt the recommended methodology as soon as possible, or - if the differences in price are significant - impose gradually convergent prices.

Modelling of the new access network and its topology

With regard to the procedure for defining and modelling the hypothetical efficient NGA network as part of the bottom-up approach, the Commission recognises the possibility for National Regulatory Authorities to use alternative approaches to those contained in the text in conformity with the principle of technology neutrality. As far as the network topology to be considered as a starting point for pricing on copper is concerned, on the contrary, both FTTC and FTTH systems are mentioned.

Geographic markets

At point 51, going back to what was envisaged by the NGAN Recommendation of September 2010, it is confirmed that the National Regulatory Authorities should take account of the geographic differentiations existing on the markets, and set the remedies accordingly, in particular imposing price control requirements only in the areas where there is a dominant Operator and a lack of effective competitive conditions.

Public Consultation by BEREC for reappraisal of the Common Positions on non-discrimination in markets for wholesale fixed network access

In 2012, BEREC revised the Common Positions on the wholesale access markets (wholesale unbundled access, wholesale broadband access and wholesale leased lines, Markets no. 4, no. 5 and no. 6 in the Recommendation 2007/879/CE), changing those adopted in 2007 by ERG.
The Common Positions expressed by BEREC are not strictly binding for the National Regulatory Authorities; the latter, however, must consider them very carefully, providing appropriate explanations wherever they are not applied.
Various issues were dealt with (from definition of a suitable level playing field, to the need for a range of wholesale products that comply with certain levels of quality, up to the necessity to guarantee the replicability of the whole products offered by the dominant Operator), and BEREC followed a process divided into three phases:

- an initial public consultation for the purpose of defining broad principles on non-discrimination;
- a second public consultation, to draft the final text;
- lastly the adoption of the Common Positions on the subject, which took place in December 2012.

Of particular interest is Principle 3, which deals with the issue of the forms of Equivalence adopted by the National Regulatory Authorities (Equivalence of Inputs or Equivalence of Outputs): they must be justified, in relation to the problems to be solved and the goals that have been set. On this subject, the final report in September on non-discrimination states: ""*BEREC views the achievement of equivalence as an important competition objective and further believes that NRAs are best placed to determine the exact application of it on a product-by-product basis. (…) a strict application of Equivalence of Input is most likely to be justified in those cases where the incremental design and implementation costs of imposing it are very low (because equivalence can be built into the design of new processes) and for certain key legacy services (where the benefits are very high, despite the material costs of retro-fitting Equivalence of Input into existing business processes). In all other cases, Equivalence of Output would still be a sufficient and proportionate approach to ensure non-discrimination*".

The imposition of a functional separation is viewed as a possible tool available to the NRAs, but it must be used only as a last resort when every other regulatory requirement adopted did not achieve the expected results (Principle 4).

Specific initiatives of the european bodies for development of nga networks

The NGA Recommendation

In 2010, the Commission adopted Recommendation 2010/572/EU containing harmonised and common guidelines for EU Member States regarding the setting up and access to new optic fibre networks (NGA Recommendation), to avoid the risk of regulatory differences and the proliferation of multiple and divergent regulatory approaches in the various Countries.

The purpose of the Recommendation is, on the one hand, to defend free competition between Operators and, on the other, encourage the roll-out of the new networks, for example by recognising a risk premium for investments made by the incumbent when defining access prices. Measures designed to encourage the entry of new Operators in the market, including imposition of the obligation of access to network infrastructures, were identified; specific stimulus to adopt forms of co-investment was included, while the need to differentiate regulation *ex ante* in order to recognise the peculiarities of local markets, was acknowledged. Freedom of Operators to choose between point-point or point-multipoint types has been guaranteed, provided that the possibility of unbundled access is guaranteed. Lastly, the NRAs must ensure that the dominant Operator develops systems that are able to guarantee easy migration for OLOs from copper to fibre networks.

Limitation costs for setting up NGA networks

In 2012, BEREC launched a public consultation on the effects that co-investment policies between several Operators may have on the level of competitiveness of the market in the roll-out of the NGAN.

In the same year the Commission launched its own public consultation on the methods for possible reduction of costs for setting up the NGAN, with particular reference to civil engineering costs for trenching and laying of fibre, which account for 80% of overall expenditure. The aim of the consultation was to collect information on examples of best practices, such as coordination of trenching work with work by other utilities, reuse of existing ducts and simplification of administrative procedures.

As a result of this initiative, in March 2013 the Commission published a draft regulation, on reduction of development costs for the new optic fibre access networks. Some of the most significant proposals were:

- Utility companies (gas, electricity, water, transport,...) must commit to comply with requests for access to their networks made by electronic communications Operators for the roll-out of the next generation network;
- The same utilities, within the scope of publicly-funded civil engineering work, must seek coordination with electronic communications Operators to facilitate work to develop ultra-broadband networks;
- Responses to applications by Operators for trenching permits must be received from Public Administrations no later than six months after filing; the National Regulatory Authorities must act as points of single contact for Operators and must monitor effective compliance with this deadline;
- Newly built houses must be equipped with the infrastructures necessary for providing NGA networks.

State funding for the setting up of NGN networks

The Commission concluded the process of reviewing the EU guidelines. Two consultations were published during 2011 and 2012 regarding review of the official rules, set forth in 2009, on state funding for development of broadband networks.

In December 2012, the Commission adopted the text amending the previous guidelines. The proposed new guidelines do not significantly differ from those already in force. However, some significant new features can be see, with regard for example to inclusion of wireless networks "*capable of delivering reliable high-speeds*" amongst those that qualify for state funding. Furthermore, under specific conditions state funding may be provided for ultra-fast networks even in black areas, where there is competition between infrastructures.

Number of networks currently available or expected to be available in the next three years	Type of areas	State funding permitted?
2 or more	Black areas	No (with exceptions)
1	Grey areas	In certain conditions
0	White areas	Yes

In conclusion, the Commission sought to encourage funding for the setting up of next generation access networks; at the same time, however, Operators receiving such funding is obliged to offer access to its physical infrastructures, bitstream and full LLU. Operators using a Point-to-Multipoint network topology, which does not permit conventional physical unbundling, must guarantee wavelength unbundling (wavelength division multiplexing, WDM) as soon as the technology is available, and in the meantime, virtual LLU (VULA service).

Lastly, a sentence of the Court of Justice of the European Communities in March 2013 rules that the loan which the French Republic granted in 2002 to France Télécom constituted an undue advantage to the incumbent Operator, even if the latter did not then make use of it.

Other specific issues related to the electronic communications industry

Actions of the Commission as part of the proceedings envisaged in phase 2 of the procedure set forth in Article 7a of the Framework Directive

The Commission is making wide use of the powers assigned to it in the new article 7 bis of the Framework Directive, showing a marked interventionism on the remedies decided by the National Regulatory Authorities imposed on SMP Operators. This made it possible to more accurately define the impact of the principles contained in the reference regulatory framework.

In some cases, the Commission intervened on non-discrimination and cost methodology issues. In 2012, for example, it spoke out against the decision of the Polish Authority to exempt fibre bitstream services from the obligation for cost orientation, while it expressed serious doubts on the Finnish proposal to withdraw obligations for cost orientation for unbundling on the NGAN. A similar position was expressed with reference to a decision adopted by the Authority in Czech Republic.

It is important to note that on these occasions the Commission stressed that the obligation for cost orientation

for NGAN wholesale remains effective, unless functional network separation operations was implemented, or unbundled fibre access was guaranteed.

In other cases, the Commission intervened on costing methodologies defined by the Authorities (see the case of the Dutch Authority OPTA which opted for a LRIC+ model rather than a BU-LRIC model to determine the fixed and mobile termination pricing, or the case of the Latvian Authority, whose decision to adopt a TD-FDC model raised serious doubt on the part of the Commission).

Action in "Phase II" concerned other issues too, such as definition of geographic NGAN markets in Holland (with the consequent elimination of the obligation for fibre unbundling imposed on the incumbent KPN), or the inclusion of cable and Wi-Fi in relevant markets by the Authority of the Czech Republic.

In 2013 as well, several concerns were raised (see the cases of interventions on decisions reached by the Austrian, Spanish and Latvian Authorities, or the one regarding deregulation of the Finnish market for wholesale calls from fixed network, deregulated by the Regulatory Authority, FICORA).

Two cases occurred during the just ended year are worth pointing out:

- The one regarding definition of mobile termination prices in Germany, which were calculated by the BNetzA Authority applying the BU-LRIC+ method, instead of the recommended pure BU-LRIC method, reaching thus price values which were higher than those in other Countries. This led to a fierce dispute between the German Authority on the one side and the Commission and BEREC on the other; in June 2013, the Commission approved a non-binding Recommendation requesting BNetzA to change or withdraw the proposed mobile termination price definition. In July, the Authority on the contrary confirmed that it wished to use the BU-LRIC+ methodology. This is an interesting case, because it showed the limits to the actions of the Commission, which has no veto power on such matters;

- Whereas with reference to the Italian Authority, AGCom, there are two issues on which the Commission raised objections:
  - the setting of 1 January 2015 deadline for the definition of fixed termination prices calculated on the pure BU-LRIC model; in the opinion of the Commission, this deadline is too late, and BEREC stated its agreement on this matter;
  - setting of prices for wholesale unbundling (Market 4) and for bitstream (Market 5). In July 2013, AGCom notified its proposals for modification of wholesale LLU and bitstream prices for the year 2013 to the Commission. The Italian Authority intended to reduce the prices, based on the results of a special public consultation. The Commission expressed serious concerns with regard to various points included in the proposal by the National Authority: doubts of a procedural nature, regarding calculation and determination of the WACC. In this case, BEREC did not share the position with the Commission which, nevertheless, in December 2013 issued a Recommendation (non-binding) requesting the Italian Authority to withdraw or change its proposal. AGCom has however confirmed its intentions.

In the majority of cases, the opinions expressed by the Commission were supported by those of BEREC.

Changes to the list of relevant markets to define ex ante regulation

In January 2013, the Commission's public consultation on possible changes to the list of relevant markets, as defined by Recommendation 2007/879, which envisaged seven markets (one for retail services and six for wholesale services), was concluded: the aim was to adapt the number and definition of the markets to the recent developments in the electronic communications industry. Following approval of the new Recommendation, the National Regulatory Authorities must perform within two years a market analysis on each relevant market identified.

In March 2013, BEREC stated that, in its opinion, any particular change to the current list is required; the main change regards the possible cancellation of Market 1- *Retail*, deemed not strictly necessary.

In October, a study by Ecorys was published suggesting a reduction in the number of regulated markets starting from 2014, with the elimination of Market 1 (Retail fixed-line access) and Market 2 (Fixed voice call origination). In particular, then:

- Market 4 (physical network infrastructure access) should be redefined to include virtual unbundling (VULA) too
- Market 5 (wholesale broadband access) should be applied only in sub-national markets where the competition between infrastructures (LLU, cable or alternative fixed networks) proves to be insufficient.

The Commission must at this point submit a revised list of relevant markets to BEREC to obtain its opinion.

Access to broadband as a Universal Service obligation

In 2013, the Commission presented a draft Recommendation (*Universal Service for digital society*) on the subject of possible inclusion of access to broadband amongst the obligations defined for Universal Service.

The Recommendation allows Member States to freely decide whether or not to include access to broadband as one of the Universal Service obligations; no obligation was established in this regard. To date, eight of the European Countries have decided to take steps in this direction.

The new draft is significantly less strict than the previous one (dated 2011), due to the objections raised by many States. In particular, the Commission eased the criteria established to define whether or not a given band speed must be considered a Universal Service, removing any numerical obligation and introducing general and non-measurable expressions.

Net Neutrality

The "Telecom Package" introduced new regulations on net neutrality; in order to assess the effectiveness and significance of the new measures introduced, in 2010 the European Commission launched a public consultation for in-depth analysis of traffic management methods used by Operators. In 2011, the Commission completed the analysis, deeming that it is too early to reach decisions on the matter and deciding that it would be more advisable to wait for the new European regulatory framework to be progressively implemented into national legislations, identifying only subsequently, at the end of that process, the best actions to be undertaken.

In order to gather information that may serve as a useful support for defining guidelines addressed to the National Regulatory Authorities and to Operators, the Commission set up a public consultation on "*specific aspects of transparency, traffic management and switching in an Open Internet*".

BEREC also dealt with net neutrality, and in 2012, at the end of the relevant public consultations, outlined guidelines with reference, in particular, to problems connected with IP interconnections, the Quality of Service (QoS), traffic management policies practised by the Operators and problems related to competitiveness deriving from that context.

In May 2013, Digital Agenda Commissioner Kroes announced that she wished to introduce guarantees suitable to ensure restriction free internet access. At the same time, however, she deemed it legitimate that Operators should use tools intended to guarantee sufficient control of traffic, thereby avoiding congestion, or spamming episodes.

These statements were later included in the draft regulation for the digital single market presented in September (see related paragraph above); some of the proposals contained in the document are in fact related to the issue of net neutrality, defined as a legal right, and to the fact that to guarantee this neutrality, the use of practices such as throttling, blocking and deliberate slowing down of access to services would be prohibited.

The topicality of this issue is confirmed by the law passed in December 2013 by the French Senate, which increases the level of control that may be exercised on personal data transiting on the web, for the purpose of more effectively combating terrorist phenomena. The new regulations, however, were criticised by internet companies, while the National Commission for the protection of personal data stated that it regretted that it had not been consulted on the matter.

4 International comparison of access network unbundling models

INTERNATIONAL MODELS OF ACCESS NETWORK SEPARATION

The following is a rapid overview of the most significant international experiences regarding separation of incumbent Operators' fixed electronic communications access network. For the sake of completeness, this overview also includes Countries which have not actually accomplished separation, but have nevertheless tackled and, where appropriate, solved the problem of access to the last mile in conditions of effective equality for all the Operators, by using different regulatory measures. The issues around access to the network and compliance with the principle of equality of treatment between competing Operators are common to many Countries, particularly in those contexts in which the incumbent Operator still maintains vertically integrated businesses and a market power deemed significant.

The new European legal and regulatory framework envisages two distinct methods of intervention by the National Regulatory Authorities with regard to separation of the access network:

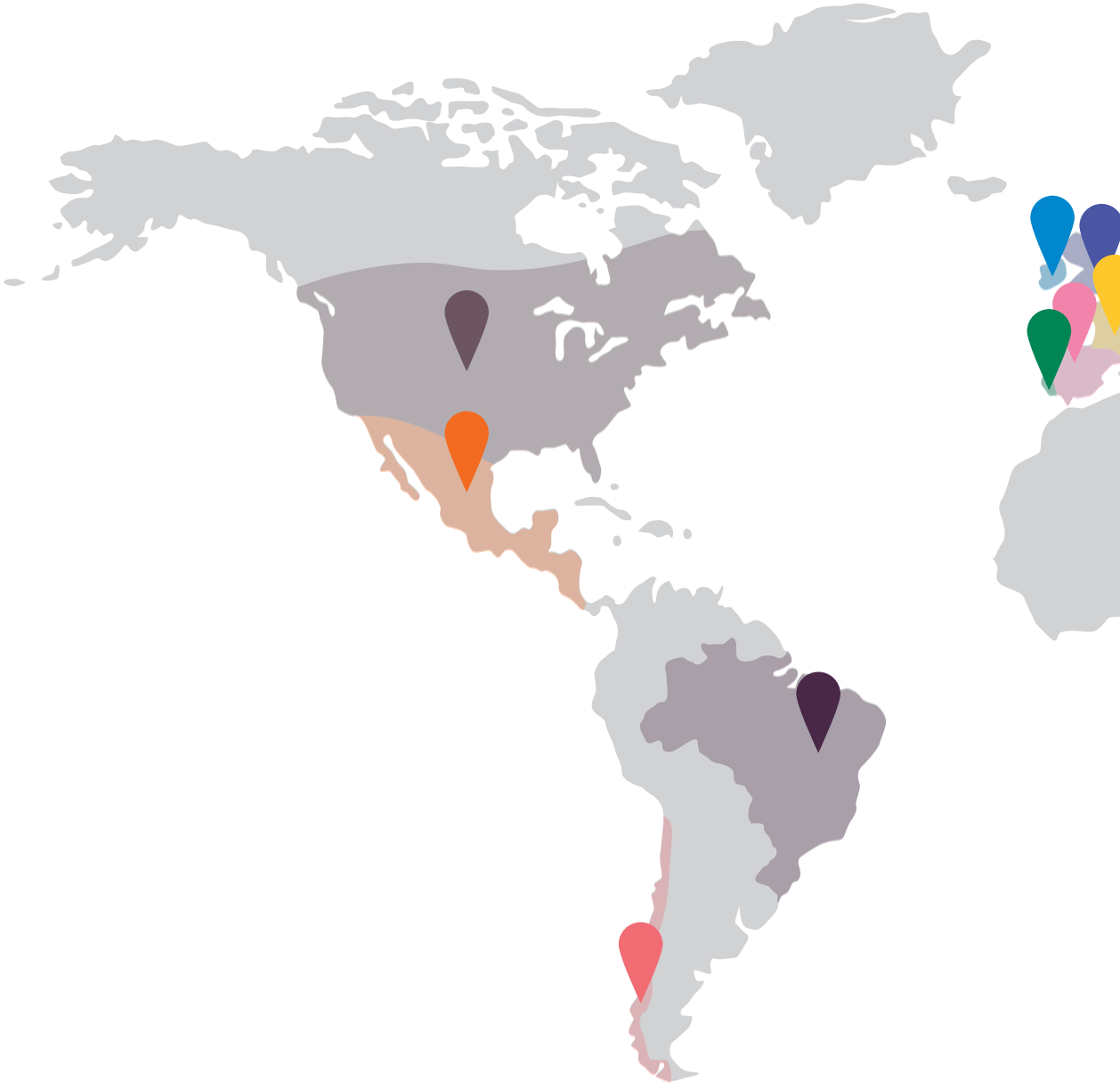
- the possibility for National Regulatory Authorities to impose an obligation for functional separation on vertically integrated companies, when certain precise circumstances occur[1];
- separation of the access network proposed voluntarily by the Operator designated as having a significant market power, followed by an assessment by the NRA, after an *ad hoc* market analysis[2]. On this subject, it must be remembered that the experiences of Countries such as Italy (with the "Open Access" model), the United Kingdom (with the "Openreach" model), Poland and Sweden were developed before the approval of the "Telecom Package". They are peculiar to a specific national context, were created in different legislative frameworks and therefore represent models that anticipated the reference legal and regulatory framework[3] subsequently approved.

NOTES

[1] Article 13a of the Access Directive 2002/19/EC, as amended by Directive 2009/140/EC.

[2] Article 13b of the Access Directive 2002/19/EC, as amended by Directive 2009/140/EC.

[3] On this subject see the BEREC public consultation document on functional separation, page 22, second paragraph, using the following link: http://berec.europa.eu/eng/document_register/subject_matter/berec/public_consultations/192-draft-berec-guidance-on-functional-separation-under-articles-13a-and-13b-of-the-revised-access-directive-and-national-experiences-public-consultation-11-october-19-november-2010



AUSTRALIA

In 2006, the incumbent Australian Operator Telstra, following numerous complaints regarding alleged discriminations against OLOs, adopted a separation between wholesale, retail and network services, creating specific separate divisions. Moreover, the Operator undertook to guarantee supply of wholesale services in compliance with the principles of internal-external equality.
In 2010, the government approved the project to set up the new publicly-owned FTTH optic fibre network, intended to cover the whole national territory, with the work carried out by NBN Co., a purposely created company partially owned by the Communications and Finance Ministries. After almost three years of long and complex negotiations between Telstra, the Australian Competition and Consumer Commission (ACCC) and the government, an agreement was reached in February 2012 for the setting up of the NGN, the structural separation of the access network and the gradual migration of the incumbent's customer base from the copper network to the next generation network as and when it is set up and put into operation.
The details of the operation are given in a document of undertakings proposed by the incumbent (*Telstra Structural Separation Undertaking and Migration Plan*). In fact, for the period from 2012 to 2018, the year when migration of the incumbent's customer base to the NGN is expected to have been completed, Telstra has undertaken to guarantee equality of treatment through a form of transitory operational separation. A special body, the *Independent Telecommunications Adjudicator* (ITA) has been set up with the main function of guaranteeing a rapid resolution of any disputes that may arise between the operators. From 2018 Telstra will operate only at Retail level.
Telstra will shut down the copper network as NBN Co. lays the new network, and will receive state funding of around 11 billion Australian dollars in payment for opening up its access network, use of its ducts, channels and switchboards, and the gradual disconnection of its lines active on the copper and cable networks - regardless of whether or not the customers effectively decide to migrate to the new network. Indeed, it is interesting to note that the agreement does not provide for transfer of the ownership of Telstra's infrastructure assets, but only their lease to NBN Co. for 20 years, for the purpose of roll-out of the NGN by NBN Co. At the end of this twenty year period, however, the Operator will be free to install new networks, or to reactivate its copper and cable networks.
The incumbent Operator will then be able to offer its services to the market, leasing the capacity of the new network at the same conditions as the competitors. NBN Co., in fact, besides setting up the network, will sell the wholesale services that transit on this network.
NBN Co. has also given certain undertakings (*Special Access Undertakings*), with the aim of regulating various technical aspects connected with the setting up and gradual commissioning of the new network and with the services offered to Operators. In 2013, the regulator, ACCC, requested a partial revision of these undertakings.
Additionally, the regulations regarding universal service have been changed, due to the fact that the universal service obligations previously imposed on Telstra are no longer valid and that a special agency charged with regulating this aspect, the Telecommunications Universal Service Management Agency (TUSMA) has been created.
In 2013, difficulties arose for the implementation of the whole project. The network roll-out is behind schedule, the plan has been judged to be too ambitious, and the idea that it would be better to change the programme, switching from the creation of a FTTH network, as initially envisaged, to a FTTC network, not as fast but more rapid and economical to set up, has been suggested.

BRAZIL

In 2008 Anatel, the Brazilian Regulatory Authority, decided to launch "*regulatory and market impact studies*" related to the advantages and disadvantages of adopting functional, business and structural separation mechanisms as part of the actions envisaged by the *Plano Geral de Atualização da Regulamentações* no Brasil (PGR), thus following a process similar to that which many European Authorities had already embarked upon.
The Authority's 2009 Annual Report pointed out the need to identify the relevant markets and the Operators with a significant market power, in order to evaluate the advisability of introducing asymmetrical regulatory measures.
The PGR issued in January 2010 envisaged, in the list of actions to be undertaken during the year, plans to develop an Open Network by means of local loop unbundling and structural or functional separation.
It is interesting to note that Anatel's public consultation in 2011, related to the new General Competition Plan (*Plano Geral de Metas de Competição*, PGMC), provided for the possibility of adopting models similar to that of the Telecom Italia Undertakings, expressly mentioning the Open Access experience.
In November 2012, with the approval of PGMC, many important new developments were introduced in the Country's regulatory framework. This document, in fact, does not merely define the relevant markets and identify the criteria to be applied for identifying operators which have a significant market power, but also details (in article 12) the asymmetrical regulatory measures that the Authority may impose on SMP Operators. These also include "*separação contábil, funcional ou estrutural*".
The new measures were applied in May 2013, when the Authority asked Telefonica, as part of a more general process of consolidation of the Operator within the Country, not only to adopt measures for accounting separation, but also to carry out a form of functional separation, by creating a specific division for wholesale services.

CILE

In Chile, the main fixed network operators (in particular Telefonica CTC) hold a significant market power. In 2010, the government proposed the adoption of forms of legislation that would be able to create conditions favourable for the setting up of so-called infrastructure-only Operators, thus paving the way for separation between the players which supply network services and those which supply retail services. The former would lease their infrastructures to the latter which in turn would offer services to the downstream divisions.

CHINA

In 1999, China Telecom was split up, by a process of structural separation, into separate companies: China Mobile, Chine Satellite, China Unicom (which provided the paging service) and China Telecom for fixed telephony.
In 2001, China Telecom was split into two: China Netcom, for the northern provinces, and China Telecom, for the southern ones.
The system has thus changed from a public monopoly to an oligopolistic structure which, however, continues to be publicly controlled.
The attempts to create more competition to the market have not however led to the hoped for benefits in terms of quality of service and costs for users.
Asymmetrical obligations were imposed on the incumbent Operator, required to supply interconnect services to Operators that requested them.
In particular, the introduction of a new asymmetrical regulatory framework was achieved with three fundamental steps: a list (modifiable and evolving) of services/products offered by electronic communications Operators; the definition of a framework of rules for the main Operators in each sector; the adoption of ex ante remedies.
When China joined the WTO (in 2001) the market was gradually opened up to foreign Operators, who from 2005 may operate by setting up special joint ventures.

FINLAND

In Finland, the Authority has the power to impose accounting separation on Operators with Significant Market Power. This form of separation is achieved by separating access and interconnection services from all the other services. It is interesting to note that this power granted to the Authority has been widely applied to several Operators for various services. In effect, the Finnish market is very unusual, and in many respects unique; in fact, mobile telephony is decidedly more widespread than fixed telephony, which is shrinking; and with reference to the latter, in particular, it appears difficult to identify an Operator that is able to provide true national coverage, since Telia Sonera itself has developed almost exclusively in the region around the capital Helsinki. For this reason, there appears to be a market structure characterised by a number of minor regional monopolists.

FRANCE

In 2007, the Regulatory Authority, ARCEP, conducted an analysis that aim to define possible problems that might derive from the adoption of a form of separation of the access network belonging to the incumbent France Telecom.
The Authority concentrated in particular on the possible negative consequences that might have arisen, such as:

- high costs for achieving it, considered higher than the related benefits
- potential disincentivising effects on the operators' investment strategies
- the non-reversible nature of such an operation.

ARCEP, moreover, came to the conclusion that if a separation of the access network were to be carried out, including separation of the ownership, it would not eliminate the monopolistic management of the access network entrusted to a single company, with all the anticompetitive consequences that might have ensued from it.
In 2010, the major French electronic communications operators launched a project for the setting up of an optic fibre company: this project envisaged a form of co-investment for optic fibre connection in one year of 800 thousand homes, located in 84 municipalities, selected from the 148 municipalities situated in densely populated areas. The Authority subsequently published a document specifying NGN access procedures, which contained no reference to separation of the incumbent's network.
In 2011, on the subject of possible separation to France Telecom's access network, the French Antitrust Authority requested ARCEP for an opinion on a possible functional separation, with the aim of preventing possible monopolistic control of access to the NGAN. ARCEP repeated that the adoption of this measure was "premature", and that such a remedy should in any case be considered as a last resort.
To date, no measures for separation have been adopted, either of a functional or structural kind, and the only imposition for the incumbent is accounting separation.
In March 2013, the Court of Justice of the European Communities ruled that the loan granted by the French Republic in 2002 to France Télécom constituted an undue advantage to the incumbent Operator, even if the latter did not then make use of it.

JAPAN

In 2011, the incumbent Japanese Operator NTT had a 52% market share on broadband, and a 35% share on ADSL, but covered 73% of the FTTH market.
This therefore posed the problem of the presence of an Operator able to exercise dominant power that could prevent full competition on the NGAN, and separation of NTT's fibre access network was thus one of the options considered.
Forms of accounting separation had already been adopted for NTT, but in 2009 the "*Hikari-no Michi*" plan was launched, with the aim of creating an optic fibre network with speeds higher than 100 Mb and of promoting the development of broadband "*in every household by sometime around 2015*". In order to achieve these aims, the possibility of a separation (structural or functional) of NTT was explicitly considered.
In 2010, the government stated on the one hand that it had no intention for the time being of pressing in the direction of a separation of NTT, but at the same time it obliged the Operator to open up its networks to competitors and to create a 'firewall' between the NTT division in charge of setting up the NGN and the other divisions. If the level of competitiveness achieved by the market by 2015 is considered to be unsatisfactory, the model may be reviewed.
The most realistic option is that of functional separation of the Operator, separation that must also include restrictions to access to information systems and the creation of an effective monitoring system. More radical forms of separation, such as structural separation or company separation, are considered less appropriate and less likely.
The debate in Japan on the general approach to be used to define the regulatory framework is also particularly heated; whether, that is, service-based competition should be fostered, or whether competition should be facility-based, in particular between the NTT fibre network and the cable and wireless networks.
Despite the satisfactory level of coverage by fibre achieved in Japan, market response has been low; the main competition comes from LTE, which NTT has fought by reducing its prices for optic fibre services.

GREECE

In 2007, the Greek Regulatory Authority EETT asked the incumbent Operator OTE for guarantees regarding compliance with the principle of internal-external equality of treatment, specifying that services would have to be supplied to the OLOs in such a way as to guarantee equal conditions from both the technical and economical points of view.
OTE was asked to create a "Chinese wall" between its retail and Wholesale departments, prohibiting the incumbent's retail segment from employing access preferential conditions to their own wholesale services as compared to those offered to OLOs.
The Authority's 2008-2011 policy document provided for the possibility of adopting access network separation models.
Furthermore, it was deemed advisable to launch a public consultation that might also have led to imposition of separation of the network from the sales divisions. In particular, it defined the specific procedures to be followed not only in the event of a separation imposed by the Authority, but also in the event of voluntary separation decided by the incumbent. These measures had been agreed by EETT with the European Commission, Parliament and Council.
To date, however, no tangible steps or practical applications have ensued from this debate and these expectations, and no decision has been reached regarding a possible separation of OTE's fixed access network.

HUNGARY

In Hungary, up to 2013, no network separation measures have been adopted: in fact, in response to complaints from the Other Licensed Operators which demand the adoption of fixed access network separation models, the Regulatory Authority NMHH has to date underlined the high costs, the possible critical factors (including technical ones) and the non-reversible nature that accompany such measures.
However, the incumbent operator Magyar Telekom has been subjected to regulatory remedies, such as the adoption of a basket of performance indicators to monitor the supply of wholesale unbundling and bitstream access services, and limitations of the flow of data between the various divisions of the incumbent.

IRELAND

The incumbent Irish operator Eircom, was owned in 2007 by the Australian company Babcock & Brown. This company proposed the separation of the Operator's network to the Ministry of Communications and to the Regulatory Authority, the Commission for Communications Regulation (ComReg), with the aim of monetising its investment on Irish market.
However, negotiations were suspended in the following year, due to the turbulence in the financial markets and the broader debate in the Irish Government about the future of the telecommunications industry in Ireland.
In 2010, the other licensed operators, represented by the Irish Trade Group ALTO (Alternative Operators in the Communications Market), requested the structural separation of the Eircom network, pointing out that the remedies adopted to that date by the government and by the Authority to guarantee compliance with equality of treatment had not had the expected effects, and therefore holding that it would be advisable to go ahead with the splitting of Eircom into separate retail and wholesale divisions.
ComReg stressed that the new EU regulatory framework provided the possibility of opting for functional separation of the network for operators which have a significant market power, for which the measures taken have not led to elimination of discriminatory behaviour. The Authority, moreover, underlined the costs associated with a functional separation, and that it was important that such costs be proportionate to the expected benefits. At this point it was observed that the experience of the other Member States showed that the most effective results have been achieved in cases where functional separation was voluntarily proposed by the incumbent and only subsequently approved and made obligatory by the Authority.
In 2012, ComReg launched a public consultation to identify the remedies to be imposed on the incumbent with regard to the services offered on the next generation access network, but up to the end of 2013 no action had been taken to separate the network.

ISRAEL

In Israel there is both a fixed network, with an incumbent operator, Bezeq, and a cable network, provided by HOT.
In 2008, the Gronau report, commissioned by the Ministry of Communications, underlined the importance of developing local loop unbundling to boost a wholesale market for fixed network access services. According to the report, structural separation between Bezeq's network and services would be desirable, but not strictly necessary. It was thought that the situation could be reviewed once the effects of introduction of LLU have been observed. A number of restrictions to the services offered by the incumbent were adopted to increase competition on the market.
Nevertheless, development of an effective liberalisation of the market has been slow and in 2013 the Antitrust Authority accused Bezeq of abuse of its dominant position.
To date, however, no decision on separation of the network has been reached.

MEXICO

In Mexico the regulatory reform of the electronic communications industry, accused of inadequate competition, is an issue that has been tackled by the government over recent years and numerous criticisms were raised in 2011 and 2012: from accusations of lack of authority and efficiency directed towards the regulatory body Cofetel by US companies, to enquiries by the Antitrust Federal Competition Commission (CFC) to ascertain monopolistic practices, the proposal for accounting separation made by Cofetel and rejected by the Operator Telmex, up to the opinion expressed by OECD which pressed for a marked reform of the whole regulatory framework.
In March 2013, the government presented a proposal for overall reform of the Mexican electronic communications industry, which was subsequently approved with a number of amendments by the Congress and the Senate. This reform, which aims to boost competition in the market and restrict the power of Operators like America Movil and Televisa, was intended to encourage foreign investment and give the Authority power to act against the possibility of Operators holding a market share higher than 50%.
On this subject, the law provides that the Instituto Federal de Telecomunicaciones has the power to "*ordenar la desincorporación de activos, derechos, partes sociales o acciones de los agentes económicos, en las proporciones necesarias para eliminar efectos anticompetitivos*".
The initial effect of the reform were seen already in December 2013, when the Regulatory Authority notified the two Operators mentioned above that a procedure is under way to decide whether they are dominant Operators on the market.
In November 2013, the Mexican President announced the National Digital Strategy, based on five pillars (connectivity, digital participation, interoperability, legal framework and open data), and with the main goals of digitalisation of the public administration and health service, a more effective war against crime, improvement in the quality of state education.
With reference to the mobile telephony sector, it is interesting to note that, as far as use of the 700 Mhz band is concerned, Cofetel is considering the possibility of adopting a model that provides for the creation of a government body, or alternatively a body created by a joint public-private venture, to develop the network and sell the wholesale traffic to retail mobile operators, which would then operate in competition with each other.

MONGOLIA

The growth of the electronic communications industry in Mongolia is influenced by the peculiarity of the Country: one of the least densely populated countries in the world, with around half of the population residing in the capital, and still with frequent cases of nomadism.
Up to the 1990s, electronic communications were totally controlled by the government.
In order to guarantee access to the fixed network for all Operators without discrimination, in 1995, the Mongolian Telecommunications Company (MTC) was set up, separating ownership of the backbone, which remained state property, from the structures responsible for running and maintaining it. This move, moreover, aimed at avoiding the costs related to possible duplications of the network, and reduces the costs for entry into the market of new competitors. The network subsequently underwent structural separation, splitting it from services. MTC was split into Telecom Mongolia (partially privatised), supplying retail services, and Information Communication Networking Company (ICNC), publicly owned, which owns the national backbone and the access network, international and long-distance connections, local transmissions and those to rural areas.
This process has made it possible to introduce a competitive model into Mongolia, making the access network and the backbone accessible at non-discriminatory conditions. At the same time, however, it has also underlined the difficulties that may accompany such processes: the regulated tariffs did not in fact allow ICNC to cover its costs, and in 2008 the Government had to intervene granting *ad hoc* subsidies.

NEW ZEALAND

In order to guarantee compliance with the principle of equality of treatment for all the Operators accessing the fixed network, in 2008 the incumbent Operator in New Zealand Telecom New Zealand (TNZ) announced a number of Undertakings, inspired by British Telecom's Undertakings, introducing significant changes to the organisation of the company. These Undertakings, accepted and ratified by the Government, established the separation of the TNZ into three divisions: Network, Retail and Wholesale, and also envisaged the establishment of a supervisory board, the Independent Oversight Group (IOG), tasked with responsibilities similar to those of the Equality of Access Board in the UK and the Supervisory Board in Italy.
In 2010, the project for the new national optic fibre network (Ultra Fast Broadband project, UFB) was launched, to be achieved by forms of public-private co-investment between the public body Crown Fibre Holdings, which controls the funds for the NGAN, and Operators to be selected by special invitations for bids.
The government offered TNZ two alternative options:

1. taking part in the bidding, after however separating the access network from the company, a step that would have gone beyond the functional separation already adopted; or
2. not taking part in the bidding, thus becoming a competitor of the government.

TNZ decided to take part in the project, creating two new companies, each listed on the stock exchange and with its own Board of Directors and its own Chief Executive Officer, as well as independent management and human resources:

- Chorus, owner to the copper network, charged with supplying network access services to Operators, which is prohibited from operating on the retail market; Chorus is constructing the NGAN having won, together with other Operators, the Crown Fibre Holdings government contracts;
- Telecom New Zealand, a retail Company that will purchase services from Chorus at the same terms and conditions as the other operators.

In 2011, the structural separation plan submitted by TNZ was approved by the Government and then by the shareholders of the Company; from November of the same year, Chorus shares began to be listed and exchanged on the stock exchange, thus becoming the first case in the world of company separation voluntarily decided by an incumbent operator.
In 2013, however, it became increasingly more clear that there were problems for TNZ: the reorganisation costs resulting from the operation described above proved higher than expected, the profits diminished considerably, and the company is considering the advisability of job cuts. The work on the NGN roll out, on the contrary, is progressing according to the established time scale.

POLAND

In Poland, Telekomunikacja Polska S.A. (TP SA) was designated as the Operator with significant market power in 2006 by the Regulatory Authority UKE; this led to imposition of compliance with non-discrimination, transparency, accounting separation and price control obligations for the company.
The possibility of mandatory splitting of TP SA into separate retail and wholesale divisions was analysed in 2008 by the Authority and in 2009, in order to avoid such an option, TP proposed to UKE a series of voluntary undertakings (the so-called Charter of Equivalence) aiming to eliminate cases of discrimination that occurred against OLOs when accessing its network.
The principles contained in the Charter of Equivalence concerned the creation of a separate wholesale division, the undertaking to separate the IT systems of the same wholesale division from those of the operator's other divisions, the adoption of a code of conduct for employees and preparation of a list of Key Performance Indicators to constantly monitor compliance with the undertakings given. In many respects the contents of the Charter of Equivalence recalled those of Telecom Italia Undertakings: TP, for example, is obliged to ensure equivalence of outputs (wholesale products and prices offered to the OLOs must be sufficiently comparable to those offered to its own sales departments, and not necessarily the same).
Following presentation of these undertakings, UKE suspended the separation process that was in progress. Nevertheless, numerous complaints have been raised by the European Commission, which in 2011 inflicted a fine on TP for abuse of dominant position and, in 2012, recommended to the Polish Authority that it should not relieve TP of the obligation for cost orientation for NGN services, "unless functional separation or other forms of separation have proved effectively to guarantee equivalence of access".

PORTUGAL

The Portuguese Regulatory Authority ANACOM, based on the result of a special public consultation, in 2009 deemed that functional separation of the fixed access network of the incumbent Portugal Telecom was not one of the remedies envisaged in the national regulatory framework; however, it pointed out that a further more thorough investigation of the issue was advisable.
A study was therefore commissioned from Oxera regarding the advisability and the consequent risks of a functional separation of the Portuguese market.
In 2011, following approval of the European "Telecom Package" in 2009, which explicitly provides the possibility for National Authorities to impose a functional separation model, and with the growing debate on the procedures for creation and governance of next generation networks, the operators Optimus and Vodafone requested the adoption of regulatory measures able to guarantee compliance with the principle of equality of treatment for access to Portugal Telecom's optic fibre network.
As of 2013, however, no steps have been taken for separation of the access network.
The European Commission has fined Telefonica and Portugal Telecom for the reciprocal non-competition agreement signed between the two companies in their respective Countries. The agreement was part of a broader operation which included the acquisition by Telefonica of Vivo, the Brazilian joint venture operating in mobile telephony, owned by Portugal Telecom.

SINGAPORE

A model for the setting up of the new optic fibre network, the Next Generation Nationwide Broadband Network, has been created in Singapore, envisaging:

1. a company (NetCo) owning the passive infrastructure: an invitation for bids designated the OpenNet company, a joint venture set up in 2008 with the aim of constructing the NGN; it supplies cable ducting and dark fibre at a pre-set price;
2. a wholesale operator (OpCo) to manage the active infrastructure, comprising the exchanges and transmission equipment; in 2009, the Authority designated StarHub, operating through the Nucleus Connect company;
3. several Operators and ISPs competing with each other which request wholesale network access services and offer, again in competition with each other, retail sales packages.

In order to minimise the barriers to entrance, separation of the passive and active infrastructures into two companies was adopted.
A series of rules regulating relations between the various players were then established: for example, no later than seven days after installation of fibres in a building by OpenNet, Nucleus must launch its offers.
It is interesting to note that all types of Operator offering electronic communications services may request passive services on fibre; mobile Operators too may therefore employ OpenNet and Nucleus when using fixed backhauling for LTE.

SPAIN

The Spanish incumbent Telefonica has been subjected since 2007 to a series of regulatory remedies, such as the obligation to notify a series of performance indicators on the quality levels of the wholesale services it supplies to the Regulatory Authority CMT and to the Other Licensed Operators, to permit comparison of the performances supplied internally to its Retail division with those supplied to the OLOs; the aim is to check the effective compliance with the principle of internal-external equality of treatment, and that there is no discrimination against Other Licensed Operators.
CMT considered the advisability of a functional separation of the Telefonica access network but, based on the result of a public consultation launched on the subject of NGA in 2008, concluded that, before taking such a step, deemed to be “extreme and exceptional”, its impacts need to be thoroughly analysed, in particular with regard to the competitive framework and investments.
Since March 2012, with incorporation into Spanish legislation of the new regulations on the subject introduced by the “Telecom Package” of 2009, the Authority has been able to impose functional separation. The process moreover provides that the initiative must be taken officially by the government: it must deem separation of the access network to be necessary, based on a special analysis by the Authority CMT from which it can be deduced that the existing remedies are not sufficient to obviate the lack of competitiveness that remain on the market.
As far as the issues regarding creation of the NGAN are concerned, in July 2013 an agreement was signed between Telefonica, Vodafone and Orange for the sharing of the terminal vertical segment of the network in buildings. Each of the three Operators must grant access to the other two in conditions of reciprocity for the roll out of fibre in existing infrastructures.
In 2013, a new body was set up; this is the Comisiòn Nacional de los Mercados y la Competencia (CNMC), which took over the Antitrust Authority CNC and the Electronic Communications Authority CMT.
The European Commission has fined Telefonica and Portugal Telecom for the reciprocal non-competition agreement signed between the two companies in their respective Countries. The agreement was part of a broader operation which included the acquisition by Telefonica of Vivo, the Brazilian joint venture operating in mobile telephony, owned by Portugal Telecom.

SWEDEN

In 2008, the incumbent Telia Sonera, to avoid possible imposition of separation of the network or penalties from PTS, the Swedish Post and Telecom Agency, created a separate division, Skanova Access, charged with independently managing network access, thus voluntarily achieving a functional separation model.
Skanova is a legally separate division of Telia Sonera, with separate computer systems and subject to financial auditing obligations; it manages copper and fibre network access services supplied to both OLOs and the sales departments of Telia Sonera. Skanova Access personnel is required to comply with the precepts of a specific Code of Conduct, containing measures designed to guarantee observance of the principles of equality of treatment and non-discrimination.
The Equality of Access Board, which is required to report periodically to the CEO of Telia Sonera has been appointed to control the actions of Skanova Access. The duty of the Board is to check compliance with the principle of equality of treatment by Skanova, above all by analysing a basket of performance indicators.
At the moment, no action has been effectively taken by the Authority, and the public consultation in 2009 on separation of the incumbent's access network has not been followed up. Nevertheless, during 2013, PTS and Telia discussed the possibility of introducing an Equivalence of Input (EOI) model to Sweden.
In June, the Authority launched the third market analysis, with the first public consultation concerning identification of SMP Operators and definition of the cardinal principles for imposition of remedies in Market 4. In particular, PTS has examined two possible options:

- an Equivalence of Input (EOI) model on the passive elements of the fibre access network eliminating price control on LLU and on dark fibre;
- withdrawal of obligations on prices in areas where there is market competition, in default of an EOI model

The national OLOs have expressed strong doubts on the effective benefits that may derive from introduction of an EOI model, holding that the creation of Skanova has not effectively brought benefits in terms of compliance with the principle of equality of treatment. More positive reactions on the contrary came from the other regional and municipal Licensed Operators, which are developing access networks for the laying of dark optic fibre at local level, without competing with Telia Sonera on the retail market.

THE NETHERLANDS

Although the Netherlands had already imposed obligations for accounting separation, transparency and non-discrimination, in 2007 the Regulatory Authority OPTA conducted a study with the aim of ascertaining the advisability of introducing an access network separation model; this hypothesis was however rejected, in that the level of competition already present on the market was deemed satisfactory, also taking into account the availability of a cable network and local municipal networks: functional separation of the network owned by the incumbent Operator KPN appeared to be an excessive step, that might have had undesirable effects on the market.
Furthermore, the fact that imposition of a functional separation was not one of the remedies considered in 2007 by the regulatory framework must be considered; the Authority declared that it was ready to reconsider its position if there were evolutions in the European regulatory framework that might expressly prescribe the adoption of measures for the functional separation of the network. Following approval in 2009 of the "Telecom Package" by the European Parliament and Council, expressly providing the power of National Regulatory Authorities to impose functional separation on incumbent operators, the Netherlands amended its Telecommunications Law in 2012, including a regulation introducing the possibility for OPTA to introduce forms of functional separation.
To date, however, no effective separation of the network has been carried out.
The model opted for by the city of Amsterdam at local level, which in some ways is reminiscent of the one used in Singapore, is interesting to note and envisages:

- a partnership between several parties that owns control of the passive network infrastructure, with Reggefiber, a Company that has recently come under the control of KPN, as majority shareholder in the partnership;
- an operator with a concession to manage the active section;
- several competing operators offering retail services.

UNITED KINGDOM

In 2005, the UK Regulatory Authority Ofcom concluded, at the end of a special Strategic Review of Telecommunications, that it was advisable to take action on the "bottleneck" formed by the British Telecom (BT) access network, considered to be a barrier to the entry of Other Licensed Operators onto the market, as well as to encourage the local loop unbundling service, at that time not very well developed.
BT proposed a series Undertakings to the Authority, totally reorganising the company structure and creating a separate division, Openreach, responsible for supply of the main wholesale services in Equivalence of Input mode: the offer to its own sales network and to the OLOs was equal in terms of price, sales terms and conditions, SLA, and timescales, and was supplied based on the same systems and processes ("*same timescales, terms and conditions and using the same systems and processes*"). A specific Code of Practice detailed the behaviour expected of the Operator's employees. Openreach has its own offices, its own commercial brand and independent management systems; its CEO reports directly to the CEO of British Telecom Group PLC.
A special body (the Equality of Access Board, EAB) was set up to monitor effective compliance with the Undertakings. Set up in 2005, it was an absolute first within the international regulatory scenario. The EAB is assisted by an office which ascertains compliance with the Undertakings and with the Code of Practice, and receives complaints from the OLOs.
Over recent years some changes have been made to the Undertakings: the deadlines for the separation of Openreach IT systems have been rescheduled, and the Equality of Access Board has been given some additional responsibilities.

USA

The U.S. regulatory approach is fundamentally different from the European one, and is inspired by the conviction that an excessive load of rules is damaging to the industry and to effective free competition. The Federal Communications Commission (FCC), moreover, has also recently confirmed that if, on the one hand, they will seek to avoid imposition of excessively invasive obligations, such as the sharing of networks, at the same time definition of a new regulatory framework has become necessary; this also with reference to the recent National Broadband Plan.
Furthermore, the dominant view in the USA is that of competition based on infrastructures rather than a service-based competition: the national regulatory Authority, instead of restricting the incumbent in a given technology, should favour development and competition in different, mutually competing technologies (e.g. fibre, mobile, cable, satellite, ...) since it is thought that this may bring greater benefits to the market.
Numerous studies conducted on the subject have concluded that the costs associated with structural separation of the access network would be higher that the related benefits, not to mention that an obligation for unbundling on the new fibre access network would be more difficult, due to technical issues, than it would be on a conventional copper access network. The effectiveness of the US approach is confirmed by the rate of development of the new networks, considerably higher than in Countries, like those in the European Union, characterised by more invasive regulatory approaches.
In the United States, however, there have been cases of forced imposition of separation by the Authorities against companies considered to be dominant on the market.
The most famous case occurred in 1984 and concerned the splitting of AT&T into a long-distance carrier and seven Regional Bell Operating Companies (RBOCs). Crandall, Eisenach and Litan note that *"neither experiment was successful. The breakup of AT&T into separate local and long-distance companies which were prohibited from entering each other's markets slowed the development of competition while imposing significant efficiency costs. Ultimately, vertical integration was reintroduced, as the RBOCs were permitted to offer long-distance services and the two major long-distance firms, AT&T and MCI, were purchased by AT&T's divested local carriers, SBC and Verizon."*[4]
The Telecommunications Act of 1996 envisaged, in Section 251, an unbundling obligation for all the network elements needed by OLOs to compete. This obligation was accompanied by a series of measures designed to guarantee compliance with the principles of non-discrimination. The sales success, with a growth of unbundled lines, was accompanied, however, by the economic crisis of many Operators that had entered the market without sufficient financial means; subsequent requests put forward to the Authority for vertical separation of the network were not granted.
The recent dispute between the FCC and Comcast, the largest US cable company, is also significant: the Authority sought to impose rules on the running of the network owned by the Operator, but a ruling in 2010 of the District of Columbia Court of Appeals upheld the case put forward by Comcast asserting that for years it has had the right to manage its network without regulatory constraints, in consideration of the substantial investments made.

NOTES

[4] Robert W. Crandall, Jeffrey A. Eisenach, Robert E. Litan: "Vertical Separation of Telecommunications Networks: Evidence from Five Countries", FEDERAL COMMUNICATIONS LAW JOURNAL, Vol. 62, 2010.
www.fclj.org/volumes/volume-62-2009-2010/issue-3/

5 Reports and complaints

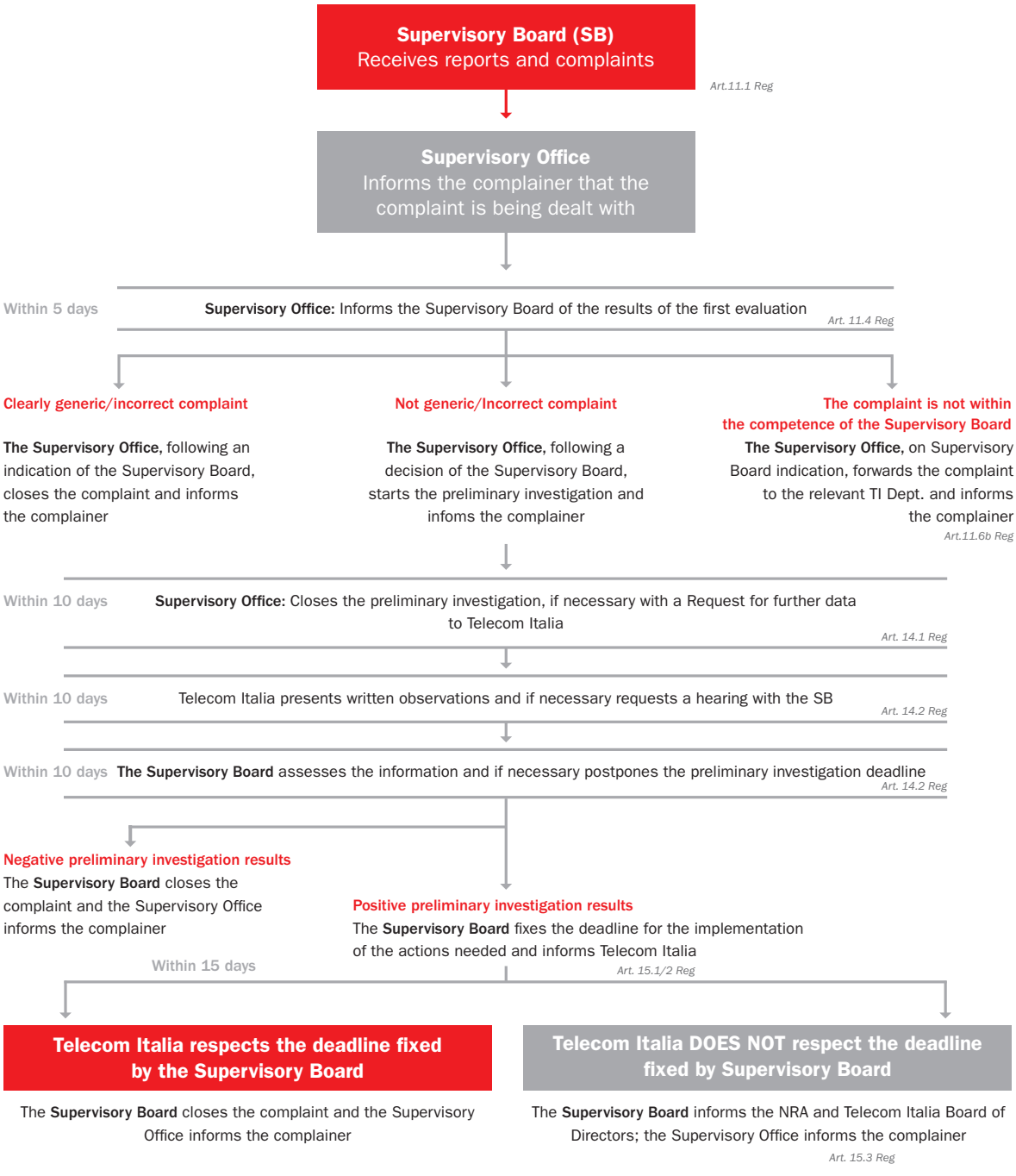
Other Licensed Operators can send the Supervisory Board reports and complaints relating to alleged breaches of the Undertakings by Telecom Italia using the form provided for this purpose. If an alleged breach by Telecom Italia is confirmed and the Company fails to remedy it in accordance with the established deadlines and procedures, the Supervisory Board must report this to AGCom and the Board of Directors of Telecom Italia.

Complaints sent to the Supervisory Board are managed according to a procedure described in the Board's Internal Regulation and detailed in Supervisory Board Resolution No. 2/2009, which provides for an initial assessment of the admissibility of the complaint and the subsequent opening of an investigation. After the investigation has been concluded, the Supervisory Board takes a decision based on the facts of the matter.

Outline details of the envisaged phases of the procedure are given below.

With a view to the disclosure and transparency of its actions, the Supervisory Board, acknowledging the need to change its procedure for dealing with reports and complaints dating from 2009, launched its first Public Consultation on the proposal for changing the said procedure. The decision to disclose in advance a document that is still being finalised, before arriving at the final decision, reflects the specific wishes of the SB to obtain the maximum agreement and transparency for its actions. A number of Operators responded positively to the Consultation by submitting their contributions, which are still being analysed and assessed, in concert with the Regulatory Authority, which has been asked to give its opinion on the proposed changes.

MANAGEMENT FLOW OF REPORTS AND COMPLAINTS



5.1 - COMPLAINTS FROM THE OLOs

Complaints received in 2013

During 2013 the Supervisory Board received three Complaints from Other Licensed Operators:

- Complaint S01/13 - Fastweb/Network access discrimination in the installation of LLU and Bitstream systems
- Complaint S02/13 - Fastweb/Malfunctions of the CRM system for Wholesale customers
- Complaint S03/13 - Welcome Italia / Physical deterioration of lines, fruitless service interventions, SLA compliance and definition of penalties

More detailed information regarding these Complaints is given below.

Complaint by the Operator Fastweb "S01/13 - Fastweb/Network access discrimination in the installation of LLU and Bitstream systems - Implementation of Undertakings Group no. 1 related to the setting up of a new delivery process for SMP services".

In April 2013, the Operator Fastweb reported 92 cases to the Supervisory Board of refusal to activate LLU systems returned by Telecom Italia stating "Presence of Equipment/Devices on the access network" as the reason.
Fastweb, alleging a breach of the principle of equality of treatment by Telecom Italia, stated on this subject that the presence of equipment should have prevented the activation of ADSL services on the same lines for Telecom Italia Retail customers too, yet on the contrary these were activated, according to Fastweb, in a certain number of cases.

Complaint and institution of the proceedings

During the hearing on 21 February 2013, Fastweb S.p.A. submitted a document to the Supervisory Board which pointed out certain critical issues in the fulfilment of the Undertakings and, in particular, Telecom Italia's refusal (KO) to activate LLU systems due to the presence of multiplexers in the access network, a fact which, according to Fastweb, should have prevented the activation, in the same way and on the same lines, of ADSL services for Telecom Italia retail customers too. In the same document, reference was also made to an alleged discrimination consisting in refusal, again by Telecom Italia, to activate lines due to excessive distance from the exchange, something that should have prevented the activation, in the same way and on the same lines, of the same type of service for Telecom Italia retail customers. On 13 March 2013, having found that the issue raised in the complaint was not "generic", not manifestly unfounded and within its remit, the Supervisory Board adopted Resolution no. 5/2013 deciding, pursuant to article 11, paragraph 3 of the Internal Regulation, the opening of the inquiries. In order to effectively support and direct the inquiries, in its note dated 14 March 2013, the Supervisory Office asked Fastweb to provide detailed data and information in support of both cases reported, consisting, as mentioned, in the refusal to activate LLU systems both due to the presence of a multiplexer in the access network and due to excessive distance from the exchange. Moreover, recognising the need to verify whether the problems reported also concern any other Licensed Operators, on 18 March 2013 the Supervisory Office sent out a specific note to all the main operators, asking them to notify the Office of any opinion or

complaint deemed useful for analysis of the facts and cases reported in the official complaint. On 4 April 2013 Fastweb sent its own reply to the request for further details, providing information only on the problem of refusal to activate LLU systems due to the presence of a multiplexer in the access network while no other complaints of the same kind were received from any of the other operators previously contacted. In particular, the report by Fastweb listed 92 specific cases of refusal by Telecom Italia due to "Presence of equipment/devices on the access network". Recognising the need to examine all the cases reported by Fastweb individually in detail, to check the presence of multiplexers on site, as well as ascertaining the quality and efficiency, with regard to compliance with the principles of equality of treatment and non-discrimination, of the delivery processes for which the complaint was lodged, the Supervisory Board issued Resolution no. 11/2013 on 23 April 2013, authorising the Supervisory Office to access the information regarding the access network, as well as inspecting the lines for which the complaint was lodged directly on the Telecom premises for the relevant geographic areas, in order to accurately and precisely check the effective presence of technical causes preventing the activations.

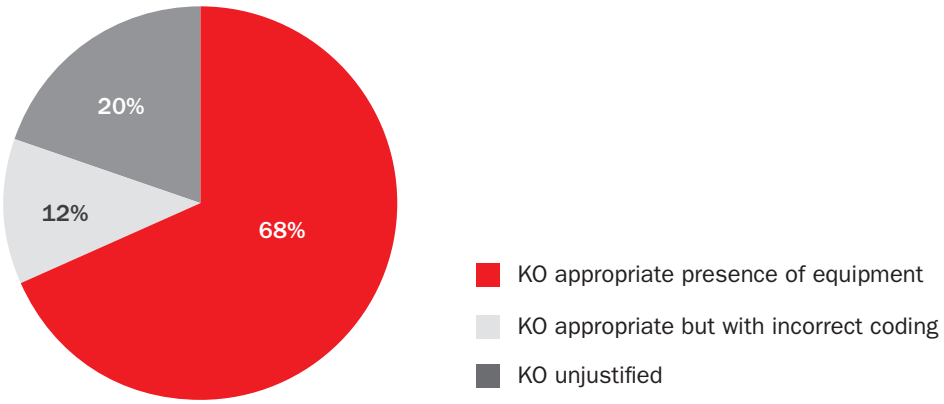
Checks by the Supervisory Office

The checks, which were conducted from April to June 2013, involved the following inspection sessions:

- Turin (for sites in Piedmont);
- Genoa (for sites in Liguria);
- Rome (for sites in Latium and Tuscany);
- Milan (for sites in Lombardy);
- Bologna (for sites in Veneto, Umbria and Emilia Romagna);
- Naples (for sites in Campania, Basilicata and Sicily);
- Bari (for sites in Apulia).

Each inspection session was divided into two phases. In the first phase, an analysis was conducted on the data extracted from the UNICA/RA data banks which, starting from the address given on the Fastweb orders, made it possible to reconstruct the route from the customer's premises to the related exchange, identifying the network terminal, cabinet, equipment (if present) and roadside DSLAM (if present). In the second phase, inspections were conducted at the lines to check the information given in the data bank and by Telecom Italia on site. In particular, visits were made to the customer's premises and the route from the customer's premises up to the relevant cabinet was checked on site.

Based on the actual situation found in the lines, on site checks permitted classification of the type of KO raised by Telecom for each order as follows:



N.B. Of the 63 orders, 3 correspond to an incorrect address, but with presence of equipment at the correct address and/or the incorrect address

For 63 orders (that is 68% of the total) presence of the equipment was found. In 11 cases (that is 12% of the total) the KO appeared to be appropriate, but not attributable to the presence of equipment, while for 18 orders (that is 20% of the total) the KO appeared unjustified, since no equipment was present.
If the causes that originated the unjustified KOs are examined, the 18 orders can be divided into two classes (see the diagram below): for 16 orders (89%) the unjustified KO was generated by misalignment of the UNICA/RA data banks and in two cases due to an error by the operator.
The diagram below, showing the geographical distribution of the orders for which unjustified KOs were received, it can be seen that half the cases are concentrated in the province of Naples.

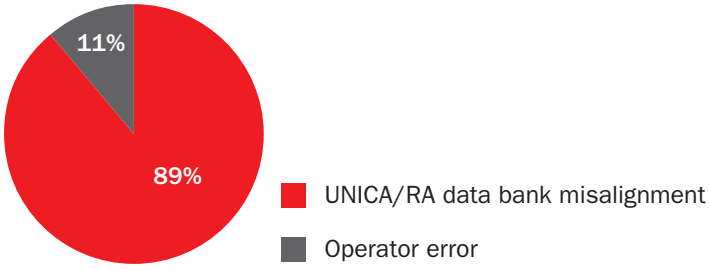


Figure 1 - Breakdown by cause

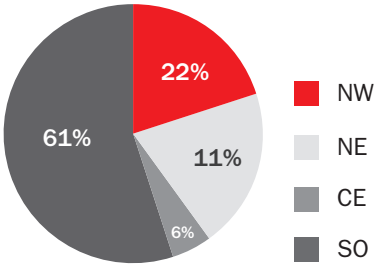


Figure 2 - Breakdown by geographical area (regional area)

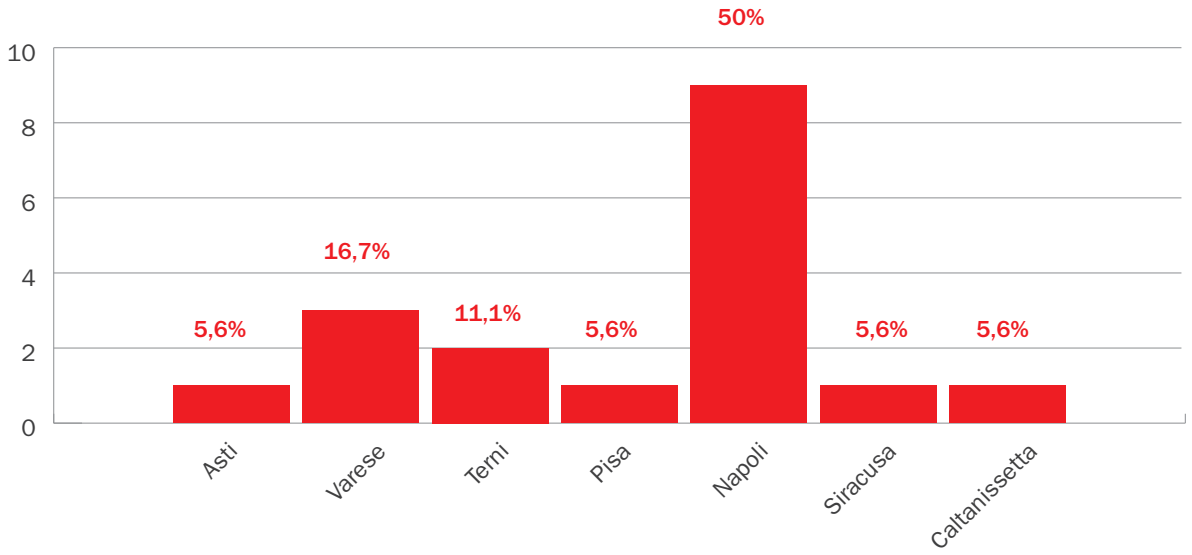


Figure 3 - Breakdown by province

The 11 cases of KO that were appropriate, but with incorrect reasons for rejection, in reality can be attributed to two possible causes of rejection, as shown below.

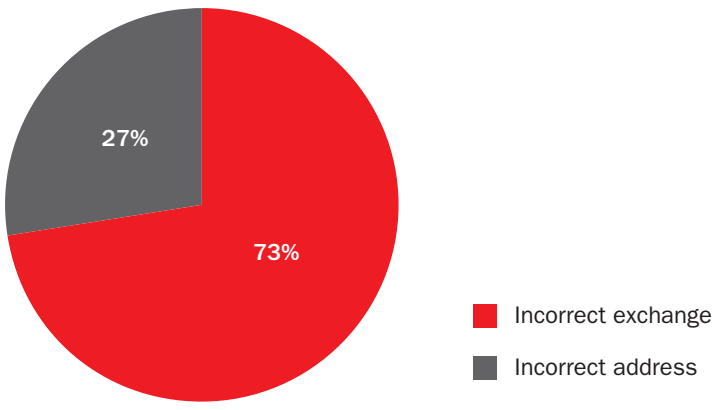


Figure 4 - Actual cause of rejection

From the diagram it can be seen that for eight orders (73%) the correct reason for rejection should have been "wrong exchange", while 3 orders appear in reality to be attributable to a "wrong address".

The checks carried out also allowed a detailed analysis to be conducted regarding cases of return of a KO on orders related to customers for whom, previously or subsequent to the Fastweb request (no later than 17 April 2013) Telecom Italia activated a retail ADSL service.

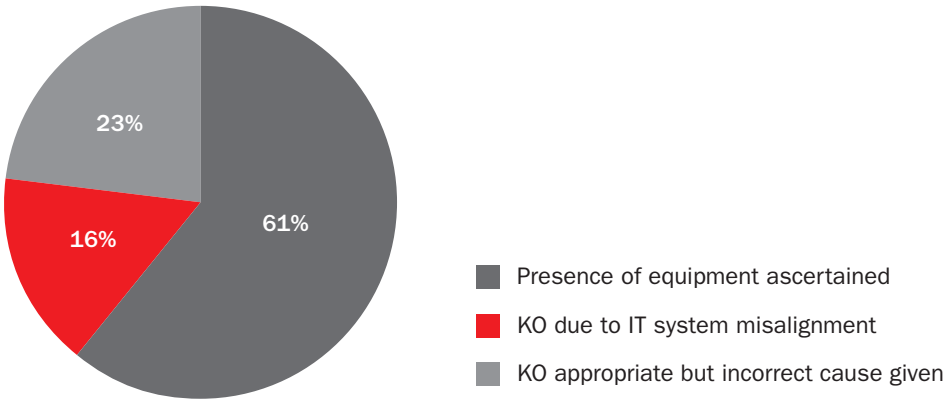


Figure 5 - Breakdown of types of KO for customers already served by Telecom Italia or subsequently activated by Telecom Italia

These are a total of 31 orders which, based on on-site findings, may be classed as follows:

- 19 orders (that is 61%) for which the presence of the equipment was effectively found;
- 5 orders (that is 16%) for which the need to return a KO was found, but for reasons different from "presence of equipment";
- 7 orders (that is 23%) for which a KO due to misalignment of the IT systems was found.

It can be seen that the percentage of unjustified KOs, that is 23%, is not very different from that found for all 92 orders taken together (20%).

The two graphs given below show the same division of orders by type of KO, respectively considering only orders for voice LLU on Active Lines (21 WOs out of 92) and only voice LLU on Non-active Lines (71 WOs out of 92).

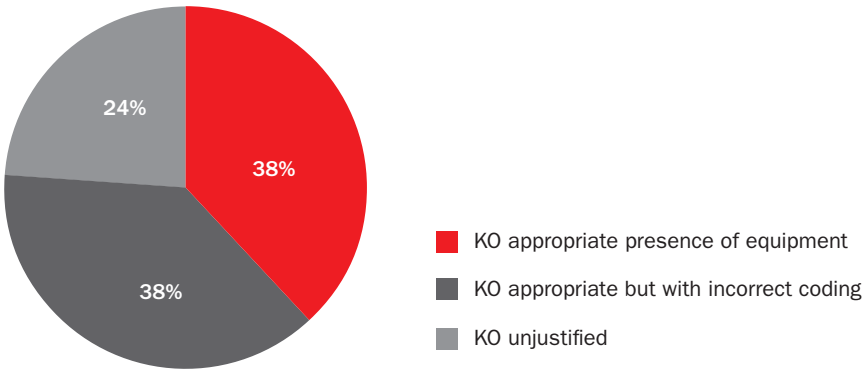


Figure 6 - WO Active Line

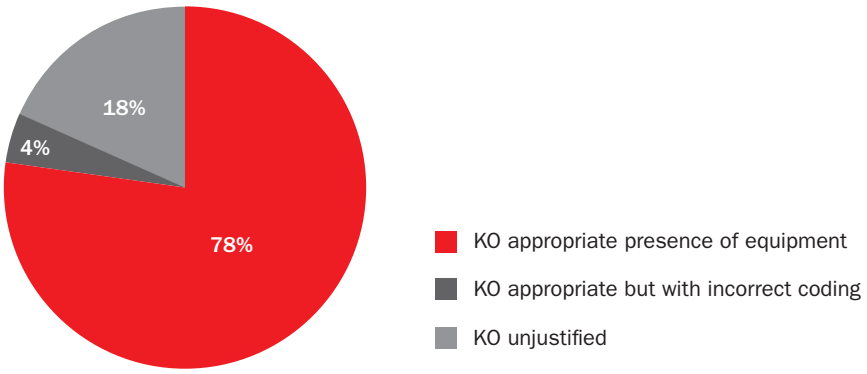


Figure 7 - WO Non-Active Line

While the percentage of unjustified KOs is similar in both cases to the level recorded for the total (20%), in the cases of orders on Active Lines, there is a higher incidence of KOs that were justified but with an incorrect coding.

Actions and Conclusions of the Supervisory Board

The checks carried out by the Supervisory Office ascertained the following information:

- all 92 cases reported concern LLU exchange areas;

- in some exchange areas, due to historical, technical and economic reasons, there are portions of network served by roadside multiplexing equipment. In 63 of the 92 cases reported, the Supervisory Office ascertained the presence of Subscriber Multiplex equipment, UCR (equipment with copper primary) or MD48 or MPX-1 equipment (with fibre in the primary), all of them devices designed only to provide voice services and which therefore do not permit, by their very nature, supply of ADSL services (presence of multiplexing equipment in LLU exchange areas was found in around 2.4% of the addresses served and, upon subsequent more thorough investigation, it was found that the percentage of lines connected to such equipment is even lower, that is 1.4 %);

- in relation to the above 63 cases, the presence of 35 roadside miniDSLAMs was found; these devices are used to make supply of broadband services such as ADSL possible for Telecom Italia customers and OLO customers by means of bitstream packages; this network configuration is compatible with activation by means of roadside miniDSLAMs, on the same lines, of systems for Telecom Italia retail customers, as well as in any case allowing activation of broadband services for Operators opting to provide bitstream packages in those areas; moreover, supply of bitstream services in place of LLU services cannot be considered economically equivalent in exchange areas where the Other Licensed Operators have installed infrastructures;

- it was ascertained that in two cases of failure to activate Fastweb customers, both included in the 63 cases above, ADSL services were subsequently activated on copper loops (by Telecom Italia) and LLU (by Vodafone) at homes served by a dual feed network, that is falling into the area of influence of the multiplexing equipment (in this case not fitted with roadside miniDSLAMs), but also served by direct copper loops connected to the reference exchange. In general, the availability of copper cables in primary networks converging on multiplexing equipment can permit, as in the cases mentioned above, the activation of LLU services, save in cases of saturation; however the state of saturation of copper cables tends to vary over time depending on activations and deactivations of customers, not to mention possible repairs in cases of faulty loops; it is therefore possible, as reported by Fastweb, for situations to occur in which a work order may be rejected due to equipment KO, even though a subsequent request by Telecom Italia or by Other Licensed Operators may find availability of loops. It must be borne in mind that the ex-post checks conducted by the Supervisory Office approximately six months after the events reported by Fastweb provide a picture of a situation, on the date of the checks, which may be different from that of the refusal to activate, due to the dynamic evolution of the state of occupation of the copper loops. Furthermore, reconstruction of the time sequence of the activities which occupy and free loops is extremely complex, in that Telecom Italia's retail and wholesale sales systems do not show any information on the network route and the Unica/RA data base does not keep track of previous occupations of loops; added to this are the uncertainties deriving from maintenance work on the network following single or multiple faults that determine intermittent availability of loops. Therefore, in the two cases identified it was not possible to determine with absolute certainty that the copper loop necessary to activate the Fastweb order was available at the time of the request;

- it was ascertained that in the remaining 29 cases, 11 received a refusal to activate due to errors in the compilation of the work orders, but with incorrect coding, while 18 received an inappropriate refusal due mainly to misalignment of the operational data banks and that, in 3 of these 29 cases, activation subsequently occurred for users of Other Licensed Operators, respectively Vodafone, Wind and Fastweb itself;

- other Licensed Operators are able to use a specific pre-sale tool provided on the Wholesale Portal to verify the possibility of making LLU or Bitstream connections, and can also access the data bases published periodically; the checks ordered on this tool by the Supervisory Board showed the reliability of the responses in 80% of the cases reported by Fastweb and in 73% of the subset of cases where a multiplexer was present.

On 3 July 2013, the National Regulatory Authority for Communications (AGCom), which in response to a complaint by Fastweb had ordered similar proceedings on the 92 cases reported to the SB, also part of a larger group of 159 cases of KO due to equipment, invited the Supervisory Board to exchange information on the investigations conducted by both parties and, at the meeting held on 8 July 2013, requested transmission of the data, documents and information related to the checks conducted, pursuant to Article 10, Paragraph 5 of the Internal Regulation. The same Authority, in a memorandum received on 24 July 2013, asked the SB to send the documents related to the inspections conducted by the Supervisory Office on the 31 cases investigated. In addition to making the documentation available, the full findings of the investigations were subsequently sent to AGCom.

After listening to the opinions of both the opposing sides at two separate hearings, on 9 December 2013 the Supervisory Board passed Resolution no. 25/2013 with which it ruled that the checks conducted on the lines for which Fastweb S.p.A. had lodged the complaint, regarding the unjustified refusal by Telecom Italia to activate LLU systems, giving the reason “Presence of Equipment/Devices in the access network”, did not prove any conduct by Telecom Italia such that it might be contrary to the requirements for equality of treatment and non-discrimination pursuant to the Undertakings approved with the AGCom Resolution no. 718/08/CONS and, in particular, to Undertakings Group no. 1. The sample of 92 cases submitted by Fastweb to the SB cannot in fact be considered, from a statistical point of view, to be representative of all the orders which received a refusal to activate of the type reported.
Nevertheless, given that the operational malfunctions found have indicated the need for Telecom Italia to take action to improve the current situation, with the main aim of avoiding the risk of future breaches of the Undertakings, the Supervisory Board recommended that the Company in question should:

A. introduce all action required to eliminate problems related to the less than full reliability of the LLU pre-sale analysis tool; increase checks on updates to the Unica/RA data bank when operations to terminate multiplexers in the access network have been completed, to constantly guarantee corporate data of the highest possible quality; publish multiplexer termination events in periodic reports as specified in Undertakings Group no. 5;

B. in cases of issue of Work Orders for retail ADSL and LLU related to addresses served by a dual feed network, take special care to efficiently handle copper loops in primary networks also by accurate checks on the systems and in the field regarding the residual capacity of any copper cables and with implementation of queueing systems (similar to those in use within the New Delivery Process for handling KOs due to saturated network) for requests in cases of saturation of resources with a view to permitting a significant reduction in the number of orders rejected with the description code “KO for presence equipment”;

C. assess the technical and economic feasibility of offering a desaturation service for primary network copper cables even by possible reconfiguration of the equipment of customers using only voice services.

The Supervisory Board also stated that it intended to start specifically monitoring the quality of the Unica/RA data, with regard to all the work orders rejected by Telecom Italia for all OLOs related to multiplexers, in order to check the introduction and effectiveness of the actions taken by Telecom Italia following the above Resolution.

Complaint from the Operator Fastweb "S02/13 - Fastweb/Malfunctions of the CRM system for Wholesale customers - Implementation of Undertakings Group no. 1 related to the setting up of a new delivery process for SMP Services".

In February 2013, the Operator Fastweb complained of numerous malfunctions of Telecom Italia's Wholesale CRM system, reporting them to the Supervisory Board.
Fastweb, when reporting the occurrence, held that these problems represented a breach of Undertakings Group no. 1, partly in consideration of the persistence of the anomalies found, which were alleged to have caused serious criticalities in the execution of numerous work orders, with a negative impact on its customers.

During the hearing on 21 February 2013, Fastweb S.p.A. reported a series of malfunctions that it claimed had deteriorated the performances of the CRM (Customer Relationship Management) system in the various versions of the software released over time. In particular, the company complained that the version CRM 2.0 contained anomalies that determined serious criticalities in the provisioning processes such as:

- high percentages of KOs which then proved to be unjustified;
- mass and repeated remodulations;
- backlog in the fulfilment of the orders (with disruptions to customers).

Furthermore, it was found that the subsequent 3.0 version of CRM also contained anomalies that might cause no less important malfunctions such as the blocking of thousands of activation and migration orders and the incorrect execution of many orders with a negative impact on customers.

Based on the declarations made by Fastweb, the Supervisory Board, with Resolution no. 6/2013 date 13 March 2013, ordered the opening of inquiries regarding the complaint "*S02/13 - Fastweb/Malfunctions of the CRM system for Wholesale customers - Implementation of Undertakings Group no. 1 related to the setting up of a new delivery process for SMP Services*".

In order to effectively support and direct the inquiries, in its note dated 14 March 2013 the Supervisory Office asked Fastweb to provide detailed data and information on the alleged discriminations reported and/or other similar cases and also asked the operators Wind Telecomunicazioni S.p.A., Vodafone Omnitel N.V., BT Italia S.p.A., Tiscali S.p.A. and Welcome Italia S.p.A. to report any problems linked to the operation of the Wholesale CRM system.

On 10 June 2013 Fastweb S.p.A. sent a note in which the specific criticalities on bitstream and LLU services related to release of the new version of CRM by Telecom Italia were detailed and, on 19 June 2013, Vodafone Omnitel N.V., in a note addressed to the Supervisory Board, reported continuous CRM system interruptions at critical times of the day for periods always lasting more than an hour, attaching the related details of the complaints.

With the memorandum dated 5 August 2013 and during the hearing on 16 October 2013, Telecom Italia described to the Supervisory Board the plans for release of the Wholesale CRM, the action taken on the related platform and all the activities conducted by the Company to improve the activities supporting provisioning to OLOs. Having received confirmation, at the hearing of Fastweb on 11 November 2013, that the problems already reported in February are still continuing with the latest releases of Wholesale CRM too, and considering the complexity of the issues concerned, the Supervisory Board recognised the need to define an indicator suitable for objectively measuring the level of operation of the Wholesale CRM system.

After the hearing of Telecom Italia held in the offices of the Supervisory Board on 9 December 2013, and at the specific request of the Supervisory Board, the Company suggested a new indicator to the SB, that is the percentage of wholesale orders (received N or more days earlier) which, on the date of measurement, are found to have an “in process” status on Wholesale CRM, but for which no formal order has been sent to Open Access. This percentage will need to be calculated as compared to the total orders being processed at the time of measurement. The reference time threshold N, that is the time that has elapsed from the Date of Receipt of the Order (DRO), which will determine whether or not an order will be considered in the indicator value, will depend on the type of service.

The Supervisory Board, having judged the proposal by Telecom Italia to be positive and taken note that the new indicator, as stated by Telecom Italia, will be available only at the end of April 2014, ruled extension of the terms of the proceedings to 29 August 2014 with Resolution 29/2013 dated 9 December 2013, with the intention of judging the effective operation of the proposed tool and specifically ascertaining the findings in terms of its suitability for solving the anomalies and criticalities reported in the complaint.

Complaint by the Operator Welcome Italia "S03/13- Welcome Italia/increase in the physical deterioration of lines, handling of fruitless service interventions, SLA compliance and related bitstream service assurance penalties - Implementation of Undertakings Group no. 5 related to guarantees of transparency of the technical plans for the quality of the fixed access network"

During the hearing held in February and subsequently in a specific letter addressed to the SB, the Operator Welcome Italia, alleging a breach of the principle of equality of treatment by Telecom Italia, reported, amongst other things, the following problems with regard to implementation of the Undertakings:
- increase of the physical deterioration of the lines on the access and transport sections;
- problems in provisioning of bitstream services on the Ethernet network;
- charging of alleged fruitless service interventions by Telecom Italia and the insufficiency of the penalties paid by Telecom Italia for failure to comply with the SLA.

The Supervisory Office, when drafting its Technical Report subsequently submitted to the Supervisory Board, pursuant to Article 3, Paragraph 2 of Resolution no. 2/2009, pointed out that the subject of the Complaint received may bring to light a situation of apparent inequality of treatment between Telecom and the OLOs.

During its Meeting held on 23 April 2013, the SB, after analysing the complaint by the OLO - not "generic", not manifestly unfounded and within its remit - and the Report by the Office, decided to open an investigation, with Resolution no. 9/2013 , opening proceeding no. S03/13, pursuant to Article 11, Paragraph 3 of its Internal Regulation, and instructing the Supervisory Office, pursuant to the provisions of Article 3, Paragraph 5 of the said Resolution no. 2/2009, to take all the necessary action, as well as asking Welcome Italia for detailed data and information on the alleged poor service reported.

The cases reported in the complaint concerned issues that are partly outside the boundaries of the Undertakings, such as, for example, faults in the transport network and not in the access network; however, the Complaint was relevant to the Undertakings, in particular with reference to the case of repeated faults, which have been brought to the attention of the SB in the Ongoing Project (Undertakings Group no. 5, *see below).*

The Operator then supplied an initial confirmation to the SB, in a letter dated 31 May, in which it also reported that a dispute on the same issues had been raised with the Authority and that technical discussions had been opened with Telecom.

Following a request for further details, in July Welcome supplied the full list of cases for which the complaint had been lodged. The SB, aided by the Office, examined the details received; as a result of this analysis, it was considered advisable to ask Telecom Italia to supply its own lists of complaints concerning customers of the Operator Welcome, in order to be able to conduct cross and comparative analyses between the various groups of elements.

On 13 September, Telecom Italia supplied its lists of disservices for the period considered.

NOTES

[1] organodivigilanza.telecomitalia.it/pdf/Determinazione_n_9_2013_Avvio_S03_13.pdf

As mentioned above, the phenomenon of repeated faults is important within the Ongoing Project (Undertakings Group no. 5):

The aim of the Ongoing Project is to reduce repeated failure of individual access lines in the field, identifying the connections to be repaired from those that, in a period of observation of 6 months, have been subject to at least three faults.
The repair work concerns the connections of both *Retail* and *Wholesale* customers and can be carried out both by action aimed to permanently repair critical network elements, and during routing repair work, as in the case of the Welcome customers concerned.
The phases of the Ongoing repair process are listed below:

The Supervisory Board, given the impacts that these disservices have caused to Welcome, deemed that it was of interest to investigate the causes of the differences found in Welcome's list and that of Telecom Italia, and examine the results obtained with an analysis of the faults that fall within the Ongoing project in order to draw conclusions as to effective compliance with the dictates of the project itself.

On 28 January 2014 and 13 February 2014, the Supervisory Board invited Telecom Italia and the Operator to separate hearings to investigate their respective positions regarding the level of service quality delivered by Open Access when supplying access connections reserved for Welcome. Telecom Italia recognised the reported disservices, although they underlined the improvements in the fault rate during the period 2011 - 2013.

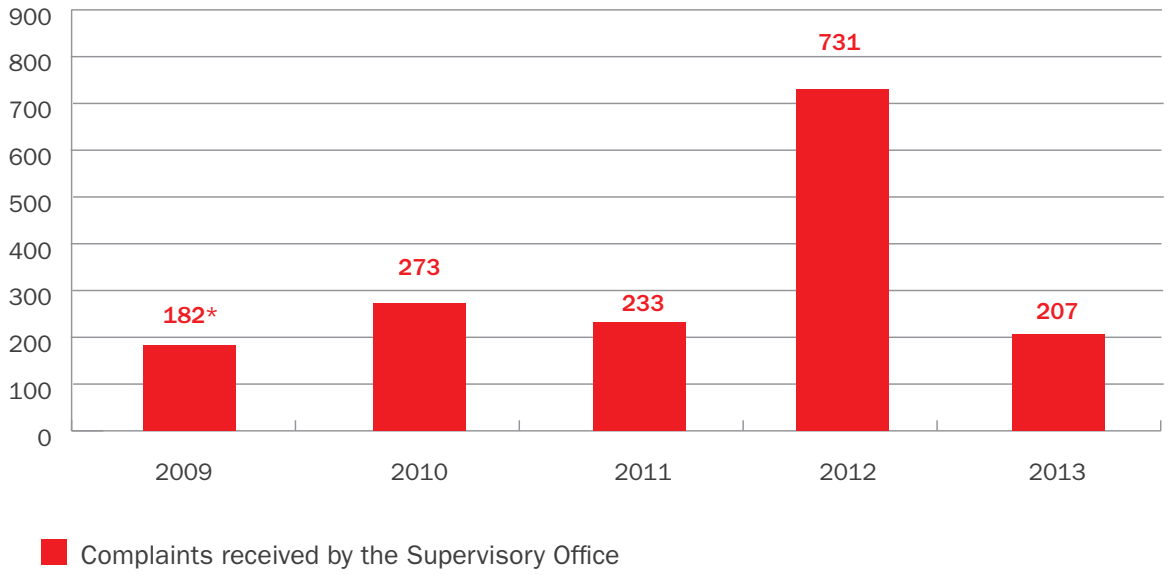
The Supervisory Board, once listened to the Welcome Italia arguments on the issue, decided to extend its analyses to the complaints of disruptions received in 2013 with particular regard to the method of handling the faults in symmetrical connections, deferring, with Resolution 7/2014, the conclusions of the investigation.

5.2 - REPORTS AND COMPLAINTS NOT FALLING WITHIN THE SUPERVISORY BOARD'S MANDATE

In 2013, the Supervisory Office received 207 complaints regarding disservices and problems that do not fall within the mandate assigned to the Supervisory Board and, on the contrary, related to the management of commercial dealings with Telecom Italia and OLO customers.

In compliance with the Supervisory Board's Internal Regulation, all of these complaints were forwarded by the Supervisory Office to the appropriate functions within Telecom Italia, at the same time promptly informing the customers concerned of this.

The following graph shows the number of complaints received by the Supervisory Office in the period from 1 April 2009 to 31 December 2013.



* In 2009 the data relates to the April-December period only

6 Actions carried out and main results obtained

6.A - SUMMARY OF 2013 RESOLUTIONS

Subject	Resolution no.	Date
Quarterly report on the work performed and on work planned in October-December 2012	Res. 1/2013	15 January 2013
Planned budget use for 2013	Res. 2/2013	20 February 2013
Undertakings Group no. 1 - Start-up of supervisory activity on the management of the work order queuing system by so-called “single queue” as part of the New Delivery Process (NDP)	Res. 3/2013	20 February 2013
Undertakings Groups nos. 3 and 4 - Termination of the supervisory activity envisaged by the Telecom Italia data certification system	Res. 4/2013	20 February 2013
S01/13 - Fastweb/Network access discrimination in the installation of LLU and Bitstream systems - Implementation of Undertakings Group no. 1 related to the setting up of a new delivery process for SMP services. Start-up of inquiry	Res. 5/2013	13 March 2013
S02/13 - Fastweb/Malfunctions of the CRM system for Wholesale customers - Implementation of Undertakings Group no. 1 related to the setting up of a new delivery process for SMP Service. Start-up of inquiry	Res. 6/2013	13 March 2013
2013 Annual Report - 2012 Activities and results	Res. 7/2013	13 March 2013
S01/13 - Fastweb/Network access discrimination in the installation of LLU and Bitstream systems - Direct access to data and information	Res. 8/2013	10 April 2013
S03/13 - Welcome Italia/increase in the physical deterioration of lines, handling of fruitless service interventions, SLA compliance and related bitstream service assurance penalties - Implementation of Undertakings Group no. 5 related to guarantees of transparency of the technical plans for the quality of the fixed access network. Start-up of inquiry	Res. 9/2013	23 April 2013
Public Consultation regarding the proposal for modification of the general criteria for managing and processing of Supervisory Board proceedings	Res. 10/2013	23 April 2013
S01/13 - Fastweb/Network access discrimination in the installation of LLU and Bitstream systems - Supply and direct access to data and information	Res. 11/2013	23 April 2013
Quarterly report on the work performed and on work planned in January-March 2013	Res. 12/2013	9 May 2013
Plan of activities - 2013	Res. 13/2013	9 May 2013
S01/13 - Fastweb/Network access discrimination in the installation of LLU and Bitstream systems - Setting of a new deadline for termination of investigation	Res. 14/2013	19 June 2013
S02/13 - Fastweb/Malfunctions of the CRM system for Wholesale customers - Setting of a new deadline for termination of investigation	Res. 15/2013	19 June 2013
Quarterly report on the work performed and on work planned in April - June 2013	Res. 16/2013	29 August 2013
S03/13 - Welcome Italia/increase in the physical deterioration of access lines, handling of fruitless service interventions, SLA compliance and related bitstream service assurance penalties - Setting of a new deadline for termination of inquiry	Res. 17/2013	29 August 2013

Subject	Resolution no.	Date
S01/13 - Fastweb/Network access discrimination in the installation of LLU and Bitstream systems - Preliminary notification	Res. 18/2013	11 September 2013
S02/13 - Fastweb/Malfunctions of the CRM system for Wholesale customers - Setting of a new deadline for termination of investigation	Res. 19/2013	16 October 2013
S01/13 - Fastweb/Network access discrimination in the installation of LLU and Bitstream systems - Setting of a new deadline for termination of inquiry	Res. 20/2013	16 October 2013
Undertakings Group no. 4 “Guarantees for transparency of the monitoring system” - Start-up of specific supervision of the indicator monitoring system	Res. 21/2013	16 October 2013
Quarterly report on the work performed and on work planned in July-September 2013	Res. 22/2013	11 November 2013
S03/13 - Welcome Italia/increase in the physical deterioration of access lines, handling of fruitless service interventions, SLA compliance and related bitstream service assurance penalties - Setting of a new deadline for termination of inquiry	Res. 23/2013	11 November 2013
S01/13 - Fastweb/Network access discrimination in the installation of LLU and Bitstream systems - Setting of a new deadline for termination of inquiry	Res. 24/2013	11 November 2013
S01/13 - Fastweb/Network access discrimination in the installation of LLU and Bitstream systems - Closing of the proceedings	Res. 25/2013	9 Dicember 2013
Undertakings Group no. 1 Evaluation of equality of treatment in “Retail” and “Wholesale” service offered by Telecom Italia	Res. 26/2013	9 Dicember 2013
Planned budget use for 2014	Res. 27/2013	9 Dicember 2013
Undertakings Group no. 1 Start-up of analyses concerning refusals to activate LLU systems due to presence of network multiplexers	Res. 28/2013	9 Dicember 2013
S02/13 - Fastweb/Malfunctions of the CRM system for Wholesale customers - Setting of a new deadline for termination of inquiry.	Res. 29/2013	9 Dicember 2013

6.B - PROGRESS OF THE TRANSITION TO THE NEW DELIVERY PROCESS

6.b.1 - General considerations

Undertakings Group No. 1 requires Telecom Italia to set up a New Delivery Process (NDP) in order to offer additional efficiency and transparency in the equality of treatment of OLO and retail customers.

In particular, the new process allows for identical operating procedures in the treatment of retail and wholesale customers in cases where services cannot be activated due to a lack of required network resources.

In accordance with the Undertakings plan, on 1 December 2009 Telecom Italia finalized the management software system for the new asymmetrical bitstream service delivery platform, while the extension to LLU and WLR services became available from April 2010. The new system consolidated the procedures for activating lines in the case where network resources are not sufficient: Work Orders are queued strictly by time of arrival, regardless of the Operator sending them and, following the development work to remedy the infrastructural deficiencies, the orders are completed according to their position in the queue.

As of 31 December 2013, a total of 118 Operators had joined the NDP system: 52 for the ATM bitstream service; 21 for Ethernet bitstream; 6 for Easy IP; 14 for WLR; 4 for Shared Access (SHA); and 21 for LLU services. The list of other licensed Operators, subdivided by service type, that have signed up to the NDP as of 31 December 2013 is shown below (Source: Telecom Italia).

ATM Bitstream Service (52 Operators):

OPERATOR	JOINING DATE	OPERATOR	JOINING DATE
INTERNET ONE s.r.l	01/12/2009	ACTIVE NETWORK S.p.A.	01/01/2011
Interactive Network s.r.l.	09/12/2009	SPIN	01/02/2011
Omninetwork S.r.l.	15/12/2009	Eutelia	01/04/2011
Raiffeisen Online Scarl	15/12/2009	SISTEMI UNO s.r.l.	26/05/2011
CONVERGENZE S.p.A.	16/12/2009	AEMNET S.p.A.	30/06/2011
Raising Unified Network S.p.A.	21/12/2009	ALIDA s.r.l.	01/07/2011
CDLAN S.r.l.	04/01/2010	COLT TECN. SERVICES S.p.A.	01/07/2011
UTILITY LINE	04/01/2010	IT.GATE S.p.a.	18/07/2011
Terralink s.r.l.	04/01/2010	MNET S.r.l.	16/09/ 2011
Consorzio METROLINK	05/01/2010	INTERCOM S.r.l.	19/10/2011
Infracom NA	11/01/2010	BT ITALIA S.p.A.	10/01/2012
Interplanet S.r.l.	20/01/2010	WIND TELECOMUNICAZIONI S.p.A.	16/01/2012
Abilene	15/02/2010	MULTIWIRE S.r.l.	23/01/2012
Telemedia.net	22/02/2010	VODAFONE OMNITEL N.V.	06/02/2012
Easynet Italia s.p.a	22/03/2010	KPNQWEST ITALIA S.p.A.	15/03/2012
Skywebtv	01/04/2010	ENTER S.r.l.	27/03/2012
Fontel	12/04/2010	WELCOME ITALIA S.p.A.	10/05/2012
EHINET	12/04/2010	AMT SERVICES S.r.l.	12/06/2012
ITELSI'	09/06/2010	UNIDATA S.p.A.	18/07/2012
Trivenet S.p.A.	15/07/2010	PHONEX INFORMATICA BANCARIA S.p.A.	10/12/2012
UNO COMMUNICATION	10/08/2010	MC LINK S.p.A.	14/01/2013
TISCALI Italia S.p.A.	30/09/2010	REDDER TELCO S.r.l	25/03/2013
S.PE. S.a.s.	02/11/2010	WIMORE S.r.l.	02/04/2013
TWT S.p.A.	22/11/2010	PANSERVICE S.a.S DI CUSEO F. & C.	08/04/2013
IFINET s.r.l	01/12/2010	KTECHNOLOGY S.r.l.	25/06/2013
FASTWEB	23/05/2011	OPTIMA ITALIA S.p.A.	26/06/2013

Ethernet Bitstream Service (21 Operators):

OPERATOR	JOINING DATE	OPERATOR	JOINING DATE
CONVERGENZE S.p.A.	01/02/2011	EASY NET ITALIA S.p.A.	14/01/2013
Interactive Network S.r.l.	29/08/2011	MC LINK S.p.A.	14/01/2013
MNET s.r.l	16/09/2011	WIMORE S.r.l	02/04/2013
VODAFONE OMNITEL N.V.	06/02/2012	BT ITALIA S.p.A.	05/04/2013
ENTER S.r.l.	27/03/2012	PANSERVICE S.a.S DI CUSEO F. & C.	08/04/2013
AMBROGIO S.r.l.	15/06/2012	ALIDA S.r.l.	15/04/2013
UNIDATA S.p.A.	18/07/2012	WELCOME ITALIA S.p.A.	22/04/2013
Raiffeisen Online Scarl	05/09/2012	FASTWEB	15/05/2013
T.W.T.	10/10/2012	WIND TELECOMUNICAZIONI S.p.A.	22/05/2013
PHONEX INFORMATICA BANCARIA S.p.A.	10/12/2012	CDLAN S.r.l.	25/06/2013
KLEOS Società Consortile s.r.l.	21/12/2012		

EASY IP Service (6 Operators):

OPERATOR	JOINING DATE	OPERATOR	JOINING DATE
AMBROGIO S.r.l.	14/06/2012	MULTIWIRE S.r.l.	25/06/2013
IDEA R&D S.r.l	27/05/2013	RETE-TEL S.r.l.	17/07/2013
INTERPLANET S.r.l.	06/06/2013	EHINET S.r.l.	01/11/2013

WLR Service (14 Operators):

OPERATOR	JOINING DATE	OPERATOR	JOINING DATE
T.W.T.	30/04/2010	AMBROGIO S.r.l.	15/06/2012
Eutelia	10/08/2010	INTRED TELECOMUNICAZIONI S.p.a.	15/06/2012
CONVERGENZE S.p.A.	16/12/2009	TELETU S.p.A.	23/07/2012
BELLNET INTERNATIONAL s.r.l.	10/02/2012	FASTWEB	23/07/2012
FONTEL s.p.a.	01/03/2012	INFRACOM ITALIA S.p.A.	09/10/2012
QCOM S.p.A.	09/05/2012	UNO COMMUNICATIONS	25/03/2013
SIPORTAL S.r.l.	14/06/2012	OPTIMA ITALIA S.p.A.	29/10/2013

LLU Service (21 Operators)

OPERATOR	JOINING DATE	OPERATOR	JOINING DATE
CONVERGENZE S.p.A.	16/12/2009	INTRED TELECOMUNICAZIONI S.p.a.	15/06/2012
Eutelia	01/04/2011	VODAFONE OMNITEL N.V.	09/07/2012
SIX COMM S.r.l.	01/06/2011	TELETU S.p.A.	23/07/2012
AMT SERVICES	30/06/2011	FASTWEB	23/07/2012
MNET S.r.l.	18/07/2011	INFRACOM ITALIA S.p.a.	09/10/2012
Skywebtv	02/11/2011	WELCOME ITALIA S.p.A.	26/11/2012
BT ITALIA S.p.A.	10/01/2012	BT Enia Telecomunicazioni S.p.A.	01/08/2013
PANSERVICE S.A.S. DI CUSEO F. & C.	20/02/2012	POSITIVO S.r.l.	01/09/2013
COLT TECNOLOGY SERVICES S.p.A.	28/03/2012	INERPLANET S.r.l.	09/09/2013
UNO COMMUNICATIONS S.p.A.	30/03/2012	TEX97 S.p.A.	10/10/2013
MC LINK S.p.A.	22/05/2012		

SHA Service (4 Operators):

OPERATOR	JOINING DATE
AMT SERVICES S.r.l.	30/06/2011
MNET s.r.l	18/07/2011
Skywebtv	02/11/2011
INERPLANET S.r.l.	09/09/2013

The graphs below show the percentage of NDP handled orders received in December 2013 out of the total number of OLO orders received in that month respectively for asymmetric bitstream, LLU, WLR, SHA services.

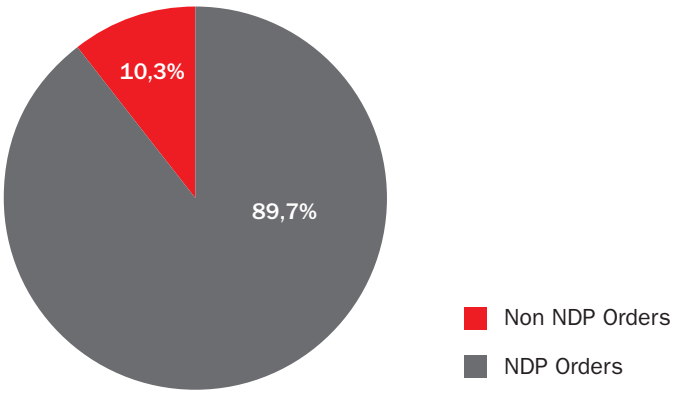


Figure 1 - Percentage of NDP orders for asymmetrical bitstream services

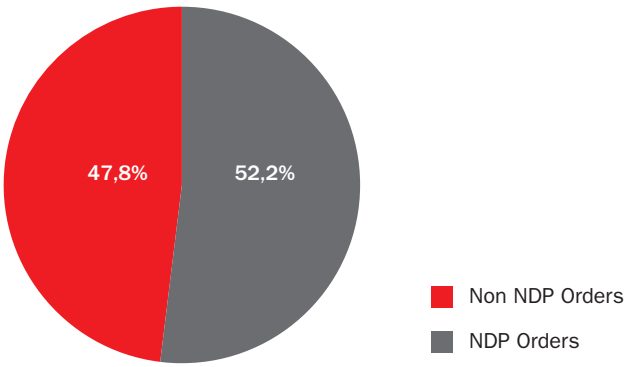


Figure 2 - Percentage of NDP orders for LLU services

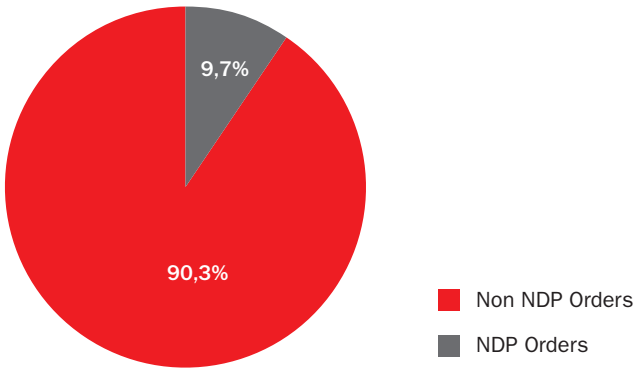


Figure 3 - Percentage of NDP orders for WLR services

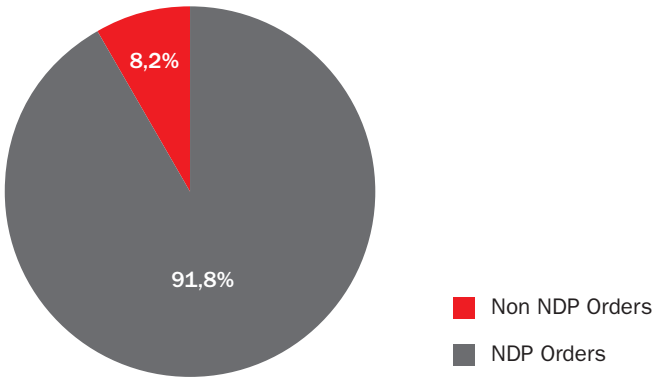


Figure 4 - Percentage of NDP orders for SHA services

6.b.2 - The "Single Queue" Management System in the New Delivery Process (NDP)

The New Delivery Process (NDP) has been designed so that all new installation requests - when there are not enough network resources available to activate them - are processed by Open Access exclusively by time of receipt, based on a First In First Out (FIFO) *Single Queue system:* the first Work Order received is the first to be processed, regardless of the Operator making the request. The queuing order is locked by an IT system that does not allow any intervention to change the order of the queued requests; indeed, there is no profile in the system that allows for changes to the priority order of the requests. The strict FIFO system implemented in all steps of the procedure also ensures that the system functions effectively, since Open Access technical staff cannot make discretionary decisions.

The procedure (see figure 5) is based on a clear separation of Open Access tasks and responsibilities between the operational functions responsible for managing the delivery process and the operational functions responsible for developing the network.

If network resources are not available when a new installation request comes in, the Order is tagged "No Network" and added automatically to the Single Queue.

This can happen, for example, in cases of complete lack of network (newly-built areas or areas being allotted, etc.) or where there is a network but it is saturated because there are no free pairs (the delivery request is tagged "No Network due to Network Saturation").

Once the saturated network element has been identified, the subsequent Work Orders relating to that element are tagged as "No Network" prior to on-field assignment.

The main objective of Open Access functions responsible for developing the network is to provide network resources (available pairs) to allow the orders waiting in the queue to be delivered. A single intervention request for the planning and development of the network is generated for each problem situation, thereby consolidating all new resource requirements. Technical staff have access to a table with the queued orders, the dashboard (number of orders in the queue and the number of pairs needed) and the scheduled date of resolution. If Open Access, during this step, receives a new request with the same address or network element as a saturated element, the system automatically tags it as “No Network” and adds it to the queue as described above.

Once the network has been expanded, the system detects the new pairs available in the database and automatically releases the orders, assigning the necessary resources to each order on a FIFO basis and making them available for subsequent delivery activities.

The system also automatically releases the orders when pairs become available due to terminations. However, the system can only begin this process after the “refresh” procedure has been launched. This is an overnight batch procedure that checks the availability of network resources against the requests in the queue, according to the established priorities. Once the order has been released by the system, the Open Access functions responsible for activating the installation will automatically be notified and will manage the meeting with the customer to activate the required service.

It is important to highlight that, other licensed Operators can monitor the status of their orders online. In particular, they can see the position of their order in the queue, the number of queued orders, their resolution dates or changes to those dates.

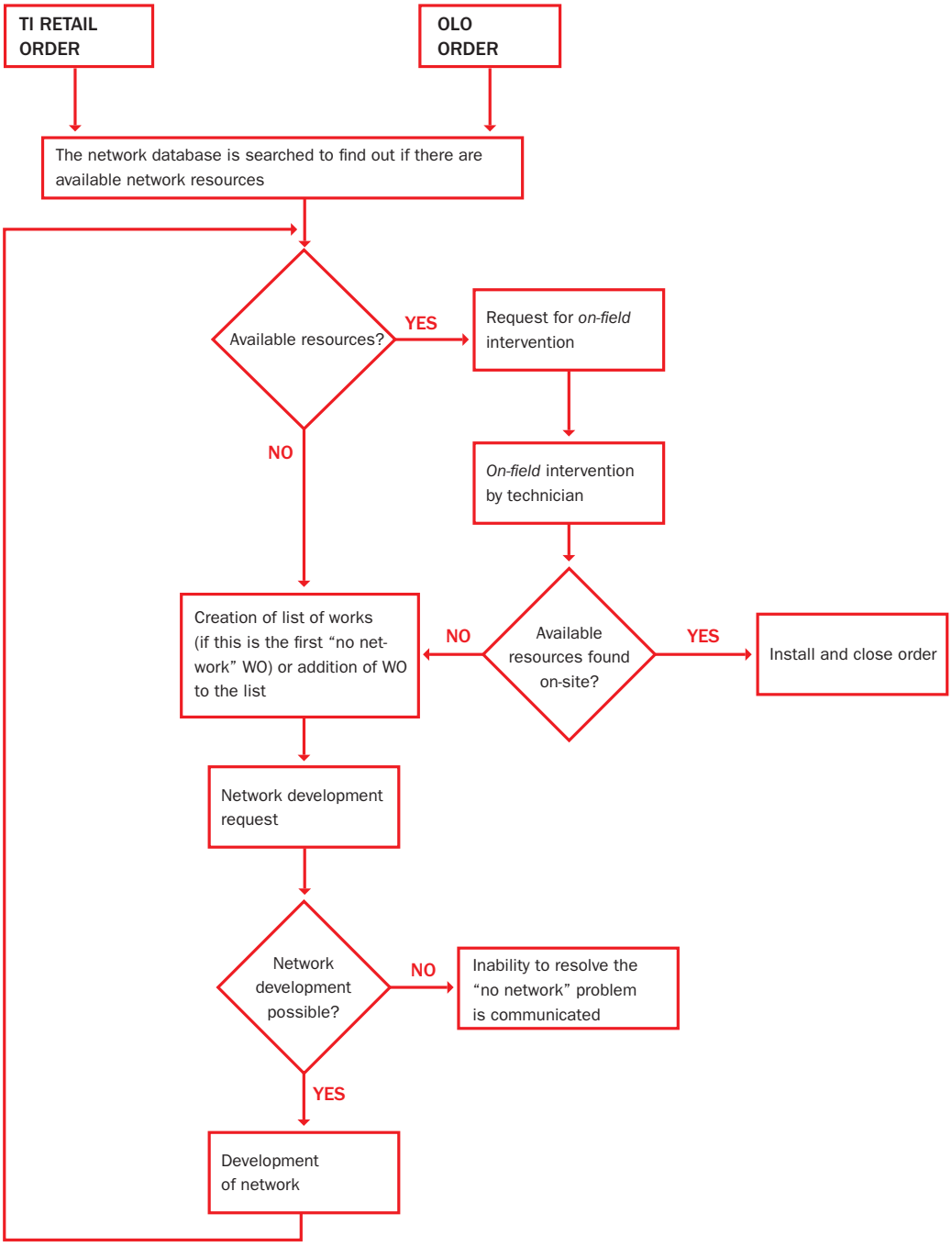


Figure 5 - Flowchart of the NDP procedure

By means of the Resolution No. 3/2013 of 20 February 2013, the Supervisory Board continued to carry out the checks started with Resolutions No. 8/2011 of 8 February 2011 and No. 12/2012 of 24 May 2012 with the purpose of obtaining information on the procedures for implementing the New Delivery Process and assessing its effectiveness, and to ensure correct management of the Work Order queuing system. The following paragraph gives a brief summary of the results obtained during the year.

6.b.3 - Monitoring activity

During 2013, the Supervisory Office has conducted 10 inspection sessions at the Open Access operational areas (geographic areas) targeted to check the correct application of the single queue management procedure of the New Delivery Process (NDP). Following the mandate assigned by the Supervisory Board with Resolution no. 03/2013, the Office examined all the orders of all the geographic areas that had been handled by the single queue process in the quarter previous to the checks and regarding cases of queues including at least one OLO order related to WLR, Bitstream and LLU services. The scope of the enquiry also included bitstream services on NGAN for which 4 cases of orders handled by the single queue system were recorded during 2013. The orders to be examined according to the aforesaid criteria were extracted from the system at the Open Access offices in Rome, in the presence of Supervisory Office personnel. For the first four inspections, which took place in the first half of the year, all the orders handled by the single queue process in the last quarter of 2012 were examined while the subsequent six inspections conducted in the second half considered all the orders closed in the quarter from 1 March to 31 May 2013. In the 10 geographic areas visited (Turin and Valle d'Aosta, Liguria, East Emilia, West Sicily, Rome Centre, Romagna, North Puglia, West Lombardy, East Sicily and Trentino Alto Adige) a total of 280 orders were examined, 126 of which were related to Bitstream services, 151 to LLU services and 3 to WLR services (see table and figure below).

GEOGRAPHIC AREA	Bitstream WO	LLU WO	WLR WO	Total WOs
Turin and Valle d'Aosta	25	16	1	42
Liguria	10	6	1	17
East Emilia	9	9	1	19
West Sicily	6	7	0	13
Rome Centre	4	38	0	42
Romagna	18	16	0	34
North Puglia	13	16	0	29
West Lombardy	19	28	0	47
East Sicily	14	11	0	25
Trentino Alto Adige	8	4	0	12
Total	126	151	3	280

Table 1 - detail of the orders examined during the inspections

Figure 6 - Geographical distribution of the orders examined

The following information was recorded for each order: locality, address, ordering OLO, type of network KO (network saturated or being allotted), date of issue of order, date of fulfilment, date of entry and exit from the queue, type of work carried out on the network. A detailed analysis was then made of the data related to any other orders present in the queue and the presence of the elements involved in the work on the project maps was confirmed. Bearing in mind the geographical location of the network elements, the areas of influence of the boxes declared to be saturated (in cases of network saturation) or the addresses of new buildings (in cases of new allotments) were considered and all the orders activated in that area of influence or that street were analysed to show any anomalies in the activations performed in the area considered and in the period when the queue was in force. The last phase of the inspection procedure was based on further extraction of data from the Wholesale systems, with a view to highlighting any orders closed (fulfilled or rejected) in the period when the queue was in force in the areas of influence of the network element declared to be saturated or in correspondence with addresses associated with new allotments.

During the analysis no cases of incorrect handling of the single queue process or situations that can be attributed to a difference in treatment between Telecom Italia customers and OLO customers were found. In no case were found any situations of anomalous activation of orders found where the "first in first out" criterion stated in procedure was not applied. However, 34 critical situations were found, connected to system anomalies that were already known or to incorrect conduct by network company personnel. A classification by type of the above criticalities is given below (see figure 7).

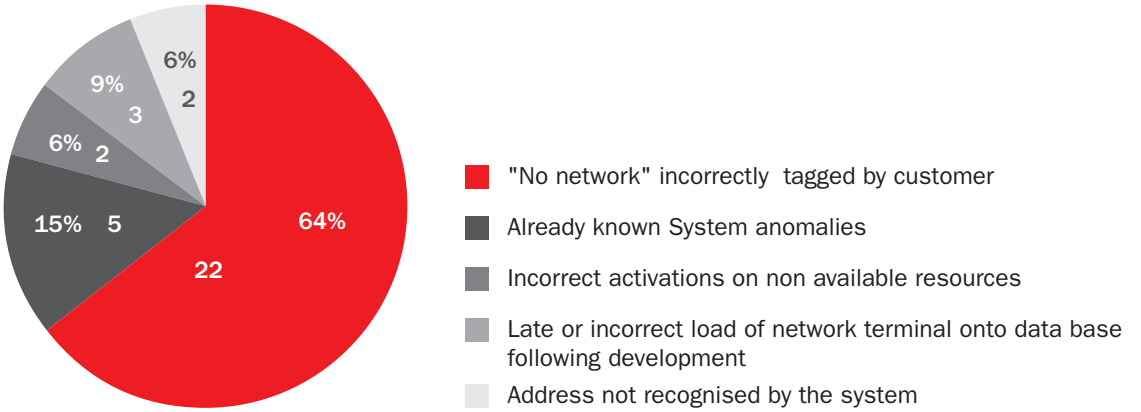


Figure 7 - Classification of criticalities found

It must be pointed out that in all cases concerned by the checks, the Open Access staff reacted to the process exceptions by performing manual operations, thus guaranteeing full and correct operation even under critical situations.

6.C - MONITORING ACTIVITIES CONDUCTED ON THE MANAGEMENT INCENTIVE SYSTEM, THE CODE OF CONDUCT AND THE PROFESSIONAL TRAINING SYSTEM

In compliance with the conditions established by Undertakings Group no. 2, the obligation to set up a new system of incentives and a code of conduct for its Open Access and Wholesale personnel, Telecom Italia has introduced a system of incentives for Open Access and Wholesale management, based on achievement of targets related to full compliance with equality of treatment, to satisfaction expressed by the OLOs purchasing SMP and co-location services and to the quality, security and efficiency of the access network (for Open Access).
The targets included in the area described above likewise apply to equality of treatment and satisfaction of the OLOs purchasing SMP and co-location services, as well as to the end-to-end quality of the SMP and co-location services supplied to the OLOs (for Wholesale).

At the same time, in compliance with the provisions of the aforesaid Undertakings Group, Telecom Italia has defined a code of conduct for its Open Access and Wholesale management and personnel and has revised its agreements with contractors introducing the requirement of compliance with the Undertakings for their employees, as well as developing training programmes for Open Access and Wholesale management and personnel.

It must be remembered on this subject that the Supervisory Board, by means of its Resolution no. 4/2009 dated 14 May 2009 made a number of Recommendations to Telecom Italia, suggesting that it should make corrections and changes to what had been achieved during the implementation of Undertakings Group no. 2.

The Supervisory Board acknowledged the revision of the measures intended to guarantee the confidentiality of the data related to the OLOs' customers and of the Code of Conduct.

A brief summary of Telecom Italia's main activities in relation to the subjects covered by aforesaid Undertakings Group No. 2, which the Supervisory Board monitored and assessed in the usual manner during the year is provided below.

6.c.1 - Staff training

Open Access

The Supervisory Board has ascertained that during 2013 Telecom Italia implemented all the necessary action for compliance with the training activity foreseen in the Undertakings.

The activities analysed and checked by the SB concerned a number of actions planned by Telecom Italia in 2012, in compliance with Resolutions nos. 152/02/CONS and 718/08/CONS, the effects of which continued up to the first half of 2013. In particular:

1. Following the closure of a number of sales branches (former DMO) in the North West, North East and South, 138 resources were assigned to the ASA Open Access area and these new employees were trained, using e-learning methods, on the contents of Resolutions 152/02/CONS and 718/98/CONS. This training, which began in December 2012, ended in March 2013.
2. During May 2013, training was provided in the 4 Operational Areas of Open Access with the aim of refreshing and consolidating knowledge on Telecom Italia Undertakings made to AGCom and to the market. During these training sessions, the Telecom Italia Undertakings and their application within the company, with particular reference to the contribution that the regional areas can make to compliance with the Undertakings themselves, were discussed in depth and confirmed. The areas of application of the training concerned network quality, delivery and assurance processes and the transparency of the technical plans. This training involved 56 resources (14 for each of the 4 regional areas) with medium-high profiles (4th levels in the organisation or 7-7Q in the field);
3. In 2013, the Company launched a training project related to effective handling of relations with OLOs and their customers. The aim of the project was to boost knowledge of the context in which ASA Open Access operates in the functions involved in handling of OLO tickets, with the aim of increasing knowledge of the rules and any possible constraints dictated by the Resolutions and by the Undertakings given by Telecom Italia.
   Starting from September 2012, 11 territorial training sessions each involving two days in the classroom (for a total of 161 resources from National Wholesale) on issues regarding behaviour/relations (in particular, to consolidate knowledge of the rules dictated by the AGCom Resolutions and provide communication tools to effectively guide relations with other Operators), were scheduled and were completed in March 2013.
4. In relation to the training plans scheduled and provided for Open Access personnel regarding communications and relations with customers, 3 two-day training sessions were organised for 39 resources redeployed in ASO. Each session involved 13 participants and ended in January 2013;
5. The "Handbook" on equality of treatment, addressed to all Open Access personnel, besides being published in a printed/laminated version for all technical personnel (employed both by Telecom Italia and by contractors), was published on the Open Access Intranet portal (OAK) for technical personnel. A training video on the

issues discussed in the Handbook was planned and made available on the same portal to further emphasize the message on Equality.

6. In June 2013, the training was completed for the local managers in the four Access Operations Areas (AOA), with specific reference to the new KPI system.
7. In November 2013, Telecom Italia created an application for all Open Access technical personnel called "mSAT" to circulate operational information for off-line consultation, with the aim of creating a simple and rapid operating guide for personnel in the field. This electronic manual, divided into various sections, also contains a part devoted to "Equality of Treatment", an area subject to the SB's inquiries. This section is currently being edited and will be checked subsequently to ensure its completeness and consistency with the subject of the Undertaking.

Another training operation begun in 2012 was the “ConTatto” project, whereby technical field personnel worked alongside call centre operators (“1 day wearing a headset”).

In 2013 the project involved 146 resources, subdivided as follows:

- 90 shadow training sessions for field technical personnel at the technical service structures, with rotation on front end, back office, specialist support and OLO disservice processing operations;
- 56 shadow training sessions for on-line technical personnel at the work centres, urban networks and on customer premises, to allow personnel working remotely to experience technical operations in the field in the event of disservice and delivery to Telecom Italia Retail and OLO Wholesale customers.

The purpose of the project was to agree field/on-line operating methods, compare respective technical experiences and enhance team spirit in with a view to solving disruptions.

National Wholesale Services

Continuing the activity of the previous years and in line with the duties assigned to it by the Undertakings, the Supervisory Board checked that Telecom Italia had fulfilled the following work plans:

1. *“Course on AGCom Resolutions 152/02/CONS and 718/08/CONS”*: in 2013 the training operations related to these matters were made available to new resources who in the meantime had been redeployed to the National Wholesale Service. In May, in particular, a classroom training session was held and was attended by 30 persons. The proposed training plan, in addition to information on said resolutions, included an opportunity to discuss the current national and international regulatory framework. A further 11 people made use of on-line training making an overall total of 41 participants.
2. *“Training/interactive communication with internal-external customers”*: Webinars, that is web conferencing tools, were already used in 2012 as a training/information aid, thus reducing the time and costs of organising and running training courses. In 2013, the same tool was used to provide training on the New Delivery Process and Self Ordering. The Webinar lasting 2 hours was held at the end of January for 5 Wind resources.
3. *“New Delivery Process - NDP”*: in relation to migration to the CRM 3.0 Platform, various in-depth sessions related to these aspects were conducted. In particular, with the customer Wind, a number of hours of training were conducted directly on the Operator's premises.

6.c.2 - The management incentive system

On 11 September 2013, the annual meeting on this issue was held between Telecom Italia and the Supervisory Board, during which the Company announced the final results of the 2012 MBO and presented the results for 2013, noting the differences.

At the end of the presentation, the Supervisory Board asked for a number of clarifications:

1. While not included in the Undertakings, the SB asked to be informed of the reason for the omission of the targets assigned to the Network Function in a previous Recommendation by the Supervisory Board, remaining convinced of the need to maintain these targets. Similarly, they asked the reason for the omission of the targets for the Regulatory Affairs function, on the contrary included for the previous years.
2. Regarding the recipients of MBO incentives, information on the criteria for selection of the resources to be assigned incentives and those excluded from them was requested, since it was clear from the presentation that not all the resources are involved in the targets related to the Undertakings. The SB then requested information on any deviations in the number of incentives awarded compared to the previous year.
3. By comparing the targets assigned to the Functions in 2012 with those proposed in 2013, it was noted that, in previous years, the Undertakings towards AGCom were differentiated between those assigned to the heads of departments and those assigned to the remaining management, while in the current year there is once again no such differentiation. The Board asked to be informed of the reasoning for this change in the structuring of the parameters.

The Supervisory Board stated that it would check the implementation of the observations made during the appraisal to be conducted in the management objectives assigned for the year 2014.

The following figures show a summary of the Undertakings-linked targets for 2013 and the 2012 Results.

PERSONNEL INVOLVED	WEIGHTING OF AVAILABLE OBJECTIVES	OBJECTIVES OF UNDERTAKINGS TO AGCOM	WEIGHTING	NO. INCENTIVISED
OPEN ACCESS	30%	OLO - Overall General Process Satisfaction Indicator Equal Treatment Retail - OLOs	10%	88/200
		(Undertaking no. 5) 254 Fault rate (%) SLA AGCom 254 (%) 254 80 percent repair time 254 95 percent repair time Switching cabinet upgrade Pole periodic review Pressurisers upgrade plan URR Ongoing (% on budget)	10%	49/200
		END-TO-END QUALITY - Sla Delivery and Assurance Sla on asymmetric bitstream delivery Sla on symmetric bitstream delivery Sla on asymmetric bitstream assurance Sla on symmetric bitstream assurance	10%	98/200
NATIONAL WHOLESALE SERVICES	40%	OLO - overall general process satisfaction indicator (30%) Equal treatment retail - OLOs (70%)	10%	18/18
		EBITDA NWS responsibility	10%	18/18

Figure 1 - Summary of undertakings-linked targets - 2013

	OBJECTIVES SUBJECT TO INCENTIVES	DEPARTMENTS INVOLVED	TARGET	GOAL WEIGHTING	NO. INCENTIVISED
	SPECIFIC OBJECTIVES OF UNDERTAKINGS VS. AGCOM				
1	**Equal treatment of Retail/OLO customers**	Open Access National Wholesale	140%	10%	74
2	**OLO Customer satisfaction**	National Wholesale	79%	5% - 10%	14
3	**CUSTOMER SATISFACTION (Assurance; Delivery + OLO with business focus)**	Open Access	128%	10%	175
4	**QUALITY OF THE UNIVERSAL ACCESS NETWORK** Fault rate SLA Percentage 80% Percentage 90%	Open Access	122,50%	10%	114
5	**DSLAM ATM and IP desaturation**	Network	140%	10%	1
6	**QUALITY of FIXED ACCESS NETWORK and related services** (Undertaking no. 5) Ongoing project (extended ongoing included) Cabinets upgrade project Poles project Pressuriser project “No network” cases project (remaining)	Open Access	115% - 120%	10%	29
7	**END-TO-END QUALITY - SPM services** Sla on asymmetric bitstream delivery Sla on symmetric bitstream delivery Sla on asymmetric bitstream assurance Sla on symmetric bitstream assurance	Open Access	107% - 131%	10%	73
8	**Objectives relating to the undertakings groups vs. AGCom**	Public & Regulatory Affairs	140%	10%	3

Figure 2 - 2012 Results

6.c.3 Measuring OLOs satisfaction

On 23 April 2013 the 2012 results of the Customer Satisfaction enquiry related to OLOs purchasing wholesale services were presented. During the meeting, the main activities conducted during 2012, the related results and the forecasts for activities in 2013 were described. More specifically, the action planned and carried out in areas specific to assessment of satisfaction (Sales, technical and administration areas and the web portal) were discussed. During the explanation of the procedures for conducting the new survey, the Members of the Supervisory Board acknowledged that the observations it had previously made had been accepted.

There were 150 companies involved in the interviews (80 in the first phase and 70 in the second). A total of 138 partial or full interviews were conducted.

The enquiry showed a situation of overall stability of the main reference indicators, within which elements emerged which are of specific interest for understanding trend in Wholesale customer satisfaction.

Based on these results, during 2013 Telecom Italia began a series of initiatives to overcome the problems found, and the most important of these are summarised below:

Sales Area

- greater care over customer support through structured action aiming to illustrate their expectations and market vision during special focus days;
- organisation of "one to many" meetings, as part of the Wholesale Tour, with the aim of understanding new expectations of customers;
- presentation of the results of the Customer Satisfaction survey and progress on the CRM project to customers, during the Wholesale4Customer event, with a view to receiving their comments and opinions;
- setting aside of a number of hours per month to be devoted to visiting customers;

Technical Area

- provision of tools and new functionalities to support system development, saleability analyses and tracking of customer requests;
- organisation of special training sessions reserved for the OLOs on the new CRM system;
- organisation of technical and targeted support workshops, on customer premises, for all Operators that have expressed a negative assessment of the service;

Administration Area

- provision of special and targeted action aiming to improve invoicing processes;
- start-up of an interfunctional project to define and introduce paperless processes (certified e-mail, digital signatures, digitisation of contracts, etc.);
- introduction of technical committees on third-party invoicing;

Portal

- reorganisation of the contents to provide fuller and clearer information;
- setting up of an editorial committee to promote optimum management of the portal;
- creation of a monitoring system to log accesses to each page of the website;

6.D - CERTIFICATION OF PERFORMANCE INDICATORS FOR EQUALITY OF TREATMENT

The objective of Undertakings Group No. 3 is to establish a system for monitoring the performance of Open Access in supplying SMP services both to OLOs customers and to Telecom Italia Retail customers. This allows comparison between performance levels achieved in supply of services to customers in the first group and the corresponding performance levels attained when carrying out work orders received from customers in the second group, thus ensuring the possibility of checking effective compliance with the principle of internal-external equality of treatment.

6.d.1 Basket of performance indicators

Telecom Italia initially proposed a basket of Key Performance Indicators (KPIs), to which other indicators defined in agreement with the Other Licensed Operators were subsequently added following the meetings of the technical committees in 2009 and 2010.

In 2011 meetings were held between Telecom Italia, the OLOs and AGCom's Undertakings Monitoring Group (GMI) with a view to simplifying and streamlining the basket of indicators. Once the new KPIs are approved by AGCom, the Supervisory Board will also verify them in accordance with the Undertakings.
The following table provides a brief description of indicators currently in force:

KPI		RETAIL	WHOLESALE
KPI 1	POTS Lines Delivery	Retail percentage of on-time appointment	Retail percentage of on-time appointment
		Percentage of work orders completed within 20 calendar days	Percentage of work orders completed within 20 calendar days
		Average SPM OA working time in calendar days	Average SPM OA working time in calendar days
	Asymmetrical Broadband Delivery	Percentage of work orders completed within 10 calendar days without a technician visit	Percentage of work orders completed within 10 calendar days without a technician visit
		Percentage of work orders completed within 20 calendar days with a technician visit	Percentage of work orders completed within 20 calendar days with a technician visit
		Percentage of work orders completed within 30 calendar days with a technician visit	Percentage of work orders completed within 30 calendar days with a technician visit
		Average SPM OA working time in calendar days	Average SPM OA working time in calendar days
	Asymmetrical Broadband Delivery	Average SPM OA working time in calendar days	Average SPM OA working time in calendar days
	New Delivery Process Indicators: Network KO/Single Queue	Percentage of work orders in single queue solved	Percentage of work orders in single queue solved
		Aging in Single Queue	*Aging in Single Queue*
		Percentage of work orders closed on time	Percentage of work orders closed at EDD
		Percentage of network KO work orders	Percentage of network KO work orders
KPI 2	POTS Lines Assurance	Average repair times expressed in working hours	Average repair times expressed in working hours
		Percentage of TTs resolved within two working days	Percentage of TTs resolved within two working days
		Percentage of TTs recurring within 30 days	Percentage of TTs recurring within 30 days
		Percentage of claimants circuits	Percentage of claimants circuits
	Asymmetrical Broadband Assurance	Average repair times expressed in working hours	Average repair times expressed in working hours
		Percentage of TTs repaired within two working days	Percentage of TTs repaired within two working days
		Percentage of TTs recurring within 30 days	Percentage of TTs recurring within 30 days
		Percentage of TTs opened within 14 days of activation	Percentage of TTs opened within 14 days of activation
	Symmetrical Broadband Assurance	Average repair times expressed in working hours	Average repair times expressed in working hours
		Percentage TTs resolved within two working days	Percentage TTs resolved within two working days
		Percentage of TTs recurring within 30 days	Percentage of TTs recurring within 30 days
		Percentage of TTs opened within 14 days of activation	Percentage of TTs opened within 14 days of activation
KPI 3	Services availability	- POTS Lines Services - ADSL Services - Symmetric Bitstream Services	
KPI 4	Wholesale systems unavailability	- POTS Lines / Broadband Delivery - POTS Lines / Broadband Assurance	
		- Interface systems	

6.d.2 Validation of basic data used to calculate KPIs

In order to provide all OLOs with adequate assurances on the reliability of the figures from the indicators, Telecom Italia launched a project, under the instruction and supervision of the Supervisory Board, to validate the Key Performance Indicators, their calculation methods and the method for extracting basic data from Telecom Italia database, which is certified by Catania University.
A "secure" database was created for this purpose which assures the unalterable nature of the figures used to calculate performance indicators through an access control system. In addition, a data sampling model was created that enables checks to be made, as required, on whether the data supplied by Telecom Italia matches the data extracted from the system.
Both the first group of indicators (initially proposed by Telecom Italia) and the second group (including the KPIs from the technical meetings in 2010 between Telecom Italia and the OLOs) were validated in 2011 and 2012.
The validation methodology can also be used again for the indicators in the new basket currently being devised, in order to ensure the same level of confidence achieved with the current KPIs.

6.d.3 Checks carried out by the Supervisory Office

The Supervisory Office conducted sample checks during 2011 and 2012 on the correct operation of the validation system and of the basic data. Similar checks were conducted in 2013 too, pursuant to Resolution 4/2013[1].
The checks were conducted during 2013 calendar year; each monthly sampling examined a sample of 386 Work Orders for the Delivery process (KPI 1) and 947 Trouble Tickets for the assurance process (KPI 2), amounting to a total of 1,333 items. The data was sampled from the databases in the presence of Open Access and Supervisory Office staff, following the procedure agreed with Catania University.
The analyses did not reveal any problems that could compromise the accuracy of the data shown: there were no significant differences between the data extracted from the systems and the corresponding data from the operational databases used to calculate the KPIs set out in Undertakings Group No. 4.
However, one of the fields in the files extracted from the system presented some apparent anomalies. The Supervisory Office conducted suitable checks which ascertained that the anomalies were due to the late alignment of auxiliary data systems, which do not compromise the use of the KPI calculation formulas. The issue did not, moreover, compromise the results of the analysis since it only affected a very small number of items. In addition, these figures are not used to calculate KPIs for Undertakings Group No. 4 and did not, therefore, have an impact on the calculation of performance indicators.
In its meeting on 13 February 2014, the Supervisory Board adopted Resolution No. 5/2014[2] containing the Supervisory Office's final report on the analysis conducted by it.
The report, which describes the monitoring work carried out and the conclusions drawn from the analyses, confirmed the effectiveness of the validation system used by Telecom Italia and consequently the reliability of the data employed to calculate the KPIs currently used for Undertakings Group No. 4.

NOTES

[1] organodivigilanza.telecomitalia.it/pdf/Determinazione_n4-2013-Chiusura_attivita_vigilanza_su_certificazione-LIGHT.pdf

[2] organodivigilanza.telecomitalia.it/pdf/Determinazione-n-5-2014.pdf

6.E - ANALYSIS OF EQUALITY OF TREATMENT KPIs

The Undertakings Group no. 4 envisages that Telecom Italia should issue periodic reports related to a basket of Key Performance Indicators (KPI) that enable checks on compliance with the principle of internal-external equality of treatment with regard to supply of SMP services by Open Access, both to the Telecom Italia *Retail* Division and to Other Licensed Operators. Telecom Italia initially proposed a group of indicators, according to the provisions of the proposed Undertakings. Other indicators defined in agreement with the Other Licensed Operators were subsequently added to these initial indicators following the meetings of the technical committees in 2009 and 2010. The aim was to prepare a tool that will enable comparison of Open Access performance levels when supplying SMP services offered to OLOs with similar services offered to the Telecom Italia retail division, rather than ascertaining compliance with the Service Level Agreements (SLA).
During 2013 Telecom Italia sent monthly and quarterly progress reports on the indicators included in the basket to the Supervisory Board, as envisaged in Undertaking no. 4.
In consideration of the clear differences in the performance indicators referring to the OLOs and to Telecom Italia retail, the Supervisory Board opened an investigation to ascertain the causes.
This complex matter was the subject of specific and ongoing discussions with the Open Access managing director during the monthly meetings of the Members of the Supervisory Board who, in November 2013, decided to formally set down a detailed analysis of the causes of the deviation to ascertain whether there are currently breaches of equality of treatment and, at the same time, to draw useful indications for review of the basket and the calculation formulas by AGCom.
The results of the 2013 KPI analysis and of the action taken by the Supervisory Board as part of its monitoring activity are given below.

6.e.1 - Overall KPI trend in 2013

KPI 1 - Voice and Broadband Delivery

KPI 1 - DELIVERY

Fig.	POTS services
1	% appointment compliance / EDD[1]
2	% connections activated within 20 days[1]
3	average connection time (days)[1]
	Broadband
4	% connections made within 10 days without technical assistance required
5	% connections made within 20 days with technical assistance required
6	% connections made within 30 days with technical assistance required
7	average connection time (days)
8	average business connection working time (days)[2]

Service levels in the OLO segment proved to be higher than or equal to the Retail segment

Service levels proved to be higher for the *Retail* segment than the OLO segment, but the situation is not critical since the gap is extremely small or can be justified by technical reasons

Service levels proved to be higher for the Retail segment compared to the OLO segment, with possible serious issues to be investigated

NOTES

[1] *Performance* differential between the segments is contained and/or justified by the different process structure.

[2] Indicator for which further information was requested under Resolution no. 16/2011.

POTS Delivery

In 2013, the three POTS service delivery indicators shown in the table constantly indicate over the months that services to the *Retail* segment were slightly more favourable than those to the Wholesale segment. However, the performances were not deemed critical, since the performance differential was limited, or attributable to technical reasons.

This is the case, for example, for the indicator measuring the level of compliance with voice delivery appointments. For customers of OLOs, the Open Access department receives an *"expected delivery date"* (the so called DAC, Data di Attesa Consegna), which is the date by which the system must be activated, whereas for Telecom Italia customers it is an actual appointment date.

Broadband Delivery

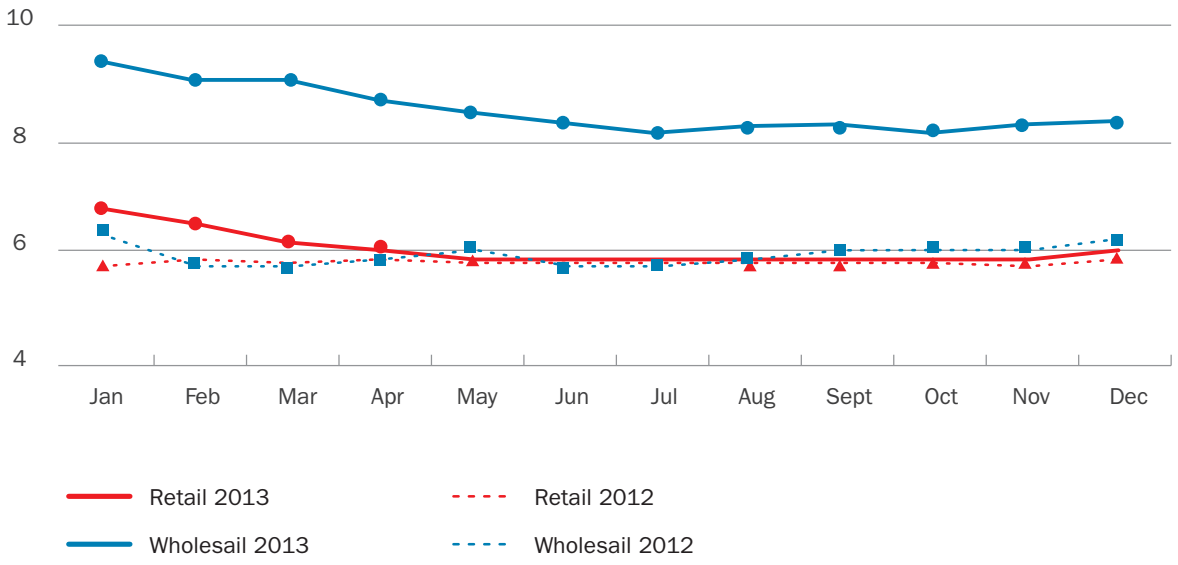
All the indicators show better performance for the *Retail* segment.

However, while for **KPI no. 4** - *percentage of lines provided within 10 calendar days without a visit by a technician* - there is almost no difference, for the other indicators the delta is significant.

With regard to the *Retail* percentage of *Work Orders completed in 20 calendar days* **(KPI no. 5),** the progressive differential stabilised in December 2013 at a level of 5.8 percentage points (p.p.).

The percentage of lines provided within 30 days of visits by technicians **(KPI n. 6)** too, shows better performances for Telecom Italia customers (*Retail*: 98.0%; *Wholesale*: 95.2%, with a gap of 2.8 p.p.).

The average processing time in calendar days **(KPI no. 7)** is 2.3 days shorter for operations conducted for Telecom Italia customers than those conducted for OLO customers; this figure remained substantially stable throughout the year. Comparing the OLO and *Retail* segments for 2012 and 2013, there has been a decline in the *Wholesale* result from last year to this year.



N.B.

The graph shows the progressive results (various average performances in the twelve months of 2013).

Indicator no. 8, *average business connection working time,* in the previous years already showed performances more favourable to the *Retail* segment. With reference to this indicator, therefore, the Supervisory Board conducted specific analyses in 2011: in fact, a number of requests were made to Telecom Italia in Resolution no. 16/2011; from the replies provided it was possible to deduce that the performance gap was connected with a process change adopted during the year, involving the introduction of an experimental order management model. Once adjusted for the change, the performance gap between the two segments was reduced considerably, attaining non-critical levels. The Supervisory Board concluded the investigation by passing Resolution no. 5/2012 , noting that, after adjustment to take account of the effect of the change, the performance levels complied with the principles of equality of treatment.

NOTES

[1] organodivigilanza.telecomitalia.it/pdf/Determinazione_n.5.2012_Chiusura_vigilanza_KPI_Relazione_conclusiva-Light.pdf

Open Access also supplied other technical explanations for the performances to the Supervisory Board during 2013:

- The main cause for misalignment of the performances can be attributed to the series of orders on which the formula agreed with the OLOs and AGCom in 2008 for delivery process indicators is calculated: in fact, the data measured for this formula also includes contract projects, which at that time were negligible for the *Wholesale* segment and totally absent from the *Retail* segment since the reference area for Telecom is limited to Consumer customers only. The situation has changed considerably over the ensuing years: while contract deliveries continue to be absent for *Retail*, they have increased substantially for *Wholesale*, with particularly significant peaks in the first quarter of 2013. Contract orders have delivery times agreed with the customer which are usually much higher than standard deliveries.
- Performances in the early months of the year, moreover, were impacted by the management problems encountered by the "North-east area" with a number of supplier contractors.

However, referring to the said Delivery KPIs, the Supervisory Board decided that an in-depth analysis of the reasons for these performances would be advisable, given that in some cases they differ considerably from those of 2012. For this reason, during the Meeting of the Board held in October, Resolution no. 21/2013 was passed, requesting a series of detailed information from Telecom Italia (see box).
In particular, Telecom Italia was asked to provide information on the underlying causes of the differences in the performance levels achieved; a description of the processes applied to OLO customers and to *Retail* customers; the total numbers of lines activated during the year broken down between the two segments and the monthly volumes of activated lines.

KPI 1 - New Delivery Process

Given the low volumes involved, in 2013 too, NDP performance indicators (% Single Queue WOs resolved; % WOs completed by appointment date/DVD; % WOs in KO Network; Single Queue waiting times) are still not significant.

However, it has been seen that for a significant number of months they were not available due to system anomalies. On this point too, in Resolution no. 21/2013, the Supervisory Board requested details on the causes preventing data collection, as well as a preliminary estimate of the figures not published.

Resolution no. 21/2013

During the course of routine monitoring of Open Access performance indicators, according to the provisions of Undertakings Group no. 4, the Supervisory Board noted that some of the KPIs seemed to show more favourable performances for customers of the incumbent Operator, Telecom Italia, to the detriment of the customers of Other Licensed Operators.

During the Board Meeting held on 16 October 2013, the SB passed Resolution no. 21/2013 initiating a specific inquiry, lasting 12 months, into Open Access' performance indicator monitoring system, to ascertain the causes of the gap recorded between *Retail* and *Wholesale* segment performances and, if possible, to point out any modifications to the process or any external factors which may have had an impact on the said performances. The SB asked Telecom for a series of specifications and detailed information on the various indicators; in particular:

- **Regarding Delivery indicators:**
  - **Lines delivered within 20 and 30 days**
  - **Average business connection processing time**

  a detailed description of the processes, highlighting the differences between the one applied to *Retail* customers and the one applied to *Wholesale* customers, detailing the monthly performance differences between the two segments, and indicating the total number of lines delivered for Telecom Italia *Retail* and for the OLOs. Supply any useful indication which may explain the data measured, and recalculating the monthly data for 2013 if modifications to the process are detected.

  Referring to the "average business connection working time" KPI, already analysed in 2011 during a special investigation, the monthly volumes of lines delivered in 2013, as well as any information useful for justifying the deviations.

  - **New Delivery Process Indicators:**

  supply details on the causes that prevented measurement of performance indicators, for several months during 2013; the best possible estimate of the data not published was also requested.

- **Regarding Assurance indicators:**
  - **Percentage of faults recurring within 30 days**
  - **Percentage of faults opened within 14 days of activation**

  a detailed description of the processes, highlighting the differences between the one applied to *Retail* customers and the one applied to *Wholesale* customers, reporting the totals for the number of faults and the number of active connections divided between Telecom Italia *Retail* and the OLOs. Supply any useful indication which may explain the data measured, and recalculating the monthly data for 2013 if modifications to the process are detected.

  Referring to the "Percentage of faults opened within 14 days of activation" indicator, recalculation of the KPI for each month in 2013, using the number of activations in the reference period as the denominator instead of the total number of Trouble Tickets.

NOTES

[2]organodivigilanza.telecomitalia.it/pdf/Determinazione_n_21-2013-Avvio_vigilanza_su_KPI.pdf

	KPIs	Shared Recommendations	Specific Recommendations
Delivery KPI	Lines delivered within 20 and 30 days	• Detailed description of the processes, highlighting the differences between the one applied to *Retail* customers and the one applied to *Wholesale* customers, detailing the monthly performance differences between the two segments, and indicating the total number of lines delivered for Telecom Italia *Retail* and for the OLOs • Any useful indication which may explain the data measured, and recalculation of the monthly data for 2013 if modifications to the process are detected	Referring to the "average business connection working time" KPI, which was already covered by a special investigation in 2011, the monthly volumes of lines delivered in 2013, as well as any information useful for justifying the deviations
	Average connection processing time		
	New Delivery Process Indicators	• Supply details on the causes that prevented measurement of performance indicators, for several months during 2013; • Supply the best possible estimate of the data not published	
Assurance KPI	Percentage of faults recurring within 30 days	• Detailed description of the processes, highlighting the differences between the one applied to *Retail* customers and the one applied to *Wholesale* customers, reporting the totals for the number of faults and the number of active connections divided between Telecom Italia *Retail* and the OLOs • Notification of any useful indication which may explain the data measured, and recalculation of the monthly data for 2013 if modifications to the process are detected	Recalculation of the KPI for each month in 2013, using the number of activations in the reference period as the denominator instead of the total number of Trouble Tickets.
	Percentage of faults opened within 14 days of activation		

KPI 2 - Voice and Broadband Assurance

Fig.	KPI 2 - ASSURANCE
	POTS services
9	average time for repair of voice connections in working hours
10	% faults resolved within 2 days of being reported
11	% POTS services faults recurring within 30 days
12	% closed claims
	Asymmetric broadband
13	average time for repair of *broadband* ADSL in working hours
14	% faults resolved within 2 days of being reported
15	% ADSL faults recurring within 30 days[1]
16	% faults reported within 14 days of activation[2]
	Symmetric broadband
17	average symmetric bitstream *broadband* repair times in hours
18	% symmetric bitstream *broadband* faults repaired within 2 working days
19	% symmetric *broadband* faults recurring within 30 days
20	% faults reported within 14 days of activation[3]

Service levels in the OLO segment proved to be higher than or equal to the *Retail* segment

Service levels proved to be higher for the *Retail* segment than the OLO segment, but the situation is not critical since the gap is extremely small or can be justified by technical reasons

Service levels proved to be higher for the *Retail* segment compared to the OLO segment, with possible serious issues to be investigated

NOTES

[1] Indicator for which further information was requested under Resolution no. 16/2011.

[2] Performance differential justified by the construction of the indicator's formula.

[3] KPI which cannot be compared due to the low volumes in the retail component.

Voice Assurance

All the indicators showed better performances for the customers of Other Licensed Operators during the year in question.

Broadband Assurance

Asymmetrical broadband

Regarding the **asymmetrical** service, the two KPIs showing better performances for the *Retail* segment (**KPI no. 15:** *Percentage of ADSL faults recurring within 30 days; KPI no. 16: percentage of faults opened within 14 days of activation*) have already been analysed by the Supervisory Board.

With regard to the first of these two indicators, in fact, the Supervisory Board, through its Resolution No. 16/2011, requested information on the matter. It was found that the Open Access performance indicators were heavily affected by differences in the percentage of naked lines in the two segments, which was minimal for *Retail*, while it had a significant impact on the *Wholesale* segment. Naked lines are used exclusively for data services only,

whereas shared lines are used for both data and voice services. Faults occurring on a shared line can be attributed by the end user to either the voice or ADSL service, whereas on naked lines, faults are always attributed to ADSL services, even where they are connected to voice services. This results in a markedly higher rate of recurring faults on naked lines.

It must also be considered that SLAs for solution of faults are much stricter in the event of OLO faults (for *Retail* SLAs, the standard resolution time for faults is two working days from the Complaint, while for *Wholesale* SLAs trouble tickets (TTs) must be resolved within 24 hours of the Complaint, resulting in shorter processing times, work performed at inconvenient hours, when customers cannot always be contacted and logistic and environmental conditions are not optimal, and, ultimately, in a greater likelihood of faults recurring.

Said investigation was closed by the Supervisory Board by Resolution No. 5/2012. However, in 2013, the Supervisory Board, in Resolution no. 21/2013 (see box), asked Telecom Italia to provide information on the underlying causes of the measured data, and the total numbers of faults and connections for the *Retail* and OLO segments.

The performances shown by KPI for the percentage of faults within 14 days of activation **(KPI No. 16)** on the contrary can be accounted for by the way the calculation formula is constructed. The indicator is defined as the number of TTs opened within 14 days of activation as a proportion of total TTs for the reference period. Since the total number of TTs in the *Retail* segment is much higher than the total number of TTs for other licensed Operators, the resulting rate is necessarily higher for OLOs.

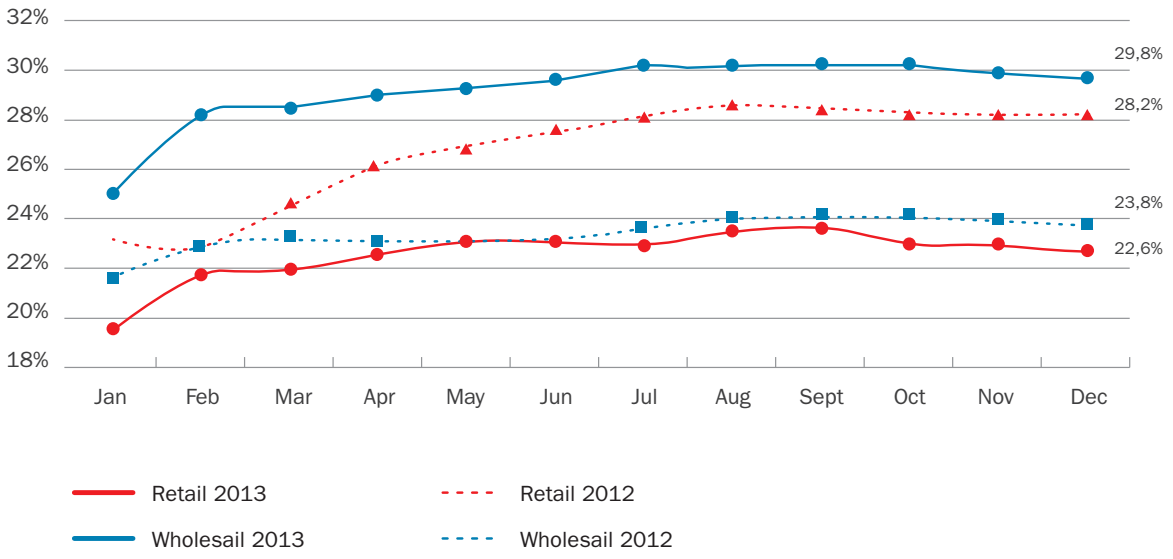
The Supervisory Board asked Telecom Italia to reformulate this indicator, using the number of lines activated in the period as the denominator: the 2011 values recalculated using this formula showed a difference of 0.8 percentage points to the advantage of the *Wholesale* segment (7.6% for *Retail* versus 6.8% for *Wholesale*), which overturns the 12.9 percentage points in favour of the *Retail* segment (2.8% for *Retail* against 15.7% for *Wholesale*) that were calculated from the figures initially reported.

The Supervisory Board in Resolution no. 21/2013 also asked Telecom Italia to provide the figures for 2013 resulting from the same reformulation, that is using the number of activations for the period as the denominator.

Symmetrical broadband

With regard to the **symmetrical** service, **KPI no. 19** *(percentage of symmetric bitstream faults recurring within 30 days)* shows consistent differences in performance in favour of the *Retail* segment. At year end the difference is 7.2 p.p (22.6% *Retail* vs. 29.8% *Wholesale*).

The turnaround that occurred from 2012 to 2013, which can be seen in the following graph is worth noting:



From a situation in which there were almost constantly 5 p.p. in favour of the OLOs in the second half of 2012, there are now more than 7 p.p. in favour of *Retail*.

It should also be remembered that the volumes analysed are limited and therefore not particularly significant.

KPI no. 20 is not significant given the very low volumes analysed.

In this case too, however, the Supervisory Board deemed that it was advisable to investigate the underlying reasons for the performances that were measured; Resolution no. 21/2013, in fact, also includes requests regarding these two indicators. In particular, Telecom Italia was asked:

- with regard to KPI 19, to provide information on the underlying causes of the differences in the reported values; a description of the processes applied to OLO customers and to *Retail* customers; the total numbers of lines activated during the year broken down between the two segments and the monthly volumes of activated lines
- for KPI 20, to provide the data resulting for 2013 according to the above reformulation, that is using the number of activations in the period (see KPI 16).

KPI 3 - Service Availability

This set of KPIs measures service availability over time, calculated as a ratio of the actual time services are operating to the theoretical time services should ideally be operating.
The indicators are constructed on the following basis:

$$\text{Percentage of Availability} = \frac{\text{Actual Time}}{\text{Theoretical Time}} * 100$$

Where:
Actual Time is the theoretical time less average downtime for the user base experiencing downtime;
Theoretical Time is the observation period multiplied by the average active user base for the.

As far as KPI 3 is concerned, the service availability performances constantly remained at extremely high levels during the year, and no problems arose.

KPI 4 - Unavailability of Wholesale Systems

This indicator measures the percentage unavailability of IT systems supporting assurance and delivery processes. Data are aggregated for each service in order to highlight any effects on the related process indicators.
The indicators are constructed on the following basis:

$$\text{Percentage of Availability} = \frac{\text{Actual Time}}{\text{Theoretical Time}} * 100$$

Where:
Actual Time is the time that service support systems are actually operating (theoretical time less downtime);
Theoretical Time is the time that the system should be operating (agreed operating time).

The percentage unavailability and percentage availability are complements equalling 100.
The results take into account the optimized architecture of the systems, and so a system breakdown will not necessarily result in an interruption of assurance or delivery activities.

KPI 4 analyses three groups of data:
- Percentages of Delivery system unavailability
- Percentages of Assurance system unavailability
- Availability of delivery interface management applications

In 2013, the performance levels were more than satisfactory, since the percentages of system unavailability remained at very low levels, and in many cases were equal to 0%.

During 2013 the new *Wholesale* CRM envisaged by Undertakings Group no. 1 progressively went into operation for an increasingly broader base of user Operators. From August, after finishing the porting of services associated with releases 1.0, 2.0 and 3.0 to the Wholesale CRM platform, Telecom Italia included it in the list of Delivery systems for which the level of availability is analysed.
The Supervisory Board requested further details on the method of calculation used. In fact, the indicator is formed as follows:

(Actual time / Theoretical time) x 100

Where:
Actual time is the time when the systems supporting the service are actually available
(theoretical time - downtime intervals)
Theoretical time is the time interval during which the system must be available (agreed operating time)

(source: Telecom Italia report)

The Actual time, however, should not express the time during which the system is "ON", but rather the time during which all the functions envisaged in the specifications of the system itself effectively prove to be working and comply with the project specifications. This problem is currently being analysed since it is linked to Complaint S02/2013.

6.e.2 Analysis of individual KPI trends in 2013

KPI 1 - Voice Delivery

Compliance with RETAIL Appointments vs. WHOLESALE EDDs

In 2013, service levels were higher in the *Retail* segment than in the *Wholesale* segment: the progressive data for the year end was 98.1% for *Retail* compared to 97.0 % for *Wholesale*, with a gap that was substantially stable at around one percentage point (p.p.).

The performance results were also influenced by process differences between the two segments. For the customers of OLOs, Open Access receives an "Expected Delivery Date", which is the date by which the system must be activated, whereas for Telecom Italia customers, the department receives an actual appointment date.

N.B. THE CHARTS BELOW SHOW

- the Telecom Italia *RETAIL* segment in RED
- the *WHOLESALE* segment in GREY

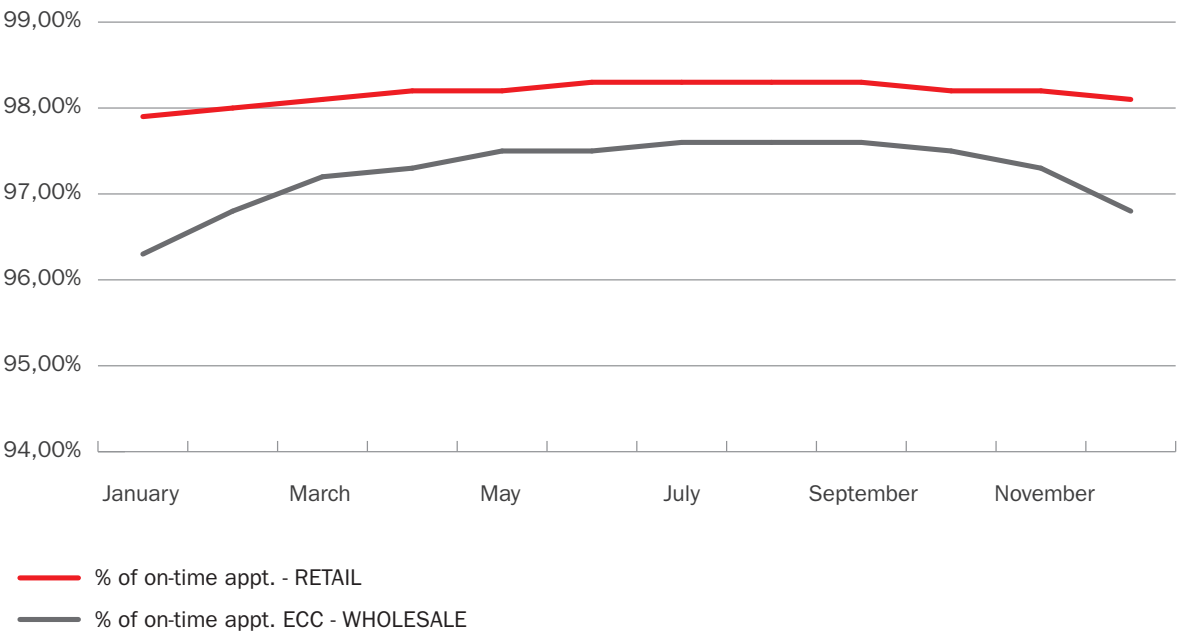


Figure 1 - Percentage compliance with appointments

Percentage of lines activated within 20 calendar days

The percentage of lines activated by Open Access within 20 calendar days in December was higher for the *Retail* segment (96.6% versus 95.1% for *Wholesale*): the end of year gap was 1.5 p.p., reduced from the levels at the beginning of the year (in January it was 3.2 p.p.; in February it was 2.4 p.p.).

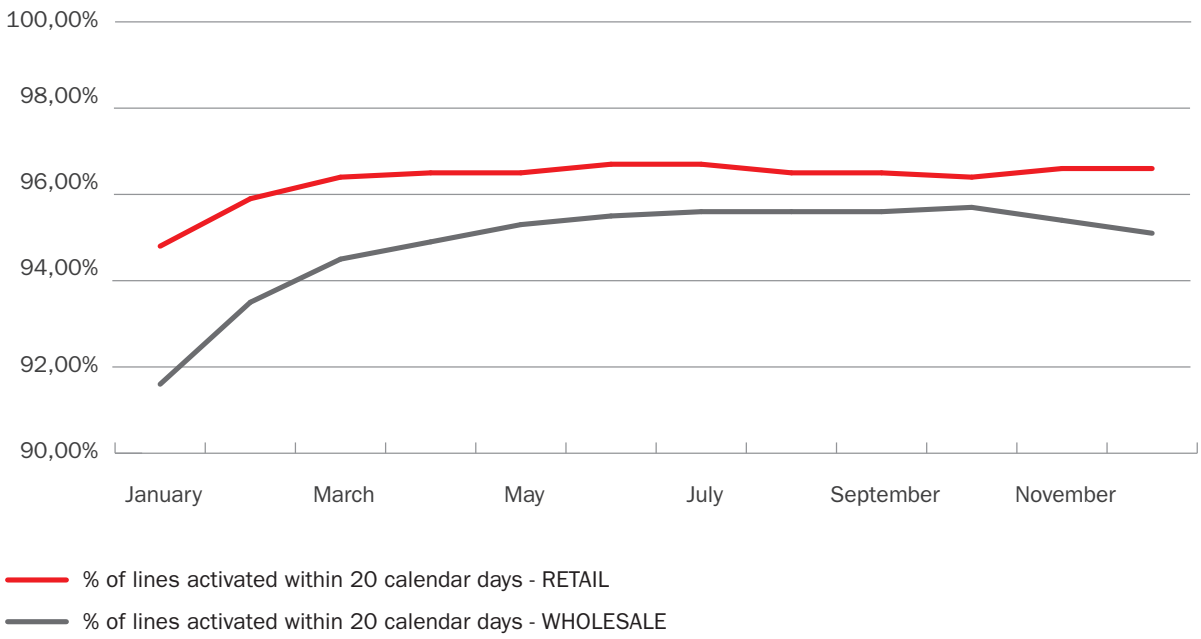


Figure 2 - Percentage of lines activated within 20 calendar days

Average voice delivery processing time (calendar days)

The average voice delivery processing time decreased in both segments; performances remained speedier for Telecom Italia customers.

In particular, times in the *Retail* segment decreased from 8.2 days in January to 7.0 in December, while in the *Wholesale* segment they were reduced from 9.3 days at the beginning of the year to 8.1.

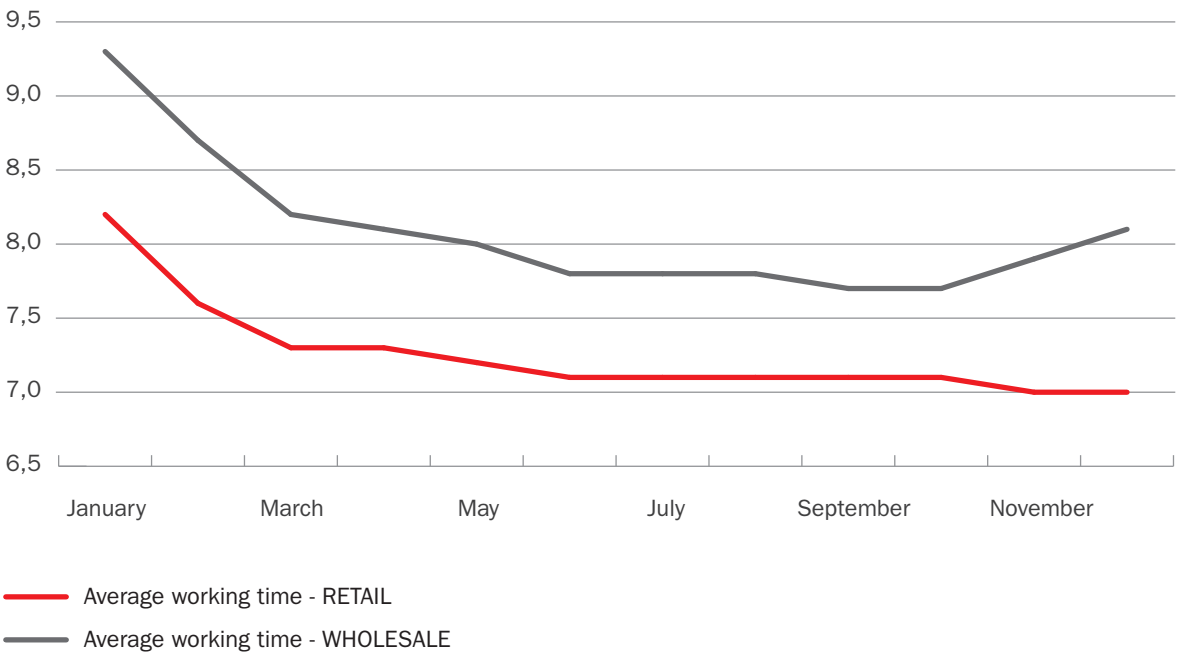


Figure 3 - Average processing time in calendar days

KPI 1 - Broadband Delivery

Lines activated within 10 calendar days - without a technician visit

The percentage of broadband lines activated within 10 calendar days without a technician being sent to the customer's home (Alice packages for Telecom Italia customers and asymmetric bitstream packages for OLO customers) remained higher than 94% in 2013, with the exception of the first months of the year, and substantially the same for both segments considered.

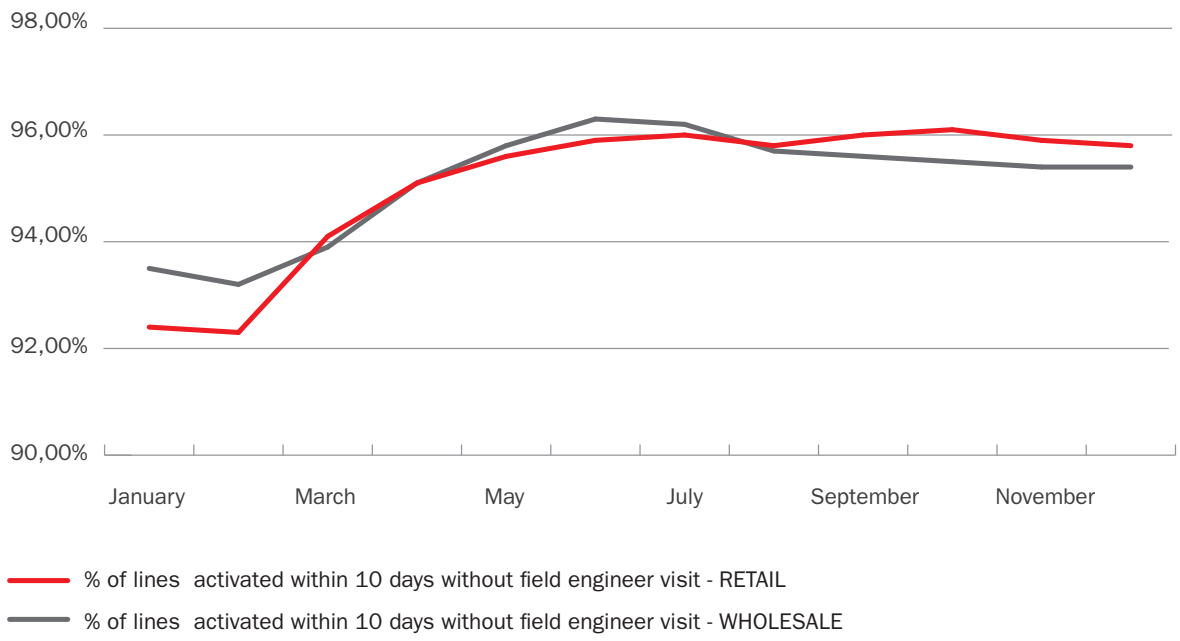


Figure 4 - Percentage of lines activated within 10 calendar days without a technician visit

Lines activated within 20 calendar days - with a technician visit

As far as the percentage of Lines activated within 20 calendar days with a technician visit, the level of performance for *Retail* was higher (95.7% *Retail* vs. 89.9% *Wholesale*, with a gap of 5.8 p.p. which remained substantially stable in the final months).

The gap between the two segments is decreasing, if we consider that the datum for January was 11.6 p.p.

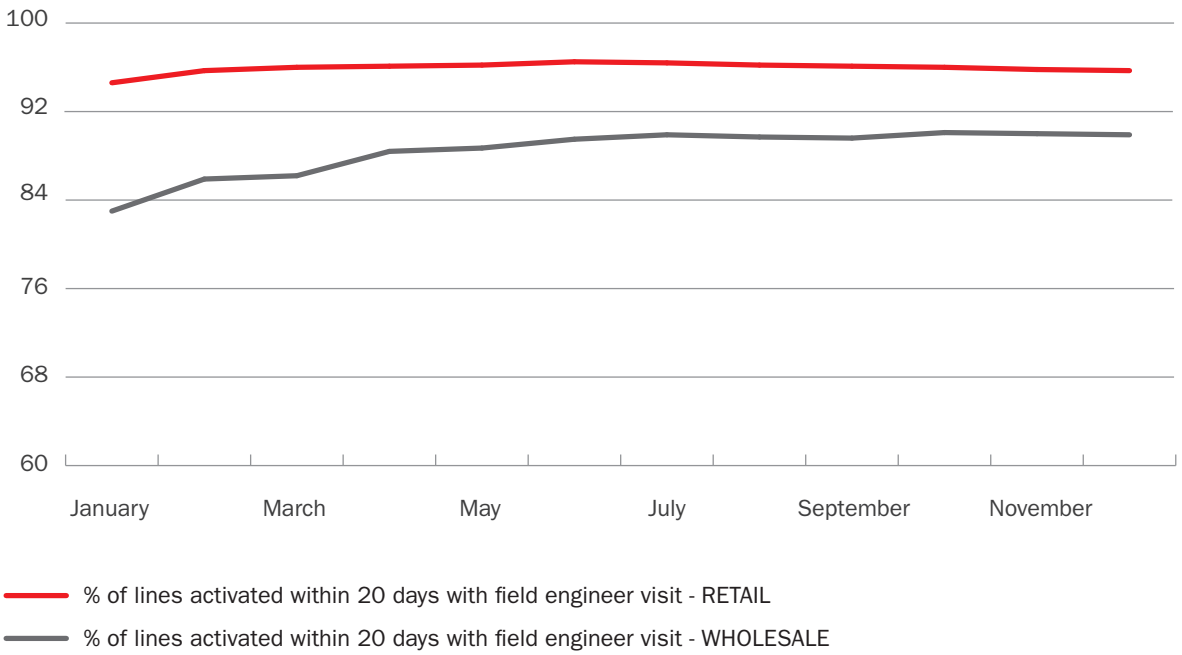


Figure 5 - Percentage of lines activated within 20 calendar days with a technician visit

Lines activated within 30 calendar days - with a technician visit

The performance indicator trend for the percentage of lines activated within 30 days with a visit by a technician is similar to that of the previous indicator: in this case too the percentages are higher for the *Retail* segment.
In December, the progressive value stabilised at 98.0% for *Retail* and 95.2% for *Wholesale*, with a gap of 2.8 percentage points.
This indicator is one of those for which the Supervisory Board asked Telecom Italia to provide further information in Resolution no. 21/2013.

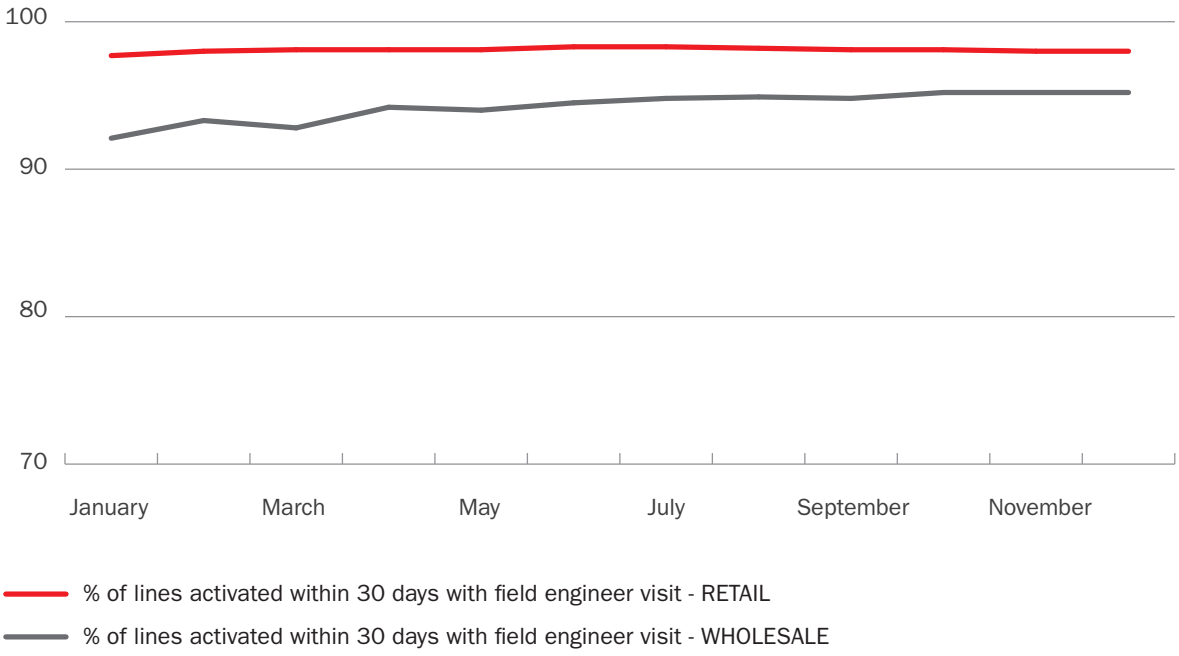


Figure 6 - Percentage of lines activated within 30 calendar days with a technician visit

Average Open Access processing time

The progressive value of the average processing time required for activation of the broadband service has decreased slightly from the beginning of the year: *Retail* went from 6.8 calendar days in January to 6.0 in November, while *Wholesale* decreased from 9.4 calendar days in the first month of the year to 8.3. A gap between the two segments remains, however, and this was 2.3 days at year end.

This indicator is one of those for which the Supervisory Board asked Telecom Italia to provide further information in Resolution no. 21/2013.

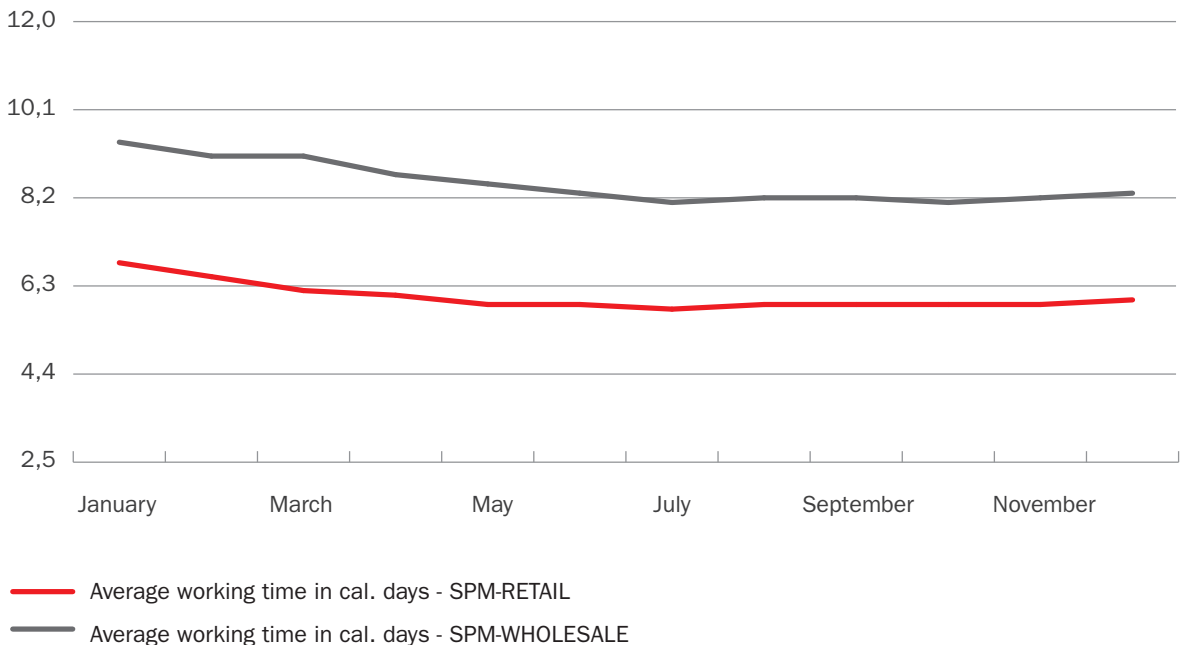


Figure 7 - Average Open Access processing time

Average business connection working time

Average business connection working time was 28.4 calendar days for the *Wholesale* segment, compared to 18.1 days for *Retail*.

The Supervisory Board conducted an investigation into the matter via Resolution No. 16/2011; the investigation was closed by Resolution No. 5/2012, finding that the performance levels measured, once adjusted for the effects of a process change introduced in 2011, showed that the principles of equality of treatment had been satisfied.

Telecom Italia, moreover, stated that the formula of the indicator is being revised at the AGCom - KPI 2013 meetings in that "the current formula is based on obsolete rules".

Furthermore, the indicator does not consider contract orders, which are processed with methods and timing agreed with the end customer.

In Resolution no. 21/2013, the Supervisory Board asked Telecom Italia to provide data on the monthly volumes of lines activated from January 2013, as well as any useful information justifying the deviations found between the two segments.

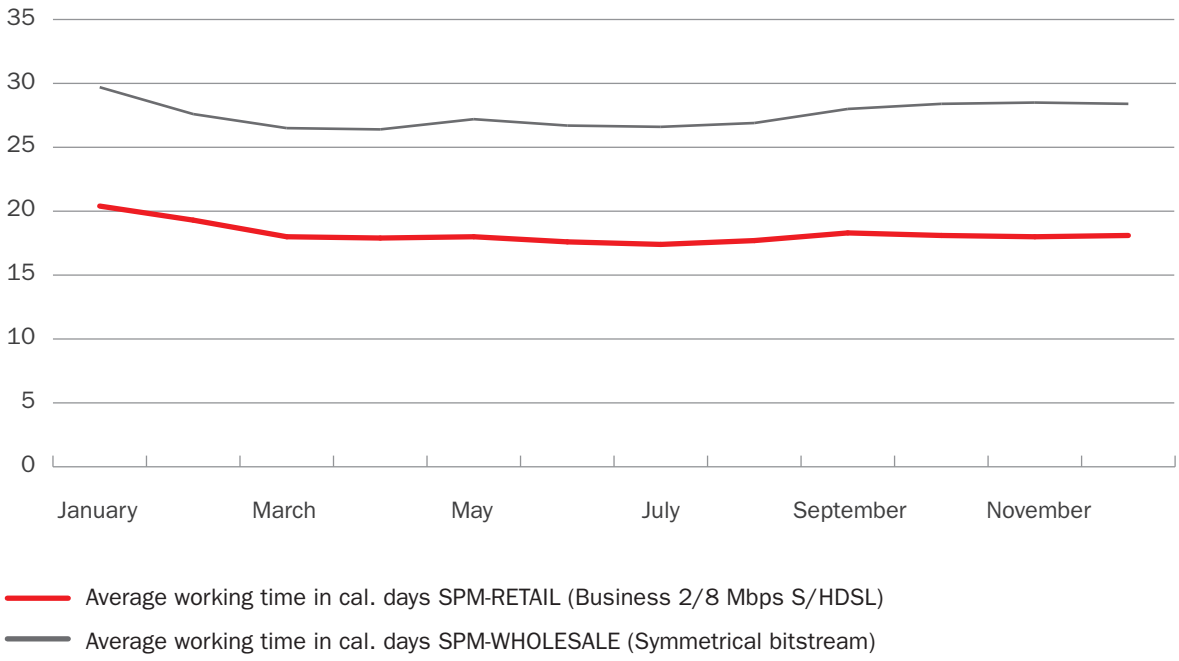


Figure 8 - Average business connection working time

KPI 1 - New Delivery Process

Given the low volumes involved, NDP performance indicators (% Single Queue WOs resolved; % WOs completed by appointment date/DVD; % WOs in the KO Network; Single Queue waiting times) are still not significant.
For almost all the indicators, moreover, a situation of non-availability of data due to system anomalies remained from May to the year end.
In Resolution no. 21/2013, the Supervisory Board asked Telecom Italia to provide details regarding the causes that had prevented measurement of the data; at the same time, the Supervisory Board asked for preliminary estimate of the figures not published.

KPI 2 - Voice Assurance

In order to enable comparison on a uniform basis, all faults resolved directly upon reporting to a call centre (187 and 191 for Telecom Italia or other customer service numbers for the OLOs) have been excluded from measurements.

Average voice line repair time (working hours)

The indicator related to average repair time shows values slightly but constantly higher for Telecom Italia *Retail* lines than those for lines used by OLO customers, confirming the trend measured over previous years.
In December, the value was 15.5 working hours for *Retail* against 15.1 for *Wholesale.*

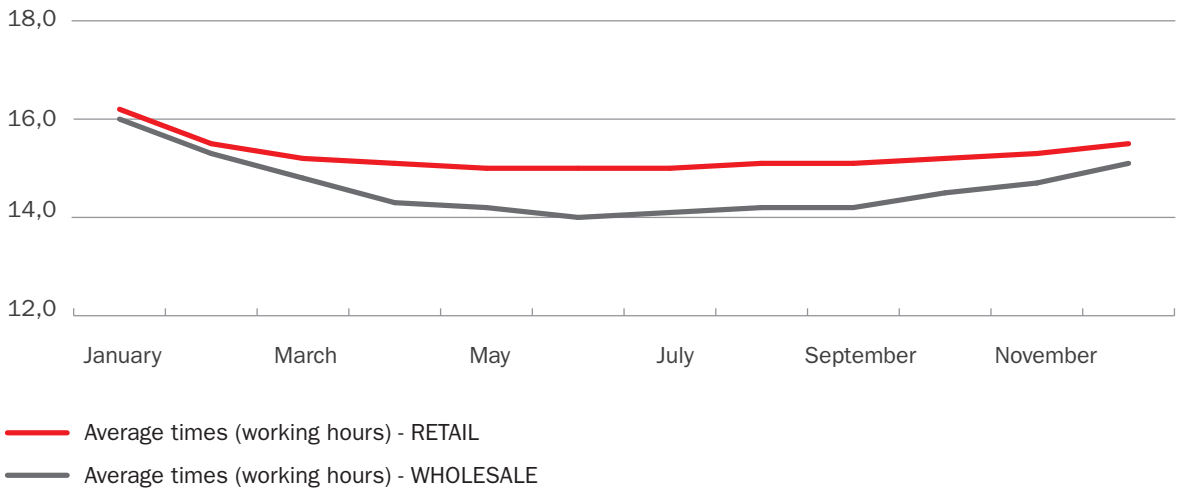


Figure 9 - Average voice line repair time in working hours

Percentage of faults resolved within two working days from the complaint

Due to contractual differences in service level agreements with OLOs, compared to those applicable to the *Retail* segment, service levels remained higher for OLOs consistently over the months; in December the value was 94.8% for *Wholesale* and 89.3% for *Retail*.

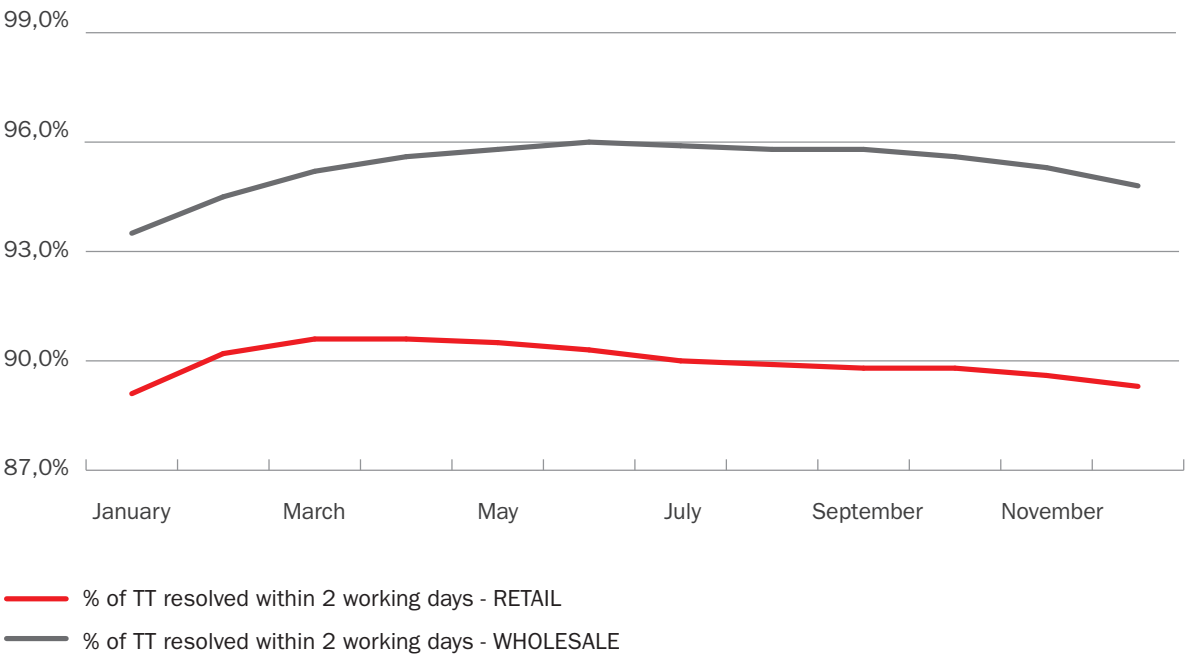


Figure 10 - Percentage of faults resolved within two working days from the complaint

Percentage of POTS line faults recurring within 30 days

The percentage of faults recurring within 30 days remained lower for OLOs, though the gap narrowed progressively over the year to 0.6 of a percentage point at the end of 2013 (11.2% for *Retail* versus 10.7% for *Wholesale*).

A slight but constant improvement in performances is noted, achieved above all in the *Retail* segment, where the trend already measured over the course of the previous years continues.

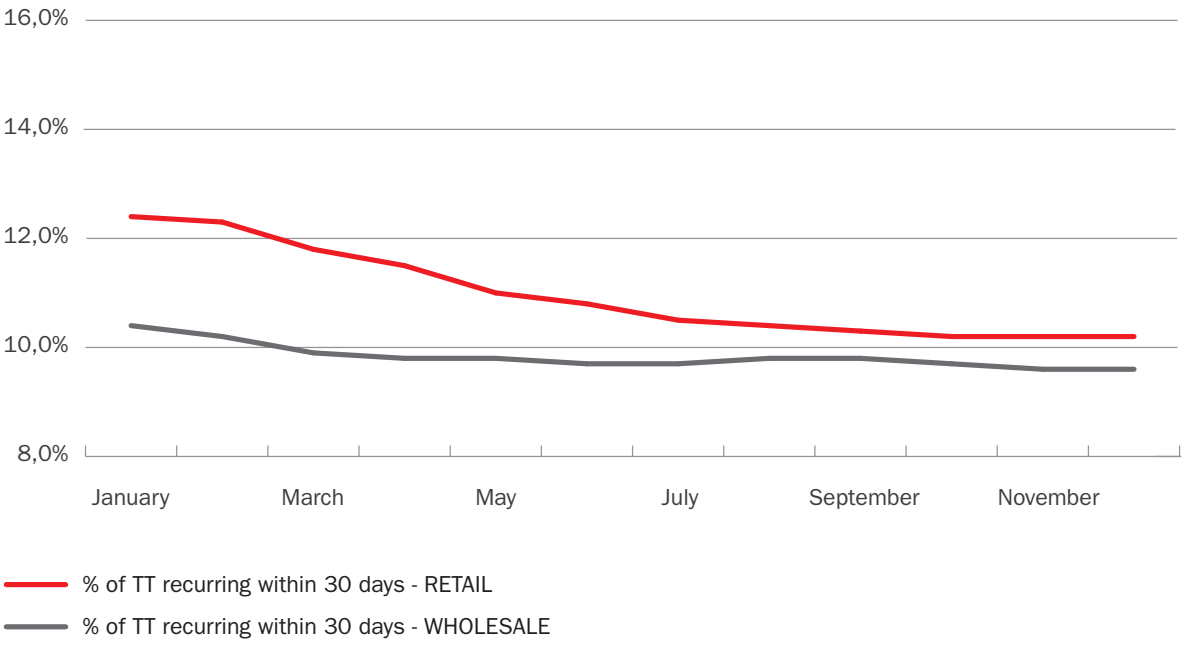


Figure 11 - Percentage of voice line faults recurring within 30 days

Percentage of claimant circuits

The percentage of claimant circuits remains significantly higher for *Retail* (16.8% compared to 10.6% for OLOs). Apart from the January datum, the gap remained substantially stable throughout 2013.
The figure is calculated by taking the total number of TTs closed in a month, including faults dealt with and closed by Open Access back offices, as a percentage of the total number of active lines.

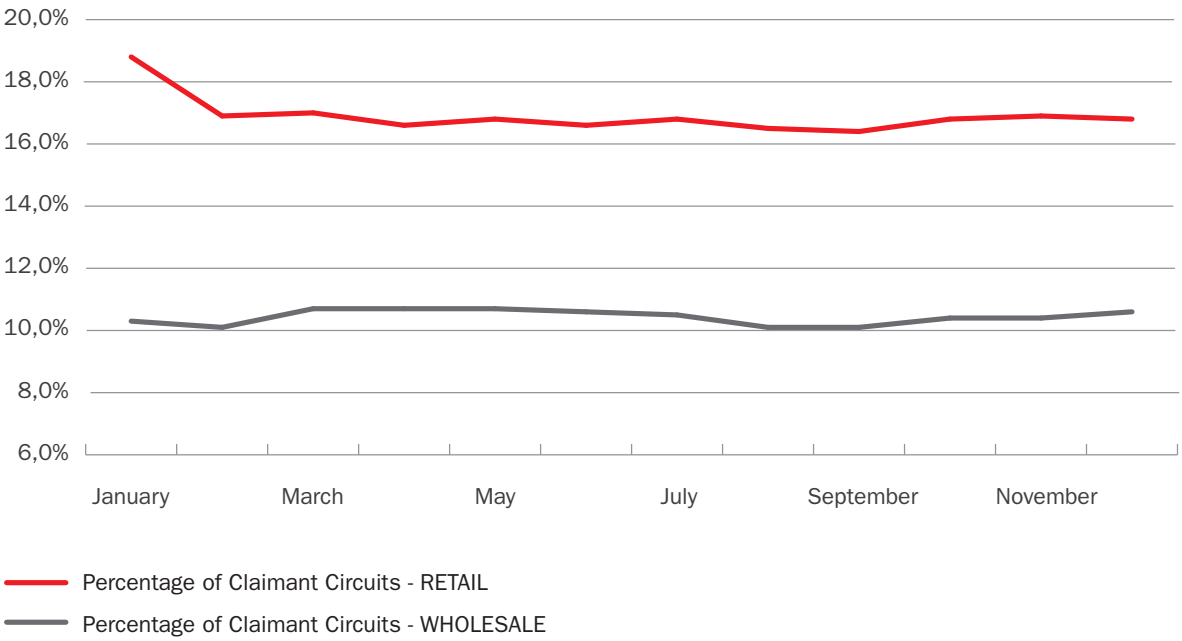


Figure 12 - Percentage of claimant circuits

KPI 2 - Broadband Assurance

Average ADSL broadband repair time (working hours)

The average time for repair of ADSL broadband faults is shorter for the *Wholesale* segment than for the *Retail* segment, thereby improving the situation in the previous year which on the contrary showed better performances for the customers of the incumbent Operator.
The average time in December was 9.1 working hours for the OLOs, and 9.5 for Telecom Italia *Retail*.

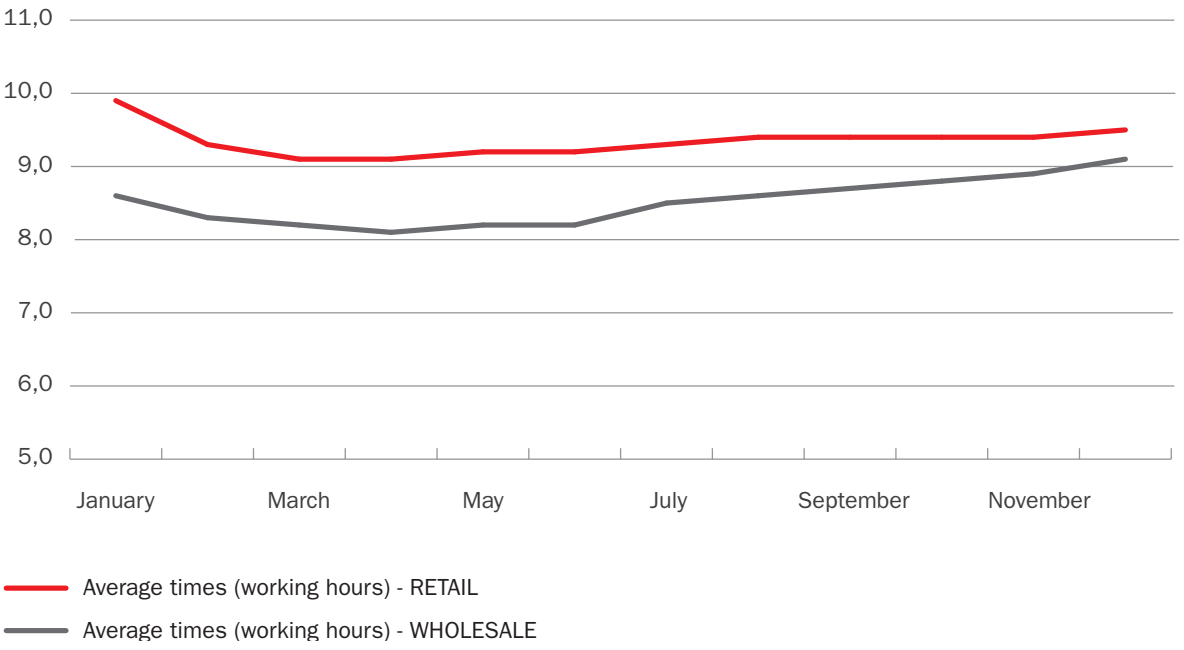


Figure 13 - Average ADSL broadband repair time (working hours)

Percentage of ADSL faults repaired within two working days

The percentage of ADSL faults repaired within two working days remained much higher for the *Wholesale* segment in 2013, continuing the trend seen in previous years, showing more favourable treatment for OLOs.
The gap between the segments in December was 4.2 percentage points, in line with the previous months.

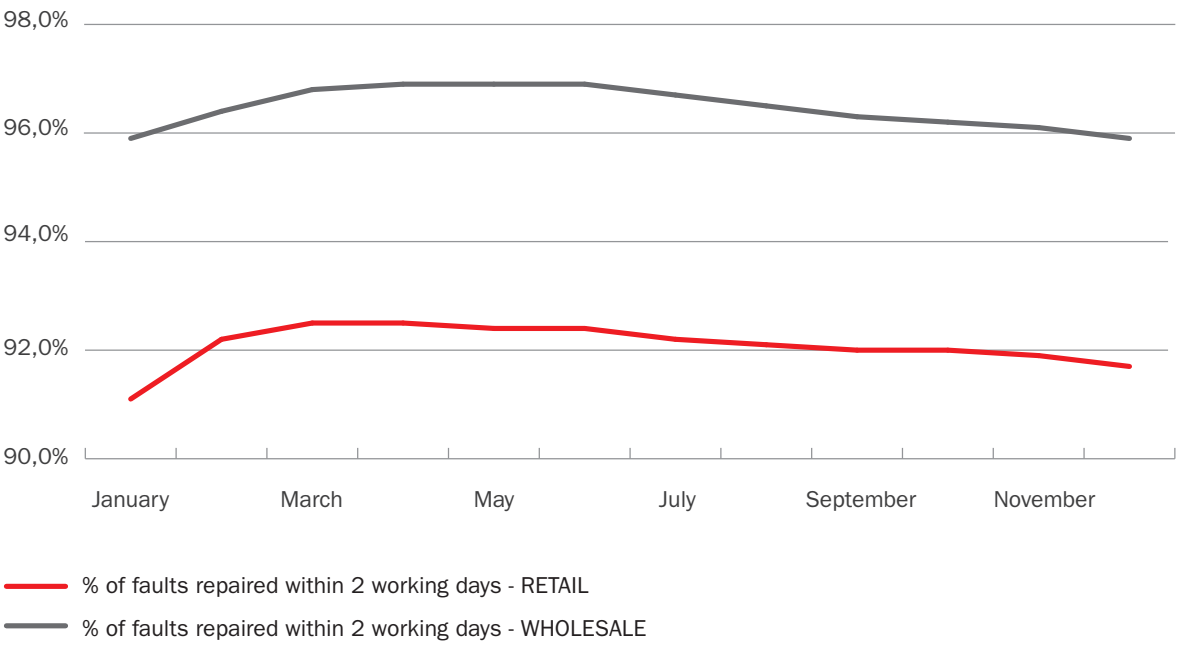


Figure 14 - Percentage of ADSL faults repaired by the 2nd working day

Percentage of ADSL faults recurring within 30 days

Throughout 2013, this percentage remained higher for *Wholesale*, with a gap at year end stabilised at 5.8 p.p. (20.0% *Wholesale* vs. 14.2% *Retail*).

The Supervisory Board conducted an investigation into this indicator, together with the KPI for average business connection working times, via Resolution No. 16/2011, which requested information from Telecom Italia on the underlying causes of the performance gap. In Resolution No. 5/2012, the Supervisory Board found that the KPI results complied with the principles of equality of treatment.

In particular, the gap in the results was attributed to the different percentages of naked lines in the two segments; in the *Retail* segment, the percentage of naked lines is minimal, while in the *Wholesale* segment 60% of the lines are naked and 40% are "shared" - used both for voice and data services. This had an impact on recurring faults: In fact, while the faults recorded on shared lines can be attributed by the customer to either voice or ADSL, the faults on naked lines are always ADSL faults, even if linked to the voice service, and this has also an impact on repetition rates.

This indicator is one of the indicators for which Supervisory Board requested Telecom Italia to provide further information in Resolution no. 21/2013.

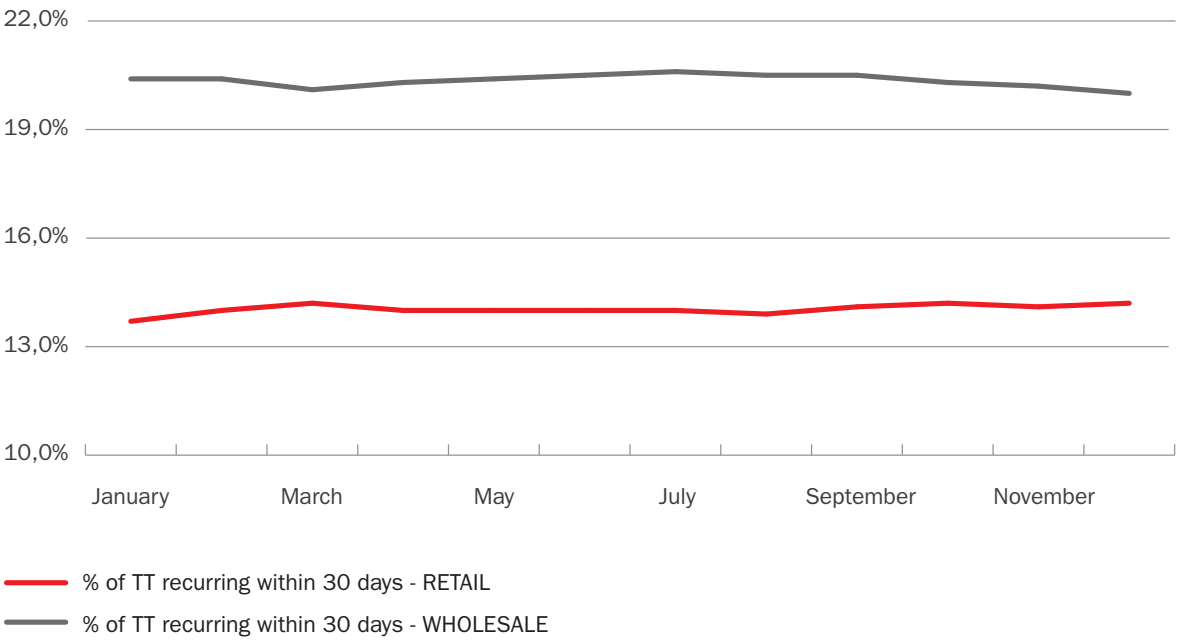


Figure 15 - Percentage of ADSL faults recurring within 30 days

Percentage of ADSL faults opened within 14 days of activation

The percentage of Trouble Tickets (TT) opened within 14 days of activation of the service is very low for Telecom Italia *Retail* (2.1%). On the contrary it is higher for *Wholesale* (12.7%). This indicator is defined as the number of TTs opened within 14 days of activation as a proportion of total TTs for the reference period. Since the total number of TTs in the *Retail* segment is much higher than the total number of TTs for OLOs, the resulting percentage is necessarily higher for OLOs, distorting the comparison. A new indicator that takes as its denominator the number of activations for the period, broken down by segment, would be more appropriate.

The Supervisory Board conducted an investigation into this indicator, which was closed by Resolution No. 5/2012. It found that when the 2011 values were recalculated using the method considered to be correct (taking into account the number of activations during the period by segment as denominator, instead of the total number of TTs in the period), there was a difference of 0.8 percentage points to the advantage of the *Wholesale* segment (7.6% for *Retail* versus 6.8% for *Wholesale*), which overturned the figures favouring the *Retail* segment that were initially reported.

In Resolution no. 21/2013, the Supervisory Board asked Telecom Italia to provide the data for each month in 2013, using the number of activations for the period as the denominator of the formula instead of the total number of Trouble Tickets for the reference period (as envisaged by the basket of indicators for Undertakings Group no. 4 agreed with the OLOs and AGCom).

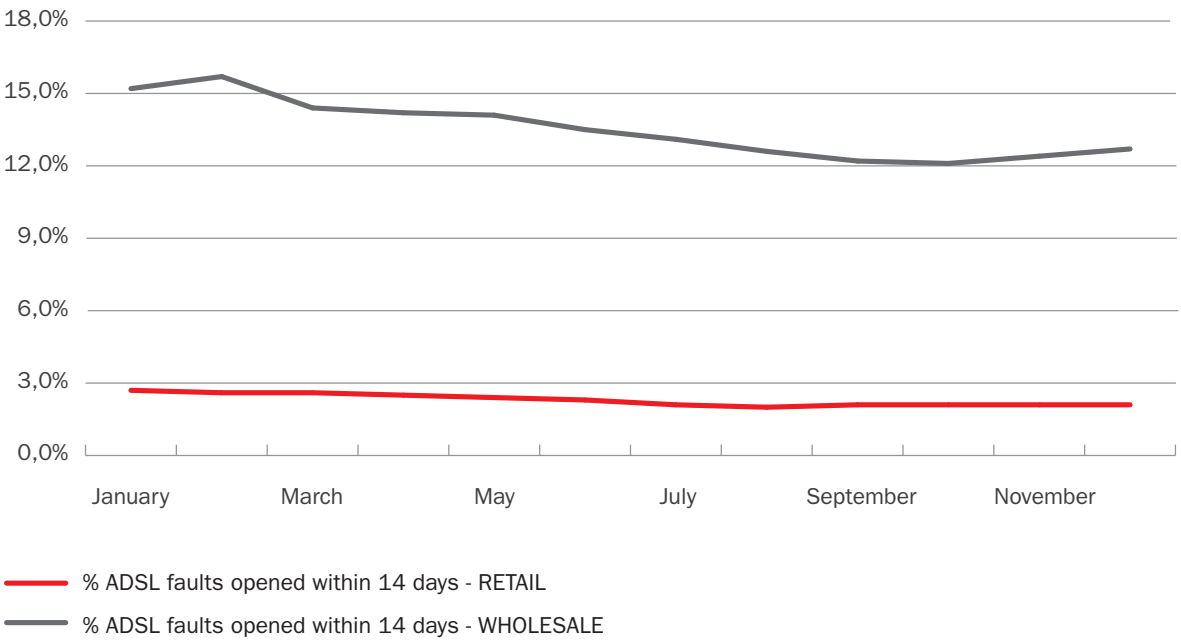


Figure 16 - Percentage of ADSL faults opened within 14 days of activation

Average SHDSL/symmetric bitstream broadband repair times (working hours)

Average repair times for SHDSL and symmetric bitstream broadband services were consistently higher for the *Retail* segment than for *Wholesale* in 2013.

In December, the average for the *Retail* segment was 6.2 working hours, versus 5.1 working hours for *Wholesale*. Figures for 2013 were in line with those for the previous two-year period.

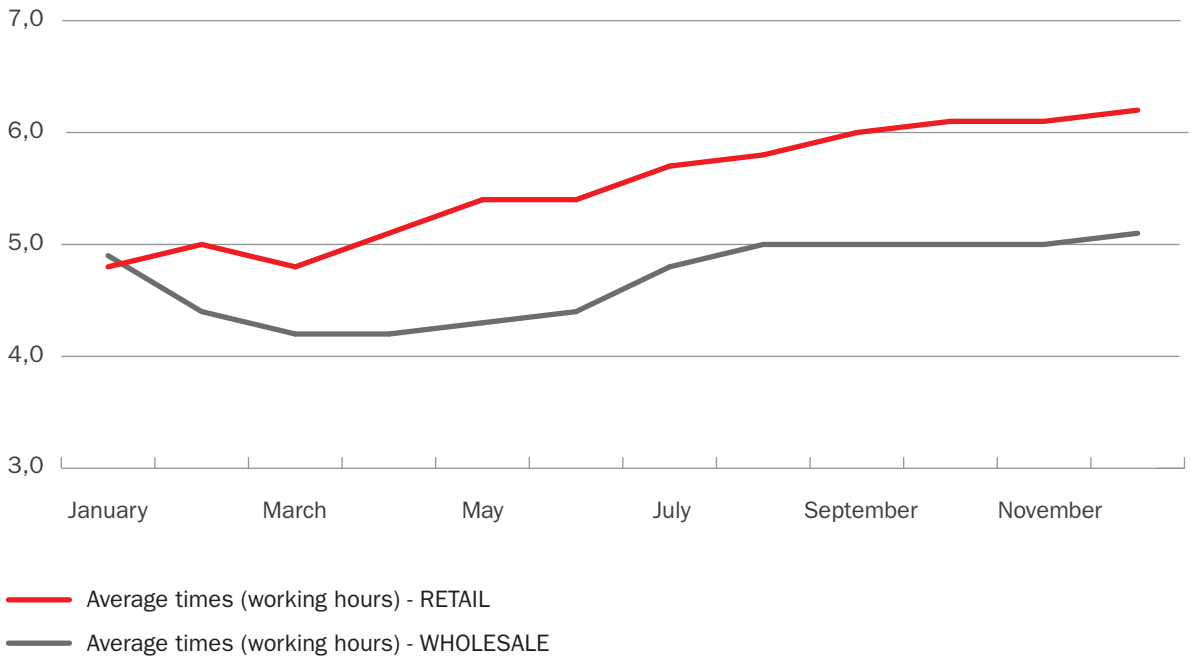


Figure 17 - Average SHDSL broadband/symmetric bitstream repair time (working hours)

Percentage of SHDSL/symmetric bitstream broadband faults repaired within two working days from the complaint

Percentages of broadband faults on S/HDSL symmetric bitstream connections repaired within the second working day remain very high for *Wholesale*, constantly between around 98% and 99%.

Performances in the *Retail* segment are lower: at 31/12 the percentage was 96.5% of the activations in the period.

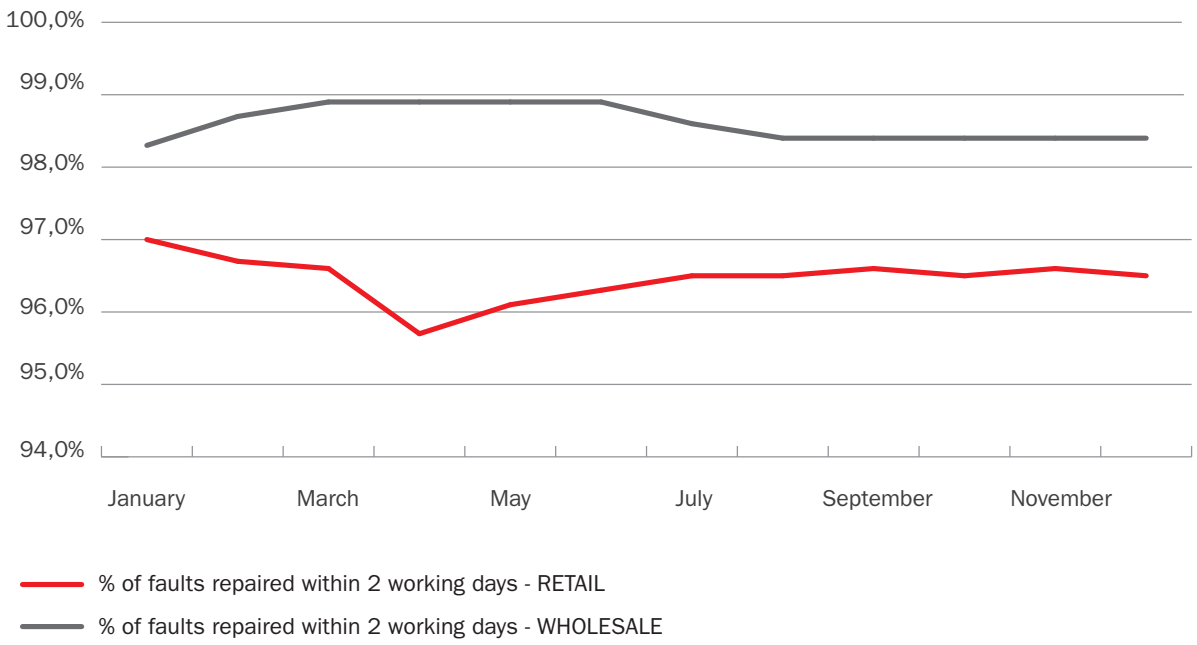


Figure 18 - Percentage of S/HDSL symmetric bitstream faults repaired by the 2nd working day

Percentage of SHDSL/symmetric bitstream broadband faults recurring within 30 days

This indicator constantly shows significantly better performances in the *Retail* segment.

The progressive figure for December was 22.6% for the *Retail* segment, versus 29.8% for *Wholesale* (gap: 7.2 p.p.).

This indicator is one of those for which the Supervisory Board asked Telecom Italia to provide further information in Resolution no. 21/2013.

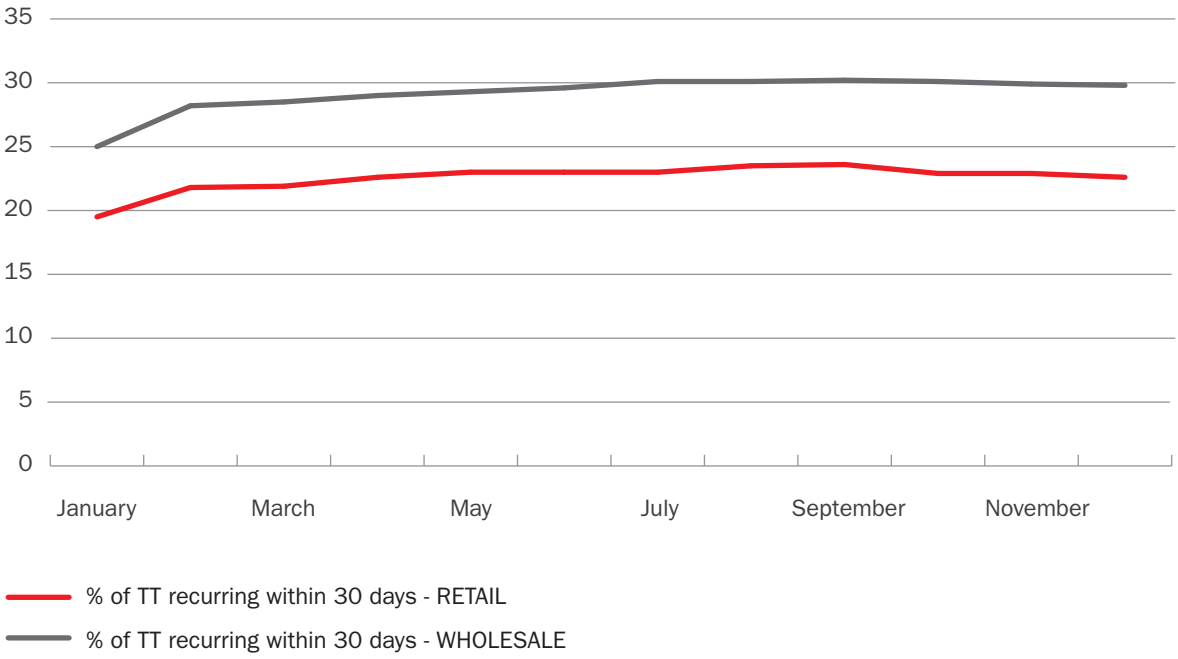


Figure 19 - Percentage of S/HDSL symmetric bitstream faults recurring within 30 days

Percentage of SHDSL/symmetric bitstream faults opened within 14 days of activation

Faults occurring within 14 days of activation are not reported for the *Retail* segment because the absolute values are negligible and so a comparison cannot be made. For OLO customers the November datum is 4.1%.

In Resolution no. 21/2013, the Supervisory Board asked Telecom Italia to provide the data for each month in 2013, using the number of activations for the period as the denominator of the formula instead of the total number of Trouble Tickets for the reference period (as envisaged by the basket of indicators for Undertakings Group no. 4 agreed with the OLOs and AGCom).

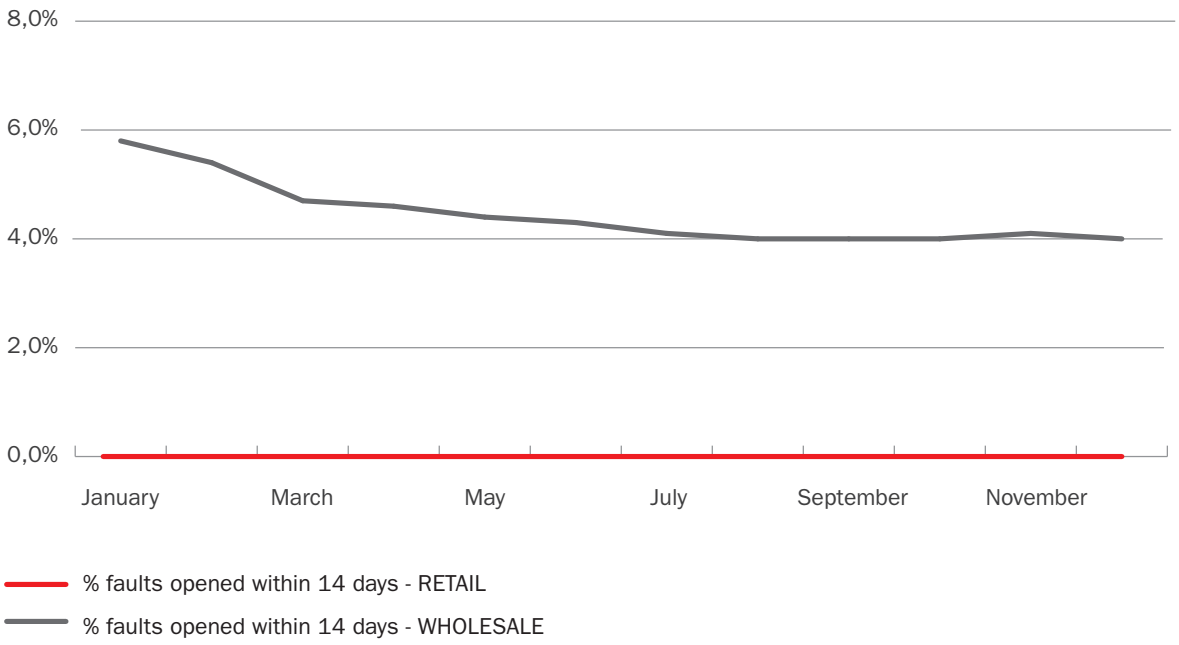


Figure 20 - Percentage of faults opened within 14 days of activation

KPI 3 - Service Availability

This set of KPIs measures service availability over time, calculated as a ratio of the actual time services are operating to the theoretical time services should ideally be operating. The indicators are constructed on the following basis:

$$\text{Percentage of Availability} = \frac{\text{Actual Time}}{\text{Theoretical Time}} * 100$$

Where:
Actual Time is the theoretical time less average downtime for the user base experiencing downtime;
Theoretical Time is the observation period multiplied by the average active user base for the same period.

Extremely high levels of system availability were recorded in 2013 for all services examined.
The systems through which services (LLU, Shared Access and WLR) are provided to OLOs in the *Wholesale* segment outperformed *Retail* Voice systems in 2013 too.

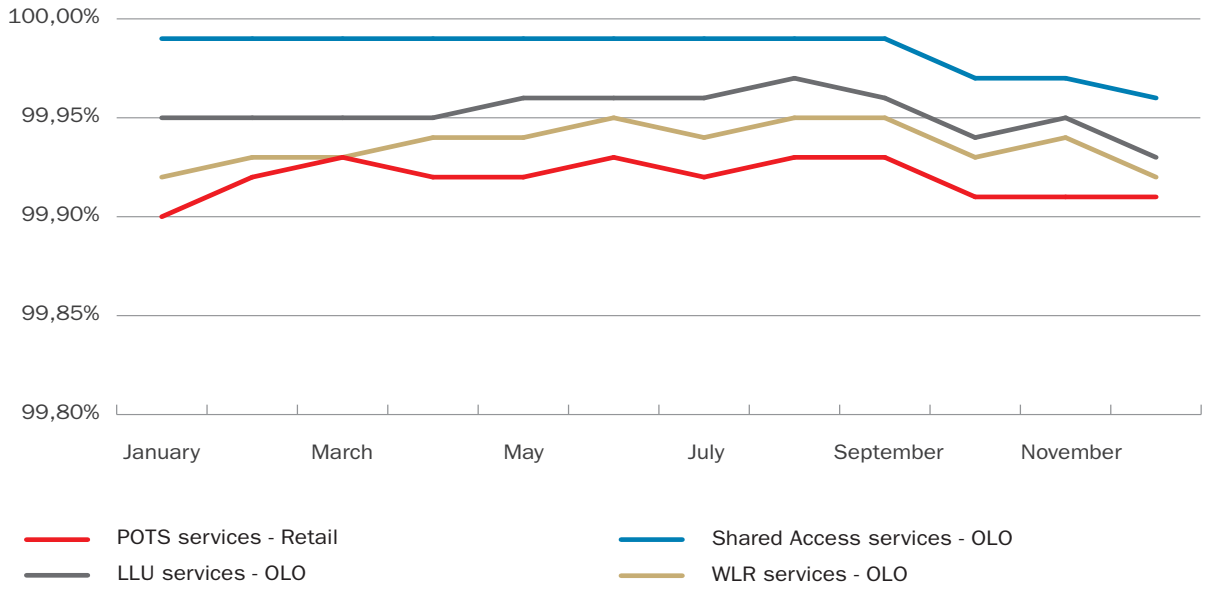


Figure 21 - Monthly voice service availability levels

For ADSL connections, Alice ADSL performed at 99.90% in December, compared to the 99.97% availability for *Wholesale* services.

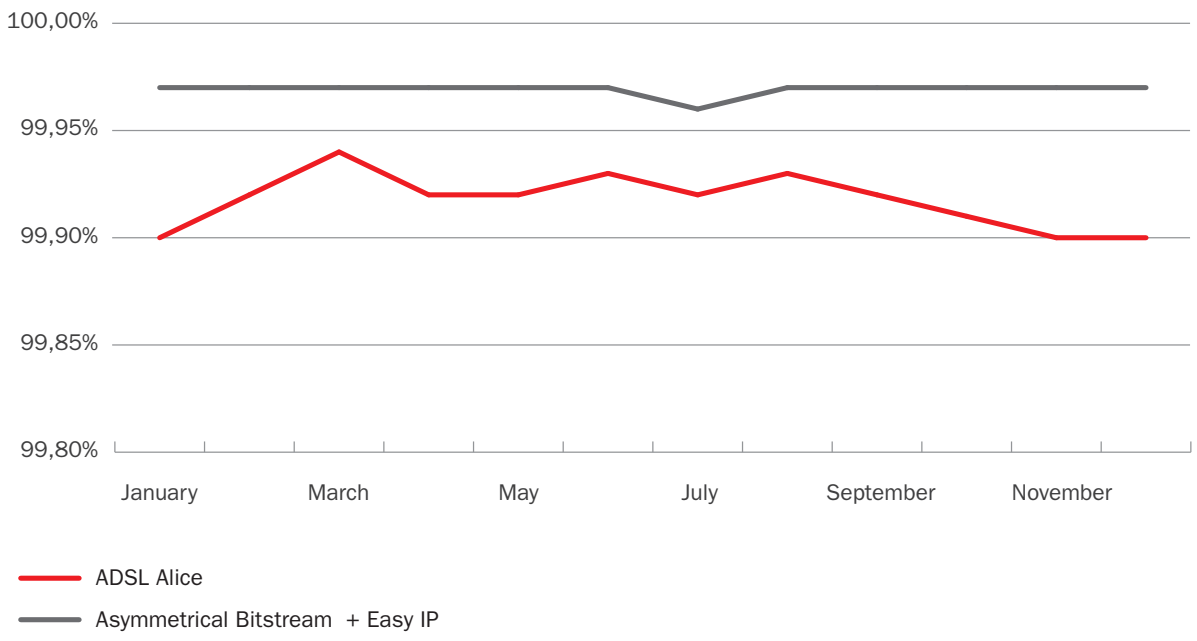


Figure 22 - ADSL Service Availability

The availability of symmetrical bitstream services was also consistently high throughout the year, measured at 99.99% at year-end for the Business Nx2 Mbps S/HDSL service, and at 99.96% for the Business symmetric bitstream service.

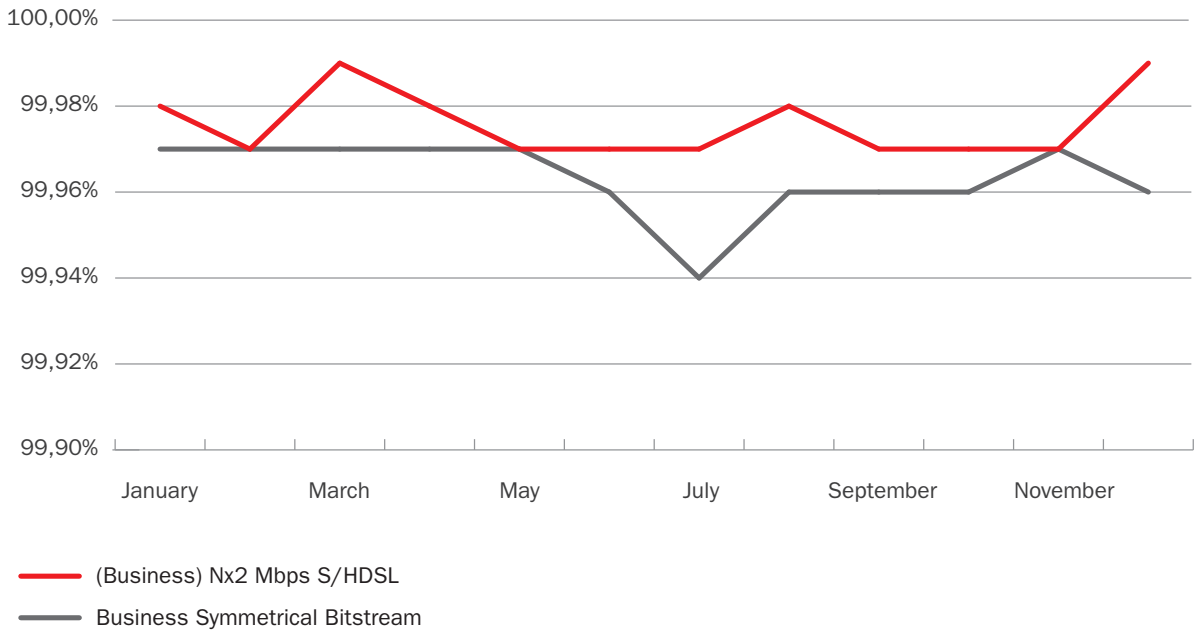


Figure 23 - Symmetrical bitstream services availability

KPI 4 - Unavailability of Wholesale Systems

This indicator measures the percentage unavailability of IT systems supporting assurance and delivery processes. Data are aggregated for each service in order to highlight any effects on the related process indicators. The indicators are constructed on the following basis:

$$\text{Percentage of Availability} = \frac{\text{Actual Time}}{\text{Theoretical Time}} * 100$$

Where:
Actual Time is the time that service support systems are actually operating (theoretical time less downtime);
Theoretical Time is the time that the system should be operating (agreed operating time).
The percentage unavailability and percentage availability are complements equalling 100.
The results take into account the optimized architecture of the systems, and so a system breakdown will not necessarily result in an interruption of assurance or delivery activities.

The graphs below show the 2013 performance with regard to availability of interface systems and Delivery and Assurance Process support systems.

It must be noted that for the latter, that is the process support systems, the data for November and December are not available.

Delivery systems

Throughout 2013, percentages of unavailability of systems controlling Delivery operations remained at optimum levels (the highest point was 0.2% recorded for Voice services).

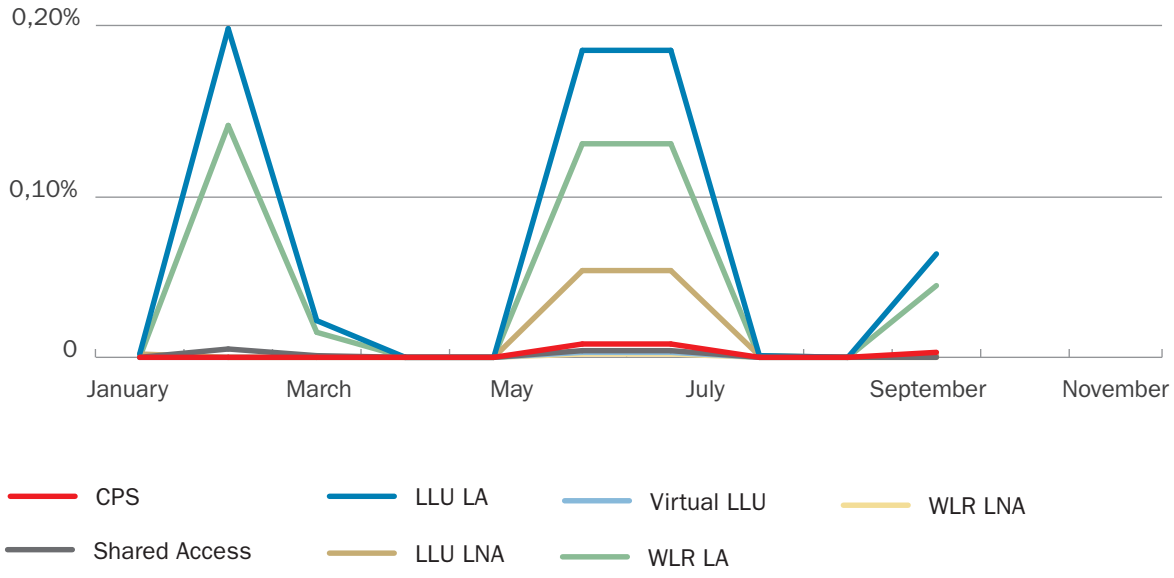


Figure 24 - Percentage of unavailability of IT systems controlling Voice service Delivery operations

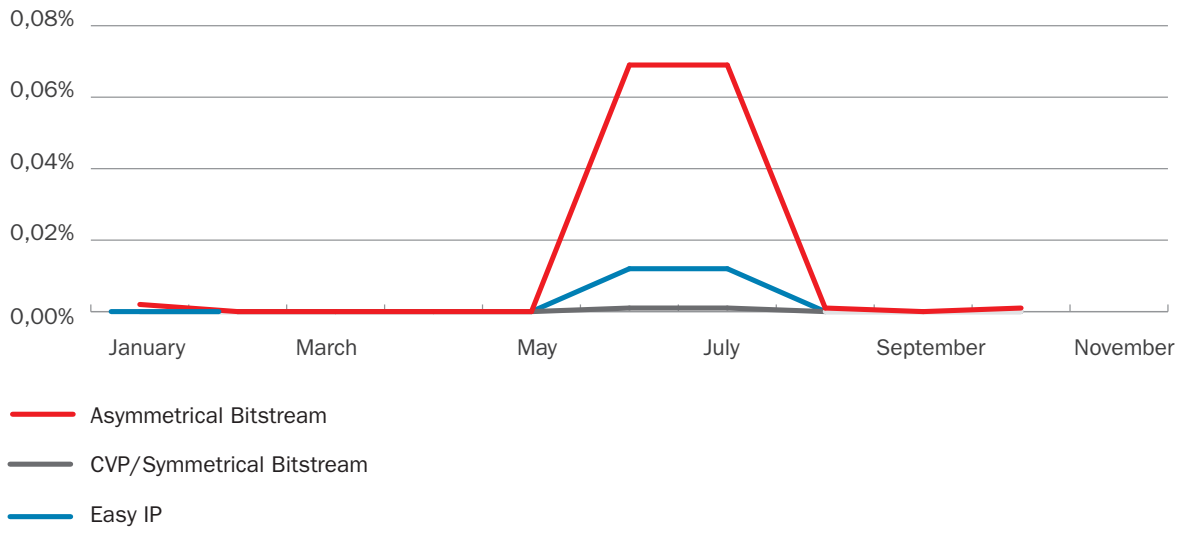


Figure 25 - Percentage of unavailability of IT systems controlling Broadband service Delivery operations

Assurance systems

The percentage of system unavailability on assurance systems peaked in June and July for both voice and broadband services, especially for LLU and asymmetric bitstream services.
Overall, however, percentage unavailability was extremely low, and often equal to zero.

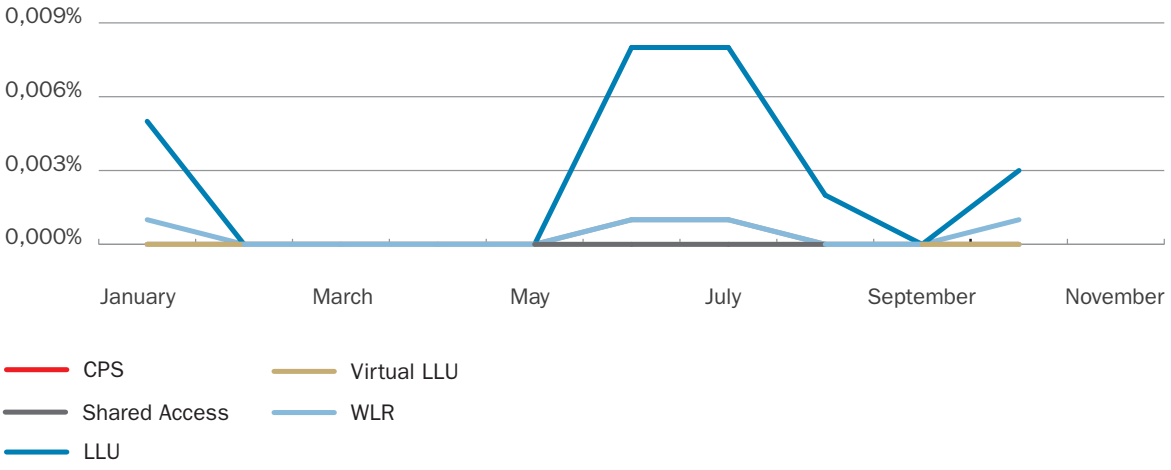


Figure 26 - Percentage of unavailability of IT systems controlling Voice service Assurance operations

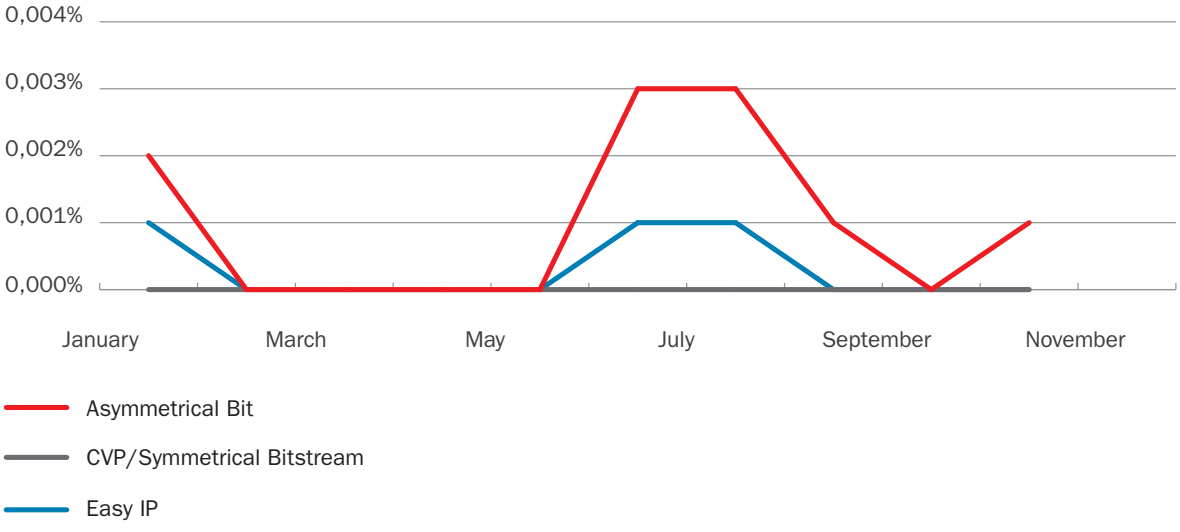


Figure 27 - Percentage of unavailability of IT systems controlling Broadband service Assurance operations

Delivery interface management applications

Starting from measurement of performances for the month of August, Telecom Italia included Wholesale CRM in the list of Delivery systems for which availability levels are analysed. This took place after finishing the porting of services associated with releases 1.0, 2.0 and 3.0 to this platform.

Availability remained consistently high throughout the year at around 100% for all systems examined, except in October when performance levels dropped for the CRM WS system.

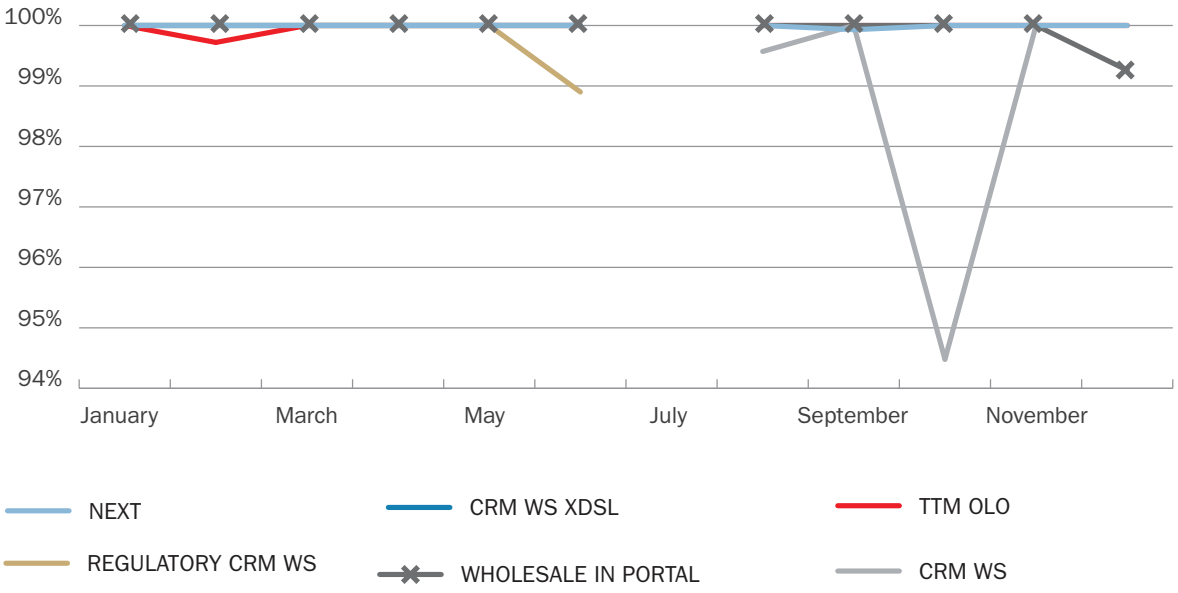


Figure 28 - Percentage of availability of IT systems controlling Delivery interface services

6.F - QUALITY OF THE FIXED ACCESS NETWORK

6.f.1 - General consideration

Undertakings Group No. 5 *(Guarantees of Transparency of the Technical Plans for the Quality of the Fixed Access Network)* sets out a series of obligations for Telecom Italia which are designed to ensure that structural changes to the fixed access network that fall outside the scope of ordinary maintenance are made public and transparent. To that end, Open Access has prepared a number of detailed operational plans which provide information about each planned intervention, clearly illustrating the impact on the overall quality of the access network.

The quality goals that Telecom Italia aims to achieve through the Technical Plans for the Quality of the Fixed Access Network essentially fall into two areas:

- ensuring ready network availability in case of a growth in demand among *Retail* and/or Wholesale customers, thus avoiding temporary network saturation;
- ensuring service continuity for existing customers by resolving the causes of higher fault rates, making changes to the most critical parts of the network and, in some cases, acting pre-emptively.

In order to achieve these goals, a number of action plans have been devised - also for 2013 - involving delivery processes and assurance processes. In terms of assurance processes, the plans to ensure service continuity aim to resolve recurring problems along single access lines (the “Ongoing” project) and to carry out preventive maintenance on the main network elements, particularly switching cabinets and poles. In line with the work carried out in 2012, special maintenance work has also been planned on pressurisers and renovations of entire sections of copper access network cabling. Regarding delivery processes, two areas of action have been identified: a fixed access network desaturation plan, which will cut the number of unresolved service requests arising from a lack of available copper pairs on the access network (“no network” reports); and a plan to upgrade the capacity of the local transmission network, designed to cut the number of exchanges not available for service due to DSLAM saturation (for a detailed discussion of this subject see section 6G - Bitstream services and the saturation of the local transmission network).

6.f.2 - Assurance Process

6.f.2a - "Ongoing" improvement project

The goal of the "Ongoing" improvement project is to increase customer quality perception and to limit repeated repairs on the same part of the system by carrying out improvement works designed to definitively resolve service disruptions. The "Ongoing" programme for 2013 called for repairs on 30,000 lines. Figure 1 shows the progress of the planned works, comparing the scheduled works against those actually carried out, from the start of the year until the end of each quarter. It is worth noting that at 31 December 2013 the total number of line improvements for the year was higher than forecast (+9%).

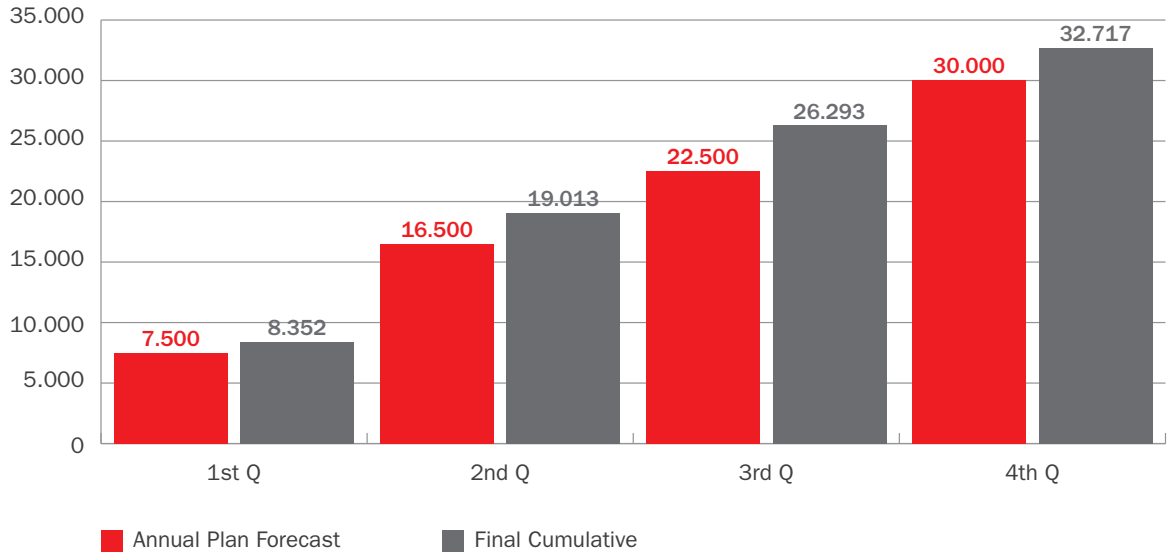


Figure 1 - "On-Going" project progress

6.f.2b - Switching cabinets project

The switching cabinets project was developed on three areas of action: annual lines review (scheduled overhaul), repair of deteriorating parts, and improvement of mechanical structures. The scheduled overhaul involves checking the cabinet against current Telecom Italia regulations, including checks on the state of the mechanical structure (especially surrounds, hinges and locks) and any issues relating to electrical connections. Upon inspection, a report is compiled for each overhauled cabinet, including the results of the checks and any problems found.

The repairs are carried out on the basis of the results of the periodic review. Open Access offices also used the information in the reports to schedule their technicians' work, listing what needs to be done. The improvement and development of the infrastructure are designed to improve reliability and security standards by fully or partially replacing existing mechanical parts. Specifically, this year also saw the continuation of the programme to replace the four resin boxes in older cabinets with one steel box, which offers greater protection and safety ("single box upgrades"). Where deemed necessary, the entire external cladding of the cabinet was replaced ("entire cladding upgrade").

The figures below show the progress made on these works, comparing the scheduled works against those actually carried out, from the start of the year until the end of each quarter respectively for periodic review, repair, single box replacement and replacement of entire casing. The delays that occurred during the first three quarters in the work to upgrade cabinets and replace single boxes were made up for and all the work was terminated with results in line with the targets that had been set.

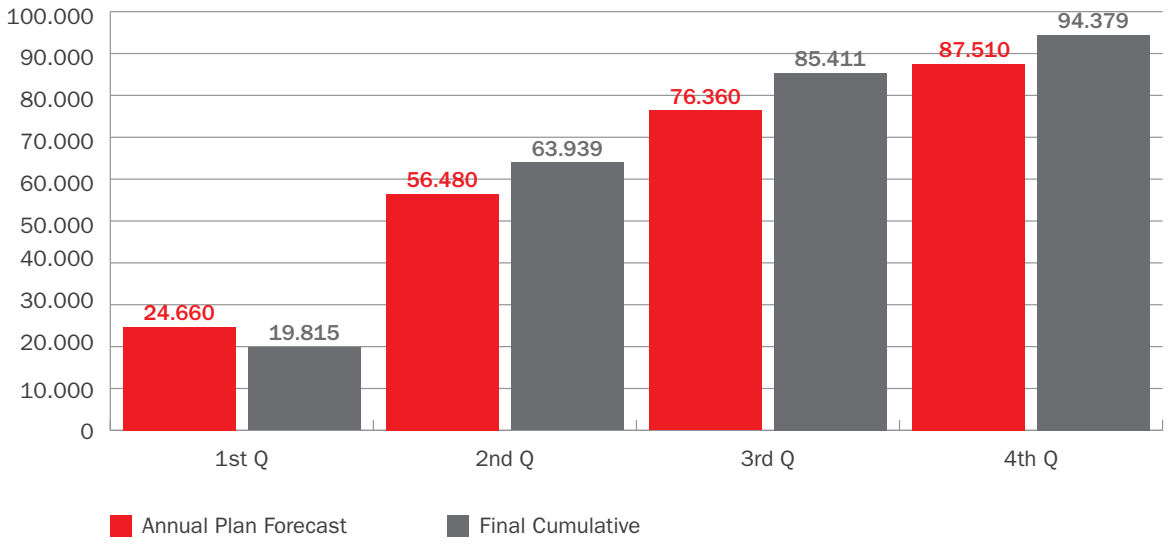


Figure 2 - Progress made on the plan for the periodic review of switching cabinets

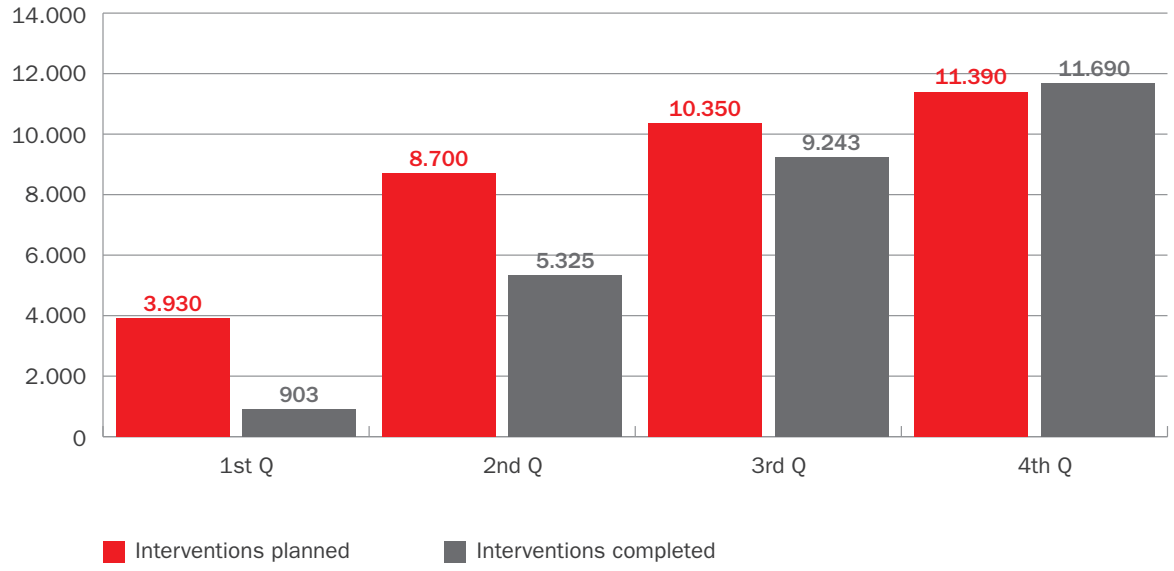


Figure 3 - Progress made on repairs of switching cabinets

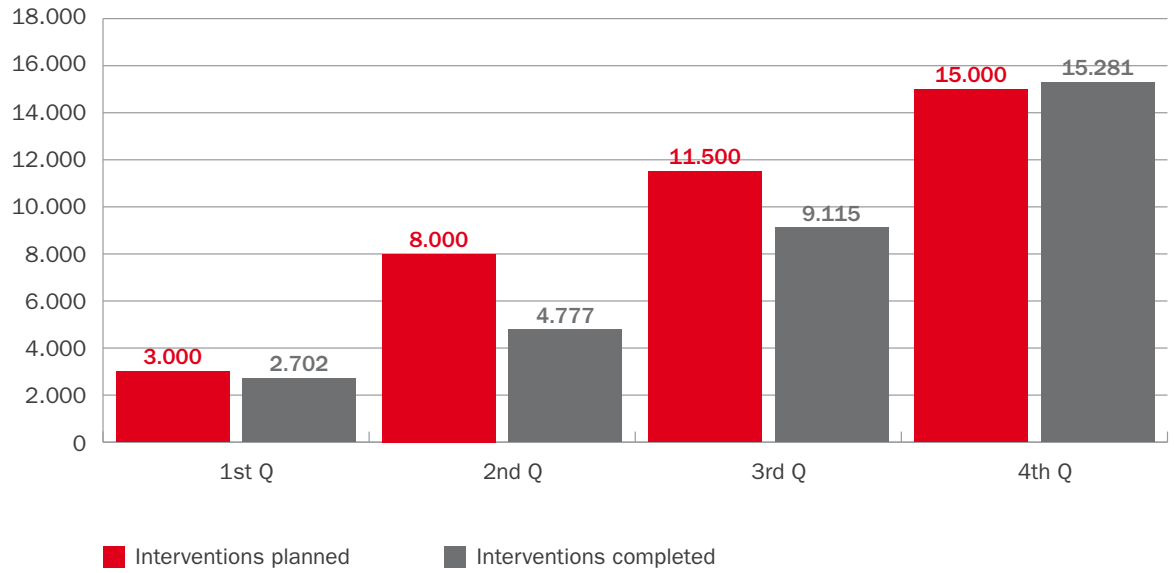


Figure 4 - Progress made on the plan for single box replacements

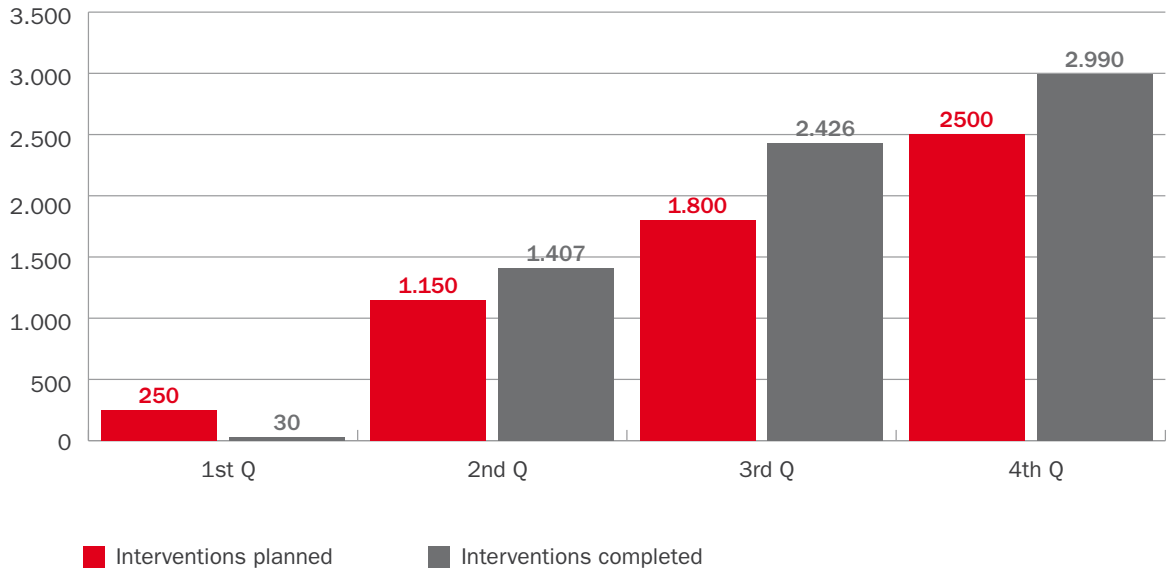


Figure 5 - Progress made on the plan for entire cladding replacements

6.f.2c - Pole Maintenance Project

A significant number of cable lines (both copper and optic fibre) use poles as supports. The regular preventive maintenance programme for these poles continued in 2013, in accordance the number of such lines currently in use. The 2013 plan scheduled the overhaul of 1,042,200 poles. A new tool (called X-Poles), which allows objective measurement of the state of decay of the poles, was used for this work. Figure 6 shows the progress made on the planned works, showing the total periodic reviews carried out from the start of the year until the end of each quarter. The figure shows that the total number of maintenance operations completed during the year is considerably higher than the target set (+20%).

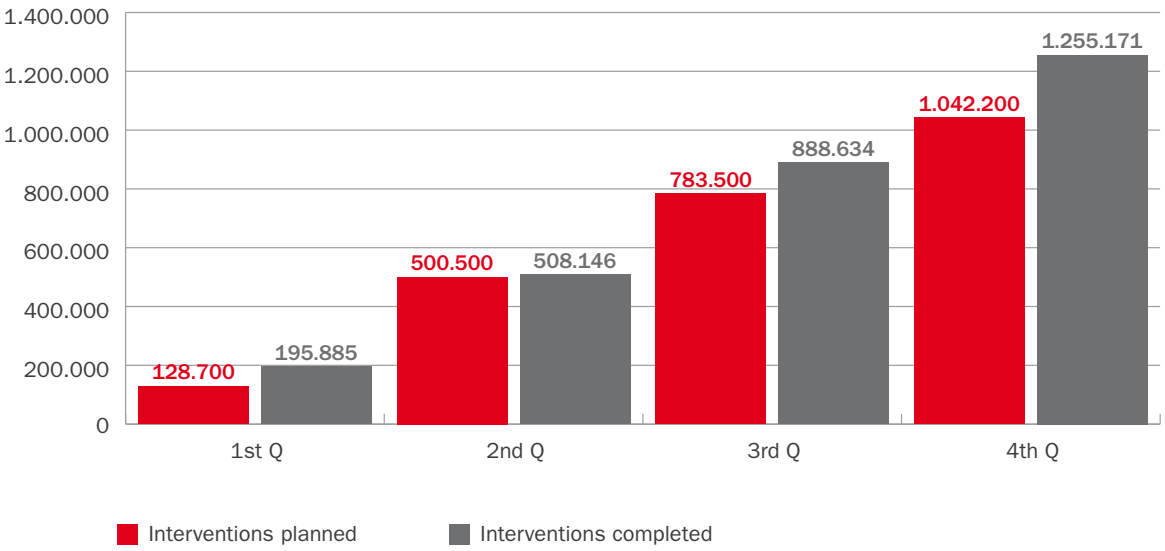


Figure 6 - Progress made on the planned periodic reviews of the poles

The pole replacement programme also continued into 2013, with the necessary maintenance work carried out at the relevant aerial cable supports. The aim is to guarantee the stability of the poles and service continuity, preventing the decay of individual poles from jeopardising the static balance of entire stretches of line. The plan for 2013 called for 120,000 poles to be replaced. The progress made is shown in figure 7. The chart shows that the number of poles replaced during the year was significantly higher than the target set in the technical plans (+15%).

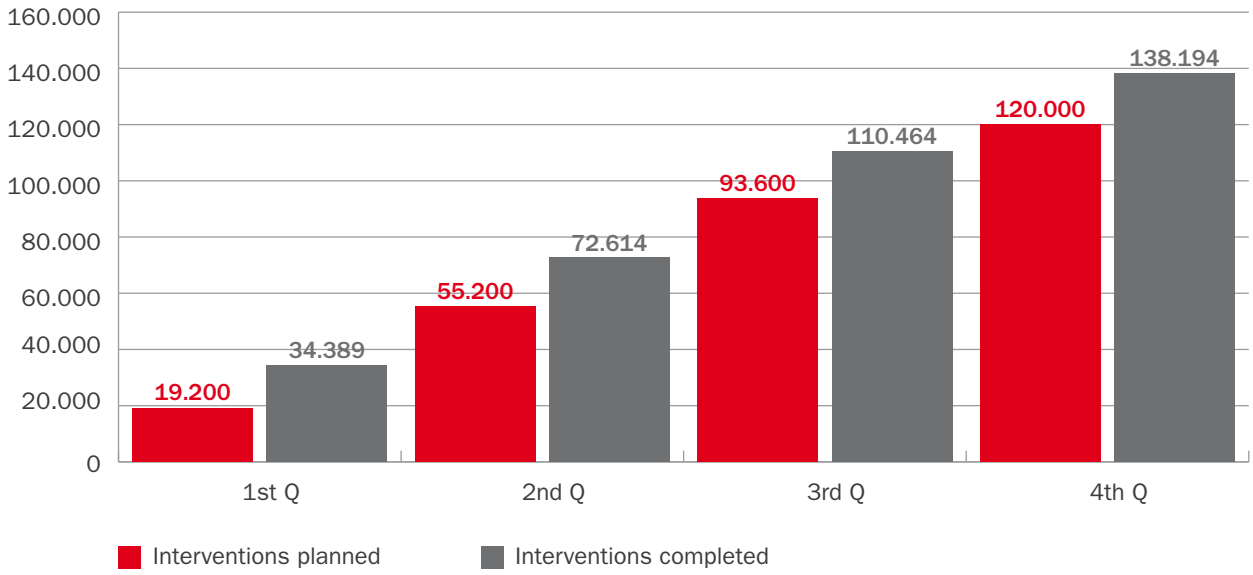


Figure 7 - Progress made on the pole-replacement plan

6.f.2d - Pressuriser Project

This project involved upgrading and carrying out special maintenance work at a selection of exchanges and cable areas on the pressurisers that ensure the correct electrical and transmission characteristics of the copper primary access network. The goals of the work to renovate the pressurisation network were to:

- restore pneumatic seals;
- restore correct remote management;
- obtain accurate identification details and capacity information for company databases;
- upgrade obsolete machinery.

The work took place at three levels:

1. Replacement of obsolete pressurisers in exchanges;
2. Execution of all work necessary to restore the pneumatic and electric network pressurisation machinery in the installation to the “normal” standards;
3. Repairs to the external network (usually the main section of cable areas) and restoration of operating conditions by locating and repairing pneumatic leaks.

The figures below show the progress made on the planned works, comparing the scheduled works against those actually carried out from the start of the year until the end of each quarter, respectively for replacement of obsolete pressurisers, work to bring stations up to standard and improvements to the external network. While for the first two categories of work the total results were in line with the technical plans, improvements to the external network suffered some delay as compared to the plans, and while this delay had been made up to a large extent by the end of the year, it did not allow achievement of the target set in the annual plan (-14%).

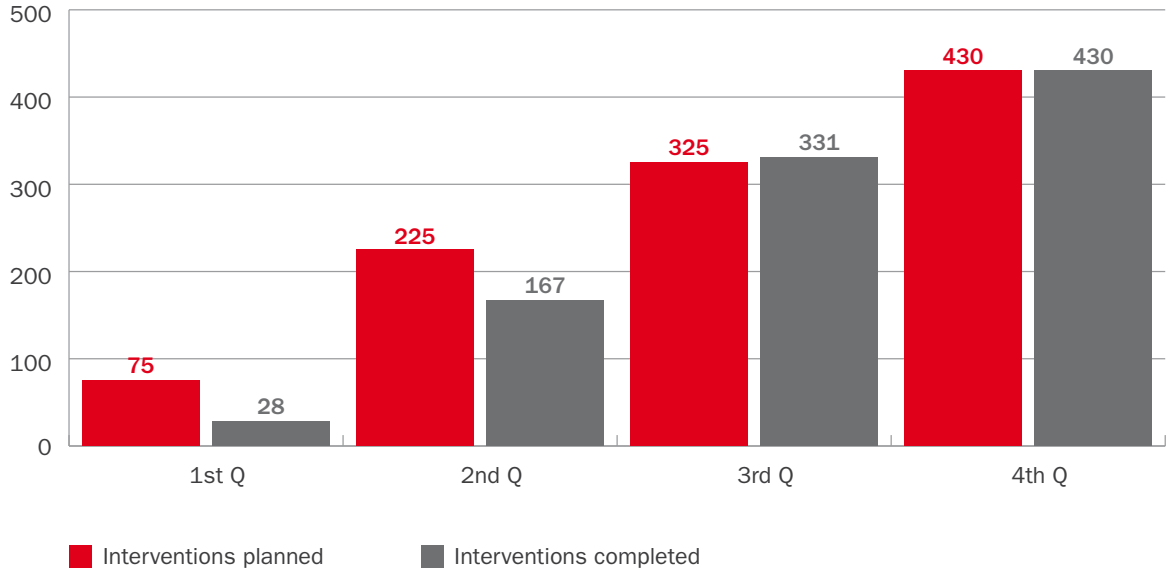


Figure 8 - Progress made on replacement of obsolete pressurisers

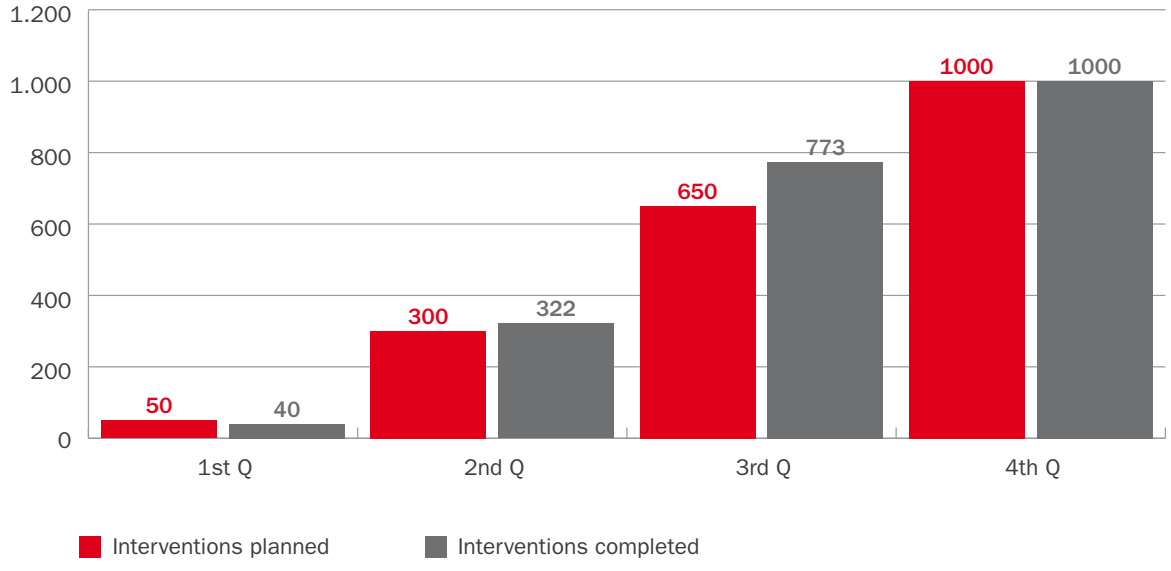


Figure 9 - Progress made on the plan to bring pressurisers stations up to standard

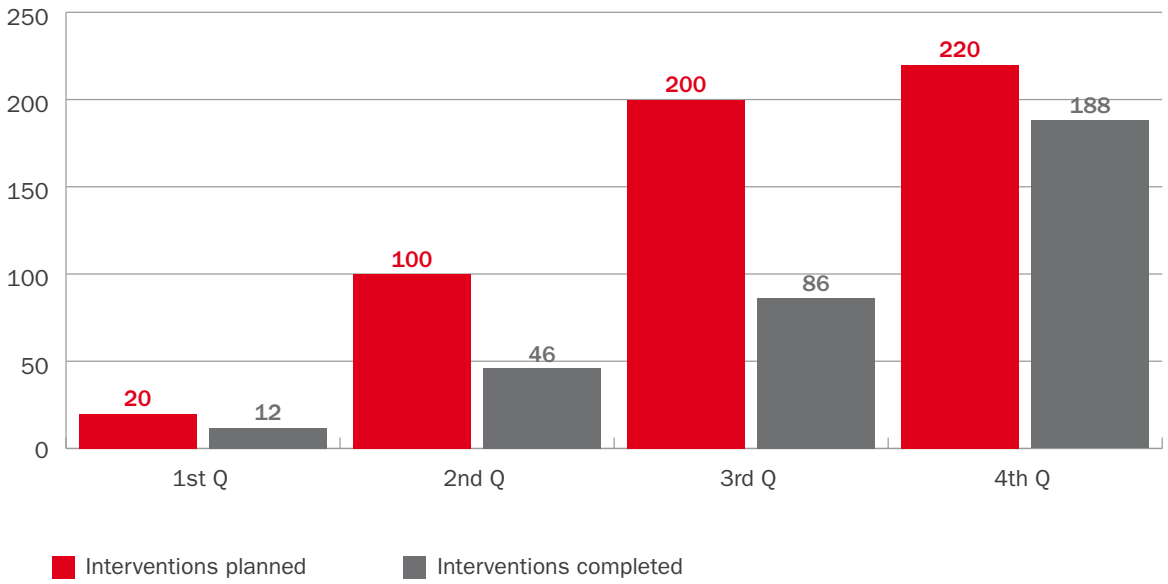


Figure 10 - Progress made on improvements to the external network

6.f.2e - Special maintenance work on the copper access network

Based on detailed analysis of the obsolescence of the copper access network, renovation work was scheduled and carried out by replacing sections of network cabling. The plan called for the renovation of 36,895 km-pair of the copper access network during 2013. Figure 11 shows the progress made, in km-pair, on the planned works, comparing the scheduled works against those actually carried out, from the start of the year until the end of each quarter. The total results were in line were according to plan.

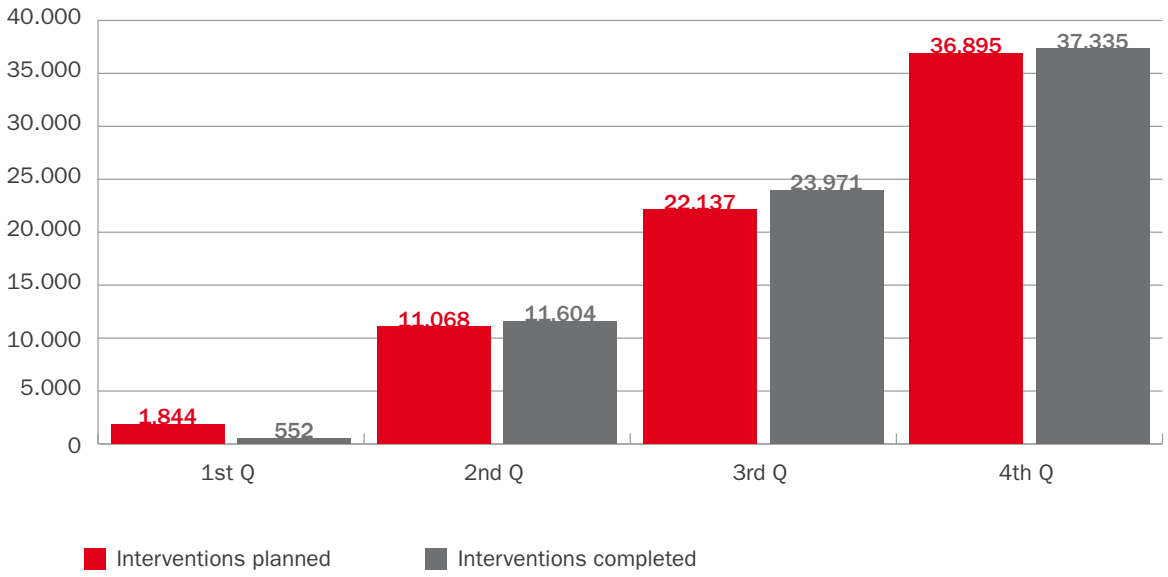


Figure 11 - Progress made on the planned special maintenance work on the copper network (in km-pair)

6.f.3 - Delivery Process

Desaturation of the fixed access network

Service requests (GTN, ISDN, ADSL, transmission flows) that cannot be met due to the lack of available copper pairs in the access network are managed on a continuous basis by the relevant Open Access departments. The shortage of network copper pairs is basically due to two reasons: i) the network needs to be extended, since it is not currently present in the area (typically the case for new buildings); ii) the network is present, but is saturated. Under the normal procedure, once it has been confirmed that a service request cannot be met due to the lack of distribution network availability, it is forwarded to the local offices which then use qualified external companies to work out an extension plan. Once this has been completed, the service is activated as requested.

During 2013, special attention was paid to the following indicators:

- Number of “no network” cases resolved;
- Percentage of “no network” cases remaining unresolved for 80 days or more.

Regarding the second indicator, the number of “no network” cases remaining unresolved for at least 80 days was supposed to below 30% of the total number. The chart in figure 12, which shows performance over time for this metric, shows that it always remained well under the maximum target value of 30% throughout the year.

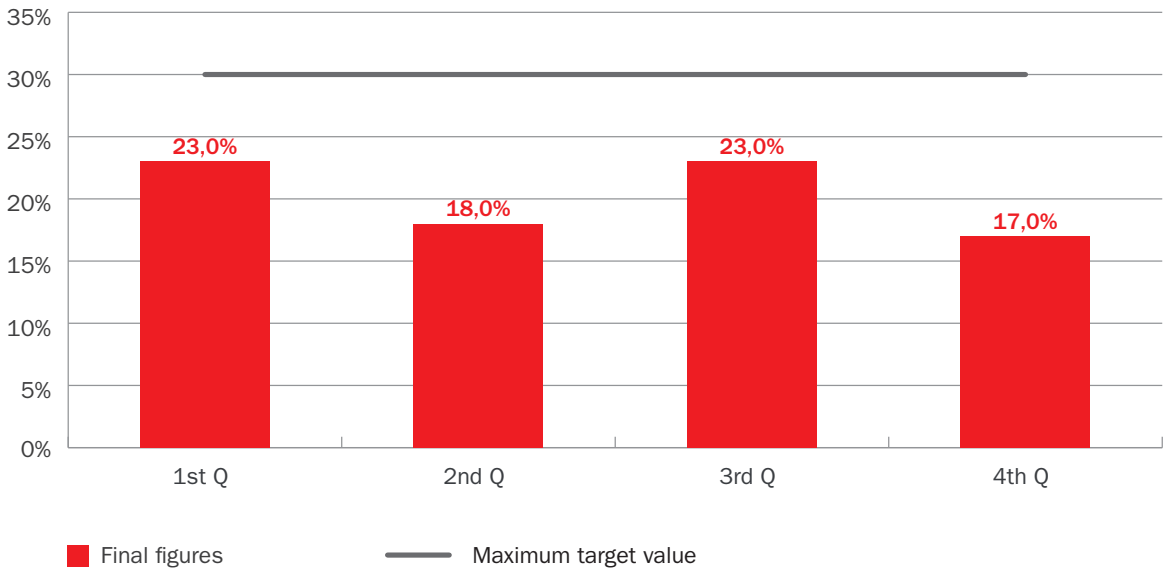


Figure 12 - Percentage of "no network" cases remaining unresolved for 80 days or more

Figure 13 shows the progress made on the planned works to resolve "no network" cases, comparing the scheduled works against those actually carried out, from the start of the year until the end of each quarter. The 2013 final result shows a number of resolved "no network" cases higher than those forecast in the Technical Plans (+19%).

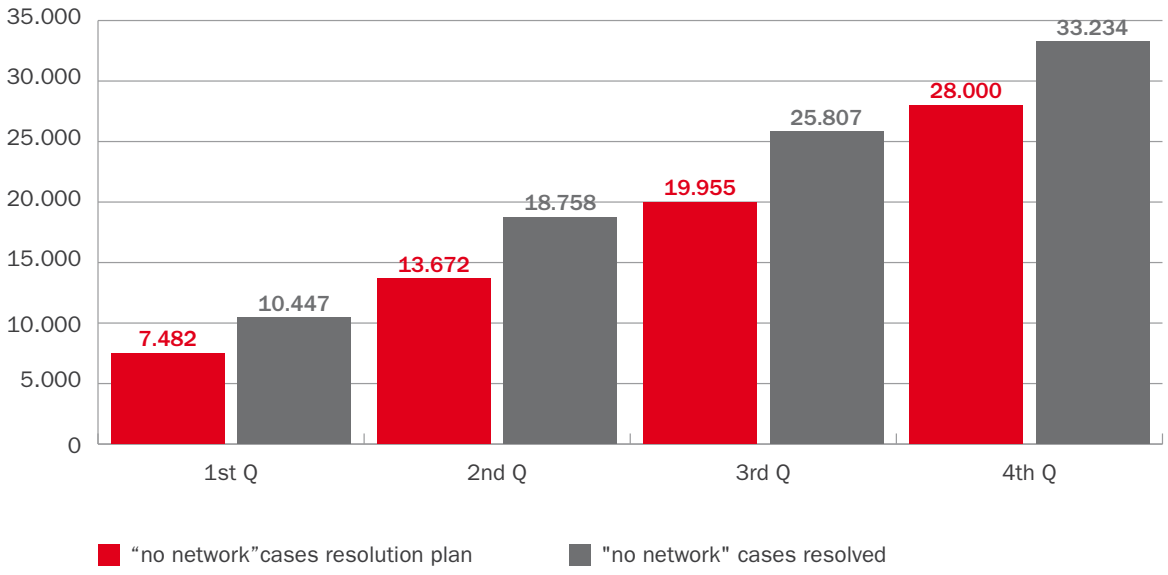


Figure 13 - Number of “no network” cases resolved

6.f.4 - Quality control criteria adopted by the Supervisory Board

As a benchmark for network quality control, the Supervisory Board continued to use an indicator based on the number of exchange areas each quarter that exceed the target fault rate for the current year. Moreover, in order to provide a meaningful indication of the quality of the network in terms of its geographic coverage and customer distribution, the Supervisory Board introduced a specific indicator based on the percentage of customers served by exchanges with a fault rate in excess of the target. For each geographic area, the indicator is obtained by calculating the percentage ratio of the total number of customers served by exchanges with a high fault rate against the total number of customers in the area. With regard to POTS (GTN) all the exchanges that have at least 1000 lines are considered, while for ADSL those with at least 300 lines are considered.

Table 1 shows the summary data for exchanges exceeding the fault rate targets for 2013 POTS services (2013 target rate: 11.2%) and compares the corresponding figures for December 2012, at both national and regional level. Telecom Italia’s figures show that, out of all voice-only exchanges, the number with a fault rate in excess of the target fell from 1,028 (end of 2012) to 1,058 in December 2013, with a slight increase. The percentage of customers served by exchanges with fault rates in excess of the target fell from 24.3% in December 2012 to 20.9% in December 2013 (-3.4%).

Analysing the data by geographical area shows that there are still significant differences between regions.

In particular, the South and the Central regional areas have the highest percentages of customers served by exchanges with a high POTS services fault rate (52.6% and 25.7%, respectively), while the percentages in the North East and the North-West are both below 6%.

REGIONAL AREA	NUMBER OF EXCHANGES FAILING TO MEET FAULT RATE TARGETS - DEC. 2012	NUMBER OF EXCHANGES FAILING TO MEET FAULT RATE TARGETS - DEC. 2013	DIFFERENCE IN NUMBER OF EXCHANGES DEC. 2013-DEC. 2012	% CUSTOMERS SERVED BY EXCHANGES FAILING TO MEET FAULT RATE TARGET - DEC. 2012	% CUSTOMERS SERVED BY EXCHANGES FAILING TO MEET FAULT RATE TARGET - DEC. 2013	VARIATION IN % CUSTOMERS SERVED BY EXCHANGES FAILING TO MEET FAULT RATE TARGET 3Q2012 -DEC. 2011
NW	75	60	-15	6,3%	3,5%	-2,8%
NE	93	132	39	5,7%	5,0%	-0,7%
CE	329	356	27	30,5%	25,7%	-4,8%
SO	531	510	-21	57,6%	52,6%	-5,0%
ITALY	1.028	1.058	30	24,3%	20,9%	-3,4%

Table 1 - Exchanges failing to meet fault rate targets for POTS services

With regard to the exchanges with ADSL installations, there was not such a marked improvement on the already good quality standards achieved in 2012 (see table 2). The number of exchanges outside the target fault rate (set at 18% for 2013) fell slightly to around 19. The percentage of customers served by exchanges with fault rates in excess of the target fell from 0.20% in December 2012 to 0.05% in December 2013. The situation shows good quality levels in all territories which all achieved levels lower than 0.2%.

REGIONAL AREA	NUMBER OF EXCHANGES FAILING TO MEET FAULT RATE TARGETS - DEC. 2012	NUMBER OF EXCHANGES FAILING TO MEET FAULT RATE TARGETS - DEC. 2013	DIFFERENCE IN NUMBER OF EXCHANGES DEC. 2013-DEC. 2012	% CUSTOMERS SERVED BY EXCHANGES FAILING TO MEET FAULT RATE TARGET - DEC. 2012	% CUSTOMERS SERVED BY EXCHANGES FAILING TO MEET FAULT RATE TARGET - DEC. 2013	VARIATION IN % CUSTOMERS SERVED BY EXCHANGES FAILING TO MEET FAULT RATE TARGET 3Q2012 -DEC. 2011
NW	0	0	0	0,00%	0,00%	0,00%
NE	2	2	0	0,04%	0,02%	-0,02%
CE	6	8	2	0,24%	0,17%	-0,07%
SO	12	9	-3	0,42%	0,03%	-0,39%
ITALY	20	19	-1	0,20%	0,05%	–0,15%

Table 2 - Exchanges failing to meet fault rate targets for ADSL services

A comparison of the data recorded in the 2009 -2013 period shows a trend towards improving results over the period both with regard to POTS (Figure 14) and to ADSL (Figure 15).

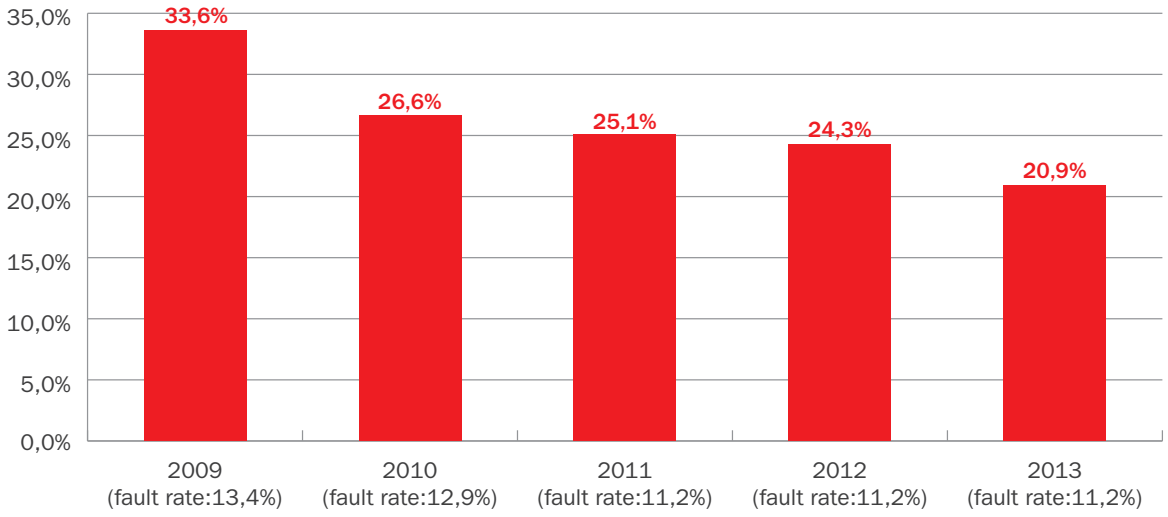


Figure 14 - Percentage of customers served by exchanges that exceed the planned fault rate for POTS

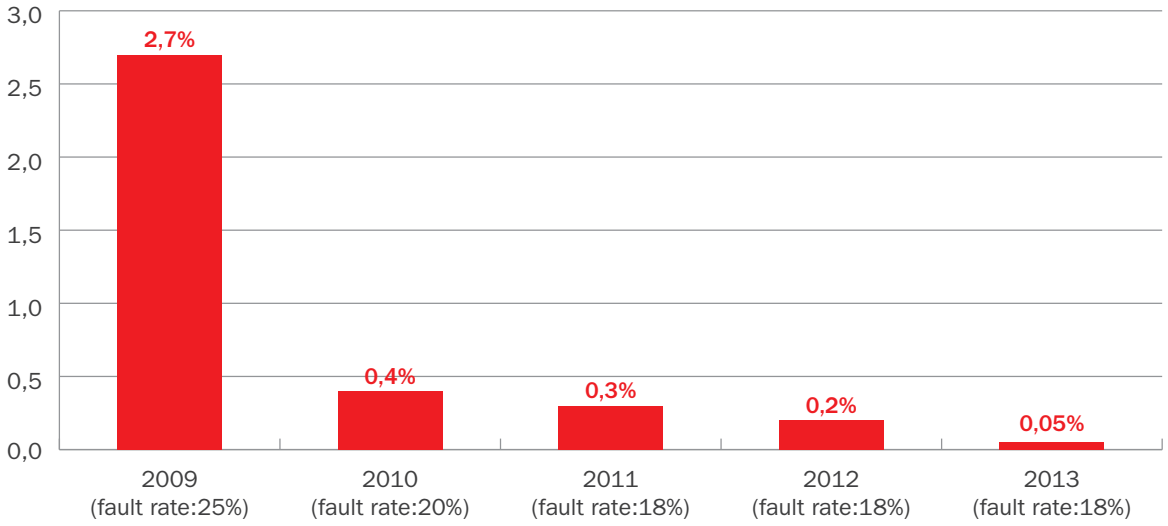


Figure 15 - Percentage of customers served by exchanges that exceed the planned fault rate for ADSL

6.G - BITSTREAM SERVICES AND THE SATURATION OF THE LOCAL TRANSMISSION NETWORK

6.g.1 General considerations

Among the matters referring to Undertakings Group no. 5, problems related to DSLAM saturation continue to be rather important. The Supervisory Office has continued to monitor progress made in the desaturation of ADSL exchanges and the management of the "amber light" pre-warning system. The purpose of monitoring is to ensure that the objectives set by Telecom Italia in its quarterly plans are met and to assess the effectiveness of the pre-warning system. Monitoring makes use of a special database created by the Supervisory Office, which is updated by direct extraction of data from the Telecom Italia Wholesale portal. This monitoring has highlighted a significant increase in the number of saturated ATM exchanges also accompanied by an increase in those declared to be in the pre-warning state. The saturation problem, which has reached major proportions since June 2012, is connected with the impossibility of sourcing new ATM DSLAM ports (with the result that equipment can reach geometric saturation), due to suppliers having ceased production of ATM technology some time ago. Given the obsolescence of ATM technology, Telecom Italia has been working on the ADSL bitstream network in an effort to extend the new Ethernet IP platform as far as possible, in order to provide a valid technological alternative in exchanges where ATM DSLAMs cannot be expanded. From January 2012, the Supervisory Office extended monitoring to include the presence of Ethernet IP DSLAMs in exchanges, in order to identify exchanges that are effectively saturated - i.e. where ATM DSLAMs cannot be expanded and an alternative Ethernet IP DSLAM is not available. In its Resolution No. 94/12/CIR of 4 October 2012, with reference to the *"end of sale"* of ATM technology, AGCom took the position that "the transition from ATM bitstream to Ethernet is a key element in ensuring an adequate competitive structure and in guaranteeing adequate service quality to the end user. Accordingly, AGCom has instructed Telecom Italia to pass on a series of financial incentives to the OLOs for the duration of the migration period, and imposed a reduction in prices for bitstream services provided on the Ethernet platform. AGCom has also asked Telecom Italia, as a condition for the recognition of the *end of sale* of ATM technology, to make available certain functional elements relating to: the process of service acquisition and provisioning; the adaptation of protocols to make OLO modems compatible; and the link analysis tools on sections relating to the delivery kits (for OLOs). With the implementation of the last action, the one related to the encapsulation protocols released on 27 December 2013, Telecom Italia has made all the services requested by AGCom available for sale, thus making official recognition of the *"End of sale"* of ATM technology possible.

6.g.2 - Asymmetrical bitstream services

Monitoring operations continue to highlight the considerable increase in the number of exchanges unavailable for service amongst those served by ATM DSLAM and miniDSLAM. The table below compares year-end service figures for 2012 and the data recorded on 31 December 2013 showing the number of asymmetrical bitstream service exchanges that were saturated.

	FINAL FIGURES AT 31/12/2012			FINAL FIGURES AT 31/12/2013		
	Exchanges in service (active + saturated)	of which saturated exchanges	% telephone customers served by saturated exchanges	Exchanges in service (active + saturated)	Saturated exchanges	% telephone customers served by saturated exchanges
Total	9.211	1.178	2,4%	9.282	1.250	2,5%
miniDSLAMs	2.355	1.127	2,1%	2.324	1.191	2,1%
DSLAM 7 and 20 Mbit/s (ATM or IP)	6.856	51	0,3%	6.958	59	0,4%
Only IP	575	0	0,0%	671	1	0,0%
7 Mbit/s ATM DSLAMs	6.281	501	5,1%	6.281	797	7,7%
of which saturated ATM DSLAMs without Ethernet		47	0,3%		58	0,3%
of which saturated ATM DSLAMs with Ethernet		4	0,0%		0	0,0%

Table 1 - Saturated asymmetrical bitstream service exchanges: December 2012 vs. December 2013

Compared to the sharp rise in the number of saturated exchanges served by ATM DSLAMs (from 501 to 797), only a minimal number of exchanges (59) were effectively out of service due to the lack of an Ethernet IP DSLAM alternative. The overall number of exchange areas out of service as of 31 December 2013 was 1,250, most of which (over 95%) were areas served by ATM miniDSLAMs. On the same date, the percentage of telephone users served by out of service exchanges was 2.5%, a slight increase over the previous year. An analysis of the data reported in the previous table also reveals an increase in the number of saturated miniDSLAMs (+6%), reflecting Telecom Italia's decision not to prepare a specific desaturation plan for lines of this type which, for the most part, cover areas of little market interest. In this regard, it must be recalled that, in its Resolution No. 12/2011, the Supervisory Board recommended that Telecom Italia should publish any miniDSLAM expansion plans that may be introduced as a result of special agreements concluded with local government authorities.

In compliance with Supervisory Board instructions, Telecom Italia has introduced a pre-warning mechanism to signal exchanges nearing saturation point. The amber light pre-warning system is up and running on the Telecom Italia Wholesale portal and signals which exchanges may become saturated within an estimated period of three months, if expansion action is not taken. The figure below shows changes in the number of 7 Mbit/s ADSL service exchanges served by ATM DSLAMs signalled by an amber light during 2013. Exchange areas served by ATM DSLAMs at risk of saturation are shown in yellow; the number of exchanges in the area for which an alternative Ethernet IP DSLAM is not available is shown in red.

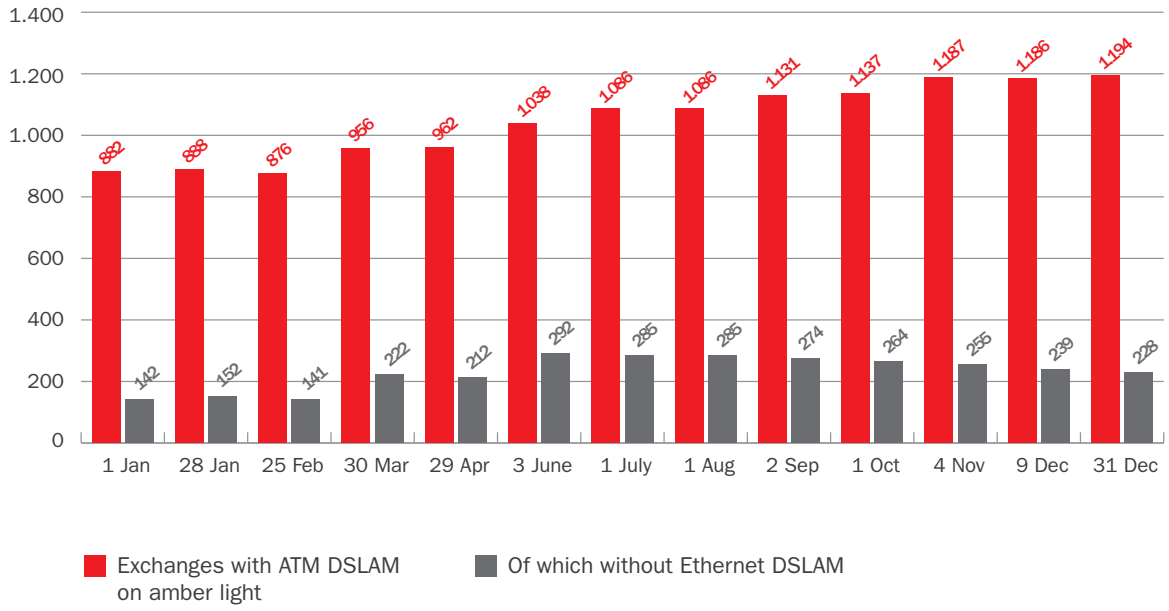


Figure 1 - Trend in the number of exchanges signalled by an amber light (7 Mbit/s ATM DSLAMs)

The number of exchanges signalled by an amber light continued to increase over the year, reaching 1,194 at 31 December 2013. The rise amounted to a year-end 35% increase in the number of exchanges signalled by an amber light as nearing saturation. It is interesting to note that, of the 1,194 exchanges with “amber light” status, 228 were without the alternative offered by Ethernet IP DSLAMs, that is 19% of the total. The figure below shows the trend in the number of 7 Mbit/s ADSL service exchanges served by ATM DSLAMs that reached saturation point during 2013. All the exchange areas served by saturated ATM DSLAMs are shown, as well as the percentage of exchanges in the area for which an alternative Ethernet IP DSLAM is not available.

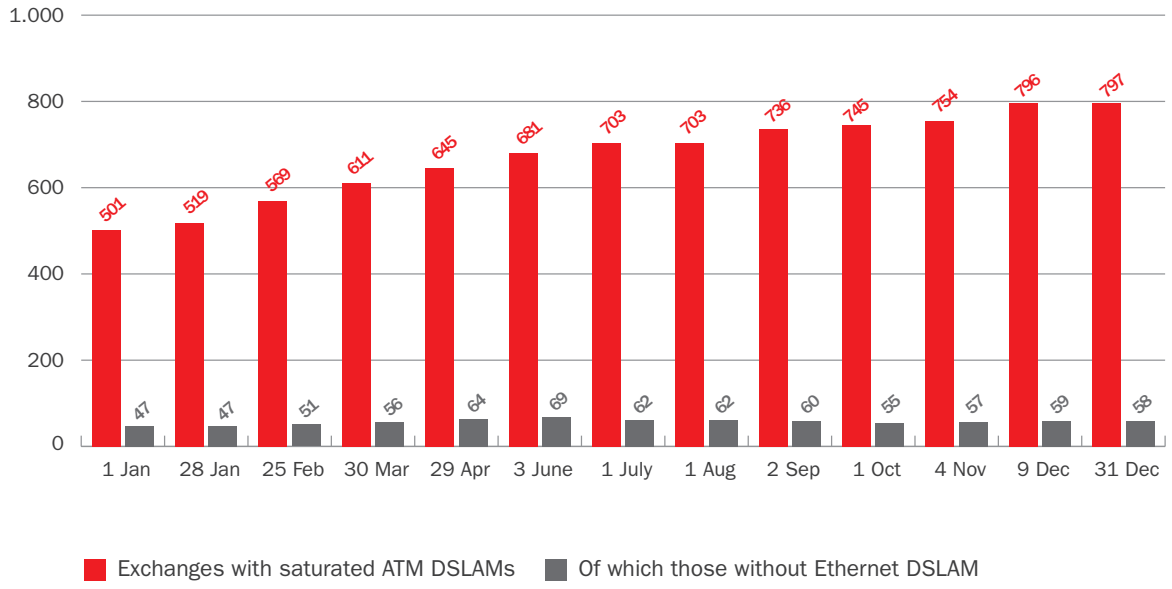


Figure 2 - Trend in the number of saturated exchanges (7 Mbit/s ATM DSLAMs)

The chart confirms that the number of saturated exchanges rose significantly over the year (+ 59%), jumping from 501 exchanges at 31 December 2012 to 797 recorded at December 2013. Of these, a remarkably high proportion (approx. 93%) were saturated in their ATM sections, but nevertheless in service thanks to the availability of an Ethernet IP DSLAM. This means that, also bearing in mind the only saturated exchange served only by Ethernet, 59 exchanges were totally out of service for asymmetrical bitstream services on 31 December 2013 out of a total of 6,958 exchanges served by DSLAMs (ATM or IP).

The figure below shows the trend in the number of exchanges equipped with saturated Ethernet IP DSLAMs: it is clear that the small number of areas out of service has increased slightly. It must be pointed out that of the 6 saturated exchanges, 5 are also saturated ATM exchanges (they coincide with a share of the 58 shown in red in the graph in Figure 2), while there is only one saturated exchange served only by Ethernet/IP. It should also be noted that a vast majority of Ethernet/IP areas that are out of service (94%) are served by road-side installations (so-called street miniDSLAMs).

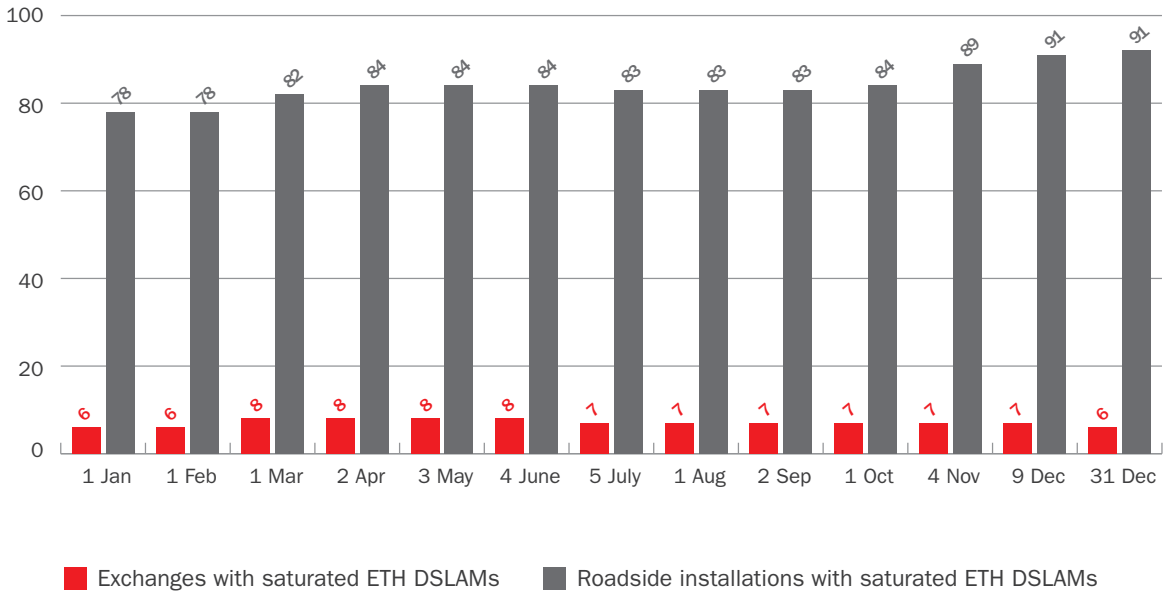


Figure 3 - Trend in the number of exchanges equipped with saturated Ethernet IP DSLAMs

6.g.3 Symmetrical bitstream services

Once again in 2013, Telecom Italia decided that desaturation plans for symmetrical bitstream services would only be introduced for exchanges of significant *Retail* or Wholesale market interest. The policy decision meant that no action plan could be prepared for 2013. Instead, work was planned over the course of the year in response to market interest. The table below compares year-end figures for 2012 and those for 2013.

	Final figures at 31/12/2012			Final figures at 31/12/2013		
	Exchanges in service (active + saturated)	of which saturated exchanges	% telephone customers served by saturated exchanges	Exchanges in service (active + saturated)	Saturated exchanges	% telephone customers served by saturated exchanges
Total	9.160	1.350	2,0%	9.164	1.224	1,8%

Table 2 - Saturated symmetrical bitstream service exchanges: December 2012 vs. December 2013

The figures below show the progress made on the work to desaturate the exchanges for symmetrical bitstream services during 2013, the break-down by geographical area of the work carried out in the period and the trend in the percentage of saturated exchanges and in the percentage of customers served by saturated exchanges. A comparison of the charts shows that both the percentage of symmetrical bitstream service exchanges that were saturated and the percentage of customers served by saturated exchanges decreased slightly during the period of observation.

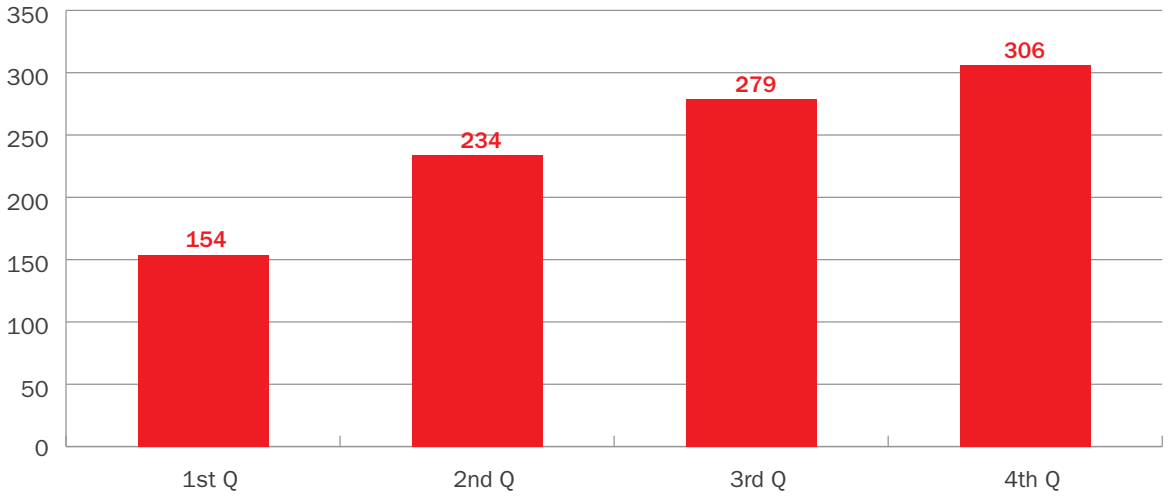


Figure 4 - Symmetrical bitstream services: Progressive desaturation action taken over 2013

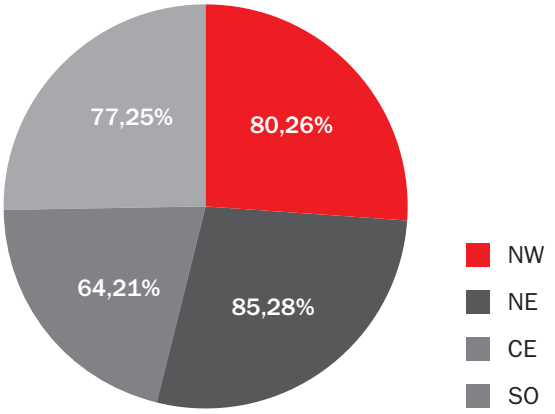


Figure 5 - Symmetrical bitstream services: Geographical breakdown of desaturation action taken over 2013

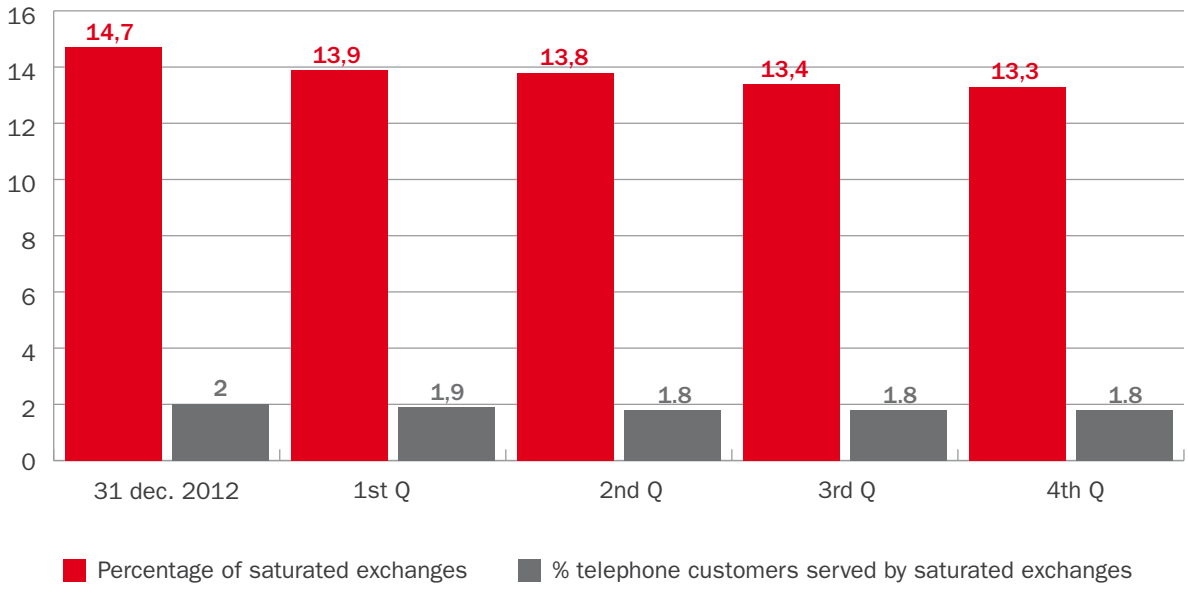


Figure 6 - Symmetrical bitstream services: % saturated exchanges and % telephone customers served by saturated exchanges

6.H PROGRESS IN THE DEVELOPMENT OF THE FIXED ACCESS NETWORK

6.h.1 General considerations

Undertakings Group No. 6 *(Guarantees of Transparency of Technical Plans for the Development of the Fixed Access Network)* requires Telecom Italia to publicise the "Technical Plans on the Development of the Fixed Access Network" by regularly publishing a series of long-term planning documents (known as "Multi-Year Plans") and medium-term planning documents relating to each quarter of the current year.
The Multi-Year Technical Plan for the development of the NGAN, as issued by Telecom Italia in February 2013, called for an increase during the year of 1,526,000 Property Units connected in primary and 60,100 Property Units connected in secondary, in order to reach 2014 with 3,863,903 Property Units in primary, of which 639,773 would also be connected in secondary, across 338 exchange areas in 68 municipalities. In particular, the Technical Plan defined by Telecom Italia for 2013 was based on the development of 178 more areas, involving 36 new municipalities. The total NGAN installations for the third quarter of 2013 showed higher results than the targets set in terms of Property Units "connected in primary" while there was a marked shortfall with regard to connected Property Units reached in secondary.

The 2013 broadband network development plan designed to reduce the digital divide called for 145 new municipalities to be covered by 197 new open exchanges. The year-end results showed a slight shortfall against the Technical Plan, both in terms of the number of new exchanges opened and the number of new municipalities covered.

Lastly, the copper network development plan for new allotments ended with 55,373 new housing units connected across Italy - exceeding the targets set in the plan. The following paragraphs give details of the analysis conducted on the final data for the third quarter 2013.

6.h.2 Development of the copper network

In order to define the planning criteria for the development of the traditional copper access network, it is necessary to distinguish between two types of installation:

- areas with an existing and functioning - but saturated - access network; depending on demand trends, this could result in infrastructural crises which, if not resolved in time, risk preventing the provision of services in line with existing SLAs. Accordingly, developing this part of the access network is seen as a way to ensure service quality and is handled under a specific project for this purpose (see "Progress on the Technical Plans for the Quality of the Fixed Access Network");

- areas with no access network; this covers new buildings in previously uninhabited areas, mainly made up of new allotments. In view of the not insignificant number of individual works projects linked to this problem, the decision was taken to monitor development plans through a specific "Allotments Project".

The network planning process for new allotments is, in some ways, similar to the development of saturated networks, but also requires various adjustments to ensure proper network coverage when the new housing units are inhabited. We therefore have to deal with volume planning mechanisms that will change significantly over time depending on various external factors, including the speed of construction of the housing units and how long it takes for the units to be inhabited, etc.

Development plans are usually laid out over a number of years, despite the obvious uncertainties due to external factors such as real estate market fluctuations and macroeconomic factors.

Telecom Italia's Multi-Year Plan for 2013-2015 calls for 220,000 new property units (P.U.) to be cabled-in according the following schedule:

	Increase 2013	Increase 2014	Increase 2015	Total increase 2013-2015
No. of planned P.U.	55.000	75.000	90.000	220.000

Figure 1 shows the progress made on the development plan for 2013, both in terms of Property Units scheduled for connection and in terms of Property Units actually connected at year-end, from the start of the year to the end of each quarter of 2013. The chart shows that, in Italy, the results at the end of 2013 were slightly above the target set in the annual plan.

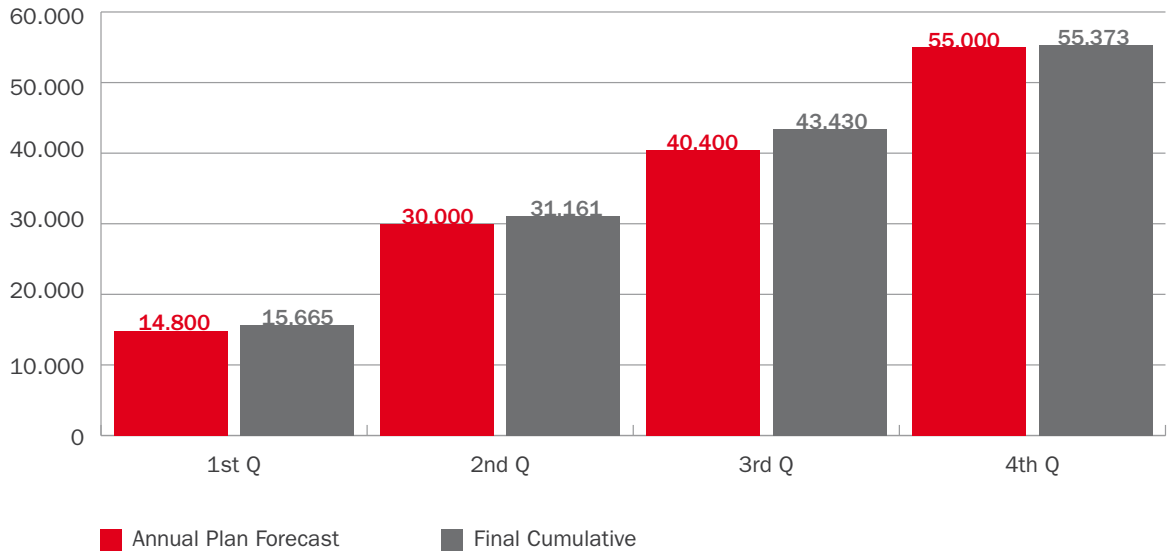


Figure 1 - Allotments Progress made in connected P.U. during 2013

6.h.3 Development of the broadband access network coverage

The 2013 development plan for the broadband network called for 197 new and active exchanges and for 145 new municipalities to be covered for ADSL services of up to 20 Mbit/s. Figure 2 shows the progress made on the development plan for 2013, both in terms of exchange areas to be served according to the plan and in terms of new exchange areas actually covered at the end of each quarter; Figure 3 shows progress against the 2013 development plan in terms of new municipalities covered.

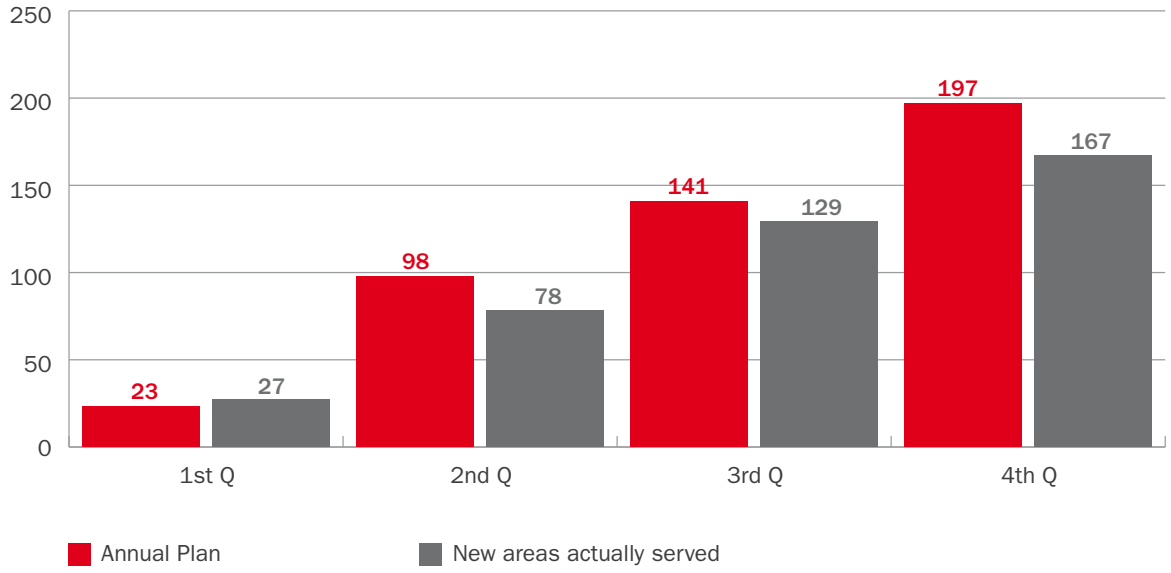


Figure 2 - Progress on the coverage plan for services of up to 20 Mbit/s: exchange areas

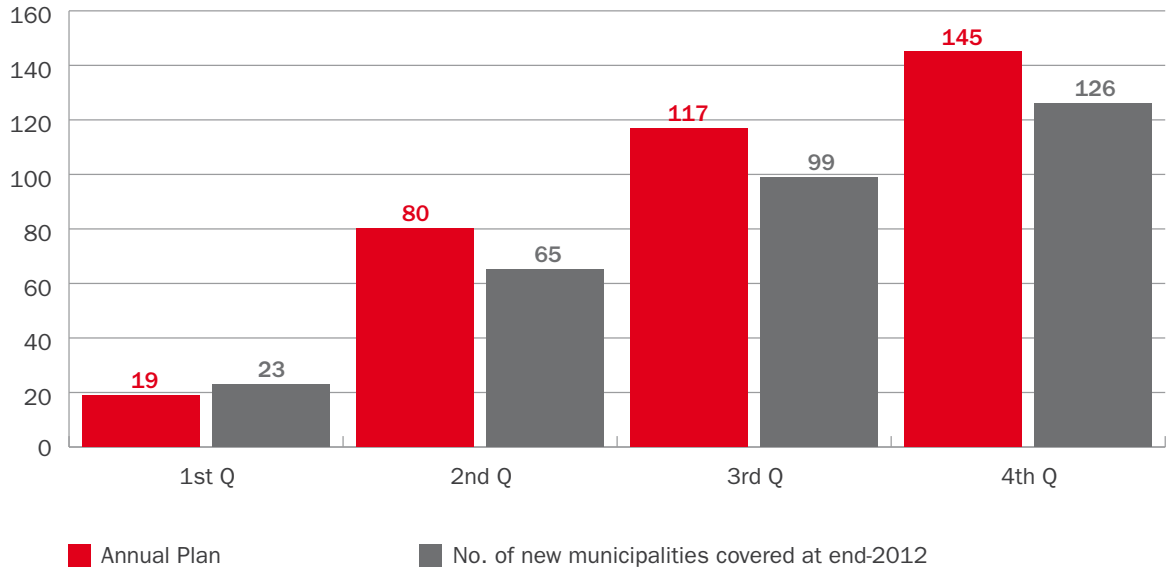


Figure 3 - Progress on the coverage plan for services of up to 20 Mbit/s: new municipalities

The final results for Italy as a whole were below target in terms of the number of new exchange areas served (-15.2%) and the number of new municipalities covered (-13%).

6.h.4 Development of the next generation broadband network (NGAN)

The Next Generation Access Network (NGAN) requires the deployment of optic fibre cabling in the access network, in order to ensure significant bandwidth availability for data transmission, which provides an infrastructure capable of supporting new and next-generation IP services. Based on the technical and economic assessments made during the first phase of NGAN development - which was limited to major metropolitan areas - Telecom Italia decided to use the following architectures:

- Fibre To The Home (FTTH): optic fibres extend to the end user's premises;
- Fibre To The Cabinet (FTTCab): based on the use of miniDSLAM VDSL2, placed near to current switching cabinets for the copper access network.
- Fibre To The Premises (FTTP): a network configuration with dedicated optic fibres extending to the customer's premises and used to connect mid-to-high level "business" customers and for HSPA mobile radio base stations.

Given the type of customer served, FTTP architecture uses a "point-to-point" configuration with dedicated fibres and Gigabit Ethernet transmission technology.

FTTH network architecture (currently being installed in the Municipality of Milan) uses Gigabit PON (GPON) technology with shared fibres in a "point-to-multipoint" configuration, in order to cut costs. Figure 4 shows the architectural layout for the FTTH network configuration used by Telecom Italia.

In general, GPON systems use a centrally-placed Optical Line Termination (OLT) which is connected to the customer-side network terminations, known as Optical Network Terminations (ONT), through an Optical Distribution Network (ODN). The ODN is completely passive (i.e. it does not require any electrical input) and is made up of optic fibres and passive optic splitters which allow the incoming signal to be divided into a number of outgoing signals and vice-versa. Under the current configuration, the splitting factor allows 64 ONTs to be connected to one OLT. Theoretically, every optic fibre served by the local exchange and corresponding to a PON branch can serve 64 property units, but in practice the modular nature of the splitters and the distribution of property units within buildings mean that the splitters cannot always be used to their full capacity. Consequently, a splitting factor of 1:64 serves an average of 50 customers (approx. 80% fulfilment). Each optic fibre, relative to each PON, is linked in the exchange to a passive Optical Distribution Frame (ODF) and connected from this to the OLT transmission system. The FTTH architecture chosen by Telecom Italia uses two kinds of optical splitting: an initial optical splitter (splitting factor: 1:16; 1:8; 1:4), located in a box inside a manhole, and a second splitter (splitting factor: 1:4; 1:8; 1:16), at the base of the building, inside a cabinet known as an Optical Termination Box (OTB). From the OTB, all the optic fibres lead, point-to-point, to the Property Units and the ONTs installed in the customer's premises, thus completing the customer's connection.

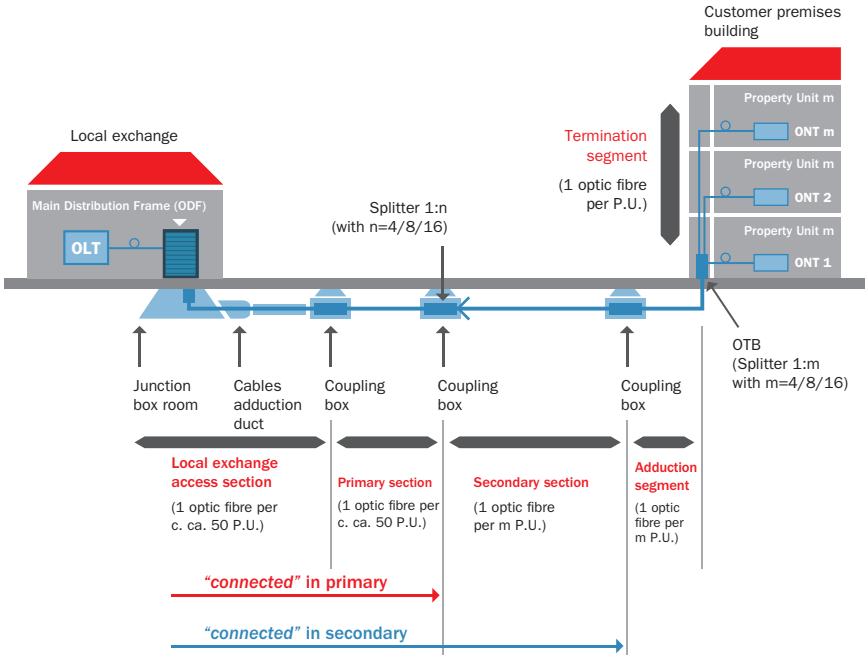


Figure 4 - NGAN network: Architectural layout of Telecom Italia's FTTH configuration

The VDSL2 technology used in the FTTCab architecture (see figure 5) makes it possible to send digital signals asymmetrically over symmetrical copper pairs at high speeds, at the same time as GTN analogue POTS services. In order to avoid disruption to the traditional telephone service, VDSL low-pass filters must be used in the customer home in every phone socket that a telephone is connected to.
The equipment series in the FTTCab network access architecture is:

- A customer-side VDSL2 modem and cabinet-side VDSL2 modem (Optical Network Unit - ONU); this makes it possible to carry two channels: one for data and one for traditional telephone services.
- A customer-side splitter in case of switchboards, radio-alarms, burglar alarms, etc.;
- The copper wire line;
- The copper wire line collection cabinet. The phone pair is terminated with a filter which separates the data channel from the voice channel; the first terminates at the ONU, which is connected by optic fibres to the served OLT using a GbE interface and the second is channelled towards to the SL telephone exchange using the primary copper network.

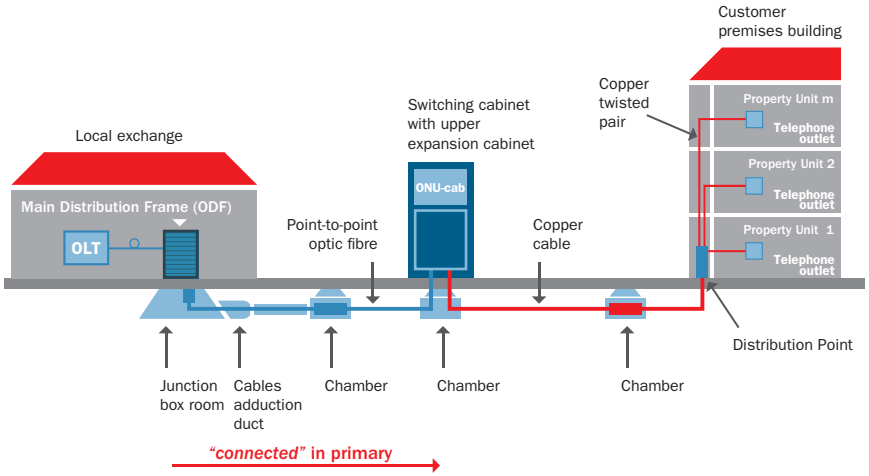


Figure 5 - NGAN network: Architectural layout of Telecom Italia's FTTCab configuration

At present two commercial VDSL2 line profiles are envisaged with the following net speeds:
1st profile Downstream: 1 - 30 Mbit/s Upstream: 300 Kbit/s - 3 Mbit/s;
2nd profile Downstream: 15 - 30 Mbit/s Upstream:1 - 3 Mbit/s;
The activation of these profiles depends on the characteristics of the line and the number and type of interfering systems connected to the cable. In future these profiles may also be developed with configurations that can provide higher operating speeds.

The development plan for the NGAN distinguishes between Property Units (P.U.) connected in primary and those connected in secondary, depending on the progress made in completing the fibre-optic network (see figure 4). More specifically, a Property Unit is considered to be "connected in primary" when the development of the optical network only covers the initial distribution section, i.e. the part of the network between the ODF in the exchange and the primary optical splitter (in FTTH architecture) and the part of the network between the ODF and the distribution cabinet (in FTTCab architecture). A P.U. is considered to be "connected in secondary" when the development of the optical network also covers the secondary distribution section, i.e. the whole of the network between the ODF in the exchange and the manhole near the building for the FTTCab architecture. Thus, saying that a Property Unit is "connected in primary" with FTTCab architecture means that the development of the network has reached a stage where the optic fibre between the exchange and the distribution cabinet for that building has been laid, but that the cabinet does not yet have the ONU. The Multi-Year Technical Plan for the development of the NGAN, as approved by Telecom Italia in February 2013, called for 7,565,903 Property Units to be connected in primary by 2015, of which 698,973 would also connected in secondary, across 716 exchange areas in 151 municipalities. The table below shows the planned work for 2013-2015 under the latest version of the Multi-Year Technical Plan (version February 2013).

	Total 2012	Increase 2013	Increase 2014	Increase 2015	Total 2015
No. of municipalities	32	36	48	35	151
No. of exchange areas	160	178	176	202	716
No. of P.U. connected in primary	2.337.903	1.526.000	2.181.000	1.521.000	7.565.903
of which also connected in secondary	579.673	60.100	59.200	0	698.973

Table 3 - Planned totals and increases in P.U. to be achieved in the period 2013-2015

The Technical Plan for 2013 envisaged, in particular, development of the network to include a further 178 exchange areas, also involving 36 new municipalities. Use of FTTH is envisaged only in the Milan area, while in all other areas it has been decided to use only FTTCab architecture.

Figure 6 shows the progress made on developing the NGAN, both in terms of Property Units connected in primary according to the plan and actually connected at the end of the period from the start of the year to the end of each quarter in 2013. Figure 7 shows the same information for Property Units connected in secondary.

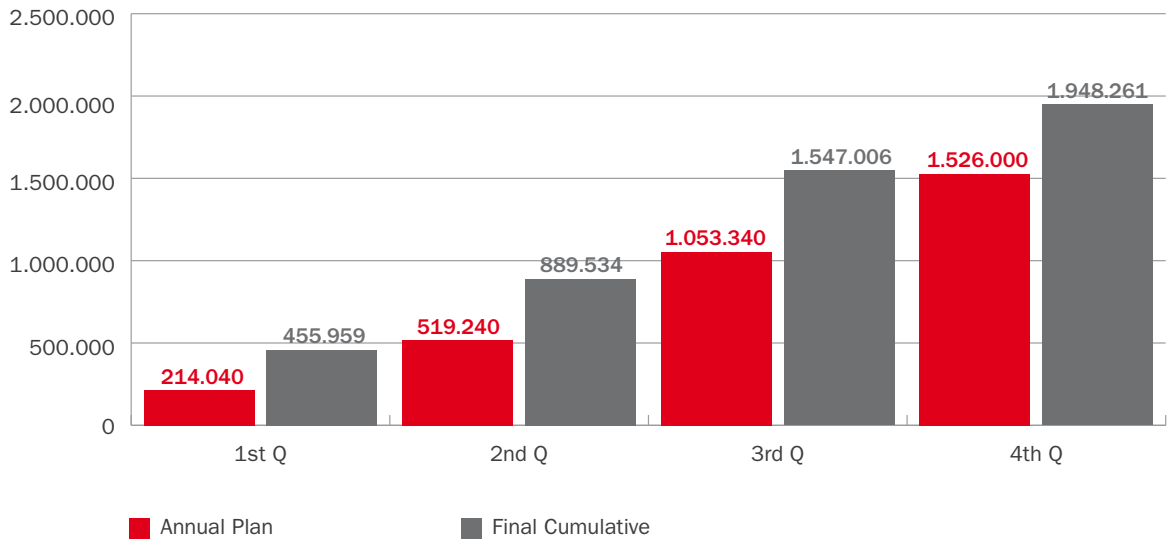


Figure 6 - Progress made on development of the NGAN (P.U. connected in primary)

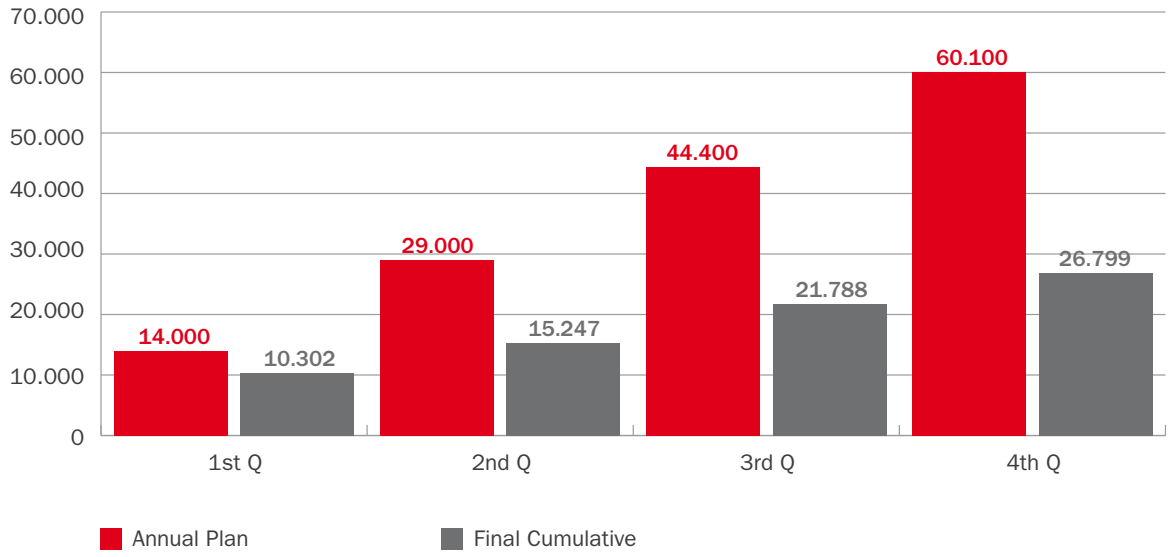


Figure 7 - Progress made on development of the NGAN (P.U. connected in secondary)

Analysis of the graphs shows a considerable acceleration in development of fibre in the primary (28% more property units than forecast passed in primary) at the end of the fourth quarter and a marked shortfall in the increase in property units connected in secondary (- 55%).

With regard to development of the FTTCab NGAN, reference can be made to Figure 8 showing the progress of the 2013 plan both in terms of new cabinets to be equipped according to programme, and in terms of cabinets effectively served at the end of the various quarters. It is noted that the number of cabinets in which ONU has been installed at the end of the fourth quarter 2013 is substantially in line with the forecast in the technical plans.

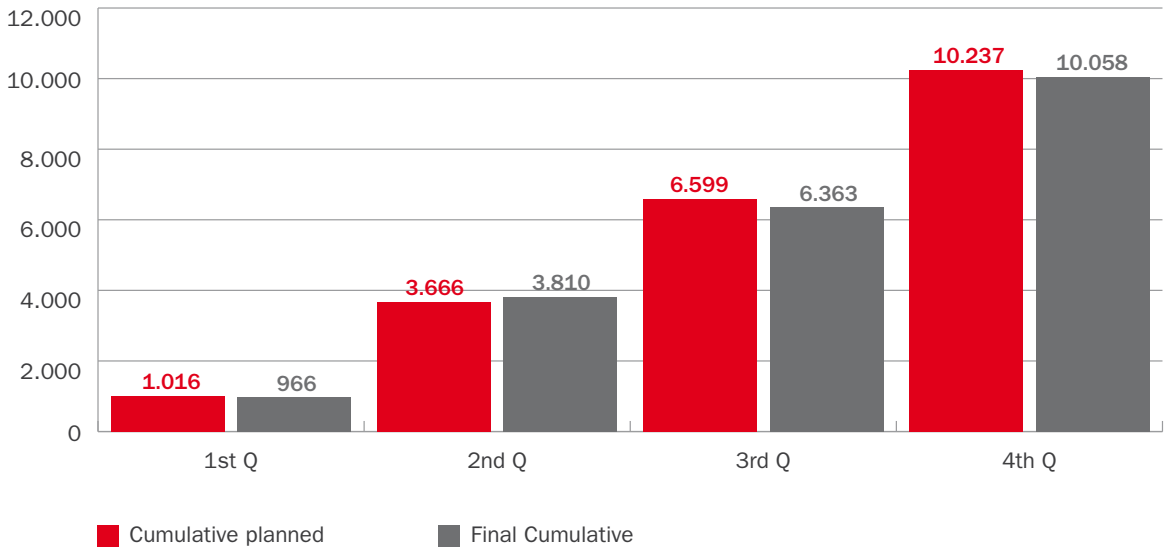


Figure 8 - Progress made on development of the FTTCab NGAN (number of new cabinets equipped)

The graphs in Figure 9 show the progress made on development of the FTTCab NGAN from the beginning of 2013 to the end of the year in terms of numbers of cabinets served, in all the municipalities involved in the project. The restrictions put in place by local authorities caused progress to differ compared to the plans in individual municipalities, although they remained in line with overall targets.

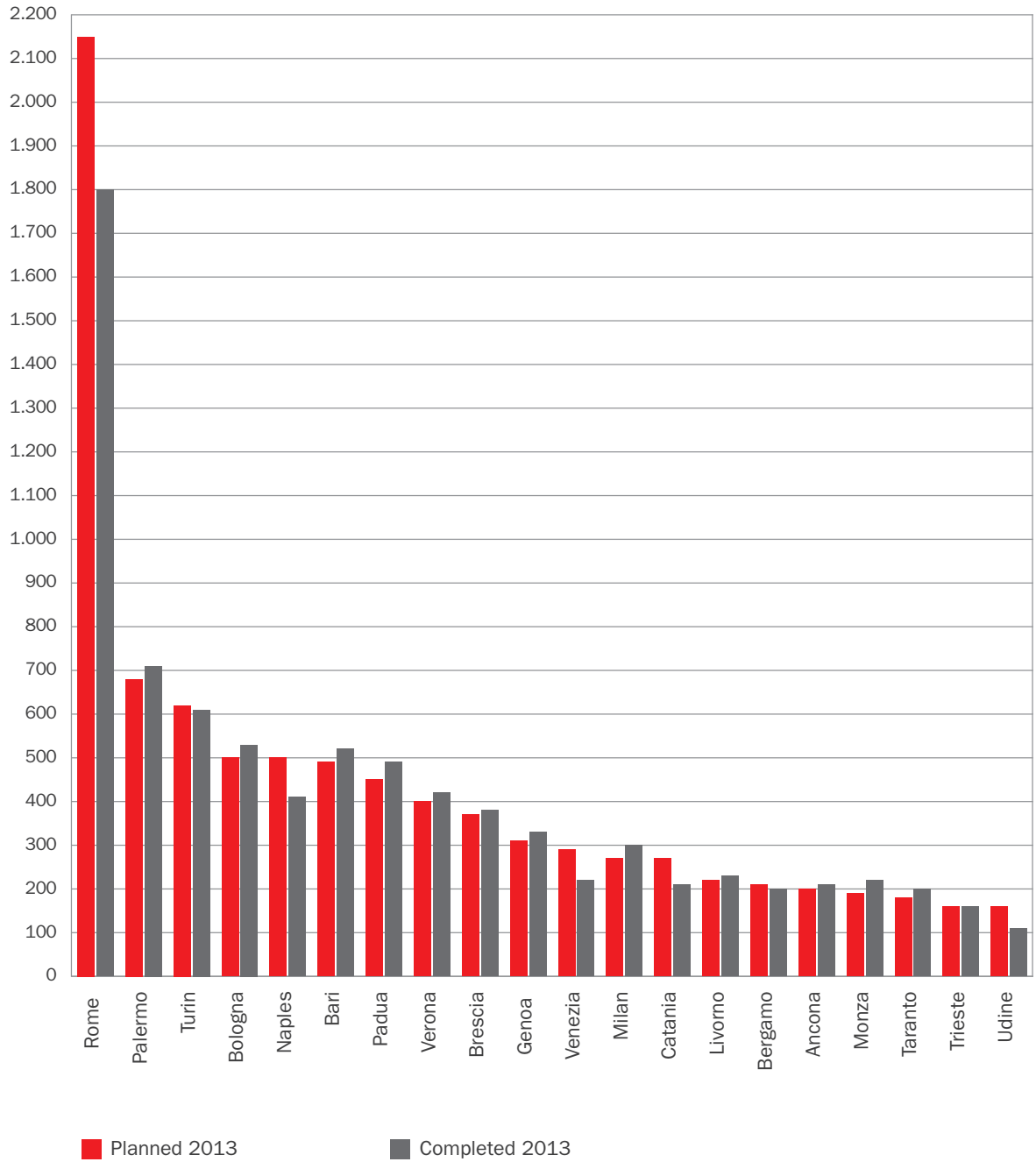


Figure 9 - Development of the FTTCab NGAN: Number of cabinets per municipality equipped with ONU from 1 January to 31 December 2013

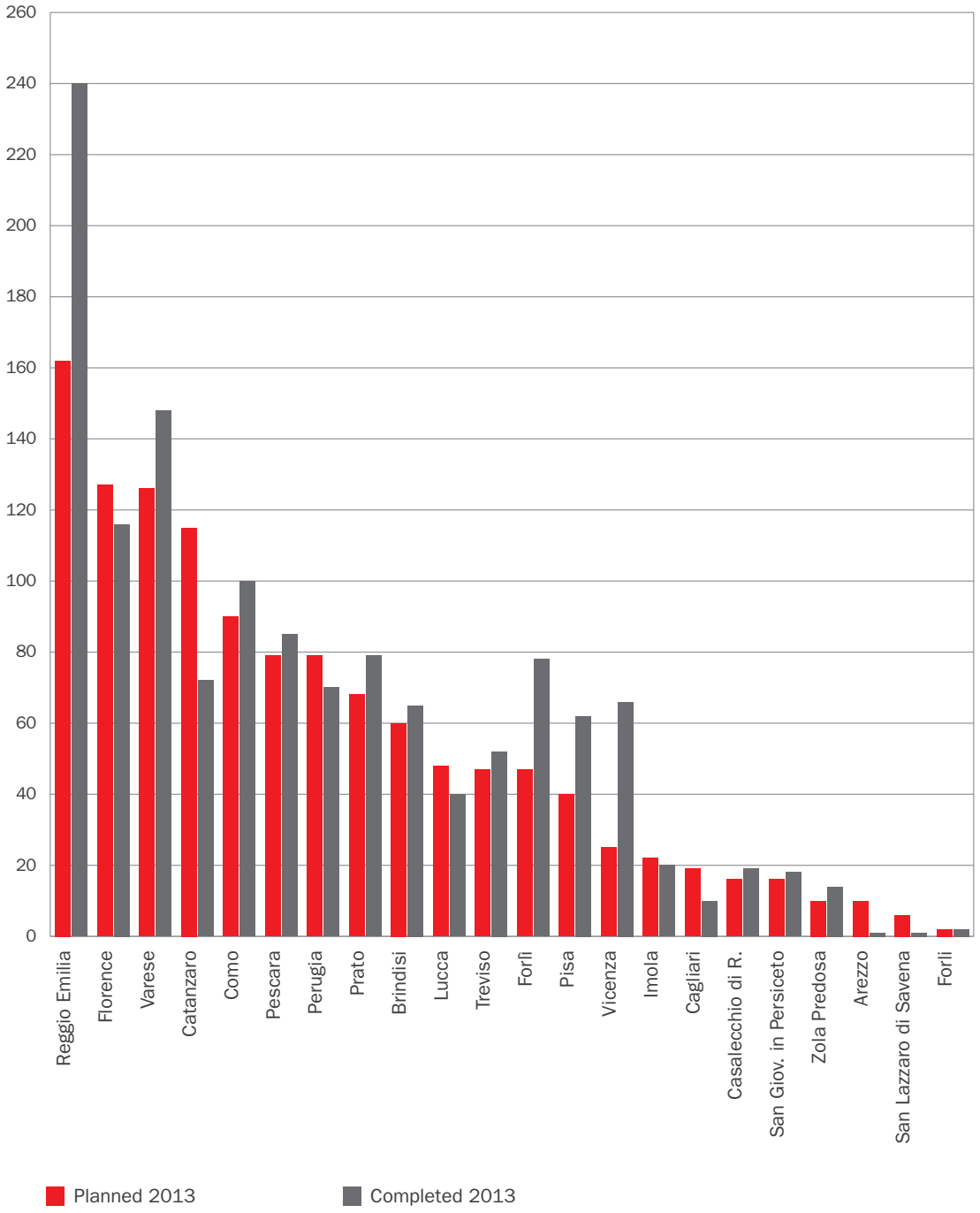


Figure 9 - Development of the FTTCab NGAN: Number of cabinets per municipality equipped with ONU from 1 January to 31 December 2013

6.I - OTHER UNDERTAKINGS GROUPS

6.i.1 - Undertakings Group no. 8: Integration of Telecom Italia regulatory accounting and calculation of transfer charges

Resolution no. 152/02/CONS fully defined a systematic Regulatory Accounting framework; this framework was then increasingly improved and provided with more detail in subsequent AGCom Resolutions.

Undertakings Group No. 8 *(Integration of Telecom Italia's Regulatory Accounting and Setting of Transfer Charges)* is part of and complements that framework. It commits Telecom Italia to disclosing the financial conditions under which SMP services are provided internally by Open Access to the *Retail* department, by submitting the applicable service contracts to AGCom for approval.

The Supervisory Board has ascertained over time that Telecom Italia has performed the commitments contained in the Undertakings Group n. 8. It has also prepared separate accounting schedules for Open Access, which provide the specific details required to check that the transfer charges applied to Telecom Italia *Retail* departments are equivalent to the financial conditions applied to the OLOs.

In 2011, the work of a technical workshop organised jointly by AGCom and Telecom Italia, to analyse the problems connected with preparation of the schedules and consolidate the methodological approach, was concluded; as a result, AGCom published Resolution No. 2/11/CONS, calling for a public consultation on the setting of application guidelines for the new regulatory accounting models envisaged.

In December 2011, after obtaining the related contributions and subsequently defining the results of the consultation, AGCom adopted Resolution No. 678/11/CONS providing *"Guidelines on Fixed Network Regulatory Accounting and Service Contracts".* Details of the guidelines were presented by Telecom Italia to the Supervisory Board at a special meeting. The AGCom resolution formally endorsed compliance with the provisions of Undertakings Group No. 8 and provided implementing rules for the fixed network regulatory accounting obligations binding on Telecom Italia, formerly identified by Resolution No. 731/09/CONS and No. 2/10/CONS.

Specifically, Resolution No. 678/11/CONS required Telecom to introduce *"Service Contracts"* that set forth internal conditions of supply and prices for the sale of SMP services to Telecom Italia *Retail* departments that are equivalent to those applied to OLOs, adopting a *"transfer charge to price"* model that states transfer charges applied for services provided by Open Access to Telecom Italia *Retail* departments for each individual retail service offered. Another requirement was the adoption of separate accounting records for resources used in the production of SMP access services for internal use and for external sale (*"Equivalent Open Access"* model). Accounting changes introduced by the resolution have required significant investments for methodological and IT developments.

As concerns Service Contracts, in October 2013 Telecom Italia submitted the Service Contracts for 2014 to AGCom, and disclosed them on its Wholesale portal.

With regard to regulatory accounts stating transfer charges to prices, Telecom Italia has to date filed the 2011 and 2012 Fixed Network Regulatory Accounts with AGCom and is awaiting appointment of the independent party charged with auditing them.

Finally, Resolution No. 1/12/CONS concerning the *"Identification of Regulatory Obligations for Access Services for Next Generation Networks"* provided that a procedure should be initiated for setting internal transfer identification and application criteria for access services on next generation networks. At the end of 2013, however, this procedure had not yet been initiated.

6.i.2 - Undertakings Group no. 9: Measures relative to the new generation access networks

In Resolution No. 1/12/CONS, AGCom completed the regulatory framework for next generation networks and services. Telecom Italia was designated SMP Operator in the new fibre markets, and specific regulatory obligations were defined, accompanied by the related implementation steps.

This transition also produced effects on the current structure of the Undertakings, the application field of which is partly strictly connected with the issued dealt with in the aforesaid Resolution (in this regard, see Chapter 3 of this report, related to the reference regulatory framework).

On 18 January 2012, the Supervisory Board passed Resolution No. 3/2012, ordering in depth analyses, focusing in particular on any overlap between the provisions of point 9.4 of the Undertakings (which requires their application to access services provided on NGNs) and the scope of Resolution No. 1/12/CONS. Internal analyses and assessment of the matter was also initiated to identify the new areas affected and conduct the required audits.

Following the said analyses, in Resolution no. 11/2012 dated 3 May 2012, the Supervisory Board approved a number of Recommendations to Telecom Italia, regarding Undertakings Group no. 6 "Guarantees of Transparency of Technical Plans for the Development of the Fixed Access Network", in particular asking Telecom Italia to supplement:

- the information contained in the NGAN/FTTCab Technical Plans providing further details with regard to making the cabinet areas saleable;
- the database made available to other Operators and to Telecom Italia *Retail* with the information regarding the saleability of the FTTCab service on active numbers.

Telecom Italia accepted the Recommendations of the SB and on 24 July 2012 presented the integrations made to the Technical Plans for Fixed Access Network Development and to the databases.

In particular the integrations to annual plans and quarterly programmes provide for the following new information:

- number of cabinets present in the exchange areas to be developed;
- number of cabinets in these exchange areas per Municipality which will be lit up and made available for sale of VDSL services in FTTCab architecture.

The integrations to the database regard:

- exchange areas where an OLT will be available, at least 60 days in advance;
- planned coverage of the ONUs, at least 30 days prior to availability for sale and, for each ONU, indication of the OLT to which it belongs;
- association of cabinets-street addresses for the “planned” cabinets, those “ready for sale” and those already “available for sale”.

Finally, in July 2012, Telecom Italia submitted a proposal to AGCom outlining a new equivalence model for the next generation access network (NGAN), which considers Undertakings Groups 1, 2, 3, 4, 5, 6, 7 and 8 to be fully applicable.

6.i.3 - Undertakings Group no. 12: Obligation to report the activation of unsolicited services

Undertakings Group no. 12 envisages that each quarter Telecom Italia should send the Supervisory Board a report containing any cases of activation of services not requested by customers, that have been brought to the notice of the Open Access technicians by the customers themselves, during service visits on lines for Delivery/ Assurance operations.
Any cases of unsolicited services not brought to the notice of the Open Access technicians in the course of their work, are outside the scope of application of this Undertakings Group.
The Supervisory Board has made detailed examinations of the reports periodically received from Open Access: during the year examined, no case of activation of unsolicited services has been brought to the notice of the technicians, thus confirming the decreasing trend that was already noted in the previous years.

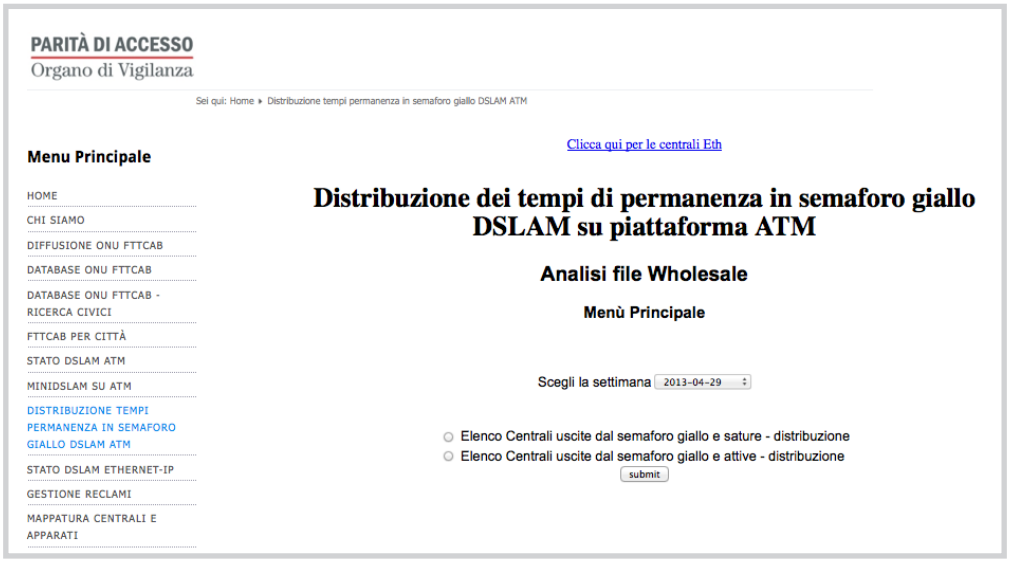
6.L - SUPERVISORY "TOOLS"

Over the years, the Supervisory Office has acquired a number of tools that are useful for ascertaining the increased availability over time of data services such as bitstream and the spread of NGAN via FTTCab.
Using the data made available by Telecom Italia on the National Wholesale Services portal, tools that permit a series of detailed analyses have been perfected; a brief description of these tools is given below.

Bitstream services

Following complaints from a number of Operators regarding unavailability of bitstream services in around 500 exchanges dating from 2010, the Supervisory Board recognised the need to check, using the data made available to the market by Telecom Italia, the development of cases of DSLAMs using ATM technology that were saturated or close to saturation. This need was later extended to include analysis of the state of the roadside miniDSLAMs using ATM technology and subsequently DSLAMs and miniDSLAMs using Ethernet-IP technology. Over time, these monitoring operations succeeded in identifying a number of cases of rescheduling of work deemed excessive by the SB during 2011 (Resolutions 12/2011 and 19/2011). The Supervisory Office currently draws up a periodic report on the state of saturation of bitstream services as a whole which is submitted to the Supervisory Board and which is included in this Annual Report.

Particular attention has been devoted to checking whether DSLAMs remain saturated and close to saturation in order to increase awareness of the increase over time of this phenomenon and act proactively.



NGAN services

During 2011, the Supervisory Board also dealt with problems related to transparency of information regarding development of NGAN infrastructures. In particular, the procedures used by Telecom Italia to notify the Operators of identification of the cabinets where the VDSL2 DSLAMs would be installed were checked as well as the timing with which the information was notified so as to make such timing compatible with the start-up of the customer communication campaign.

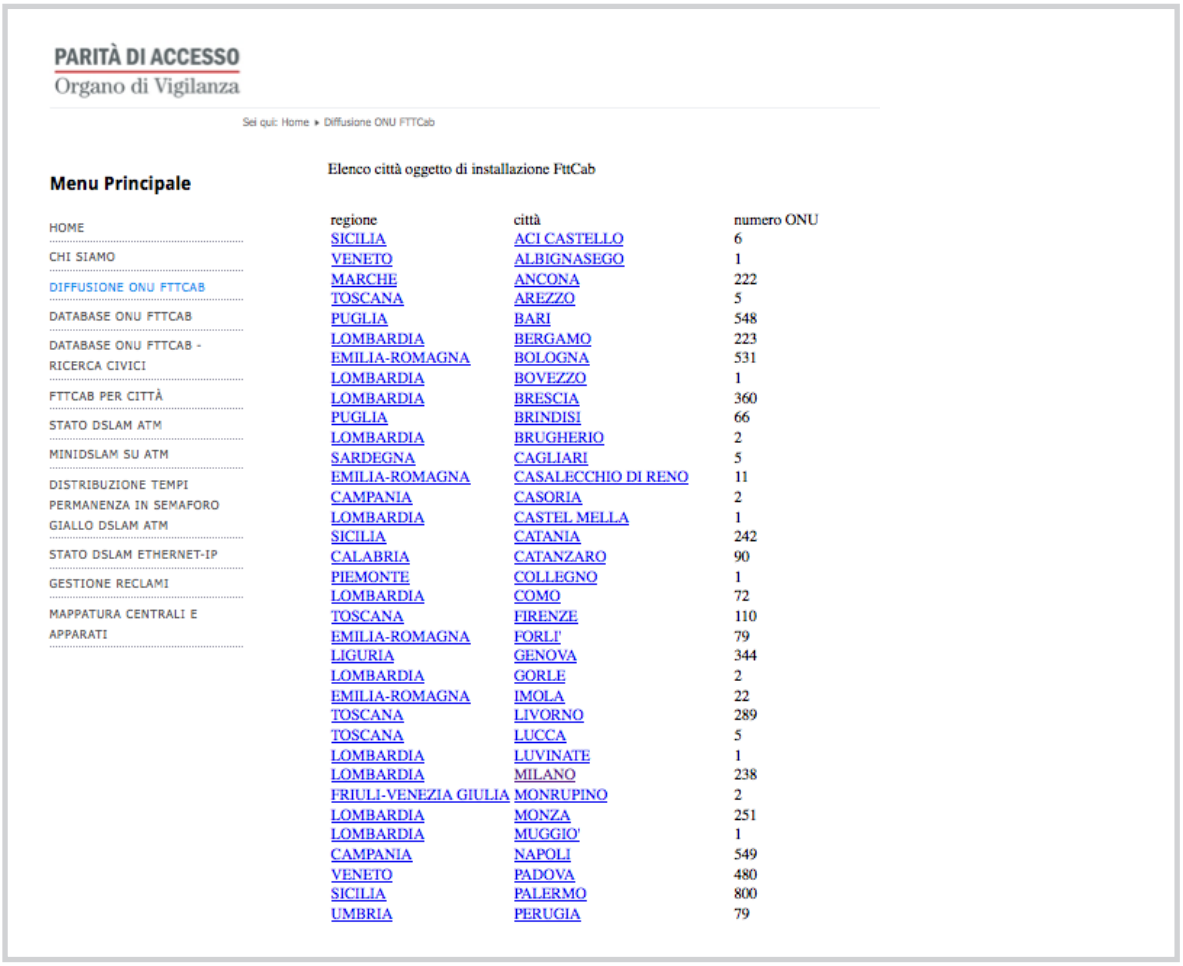
Resolution no. 10/2012 committed the Supervisory Board to careful analyse the problem; this analysis was concluded with Resolution no. 15/2012 containing a series of Recommendations to Telecom Italia, with the aim of improving the quality of the communications to the Market and therefore the transparency of information.

More specifically, it was recommended that Telecom Italia should:

a. within its Annual Plans, define not only the municipalities and exchange areas involved in development of ultra-broadband networks, but also estimate the number of cabinets expected to be equipped for the NGAN in FTTC architecture;
b. include information on the number of cabinets to be prepared in each municipality in its Quarterly Plans;
c. maintain the process of circulation of detailed indications on individual cabinets according to the methods currently envisaged for activation of broadband installations for the ADSL/bitstream service;
d. create a database to allow identification of the property units served, starting from the switching cabinet identifier.

Based on these Recommendations, the Supervisory Board acquired a tool to check these notifications to ascertain the spread of NGAN infrastructures starting from the Telecom Italia communications published on the Wholesale Portal.

This tool makes it possible to check whether or not a given cabinet, street address and whole urban area are served.



PARITÀ DI ACCESSO
Organo di Vigilanza

Sei qui: Home ▸ Diffusione ONU FTTCab

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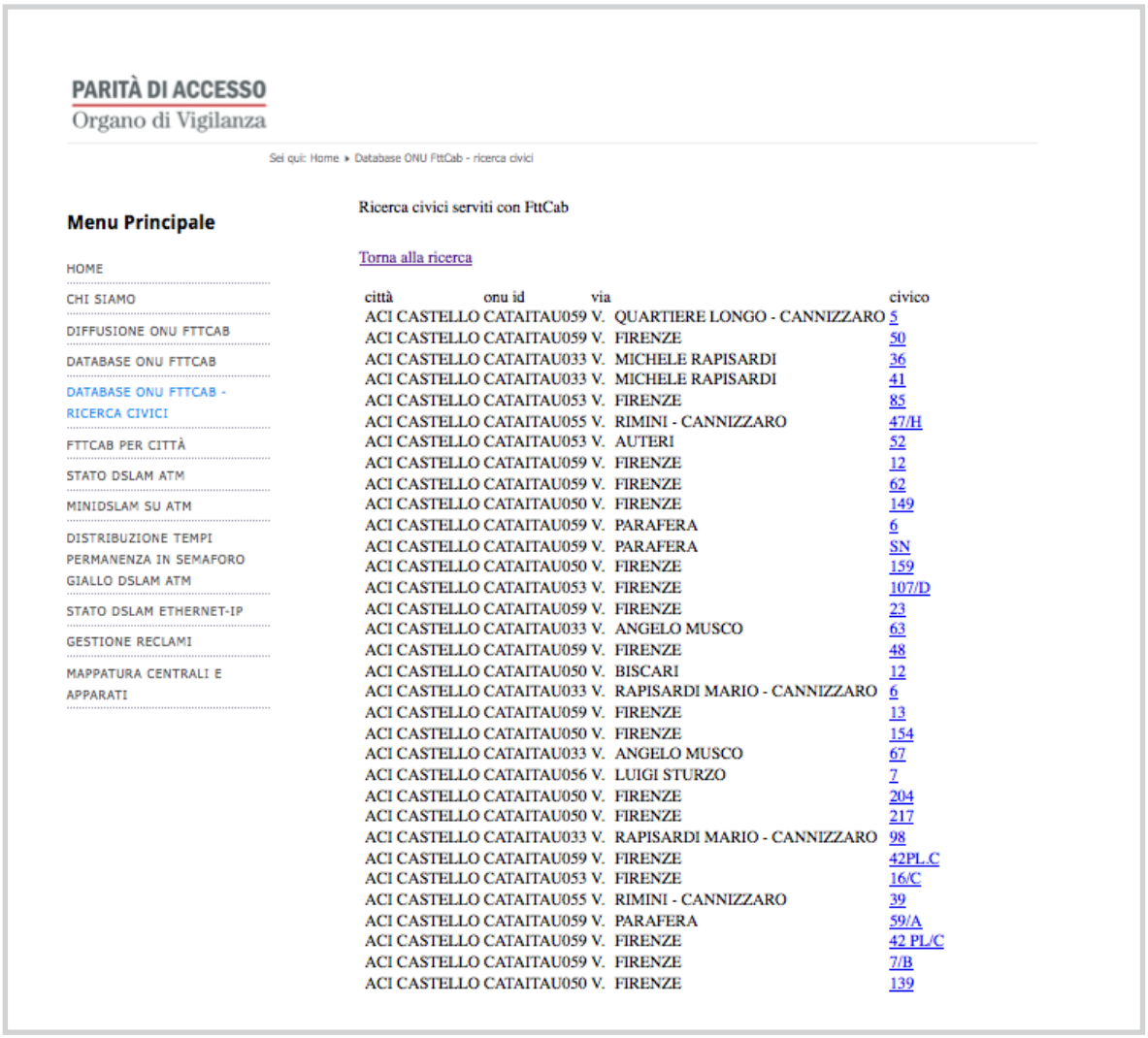
- DISTRIBUZIONE TEMPI PERMANENZA IN SEMAFORO GIALLO DSLAM ATM
- STATO DSLAM ETHERNET-IP
- GESTIONE RECLAMI
- MAPPATURA CENTRALI E APPARATI

Elenco città oggetto di installazione FttCab

regione	città	numero ONU
SICILIA	ACI CASTELLO	6
VENETO	ALBIGNASEGO	1
MARCHE	ANCONA	222
TOSCANA	AREZZO	5
PUGLIA	BARI	548
LOMBARDIA	BERGAMO	223
EMILIA-ROMAGNA	BOLOGNA	531
LOMBARDIA	BOVEZZO	1
LOMBARDIA	BRESCIA	360
PUGLIA	BRINDISI	66
LOMBARDIA	BRUGHERIO	2
SARDEGNA	CAGLIARI	5
EMILIA-ROMAGNA	CASALECCHIO DI RENO	11
CAMPANIA	CASORIA	2
LOMBARDIA	CASTEL MELLA	1
SICILIA	CATANIA	242
CALABRIA	CATANZARO	90
PIEMONTE	COLLEGNO	1
LOMBARDIA	COMO	72
TOSCANA	FIRENZE	110
EMILIA-ROMAGNA	FORLI'	79
LIGURIA	GENOVA	344
LOMBARDIA	GORLE	2
EMILIA-ROMAGNA	IMOLA	22
TOSCANA	LIVORNO	289
TOSCANA	LUCCA	5
LOMBARDIA	LUVINATE	1
LOMBARDIA	MILANO	238
FRIULI-VENEZIA GIULIA	MONRUPINO	2
LOMBARDIA	MONZA	251
LOMBARDIA	MUGGIO'	1
CAMPANIA	NAPOLI	549
VENETO	PADOVA	480
SICILIA	PALERMO	800
UMBRIA	PERUGIA	79



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Sei qui: Home ▸ Database ONU FttCab - ricerca civici

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Ricerca civici serviti con FttCab

Torna alla ricerca

città	onu id	via	civico
ACI CASTELLO	CATAITAU059	V. QUARTIERE LONGO - CANNIZZARO	5
ACI CASTELLO	CATAITAU059	V. FIRENZE	50
ACI CASTELLO	CATAITAU033	V. MICHELE RAPISARDI	36
ACI CASTELLO	CATAITAU033	V. MICHELE RAPISARDI	41
ACI CASTELLO	CATAITAU053	V. FIRENZE	85
ACI CASTELLO	CATAITAU055	V. RIMINI - CANNIZZARO	47/H
ACI CASTELLO	CATAITAU053	V. AUTERI	52
ACI CASTELLO	CATAITAU059	V. FIRENZE	12
ACI CASTELLO	CATAITAU059	V. FIRENZE	62
ACI CASTELLO	CATAITAU050	V. FIRENZE	149
ACI CASTELLO	CATAITAU059	V. PARAFERA	6
ACI CASTELLO	CATAITAU059	V. PARAFERA	SN
ACI CASTELLO	CATAITAU050	V. FIRENZE	159
ACI CASTELLO	CATAITAU053	V. FIRENZE	107/D
ACI CASTELLO	CATAITAU059	V. FIRENZE	23
ACI CASTELLO	CATAITAU033	V. ANGELO MUSCO	63
ACI CASTELLO	CATAITAU059	V. FIRENZE	48
ACI CASTELLO	CATAITAU050	V. BISCARI	12
ACI CASTELLO	CATAITAU033	V. RAPISARDI MARIO - CANNIZZARO	6
ACI CASTELLO	CATAITAU059	V. FIRENZE	13
ACI CASTELLO	CATAITAU050	V. FIRENZE	154
ACI CASTELLO	CATAITAU033	V. ANGELO MUSCO	67
ACI CASTELLO	CATAITAU056	V. LUIGI STURZO	7
ACI CASTELLO	CATAITAU050	V. FIRENZE	204
ACI CASTELLO	CATAITAU050	V. FIRENZE	217
ACI CASTELLO	CATAITAU033	V. RAPISARDI MARIO - CANNIZZARO	98
ACI CASTELLO	CATAITAU059	V. FIRENZE	42PL.C
ACI CASTELLO	CATAITAU053	V. FIRENZE	16/C
ACI CASTELLO	CATAITAU055	V. RIMINI - CANNIZZARO	39
ACI CASTELLO	CATAITAU059	V. PARAFERA	59/A
ACI CASTELLO	CATAITAU059	V. FIRENZE	42 PL/C
ACI CASTELLO	CATAITAU059	V. FIRENZE	7/B
ACI CASTELLO	CATAITAU050	V. FIRENZE	139

PARITÀ DI ACCESSO
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Torna ad Elenco città

7 Relations with Institutions and Operators

In the wake of the guidelines announced during the presentation of the 2013 Annual Report of the Supervisory Board, which covered the activity and results achieved in 2012, the new Board devoted particular attention to the system for implementing the Undertakings, including monitoring, surveillance and the detailed checks undertaken on its own initiative and at the request of the Other Licensed Operators.

The strategic goal of the mandate of the Supervisory Board will be to enforce and optimise the rules in force, where necessary strengthening them and making them more effective in a continuing dialogue with the Board and the offices of AGCom, on the one hand, and with the entire industry on the other, to guarantee as far as possible true equality of access to the fixed network for all operators on the market.

In this context, the Supervisory Board, in full compliance with the strict limitations institutionally imposed on its action, will strive to identify and suggest action for continuous improvement of the Equivalence of Output model currently in use, taking advantage of the lively debate between operators that distinguishes the Italian electronic communications market and contributing, in this way, to making all the potentials offered by the existing model objectively measurable, in terms of guarantees of transparency and equality of access.

Again in this context, during the early months of 2013, a calendar of hearings was arranged with the main players on the market, which offered significant areas of discussion and careful consideration of a number of dynamics highlighted by the participants at the various meetings.

Italian National Regulatory Authority for Communications (AGCom)

Relations with AGCom continued over the year, with the aim of exchanging information and reporting on activities concerning issues of mutual interest to the Authority and the Supervisory Board.

The Members of the Supervisory Board, from the moment they took up office, decided to work closely with the Regulatory Authority, as confirmed in the meeting with the Chairman and Officers of the Authority held on 21 February 2013.During said hearing, the Supervisory Board explained the future developments of supervision of the current Telecom Italia model for Equivalence of Output. In this sense, the Regulatory Authority, acknowledging the role played by the Supervisory Board in the steps taken to protect equality of treatment, reaffirmed its hopes for the future action in the complex and varied task of supervising equality of access which was entrusted by the Undertakings.

Later, on 23 April 2013, also in the light of the clear intention of Telecom Italia to incorporate a separate company to run its access network, adopting an EoI model, a second hearing of the Board took place in the offices of the Authority covering the subject of transition from an EOO model to an EOI one, as well as various topics regarding compliance with the principles of non-discrimination and systems for equivalence of access in a spirit of mutual support and collaboration.

Turning then to operations, on 29 January 2013 an initial meeting was held in the offices of the Authority to discuss the process for defining new KPIs. During the meeting, both parties stressed the advisability of keeping up regular relations in the future as well on specific issues of mutual interest.

Furthermore, on 8 July 2013, at the invitation of the Networks and electronic communications services Department of the National Regulatory Authority for Communications (AGCom), the members of the Supervisory Office, together with the General Secretary of the Supervisory Board, met the Director of the department to discuss the complaint by the Operator Fastweb regarding alleged several unjustified "Equipment K.O." used by Telecom Italia against the complainer.

Lastly, the meetings with the Legal Service of the Authority regarding the change in the Regulations for handling and dealing with reports and complaints by the Supervisory Board are to be reported, they were constructive meetings which always took place in an atmosphere of full cooperation.

Telecom Italia

In addition to the regular and numerous discussions related to the initiated investigation proceeding, the meetings with Telecom Italia continued to analyse certain subjects related to the various Undertakings Groups, accounts of which are given briefly below.

On 9 May 2013, a visit was made by the Supervisory Board to the TILab laboratories in Turin, during which the Members of the Board examined various technological aspects of the Telecom Italia network infrastructure such as FTTH and FTTCab, as well as LTE radio base installations. During the visit advanced planning was presented on the world of domotics remote controlling within future "digital homes", employing installations which are likely to become rapidly more widespread in an increasingly more innovative domestic environment.

On 10 July 2013, the Members of the Board met the representatives of Telecom Italia to discuss the demerging of the access network into a separate company and the adoption of an Equivalence of Input model.

With regard to Undertakings Group no. 2, on 11 September 2013, the Supervisory Board met Telecom Italia during a hearing for the presentation of the 2013 MBOs for the Company's management. During the meeting, Telecom was able to explain to the Board the objectives related to the Undertakings to AGCom, presenting the overall objective system architecture and the company structures involved, as well as the final balance for the 2012 objectives.

Lastly, we report that the Supervisory Board had a meeting with the Chief Executive Officer of Telecom Italia, Marco Patuano on 25 November 2013, to discuss the guarantees for compliance with the principles of equality of treatment and non-discrimination of Other Licensed Operators.

Subsequently, on the same day, the Supervisory Board also met the Head of the Telecom Italia Open Access function. The subject of the meeting was the presentation of the new organisation of the Open Access Function and the logic underlying the new organisation.

Other Licensed Operators

The Supervisory Board, from the moment it took up office, set itself the task, for the purposes of the broadest and most quality driven development of its supervisory activities, of involving and stimulating the Other Licensed Operators to become actively involved, also by attending regular hearings.

With this in mind, and considering the need to ensure the broadest possible involvement of the Other Licensed Operators in its supervisory activities, the SB directed the General Secretary to arrange a calendar of hearings to collect complaints, judgements, indications and any other useful element on the state of fulfilment of the Undertakings by Telecom Italia.

The Supervisory Board, therefore, following up on the decision of 18 December 2012, during the course of special, individual hearings, met the main Other Licensed Operators in meetings held from January to May 2013 involving the Operators Tiscali, Wind, Fastweb, Vodafone, BT Italia and Welcome Italia, as well as the Italian Association of Internet Providers (AIIP).

The meetings were aimed to introduce the new Supervisory Board and open a process of mutual exchange of information. Specifically, the Chairman of the SB asked the OLOs to inform the three board members of Complaints regarding alleged discriminatory actions by Telecom Italia, declaring the SB's utmost willingness to examine such reports thoroughly.

With reference to the procedural areas connected with the complaints received from the Other Licensed Operators, the Supervisory Board had talks with them and had several and different meetings with their representatives.

8 Glossary

Glossary

ADSL	Asymmetric Digital Subscriber Line
AGCM	Autorità Garante della Concorrenza e del Mercato (Italian Competition Authority)
AGCom	Autorità per le Garanzie nelle Comunicazioni (Italian National Regulatory Authority for Communications)
AL	Active Line
AOA	Access Operations Area
BRAS	Broadband Remote Access Server
BT	British Telecom
BTP	Building Termination Point
Co.Re.Com.	Comitati Regionali per le Comunicazioni (Regional Committees for Communications)
CNCU	Consiglio Nazionale dei Consumatori e degli Utenti (National Council of Consumers and Users)
CPS	Carrier Pre-Selection
CRM	Customer Relationship Management
CS	Carrier Selection
DU	Dwelling Unit
DVD	Desired Visit Date
DSLAM	Digital Subscriber Line Access Multiplexer
EAB	Equality of Access Board
EAO	Equality of Access Office
EDD	Expected Delivery Date
EoI	Equivalence of Input
EoO	Equivalence of Output
FRAR	Frame Relay Access Remotizer
FTTB	Fibre To The Building
FTTCab	Fibre To The Cabinet
FTTH	Fibre To The Home
FTTN	Fibre To The Node
FTTP	Fibre To The Premises
GPON	Gigabit PON
GTN	General Telephone Network
IOG	Independent Oversight Group
IPTV	Internet Protocol Television
ISDN	Integrated Services Digital Network
KPI	Key Performance Indicator
KPO	Key Performance Objective
LLU	Local Loop Unbundling
MBO	Management By Objectives
MTT	Master Trouble Ticket
NAL	Non Active Line
NDP	New Delivery Process
NGAN	Next Generation Access Network
NGN	Next Generation Network
NWS	National Wholesale Services
OA	Open Access
ODF	Optical Distribution Frame
ODN	Optical Distribution Network
Ofcom	Office of Communications
OLO	Other Licensed Operators
OLT	Optical Line Termination
ONT	Optical Network Termination
OTA	Office of the Telecommunications Adjudicator
OTB	Optical Termination Box
PON	Passive Optical Network
POTS	Plain Old Telephone Service
PSTN	Public Switched Telephone Network
PVC	Permanent Virtual Channel
RO	Reference Offer
SA	Shared Access
SB	Supervisory Board
S/HDSL	Single-Pair High-Speed Digital Subscriber Line
SLA	Service Level Agreement
SLU	Sub-Loop Unbundling
SMP	Significant Market Power
SO	Supervisory Office
PU	Property Unit
VDSL	Very High Digital Subscriber Line
VULA	Virtual Unbundled Local Access
WDM	Wavelength Division Multiplexer
WLR	Wholesale Line Rental

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