1.1 Overview

Orange is one of the world's leading telecommunications operators with revenues of 40 billion euros and 156,000 employees worldwide (including 97 000 in France) at December 31, 2015. With operations in 28 countries, the Group served 263 million customers at December 31, 2015, including 201 million mobile customers and 18 million fixed broadband customers. Orange is also a leading provider of telecommunication services to multinational companies, under the brand Orange Business Services. In March 2015, the Group presented its new strategic plan, *Essentials2020*, which focuses on its customers' expectations to ensure that they experience the best of the digital world and the power of its high speed broadband networks.

Orange has been listed since 1997 on Euronext Paris (symbol: ORA) and on the New York Stock Exchange (symbol: ORAN).

History

Orange, formerly France Telecom, is France's incumbent telecommunications operator. The Group has its origins in the Ministry for Mail, Telegraphs and Telephone, later to become the General Directorate of Telecommunications, which in 1990 was accorded the status of independent public entity and, on January 1, 1991, renamed France Telecom. On December 31, 1996, France Telecom became a *Société Anonyme* (limited company) with the French State as its sole shareholder. In October 1997, France Telecom shares were listed on the Paris and New York stock exchanges allowing the French government the disposal of 25% of its shares to the public and Group employees. Subsequently, the public sector gradually reduced its holding to 53%. The law of December 31, 2003 authorized the transfer of the Company to the private sector and between 2004 and 2008 the public sector sold a further 26% of the capital, and then again 4% in 2014 and 2015. At December 31, 2015, the French State retained 23,04% of the share capital, held either directly or jointly with Bpifrance.

Since the 1990s, France Telecom's area of activity and its regulatory and competitive environment have undergone significant changes. In a context of increased deregulation and competition, between 1999 and 2002, the Group pursued a strategy of developing new services and accelerated its international growth with a number of strategic investments. These included, in particular, acquiring mobile operator Orange and the Orange brand, which had been created in 1994, and taking a stake in Poland's incumbent operator, Telekomunikacja Polska (renamed Orange Polska in 2013). Most of these investments could not be financed by share issues and therefore the Group's debt substantially increased during this period.

At the end of 2002, France Telecom started a large-scale refinancing plan for its debt to reinforce its balance sheet, as well as an operational improvements program, the success of which has allowed the Group to develop a global integrated-operator strategy by anticipating changes in the telecommunications industry.

In 2005, France Telecom acquired 80% of Spanish mobile operator Amena, whose activities were then regrouped with the Group's fixed-line and Internet operations in Spain into a single entity under the Orange brand. In 2008 and 2009, the Group acquired almost all the remaining capital of Orange Espagne.

In parallel, the Group streamlined its asset portfolio by selling off non-strategic subsidiaries and holdings.

In 2006, Orange became the single brand of the Group for Internet, television and mobile services in most countries where the Group operates, and Orange Business Services the brand for services offered to businesses throughout the world.

Since 2007, Orange has pursued a selective policy for the development and management of its activities, mainly focused on emerging markets (in particular Africa and the Middle East), while attempting to grasp opportunities for consolidation in markets where the Group was already present. In 2010 this strategy notably led the Group to raise its stake in Egyptian operator ECMS (Mobinil) from 36% to 94% (and to 99% in February 2015). It also resulted in the joint venture with Deutsche Telekom that combined UK business under the EE brand on April 1, 2010, as well as in the 2012 disposal of Orange Suisse.

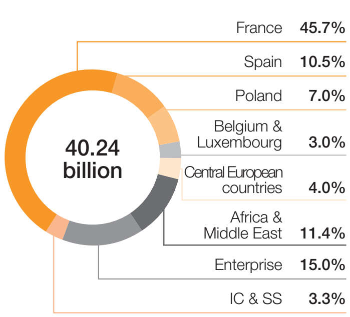
This policy continued in 2014 with the disposal of Orange Dominicana, in 2015 with the acquisition of Jazztel in Spain and the consolidation of Médi Telecom in Morocco and finally in early 2016 with the disposal of the Group's stake in EE and the signing of agreements to acquire several operators in Africa.

From July 1, 2013, the Company adopted the corporate name Orange.

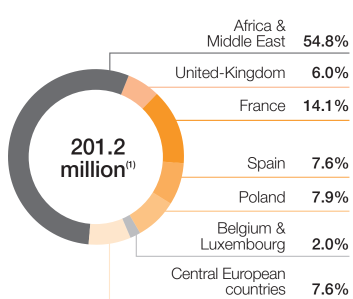
For more information on Orange's strategy, see Section 2.3 *Orange's Group strategy*.

Business in 2015

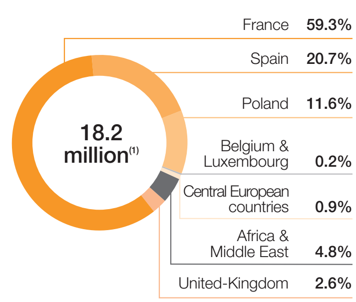
Revenues (in euros)



Mobiles customers



Broadband Internet Customers



(1) The EE customer base in the UK is 50% consolidated in the Orange customer base.

At the end of 2015, the Orange group grew its worldwide customer base by 7.7% year-on-year, adding 18.8 million new customers to 262.9 million, including 201.2 million mobile customers (excluding MVNOs) (up 8.5%) and 18.1 million broadband customers (up 13.1%).

This increase reflects the continued strength of growth in mobile services in Africa and the Middle East, where numbers rose 13% to 110.2 million customers at December 31, 2015 (12.7 million new mobile customers). In Africa, the Orange Money application had 16.4 million customers, compared with 12.6 million in 2014.

In France, mobile contract customers, which accounted for 85% of the mobile customer base at December 31, 2015 (24 million customers), increased by almost 10%. In the Europe zone (excluding the UK), mobile contracts (31.4 million customers at December 31, 2015) also rose (+12.2% year-on-year), in particular in Spain, Poland and Romania, representing 62.4% of the mobile customer base at December 31, 2015.

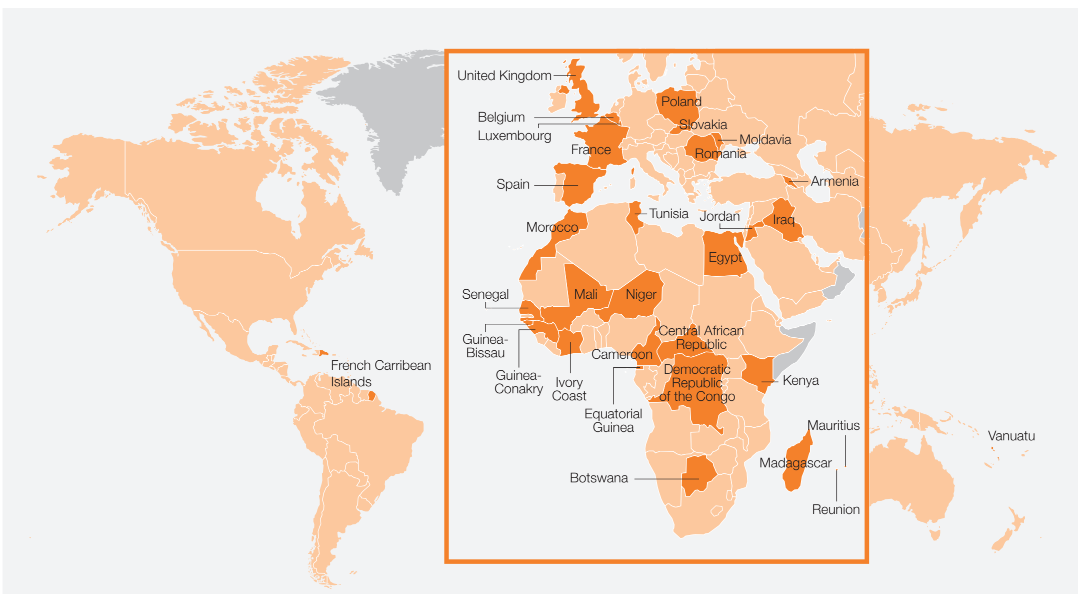
2015 saw the continued development of 4G high-speed mobile broadband with a total of almost 18 million customers in Europe at December 31, 2015 (i.e. 2.3 times more than a year earlier), including 8 million in France, 5.1 million in Spain, 2 million in Poland and 1 million in Belgium. 4G has also been rolled out in Europe in Romania, Slovakia and Moldova. In Africa and the Middle East, 4G has been deployed in Botswana, Jordan, Morocco, Mauritius, Cameroon and Guinea-Bissau.

Fixed-line broadband had 18.1 million customers at December 31, 2015, up 13.1% year-on-year. Fixed-line broadband subscribers included 1.882 million fiber subscribers at December 31, 2015, of which 960,000 in France and 809,000 in Spain.

Revenues for the Orange group were 40.236 billion euros in 2015, almost unchanged on a comparable basis. Excluding the impact of regulatory measures, they rose 0.3% after falling 1.6% in 2014.

CAPEX was 6.486 billion euros in 2015, up 9.3% compared to the previous year on a comparable basis, in line with the Essentials2020 plan. Investments in fiber rose sharply (+55% year-on-year on a comparable basis) and the Group's investment strategy also targets an improved customer experience, with in particular the extension of 4G mobile coverage and the modernization of the distribution network.

Group footprint in 2015



1.2 Selected financial information

The selected financial information presented below relating to the years ending December 31, 2011, 2012, 2013, 2014 and 2015 is extracted from the consolidated financial statements audited by Ernst & Young Audit and Deloitte & Associés for the years ending December 31, 2011 to 2014 and by Ernst & Young Audit and KPMG SA for the year ending December 31, 2015.

The selected financial information relating to the years ended December 31, 2015, 2014 and 2013 must be read together with the Group's consolidated financial statements and management reports for those fiscal years.

1.2.1 Consolidated income statement

Amounts in accordance with IFRS

(in millions of euros, except for earnings per share data)	2015	2014	2013	2012	2011
Revenues	40,236	39,445	40,981	43,515	45,277
Operating income	4,742	4,571	5 333	4,180	8,008
Finance costs, net	(1,583)	(1,638)	(1,750)	(1,728)	(2,033)
Consolidated net income after tax of continuing operations	2,510	1,360	2,178	1,221	3,888
Consolidated net income after tax of discontinued operations	448	(135)	(45)	(117)	(60)
Net income (attributable to owners of the parent company)	2,652	925	1,873	820	3,895
Net income (per share) of continuing operations attributable to owners of the parent company					
Earnings per share (undiluted) (1)	0.76	0.36	0.73	0.36	1.50
Earnings per share (diluted) (1)	0.75	0.36	0.73	0.35	1.48
Net income (per share) of discontinuig operations attributable to owners of the parent company					
Earning per share (undiluted) (1)	0.17	(0.05)	(0.02)	(0.05)	(0.03)
Earning per share (diluted) (1)	0.17	(0.05)	(0.02)	(0.04)	(0.02)
Net income attributable to owners of the parent					
Earnings per share (undiluted) (1)	0.93	0.31	0.71	0.31	1.47
Earnings per share (diluted) (1)	0.92	0.31	0.71	0.31	1.46
Dividend per share for the fiscal year	0.60 (2)	0.60	0.80	0.78	1.40

(1) Earnings per share calculated on a comparable basis.
(2) Subject to the approval of the Ordinary Shareholders' Meeting.

1.2.2 Consolidated statement of financial position

Amounts in accordance with IFRS

(in millions of euros)	2015	2014	2013	2012	2011
Intangible assets (1)	41,398	36,595	36,732	37,591	38,683
Property, plant and equipment, net	25,123	23,314	23,157	23,662	23,634
Total assets	91,430	88,404	85,833	89,980	96,083
Net financial debt (2)	26,552	26,090	30,726	30,545	30,890
Equity attributable to the owners of the parent	30,907	29,559	24,349	24,306	27,573

(1) Includes goodwill and other intangible assets.
(2) The components of net financial debt are described in Note 10.2 to the consolidated financial statements.

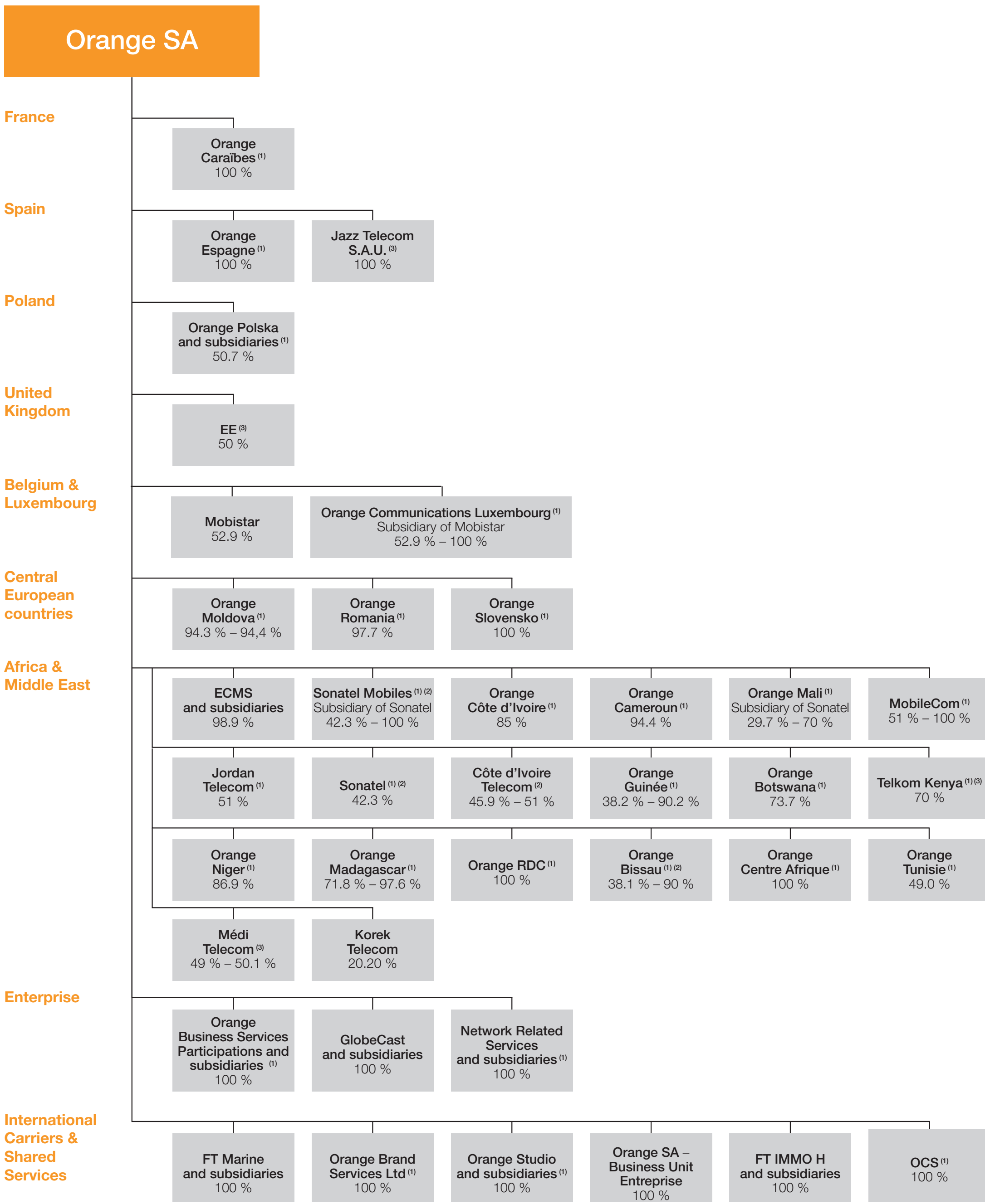
1.2.3 Consolidated statement of cash flows

Amounts in accordance with IFRS

(in millions of euros)	2015	2014	2013	2012	2011
Net cash provided by operating activities	9,527	8,802	7,259	10,016	12,879
Net cash used in investing activities	(9,406)	(6,352)	(6,044)	(4,710)	(6,308)
Purchase of property, plant and equipment and intangible assets	(7,771)	(6,111)	(6,117)	(6,763)	(6,711)
Net cash used in financing activities	(3,924)	(154)	(3,537)	(5 072)	(2,860)
Cash and cash equivalents – closing balance	4,469	6,758	5,934	8,321	8,061

1.3 Organizational chart

The chart below shows the main operating subsidiaries and investments of Orange SA as of December 31, 2015 (the complete list is available on the Group's website (the complete list is available on the Group's website (www.orange.com under the heading *About/Global-footprint*)). The holding percentages shown for each entity are the percentage of interest along with the percentage of control when these differ:



(1) Company operating under the Orange brand.
(2) Orange controls the Strategy Committee, which makes recommendations to the Board of Directors.
(3) See Note 2.2 to the consolidated financial statements.

Business environment, strategy and risk factors

2

This chapter contains forward-looking statements, particularly in Section 2.3 *Orange's group strategy*. These forward-looking statements are subject to numerous risks and uncertainties that could cause actual results to differ materially from the results anticipated in the forward-looking statements. The most significant risks are detailed in Section 2.4 *Risk factors*. Please also consult the information under the heading *Forward-looking information* at the start of this document.

2.1 The world Information and Communication Technologies market

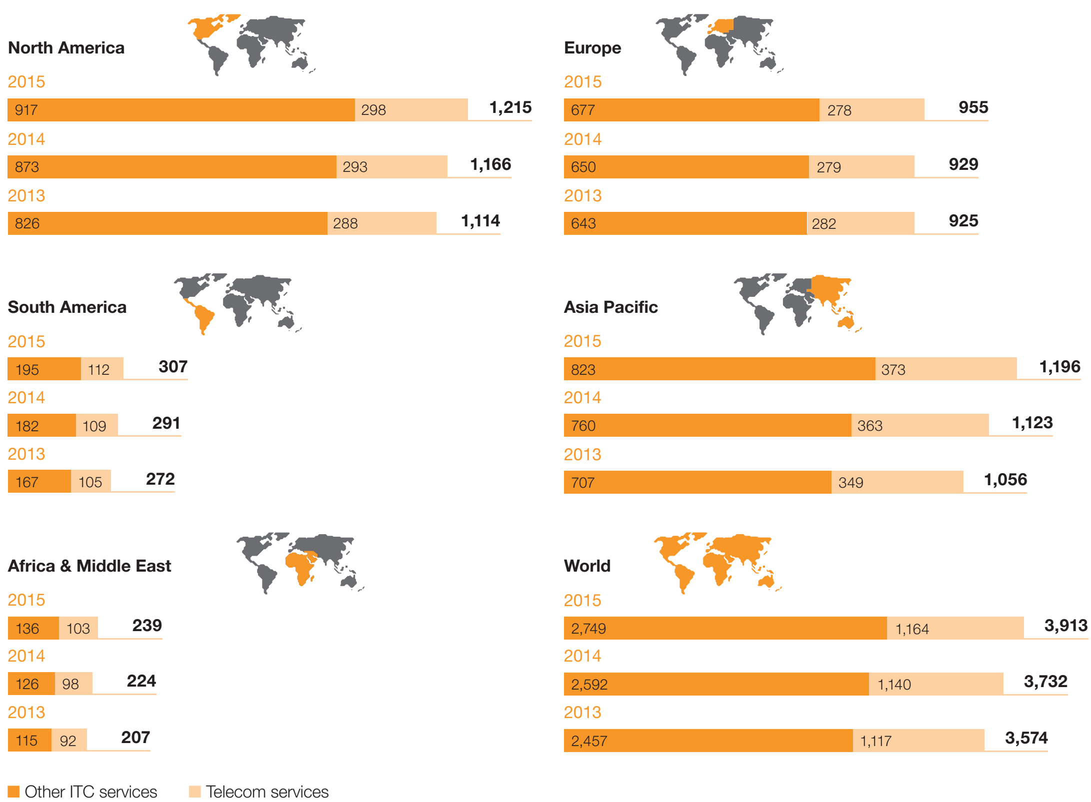
2015 was marked by continued global growth in the information and communication technologies segment (ICT), which includes mainly the sectors of computing, audiovisual, multimedia, Internet and telecommunications. After the recovery recorded in 2013, and then in 2014, growth in ICT revenues continued to accelerate in 2015 to +4.8% (+0.4 percentage points compared to 2014), and totaled 3,913 billion euros.

The ICT market remains an essential component of economic growth, and represents an important source of value creation through the distribution of new services and new uses. Among these are, in particular, growth areas developed by Orange: the Cloud, Big Data and the Internet of Things.

Revenues of telecom services, which amounted to 1,164 billion euros at the end of 2015, continued to grow by +2.1%, albeit at a slower rhythm than that of all ICT services (+4.8%)

Market growth by region

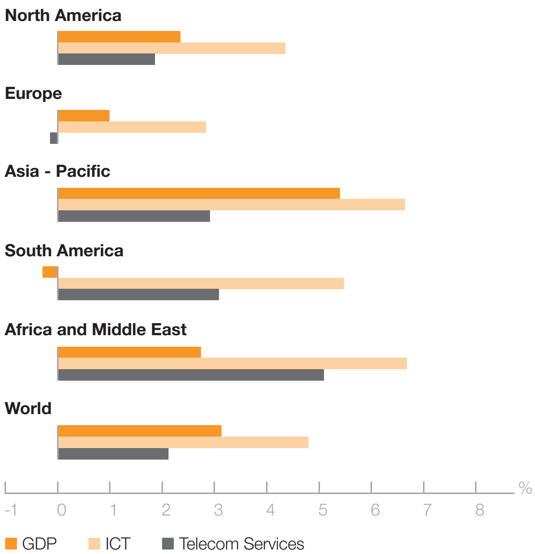
Figure 1: Geographical breakdown of global ICT revenues (in billions of euros)



Source: Idate.

The ICT market grew in 2015 at different speeds depending on the geographical area. Growth accelerated in emerging countries, in particular in Africa and the Middle East. Emerging countries, which represent 30% of the world market, contributed more than 50% of global growth (source: Idate).

Figure 2: 2015/2014 Growth rate by region



Source: Idate and FMI.

Europe

In 2015, revenues of European telecom services stabilized (-0.2%) compared to 2014, after four years of shrinkage from 2010 to 2014 (-1.2% in 2014 and -3.4% in 2013). Europe remains the least dynamic region in the world in terms of growth, and its weight in the world market now only represents 24%, behind Asia Pacific and North America (source: Idate).

Moreover, operators (including cable operators) continue to face competition from Over the top (OTT) players that generally offer communication services to users for free (being remunerated by advertising).

USA

In 2015, the growth in the ICT market was down slightly, from 4.6% to 4.3%, in a context of stable US GDP growth. The region improved its performance in the ICT market, despite a downturn in growth in telecom services, and more noticeably in networking equipment. Indeed, the United States is coming out of a strong growth phase led by the renewal of its mobile networks. The rollout of LTE led to significant investments and an increase in the operators' revenues (source: Idate). In 2015, revenues from telecom services reached 298 billion euros, up by 1.8%, representing 26% of the world market.

Africa and the Middle East

In 2015, the growth of the ICT market remained high at 6.7%, despite a downturn in economic growth of 2.8% on the continent (compared with 3.5% in 2014). The potential of this region in which the Orange group is very present remains strong, both in terms of equipment and access infrastructure. Telecom services that represent 43% of the ICT market are up by 5.1%, higher than that of the world market overall, but slowing down compared to 2014. Revenues of telecom services totaled 103 billion euros, for a 9% share of the world market, the weakest compared to the other regions in the world.

South America

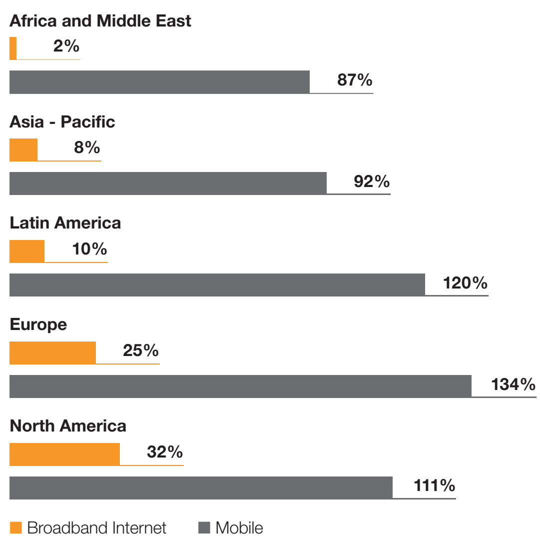
In spite of the advanced maturity of services, the opening to market competition created a strong dynamic of development of equipments and uses. The growth of the ICT market fell slightly compared to 2014, but was higher than 5%. Telecom services represent nearly 36% of the ICT market with sustained growth in 2015 (+3.1%).

Revenues of telecom services reached 112 billion euros, representing 10% of the world market.

Asia Pacific

This region, that includes both advanced economies and emerging countries, recorded a high growth in the ICT market (+6.6%), valued at 1,196 billion euros. Economically, the region also posted high GDP growth, especially in China (+6.8%). Revenues of telecom services that reached 373 billion euros in 2015, a growth of 2.9%, represent 32% of the world market, the largest share of all regions worldwide. In this region, telecom services represent almost one third of the revenues of the ICT, in spite of a 1.5 percentage point slowdown in 2015 compared to 2014.

Figure 3: Mobile and fixed broadband Internet penetration rate by geographic region in 2015 (in % of the population)



Source: Idate.

Key trends and changes

Convergence of services and market consolidation

The growth in mobile access with the 4G development and the high penetration of smartphones and M2M throughout the world constitutes a major component of the momentum of the telecommunication sector. Convergence is also a major trend, particularly in Europe, since it allows operators with both fixed and mobile network infrastructures to capture and keep their customers through a household-based approach, faced by the competition from fixed-line only or mobile only operators. This convergence results in the development of so-called "quadruplay" offers (voice, Internet, television, mobile). Convergence is also illustrated by the growing use of WiFi in mobile networks. On their side, the cable operators also include WiFi in their offers to counter telecom operators' quadruplay offers.

One can simultaneously observe a movement toward consolidation of players, both in Europe and the USA, linked to this convergence of networks and services, as well as the necessity of acquiring a larger size whereas the pressure on prices is stronger and infrastructure investments are indispensable.

In Europe, a series of mergers between fixed-line and mobile operators have occurred since 2014, such as the acquisition of the fixed-line operator Kabel Deutschland by Vodafone in Germany, the acquisition of SFR and Virgin Mobile in France and Portugal Telecom in Portugal by Altice, the purchase of Groupo Corporativo by Vodafone in Spain and the purchase of Base by Telenet in Belgium. The acquisition of EE by BT in the United Kingdom and Jazztel by Orange in Spain follows the same logic of alliances between fixed and mobile activities.

Moreover, since 2013 consolidation transactions have reduced the number of mobile operators in Austria, Germany, Ireland, Italy and in the UK from four to three.

Cable has also been at the center of many transactions over the past few years with Liberty Global, which took control of Virgin Media in the United Kingdom and Ziggo in the Netherlands, the merger of Comcast with Time Warner cable and the entry of Altice into the United States with the acquisition of two cable operators in 2015: Suddenlink Communications and Cablevision.

Development of networks and growth of telecommunications uses worldwide

In Africa and the Middle East, Internet access networks are developing mainly via the deployment of 3G and 4G mobile networks, whereas in Europe investments in networks are concentrated in high capacity broadband access, with the development of fixed-line offers on fiber referred to as FTTH (Fiber-to-the-Home) and the deployment of 4G mobile networks. In parallel, operators are developing their networks to make them more agile and simpler to manage (with "virtualization") and more open (with API).

Uses are exploding under the combined effect of the deployment of new networks, the increase in the capacities of existing networks and the growth in the penetration rate of more and more sophisticated mobile handsets (smartphones). The explosion in uses is mainly driven by video, and by the increase in the number of screens (computers, smartphones, tablets, readers, connected TVs, connected watches).

New expectations of consumers and businesses

For the consumer, digital technologies continue to permeate all areas of daily life: family, home, wellness, entertainment, work and money. Indeed, more and more of these areas are being affected by connected objects, such as domotics (home automation), automobile, health, energy and wellness, and are likely to be integrated in all industries and services over time. Some forecasts indicate for example about 25 billion connected objects in 2020 (source: GSMA Understanding the Internet of Things, July 2014). In this area, the development of technologies such as *LoRa* (long range bi-directional low power network) should have a major impact on the growth of this market.

For the most part, B2B applications of the Internet of Things are being developed within companies (for example, for the optimization of internal logistic processes). The big players of the Internet generate revenue by monetizing data obtained via connected objects (collected and analyzed thanks to Big Data techniques). In this context, consumers have strong expectations on the quality and reliability of the communication networks, but also on the protection of their personal data and on having a relationship of trust with their operator.

Digitalization (IoT, Big Data) allows companies to improve their performance by knowing their customers better and by improving the management of their industrial processes. Therefore they also express the need to be assisted in this double aspect of their *transformation* process.

Evolution of operators' model and revenues

Connectivity services will continue to make up the largest part of telecommunications operators' revenues in the next few years. Nevertheless, other sources of revenues will reside in the ability to monetize new services related to changes in their networks and services platforms, to applications suppliers, residential and business customers. These are in particular:

- new models of access to IT (Information Technology) platforms through API (Application Programming Interfaces) that will strengthen the independence of users to implement personalized services themselves;
- innovative technologies such as data analysis (Big Data), Internet of Things (IoT) or M2M (Machine to Machine);
- mobile financial services in 3 areas: money transfers, payments and mobile banking;
- a secure management of data and transactions by operators.

The rise of the collaborative economy

The digital revolution has allowed collaborative models to emerge in the economic sphere where sharing and using take precedence over property. These models are based on direct relationships between individuals who can exchange services thanks to the development of digital networking platforms (accessible over the Internet, mobile phones or tablets). This market, representing $15 billion today, will reach $335 billion by 2025, according to estimates by the auditing and consulting firm PwC. The biggest players (Airbnb, Uber, Blablacar, etc.) who focus on the management of these platforms with minimum investment, reap significant revenue. These models are extremely disruptive. They enter into direct competition with well-established companies (hotel industry, transportation, finance, distribution) that have to bear the costs associated with the production of goods and services. They also pose challenges to traditional ways of organizing labor and social security (associated with salaried employees), and are outside the established framework of corporate taxation. Whereas traditional players will have to adapt themselves by integrating consumers and users into their business processes, the collaborative models will also have to evolve in order to overcome obstacles to their development.

2.2 Regulations

2.2.1 European Union

The regulatory environment of the electronic communications sector within the member states of the European Union in which the Orange Group operates conforms to a requirement of harmonization arising from the obligation for National Regulatory Authorities to implement at a national level the regulatory framework defined at the level of the European Union, even if the regulatory environment is marked by certain discrepancies.

This common regulatory framework is presented below with a detailed description for each major country in which the Orange Group operates[(1)].

2.2.1.1 Legal and regulatory framework

The general EU legal framework for electronic communications consists of five main directives deriving from the 2002 *Telecom Package*:

- Framework Directive 2002/21/EC of March 7, 2002, on a common regulatory framework for electronic communications networks and services;
- Authorization Directive 2002/20/EC of March 7, 2002, on the authorization of electronic communications networks and services;
- Access Directive 2002/19/EC of March 7, 2002, on access to, and interconnection of, electronic communications networks and associated facilities;
- Universal Service Directive 2002/22/EC of March 7, 2002, on universal service and users' rights relating to electronic communications networks and services;
- Directive on *Privacy and electronic communications* 2002/58/EC of July 12, 2002, concerning the processing of personal data and the protection of privacy in the electronic communications sector.

All five directives were reviewed in 2009[(2)], with changes fully transposed by EU member states, and were subsequently placed under the oversight of the Body of European Regulators for Electronic Communications, (BEREC)[(3)].

The European Commission is expected to present a new framework directive in 2016.

On October 9, 2014, the European Commission approved a new recommendation (2014/710/EC) identifying four relevant product and service markets susceptible to *ex ante* regulation compared to seven in its previous recommendation made in 2007:

- M 1: wholesale call termination on individual public telephone networks provided at a fixed location;
- M 2: wholesale voice call termination on individual mobile networks;
- M 3:
  - a) wholesale local access provided at a fixed location, and
  - b) wholesale central access provided at a fixed location for mass-market products;
- M 4: wholesale high-quality access provided at a fixed location.

This regulatory framework has been fleshed out with a number of additional texts.

Roaming

Regulation No. 531/2012, adopted on June 13, 2012 by the European Parliament and Council, on roaming on public mobile communications networks within the Union (*Roaming III*):

- introduces, for the wholesale market, a regulated right of access to European roaming services for MVNOs and resellers;
- extends the sliding cap on roaming rates to the retail data market;
- introduces, as of July 1, 2014, two structural changes to increase competition in the retail market by separating domestic services and international roaming services;
- expands, for customers using their cell phones outside the EU, pricing transparency requirements and bill shock prevention measures for European operators.

(1) For information concerning risks linked to the regulations of the electronic communications sector, see Section 2.4.2 *Legal risks*.
(2) Directive 2009/140/EC of the European Parliament and Council of November 25, 2009 amending the Framework, Access and Authorization Directives and Directive 2009/136/EC of the European Parliament and Council of November 25, 2009 amending the Universal Service and Privacy Directives.
(3) Regulation (EC) no. 1211/2009 of the European Parliament and Council of November 25, 2009 establishing BEREC.

Roaming III regulation

Price caps (euros VAT excl.)		July 1, 2011	July 1, 2012	July 1, 2013	July 1, 2014	July 1, 2017	July 1, 2022
Voice	Sent (retail)	0.35	0.29	0.24	0.19	Withdrawal (1)	
	Received (retail)	0.11	0.08	0.07	0.05	Withdrawal (1)	
	Wholesale	0.18	0.14	0.10	0.05	0.05	Withdrawal (1)
SMS	Sent (retail)	0.11	0.09	0.08	0.06	Withdrawal (1)	
	Received (retail)	0.00	0.00	0.00	0.00	0.00	Withdrawal (1)
	Wholesale	0.04	0.03	0.02	0.02	0.02	Withdrawal (1)
Data	Retail		0.70	0.45	0.20	Withdrawal (1)	
	Wholesale	0.50	0.25	0.15	0.05	0.05	Withdrawal (1)

Voice: price per minute excl. VAT/SMS: price by SMS excl. VAT/data: price per MB excl. VAT.
(1) Withdrawal subject to EC review in 2016.
Source: Orange, based on data in EU regulation No. 531/2012.

The European single market for telecommunications was adopted by the European institutions and published on November 26, 2015. One of its main aims was to amend the *Roaming III* regulations that would ban surcharging for roaming within the EU by June 2017 (see Section 2.2.1.2).

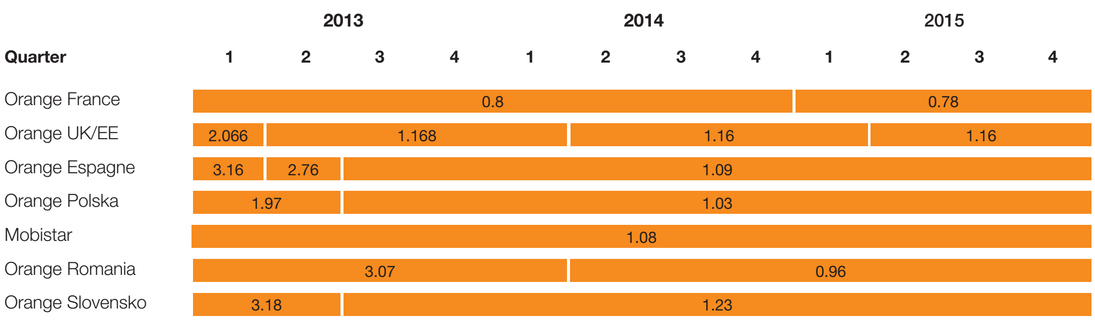
Call termination rates

On May 7, 2009, the European Commission adopted a recommendation regulating fixed-line and mobile call termination rates in the EU (2009/396/EC).

The Commission recommends that national authorities should apply the following principles:

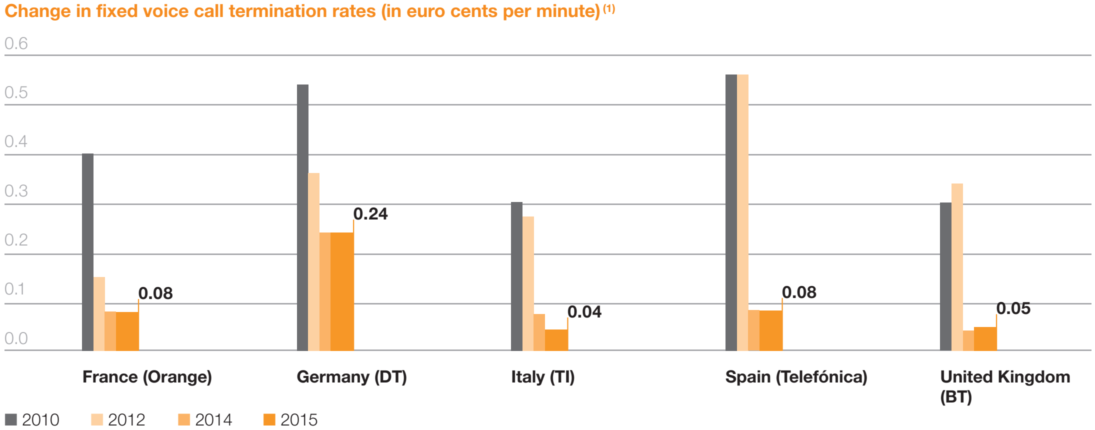
- symmetry in each country between the various operators' fixed voice call termination rates and also between their mobile call termination rates, with the option of allowing a four-year transitional asymmetry on fixed or mobile call termination rates to benefit a new entrant;
- call termination rates geared towards the avoidable cost of this service for an efficient operator (i.e. about 1 euro cent per minute for voice MTRs and a lower rate for voice FTRs).

Change in mobile voice call termination rates (in euro cents per minute)



Source: Cullen International December 2015.
Figures are December tariffs at local level-Exchange rates used in this table are the latest month average rate of the period.

Change in fixed voice call termination rates (in euro cents per minute) (1)



Source: Cullen International - December 2015.
Exchange rates used in this table are the latest month average rate of the period
(1) Methodology for fixed-line call termination benchmarking: Average price per minute (in euro cents): at local level, i.e. at the lowest interconnection point (the equivalent the of ICAA in France); during "peak" minutes only (as off-peak periods are not consistent from one operator to another).

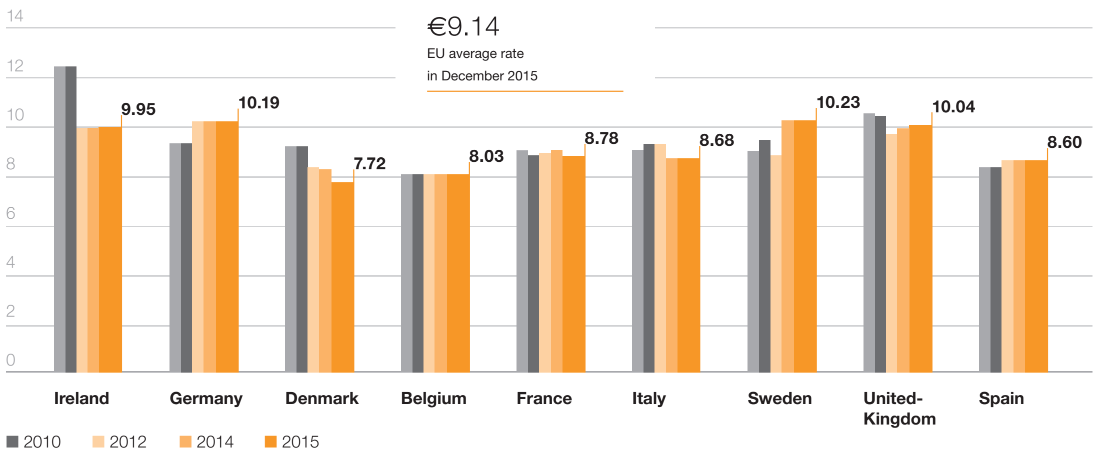
Access to fixed-line infrastructure

Recommendation "on non-discrimination obligations and consistent costing methodologies to promote competition and enhance the broadband investment environment"

The recommendation adopted by the European Commission on September 12, 2013, seeks to:

- strengthen rules on non-discrimination to provide equivalent access on new networks, publication of performance indicators and the application of technical replicability tests;
- to stabilize prices, at constant currency, for use of the copper network around the current average access price within the EU (8 to 10 euros at current rates excluding tax); and
- to allow greater flexibility in determining high speed broadband wholesale prices to the extent that National Regulatory Authorities are allowed not to impose a cost-orientation obligation when strengthened non discrimination rules are in place and competition between platforms (copper, cable, mobile) is effective.

Full unbundling – European benchmark data (recurrent monthly charge excluding commissioning costs)



Source: Cullen International – December 2015. Exchange rates used in this table are the latest month average rate of the period.

2.2.1.2 Significant events in 2015 and the start of 2016

October 2015	**Regulation on the European Single Market for Electronic Communications** Adoption by the European Parliament of the regulation
February 2016	**Protecting Personal Data** Adoption by the European Parliament of a General Data Protection Regulation
	"Privacy Shield" agreement
September 2015	**Framework Review** Consultation on the framework review

European single market for telecommunications

The European Parliament adopted the European single market for telecommunications on October 27, 2015. This covers:

- **the end of roaming charges** and international call premiums for intra-European calls: representing a consensus on the political objective among the institutions and the telecommunications industry, the text takes into account the serious technical difficulties that must be resolved in order to ensure that this key measure for Europe does not have concrete negative consequences on the price of domestic mobile services or on investments in the networks. In November 2015 the European Commission launched a public consultation on how to resolve these technical difficulties.

  Under this regulation, a transitional period starting on April 30, 2016, allows, for all price plans, intra-European roaming calls to be charged at the domestic price, plus a maximum surcharge corresponding to the regulated wholesale price caps currently applicable. The cost of incoming roaming calls is capped at the weighted average call termination rates regulated in Europe (1.14 euro cents). A "RLAH[1] + surcharge" model is allowed for all pricing plans.

  After this transition period, roaming charges and international call premiums for intra-European calls must be stopped according to technical terms that have yet to be defined;
- **net neutrality:** BEREC is responsible for creating the guidelines for the establishment of rules applicable throughout Europe to preserve the open Internet, which will be applied in each country under the responsibility of local regulators by May 2016.

(1) RLAH : *Roam Like At Home*.

Review of the "*Telecom Package*" framework

The European Commission launched a consultation in September 2015 to review the "*Telecom Package*" regulatory framework. In response, Orange affirms the need to reorient the objectives of the framework towards economic development and investment, to limit and to simplify access obligations to fixed-line networks, to impose spectrum allocation rules that promote economic efficiency, to modernize consumer protections, to rethink the instruments allowing access to the Internet for all and to adopt a truly harmonized regulation in Europe. The European Commission is expected to present a new framework directive in 2016.

Protecting Personal Data

A general directive (1995/46/EC) encompasses the processing of personal data in the European Union. This directive must be updated in early 2016, following an agreement between the European Commission, the European Parliament and the European Council concluded on December 15, 2015. The new rules harmonize with one another within the EU and strengthen the rights on data protection and the control of existing personal data; they will apply from 2018. The *Privacy and electronic communications* directive, specific to the electronic communications sector (2002/58/EC), will also be updated in order to remain consistent with the inter-sector directive.

Following the ECJ's invalidation of Decision 2000/520/EC, known as "Safe Harbour", the European Commission and the US authorities published a new framework for transatlantic data exchange on February 29, 2016. Known as EU-US Privacy Shield, the agreement is intended to ensure that the personal data of European citizens enjoys the same protections they do in Europe when they are processed in the United States.

2.2.2 France

2.2.2.1 Legal and regulatory framework

Legal framework

The electronic communications sector is primarily governed by the French Postal and Electronic Communications Code (CPCE) as well as legal provisions relating to e-commerce, the information society, consumer protection and personal data protection.

The French government transposed the European *Telecom Package*, as amended in 2009, into national law via the Ministerial Order of August 24, 2011 and the Decree of March 12, 2012, implementing regulations.

The audiovisual communication services produced or distributed by the Orange group come under the specific regulations governing this sector and are managed by the amended law of September 30, 1986[1].

Regulatory Authorities

The Postal and Electronic Communications Regulatory Authority (the Arcep) is an independent administrative body created by the law of July 26, 1996 and acts as French regulator for these sectors nationwide. The Arcep'S main missions in electronic communications are to set regulations (general or specific obligations) for operators within its jurisdiction. It has powers to sanction non-compliant operators and can rule on disputes between operators over technical and pricing conditions for network access and interconnection. The Arcep also allocates spectrum and numbering resources. Finally, it determines the size of contributions to fund the universal service obligation and oversees the mechanisms for delivering this funding.

The French Competition Authority is an independent government authority responsible for ensuring open market competition and compliance with public economic policy. It has jurisdiction over all business segments, including the electronic communications sector. It has sanction powers for anti-competitive practices, as well as consultative powers. It also specializes in overseeing mergers and acquisitions.

The ANFr (*Agence nationale des fréquences* – French national agency for frequencies) is responsible for planning, managing and controlling the usage of radio frequencies and for coordinating the establishment of certain radio transmission facilities. The frequency spectrum is covered by 11 controlling authorities: government ministries, Arcep and the French Broadcasting Authority (CSA). The Arcep and the CSA are in turn responsible for allotting to users the frequencies they control.

The CSA is an independent administrative body created by the law of January 17, 1989, tasked with protecting freedom of audiovisual communication by means of any electronic communications technology as regards radio and television in accordance with the Law of September 30, 1986. In July, 2013 the CSA was partly reformed and a Commission for the modernization of audiovisual broadcasting is to be created and given responsibility for the radio spectrum.

(1) For information concerning risks linked to the regulations of the electronic communications sector, see Section 2.4.2 *Legal risks*.

2.2.2.2 Regulation of mobile telephony

Main blocks assigned in the mobile services spectrum
(700 MHz, 800 MHz, 900 MHz, 1,800 MHz, 2.1 GHz and 2.6 GHz)

700 MHz	– Authorizations were given to Orange and Free in December 2015 for 10 MHz each, and to Bouygues Telecom and SFR for 5 MHz each for a period of 20 years
800 MHz	– Authorizations were given to Bouygues Telecom, Orange and SFR in January 2012 for 10 MHz each for a period of 20 years – Free Mobile has roaming access rights on the SFR network in the "priority development zone" (ZDP), covering the least populous areas of the country (18% of the population and just under two thirds of mainland France)
900 MHz	– 2G and 3G operators were authorized to refarm the 900 MHz band for 3G in February 2008 – 2 x 5 MHz were sold back to Free Mobile by Orange France and SFR on January 1, 2013 for high-density areas, and by Bouygues Telecom in July 2011 for the remaining parts of the country
1,800 MHz	– Bouygues Telecom has been authorized to refarm the 1,800 MHz band for 4G from October 2013, after handing back some spectrum – Orange and SFR have been authorized to refarm the 1,800 MHz band for 4G from May 2016, or earlier if they so desire, after handing back some spectrum – Authorization was given to Free in December 2014 for 5 MHz duplex; Free may request the allocation of the 10 MHz handed back by Orange and SFR
2.1 GHz	– Free Mobile was awarded the fourth 3G license, with a 2.1 GHz channel, in January 2010 – SFR and Orange France were each awarded two other channels in May 2010
2.6 GHz	– Authorizations were given to Orange France and Free Mobile in October 2011 for 20 MHz each, and to Bouygues Telecom and SFR for 15 MHz each

Deployment obligations of 3G operators in continental France

To date, Arcep has considered that the operators have respected their 3G deployment obligations in continental France in regard to the schedules specified in their authorizations.

At the end of December 2015, Orange's 3G coverage was 99.3% of the population and 92.6% of the country.

Deployment obligations of 4G operators in continental France

(as a % of the population)	01/17/2017	10/11/2019	01/17/2022	10/11/2023	01/17/2024	01/17/2027	End-2030
Regional rail network (coverage in each region)						60% (700 MHz)	80% (700 mHz)
Regional rail network (national coverage)		60% (700 MHz)				80% (700 mHz)	90% (700 MHz)
Priority highways							100% (700 MHz)
Town centers in the "white area" program (1% of the population and 3,300 town centers)						100% (700 MHz)	
Inside priority deployment area (18% of population and 63% of territory)	40% (800 MHz)	90% (800 MHz) 50% (700 MHz)				92% (700 MHz)	97.7% (700 MHz)
In each county (*département*)					90% (800 MHz)	95% (800 MHz) 90% (700 mHz)	95% (700 mHz)
Throughout the metropolitan territory		60% (2.6 GHz)		75% (2.6 GHz)	98% (800 MHz)	99.6% (800 MHz) 98% (700 MHz)	99.6% (700 MHz)

Source: Arcep.

At the end of December 2015, Orange's 4G coverage was 79.6% of the population and 32.8% of the country.

Analysis of the wholesale mobile call termination markets (4th round)

Mobile voice call termination

On December 9, 2014, Arcep issued decision No. 2014-1485 concerning analysis of the wholesale fixed-line or mobile call termination markets for 2014-2017. It set the following price ceilings for mobile voice call termination:

	Market analysis – 1st round			Market analysis – 2nd round			Market analysis – 3rd round						Market analysis – 4th round			
				1st price cap	2nd price cap (decision Dec. 2008) (1)		(March 2011 and July 2012 decisions)						(December 2014 decision)			
(cent€/min)	2005	2006	2007	Jan. 08 - Jun. 09	Jul. 09 - Jun. 10	Jul. 10 - Dec.10	Jan. 11 - Jun. 11	Jul. 11 - Dec. 11	Jan. 12 - Jun. 12	Jul. 12 (2) - Dec. 12	Jan. 13 - Jun. 13	Jul. 13 - Dec. 13	Jan. 14 - Dec. 14	Jan. 15 - Dec. 15	Jan. 16 - Dec. 16	Jan. 17 - Dec. 17
Orange France	12.50	9.50	7.50	6.50	4.50	3.00	3.00	2.00	1.50	1.00	0.80	0.80	0.80	0.78	0.76	0.74
SFR	12.50	9.50	7.50	6.50	4.50	3.00	3.00	2.00	1.50	1.00	0.80	0.80	0.80	0.78	0.76	0.74
Bouygues Télécom	14.79	11.24	9.24	8.50	6.00	3.40	3.40	2.00	1.50	1.00	0.80	0.80	0.80	0.78	0.76	0.74
Free Mobile, full MVNO (2)									2.40	1.6 (3)	1.1 (3)	0.80	0.80	0.78	0.76	0.74
Asymmetry	18%	18%	23%	31%	33%	13%	13%	0%	0%	60%	38%	0%	0%	0%	0%	0%

(1) For Bouygues Telecom, decision 2010-0211 of February 18, 2010 setting the rate for 2nd half 2010 at €3.40 cents.
(2) For Free Mobile and full MVNO's Lycamobile and Oméa Telecom, decision of July 27, 2012 with effect as of August 1, 2012 – maximum price for 1st half 2012.
(3) Excluding BNP.

SMS TR

On January 29, 2015, the Arcep put the SMS call termination market, previously regulated, under surveillance.

Significant events in 2015 and the start of 2016

	Spectrum
July 2015	Orange and SFR have been authorized to use the 1,800 MHz band for 4G from May 2016 after handing back some spectrum
September 2015	Allocation of 5 MHz duplex of 1,800 MHz spectrum to Free Mobile
December 2015	Allocation of 30 MHz duplex of 700 MHz spectrum to Orange, Free Mobile, SFR and Bouygues Telecom
January 2016	Overseas territories: launch of an allocation process for the 800 MHz and 2.6 GHz spectrum not yet allocated, and the spectrum still available in 900 MHz, 1,800 MHz and 2.1 GHz
	Mobile coverage
August 2015	Provisions for improved coverage under the Macron law giving broader powers to Arcep on the matter
May 2015	Inter-operator agreement on the coverage of white areas

Spectrum

Digital dividend – 700 MHz Band

On January 8, 2015 the Prime Minister's Order on reallocating the 700 MHz band to the Arcep (2*30 MHz) for high-capacity mobile uses was published in the French Official Journal. It allocated the 703-733 MHz and 758-788 MHz bands to the Arcep, initially jointly with the CSA as from December 1, 2015 and exclusively from July 1, 2019.

On December 9, 2015, following a spectrum allocation auction, Arcep granted authorizations to use the spectrum in the 700 MHz band as follows: Orange and Free received two blocks of 5 MHz duplex each, Bouygues and SFR one block of 5 MHz duplex each. In total, the government will receive €2,799 million, including €933 million from Orange, for the allocation of this spectrum, between 2015 and 2018.

1,800 MHz

In July 2015, the Arcep authorized Orange and SFR to use the 1,800 MHz band for 4G from May 25, 2016 after handing back some spectrum. Orange and SFR keep 20 MHz in the band; Free may request the allocation of the 10 MHz handed back.

In September 2015, Arcep granted 5 MHz to Free Mobile in the 1,800 MHz band, as per decision of December 16, 2014: this allocation is part of the 15 MHz duplex reserved for Free Mobile in the target allocation plan for the 1,800 MHz band by May 2016. These 5 MHz duplex are technology neutral.

Allocation of spectrum in overseas territories

The call for applications for the allocation of 800 MHz, 900 MHz, 1.8 GHz, 2.1 GHz and 2.6 GHz frequencies in the overseas territories (in Guadeloupe, Guyana, La Réunion, Martinique, Mayotte, Saint-Martin and Saint-Barthélemy) was launched by the government on January 29, 2016, in order to provide the operators with the means necessary to deploy 4G and continue developing their 3G networks. The allocations distributed by beauty contest procedure are scheduled for 2016.

Mobile coverage

As part of the Macron Act of August 6, 2015, measures have been taken to improve mobile telephony coverage, which must cover all non-covered town centers by the end of 2016. This involves finalizing the White Zones 2G program and supplementing it with the coverage of 268 additional town centers, which may be deployed in 3G. Moreover, the current shared 3G program, "3G RAN Sharing", should be finalized by mid-2017. Beyond the town centers, some areas of economic interest which are not currently covered may be the subject of a request to the concerned territorial authority for financial aid from the government at a local bureau, which the government will organize.

These measures have been incorporated in the agreement signed on February 24, 2016, between the four mobile operators in the presence of the Ministry of the Economy and Arcep. They are accompanied by the withdrawal of the public telephony component of the universal service.

2.2.2.3 Regulation of fixed-line telephony, broadband and superfast broadband Internet

Since July 2008, except for retail offers for fixed telephony under universal service, all of Orange's regulatory obligations concerning retail fixed-line telephony (access and communication) on the consumer and business markets have been lifted. *Ex ante* regulation of Orange's fixed-line services relates to retail offers under the universal service and wholesale offers that are regulated to ensure effective competition in the retail markets (call origination and termination, wholesale line rental, unbundling, access to ducts and poles, bitstream and capacity services).

Orange's obligations regarding cost accounting and accounting separation in the fixed-line business

The Arcep'S decision No. 06-1007 of December 7, 2006 sets forth Orange's obligations as to cost accounting and accounting separation in the wholesale and retail businesses. When retail activities make use of wholesale network services that are subject to accounting separation, these resources are recognized in regulatory accounts at the wholesale offers price. These obligations were first implemented in 2007 in respect of FY2006 ; they were deemed compliant by the Arcep and were renewed every year since then with the same outcome.

Analysis of the relevant markets for fixed broadband and high-speed fixed broadband, fixed-line telephony and fixed-line voice call termination (4th round)

Analysis of the fixed broadband and high-speed fixed broadband markets mid-2014 to mid-2017

On June 26, 2014, the Arcep issued three analysis decisions on the fixed broadband and high-speed fixed broadband markets for mid-2014 to mid-2017:

- decision No. 2014-0733 concerning analysis of the relevant wholesale market for access to the physical network infrastructure that composed the local loop (market 4);
- decision No. 2014-0734 concerning analysis of the relevant wholesale market within France for broadband and high-capacity broadband (market 5);
- decision No. 2014-0735 concerning analysis of the relevant wholesale market for capacity services (market 6).

The scopes for these three decisions were defined to comply with changes made by the European Commission recommendation of October 9, 2014 on the relevant markets subject to *ex ante* regulation, in order to make a distinction between wholesale "generalist" offers aimed at the consumer and wholesale offers targeting business needs. In this enterprise segment, Arcep decision No. 2014-0735 lift the pricing obligations on Orange (copper and fiber) in some competitive geographical areas from January 1, 2015.

Analysis of relevant fixed-line telephony markets in 2014-2017

On September 30, 2014 the Arcep issued decision No. 2014-1102 on analysis of the relevant markets for fixed-line telephony in 2014-2017. It prolonged the obligation imposed on Orange to provide wholesale line rental (WLR) at cost-based prices. The decision introduced a gradual relaxation of the pricing obligations imposed on Orange for straight carrier selection offers. Finally, the decision lifts the asymmetrical regulation imposed on Orange in the call origination market for calls to value-added service (VAS) numbers, instead relying exclusively on the symmetrical framework established by Arcep decision No. 2007-0213.

Analysis of the wholesale markets for fixed-line voice call termination in 2014-2017: cut in call termination prices

On December 9, 2014, Arcep issued decision No. 2014-1485 concerning analysis of the wholesale fixed-line or mobile call termination markets for 2014-2017. It set the following price ceilings for fixed-line call termination:

Caps (in euro cents/min)	**Call termination rates**	**Variation**
January 1, 2013	0.08	(46.6)%
January 1, 2015	0.079	(1.25)%
January 1, 2016	0.078	(1.26)%
January 1, 2017	0.077	(1.28)%

Regulation of fixed-line electronic communications service offers

Rate changes for wholesale offers subject to cost orientation (unbundling, analog and digital Wholesale Line Rental, and call origination)

In respect of 2015, Orange published a new increase in the prices for full unbundling and a rise in bitstream access prices. The unbundling prices were adjusted during the year in order to respect Orange's cost orientation obligation.

2016 rates approved by the Arcep in February 2016:

		2014 rates	**2015 rates**	**2016 rates**
Unbundling	Total	€9.02	€9.05 € (1)	€9.10
	Partial	€1.64	€1.77	€1.77
Wholesale line rental	Analog WLR	€12.19	€12.32	€12.32
	Digital WLR	€18.35	€18.57	€18.57
Bitstream	DSL access	€4.39	€4.79	€4.79
	Naked DSL access	€12.41	€12.53	€12.63

(1) Rate adjusted to €8.78 from August 1, 2015.

Regulation of fiber optic networks

Regulatory framework governing very high-capacity broadband wholesale offers:

- asymmetric regulation of access to civil engineering infrastructure which allows alternative operators to deploy their horizontal networks on Orange's infrastructure: non-discriminatory access at a rate that reflects costs;
- principle that the terminating segment of FTTH networks are mutualized between operators;
- symmetrical regulation of access to the terminating segment of FTTH networks including outside high-density areas: same obligations to offer passive access to the terminating segment of FTTH networks on reasonable and non-discriminatory terms apply to all operators cabling buildings anywhere in France. This access must be made available from a sharing point in a reasonable location (Arcep decision No. 2009-1106 of December 22, 2009, see also decision no. 2010-1312 of December 14, 2010). Charges must be reasonable and compatible with the principles of efficiency, relevance, objectivity and non discrimination.

National Digital Agency

On February 4, 2015, the decree creating a service with national authority was published in the French Official Journal: the National Digital Agency, which takes over three responsibilities: steering and implementation of the "France Superfast Broadband Program", coordinating and leading the various initiatives of French Tech, overseeing the dissemination of digital tools and the development of their use. It has to coordinate with several other institutions, including the *Caisse des dépôts*, *BPI France*, the National Digital Council, the Arcep and other state services involved in digital development.

The France Superfast Broadband Program aims to have 100% of the French population eligible for very high capacity broadband by 2022, with an interim target of covering half the population and companies by 2017. FTTH is seen as the main way of achieving this, although other technologies are also expected to contribute (higher speed on copper as a transitional solution, satellite, LTE). A total 20 billion euros of private and public investment is estimated to be needed to meet the 2022 target. This breaks down into three parts:

- one third of investment by private operators who expect to use their own capital to deliver FTTH to 57% of French homes by 2022;
- the remaining 43% of homes will be covered by the other two-thirds of investment, to be financed through networks managed by local public authorities (RIP):
  - for more than half of these homes, it has been decided to provide FTTH coverage financed partly by public subsidy with the rest provided by private operators,
  - the remainder relates to coverage of the more rural zones by complementary solutions (higher speed on copper, satellite, etc.) jointly financed by the state and local authorities.

Significant events in 2015 and the start of 2016

	Roll out of fiber optic networks and switch off of the copper network
February 2015	Delivery of the Champsaur report on the conditions and timing of the copper network closure
August 2015	Arcep's decision on the technical and operational processes for sharing high-capacity fiber optic broadband infrastructure
December 2015	Arcep's decision on the guidelines relating to the FTTH prices of networks managed by local public authorities (RIP)
	Arcep's recommendation on the implementation of the completeness obligation of the fiber optic rollouts outside high-density areas
	Reform of value-added services (VAS) pricing
October 2015	Entry into force of the VAS pricing reform on October 1, 2015
	Miscellaneous
July 2015	Arcep's decision in dispute resolution on our LFO offers and all-usage hosting
January 2016	Arcep strategic review
February 2016	Decision on wholesale rates for fixed-line access 2016/2017

Rollout of fiber optic networks and switch off of the copper network

The Macron Act of August 6, 2015, establishes new provisions concerning FTTH, including the establishment of an *ex ante* rate regulation mechanism for FTTH offers for network managed by public local authorities (RIP). In this context, Arcep is responsible for specifying the rate conditions that the network managed by public local authorities (RIP) must meet in order to comply with the EC guidelines regarding state aids to NGAs and with Arcep regulations regarding FTTH. In its decision dated December 7, 2015, Arcep recommends that the rates practiced in the network managed by public local authorities (RIP) be close to those in the privately organized area, taking as reference for the co-financing the rates equal to those charged by Orange in the AMII (1) area and lower for per line rental. Moreover, Arcep reiterates the need for rate consistency between the different offers, and in particular that bitstream rates must be higher than passive leasing. Finally, Arcep proposes to allow a transitional arrangement during the introductory period of the network managed by public local authorities (RIP) with discounted rates during the network's first years.

On August 7, 2015, Arcep adopted its decision on the technical and operational processes for sharing high-capacity fiber optic broadband infrastructure. The main purpose of this decision is to harmonize the practices of the different operators outside high-density areas. The operators are obliged to roll out the network in the immediate vicinity of all houses located in an area behind a sharing point within five years after its launch. The obligation of completeness of the fiber optic rollouts outside of high-density areas was clarified in December 2015 by a recommendation that tends to alleviate this constraint in the case of an isolated housing area, while precisely defining the technical and economic conditions.

Moreover, the French Competition Authority noted, on July 30, 2015, the lifting of the clause prohibiting Orange from deploying its FTTH network in 208 towns in the AMII area making up part of the area granted to Numericable SFR (i.e. about 900 k lines).

(1) Zone subject to calls for investment from the private sector.

In parallel, a report (the Champsaur report) aiming to clarify the conditions and the schedule of the copper network closure was delivered to the government on February 19, 2015. This report rules out a closure of the copper network imposed by the public authorities, because only Orange is responsible for making such a decision. It notably includes the creation of "fibered zones" which the government would designate under certain conditions (whole zone served by FTTH networks, network engineering compliant with regulations, etc.) triggering measures to incentivize customers to migrate from copper to fiber.

Reform of value-added services pricing

In March 2014, the Arcep published a recommendation on the wholesale VAS interconnection market with a particular focus on the relationship between originating and recipient operators, as part of the implementation of the VAS pricing reform (decision No. 2012-0856).

On June 10, 2014, Arcep issued decision No. 2014-0661, postponing the entry into force of VAS market reform until October 1, 2015 (initially scheduled for January 1, 2015). This was to allow VAS publishers and recipient operators adequate visibility to conduct their commercial negotiations.

The VAS reform redefines pricing methods applied to calls to short and special numbers (beginning with 08) which allow users to access weather forecasts and distance sales services, for instance, as well as government services. The reform (i) creates a uniform pricing model for the retail services market irrespective of whether the originating call is from fixed-line or mobile network, known as "C+S" for its two components: the price of the call (C) equal to the price of the local call and service (S) defined by the provider and (ii) makes calls which are currently free when calling from a fixed line also free when calling from a mobile number.

Dispute resolution on our LFO offers and all-usage hosting

On April 1, Free submitted a request for dispute resolution to Arcep, asking to use the NRA and LFO hosting offer without extra charge for the routing of its mobile traffic from antennas connected by fiber optics, despite the fact that we offer a commercial package to this effect. Arcep issued its decision on July 30, 2015, in which it imposed on Orange a cost-oriented hosting service for the equipment that permits the routing of mobile traffic, and to allow the routing of the traffic stemming from mobile sites connected by fiber optics on the LFO without extra charge. Orange has appealed this decision based on the second point before the Paris Court of Appeal.

Wholesale rates on fixed-line access 2016/2017

Wholesale rates on fixed-line access 2016/2017: by its decision No. 2016-0206, dated February 16, 2016, on the price framework for copper local loop access for 2016 and 2017, Arcep proposes to increase the full unbundling contract from €9.05 per month to €9.10 per month in 2016, and then to €9.45 per month in 2017, to lower the service access fee from €56 to €50 and the termination fee from €20 to €15 and to lower the price of the SAV+ service (increasing the reliability of a line performing worse than the theoretical values) from €135 to €105.

By its decision No. 2016-0208, dated February 16, 2016, on the price framework of wholesale access to fixed-line telephony services and the associated call origination, for 2016 and 2017, it proposes to stabilize the prices of wholesale line rental and an annual increase of 10% of the call origination.

In addition, by its decision No. 2016-0207 dated February 16, 2016, on the price framework of the offer for generalist activated access to DSL delivered within France by Orange, for the years 2016 and 2017, Arcep proposes to maintain the current prices for collecting and accessing non-naked bitstream and a slight increase in access prices for naked bitstream.

Arcep strategic review

On January 19, 2016, the Arcep published the conclusions of its strategic review, in which it makes public its new regulatory priorities: promoting investment in infrastructures and innovation, ensuring connectivity in all geographies and preserving an open Internet.

2.2.3 Spain

2.2.3.1 Legal and regulatory system

Legal framework

The 2002 European *Telecom Package* was transposed into Spanish law by the general Telecommunications Act (law No. 32/2003 of November 3, 2003), Royal Decree No. 2296/2004 of December 10, 2004 on the electronic communications markets, network access and numbering, and Royal Decree No. 424/2005 of April 15, 2005 on the supply of electronic communications services, universal service obligations and user rights.

The 2009 *Telecom Package* was transposed into Spanish law by Royal Decree No. 726/2011 on universal service provision in May 2011 and Royal Decree No. 13/2012 of March 31, 2012.

The telecommunications sector is also covered by law No. 15/2007 of July 3, 2007 relating to the implementation of competition rules.

Law No. 34/2002 of July 11, 2002 relating to the information society and electronic commerce specifies the obligations and limits of responsibility applicable to service providers in the information society.

The regulatory framework applicable to data protection in Spain is based around law No. 15/1999 of December 13, 1999, relating to personal data protection and order No. 999/1999 relating to security measures. In the field of intellectual property rights protection, law No. 23/2006 of July 7, 2006 amends law No. 1/1996 of April 12, 1996 and transposes European directive 2001/29/EC relating to the harmonization of certain aspects of copyright and related rights in the information society.

Regulatory Authorities

Since October 2013, the regulators for all the various sectors of the economy, including telecommunications, have been brought together under a new cross-industry entity, the National Commission for Markets and Competition (*Comisión Nacional de los Mercados y la Competencia*), set up by law No. 3/2013 of June 4, 2013, which also has responsibility for competition issues.

As a result the telecom industry is overseen by both the new multi-industry regulator and Setsi as follows:

- Setsi handles authorizations, spectrum allocations, telephone numbering, universal service cost approvals, quality of service, and disputes between consumers and non-dominant operators;
- the CNMC conducts market analysis and handles disputes involving operators with significant market power.

2.2.3.2 Regulation of mobile telephony

Mobile voice call termination rates

Following a consultation on the wholesale mobile call termination market (market 7), the CMT issued a decision on May 10, 2012 proposing a gradual decrease of mobile call termination caps, reaching rate symmetry in July 2013. The adopted caps are as follows:

(in euro cents/minute)	04/16/2012-10/15/2012	10/16/2012-02/29/2013	03/01/2013-06/30/2013	From July 2013
Movistar, Vodafone, and Orange	3.42	3.16	2.76	1.09
Yoigo	4.07	3.36	2.86	1.09

Spectrum

In May 2011, the Spanish authorities allocated a 5 MHz duplex block in the 900 MHz spectrum to Orange Espagne. The license, granted under the principle of technological neutrality, is valid until December 2030.

In July 2011, the Spanish authorities auctioned the 800 MHz, 900 MHz and 2.6 GHz frequency bands. The 800 MHz licenses, awarded in 2011, only become available from 2015. The same is true for the 900 MHz block allotted to Telefónica.

In July 2013, Orange Espagne 's license for the 900 MHz band was extended from 2025 to 2030 and its 1,800 MHz license from 2023 to 2030.

Following these allocations, the Spanish spectrum is distributed as follows (national licenses):

	800 MHz	900 MHz	1,800 MHz	2.1 GHz		2.6 GHz	
				FDD	TDD	FDD	TDD
Orange	2*10 MHz	2*10 MHz	2*20 MHz	2*15 MHz	5 MHz	2*20 MHz	10 MHz
Vodafone	2*10 MHz	2*10 MHz	2*20 MHz	2*15 MHz	5 MHz	2*20 MHz	20 MHz
Telefónica	2*10 MHz	2*10 MHz	2*20 MHz	2*15 MHz	5 MHz	2*20 MHz	
Yoigo			2*15 MHz	2*15 MHz	5 MHz		

The schedule of the allocation of 700 MHz spectrum for telecom operators has not yet been announced.

Significant events in 2015 and the start of 2016

March 2015	Start date of 800 MHz licenses for operators
January 2016	Proposal to increase the spectrum cap per telecom operator

Start date of 800 MHz licenses for telecom operators in March 2015

On September 24, 2014 the government approved by Royal Decree 805/2014 the technical specifications that would allow the handover of digital TV spectrum in the 800 MHz band to mobile telephony use. These licenses, awarded following the 2011 auction process to three operators, Telefónica Móviles, Vodafone and Orange, came into force in March 2015.

Spectrum cap per operator

The total spectrum cap is currently set by the CNMC to 185 MHz per operator. In the context of the future regional auctions in the 2.6 GHz band and the auctions in the 3.5 GHz band, which should be held at the end of the first quarter of 2016, the CNMC proposes to increase this cap.

2.2.3.3 Regulation of fixed-line telephony, broadband and superfast broadband Internet

Wholesale broadband markets (markets 4 and 5/2007)

By its decisions of July 18, 2013, revising the rates for access to Telefónica's local loop, of January 30, 2014, revising the rates of the wholesale services GigADSL, ADSL IP and NEBA and July 23, 2015, revising the rates for the traffic component of the NEBA offer, the CNMC confirmed the following rates:

	Rates
Unbundling offer (since September 2013)	
Full unbundling	€8.60
Partial Unbundling	€1.30
Bitstream Offers	
Neba FTTH	€19.93
Neba DSL	€6.48
Naked DSL premium	€8.60
Aggregation offer (per Mbit/s)	€7.98
GigADSL and IP-ADSL (regional offer) at 10 Mbits/s	€10.20
IP-ADSL (national offer) at 10 Mbits/s	€13.60

Since April 2014, the GigADSL and ADSL IP offers, replaced by NEBA, which will cease to be regulated in areas of Spain where NEBA is available.

2

Significant events in 2015 and the start of 2016

April 2015	**Replicability of triple play bundles** Authorization of Telefónica's takeover of DTS under certain conditions
May 2015	**Orange's bid for Jazztel** Authorization by the European Commission of Orange's takeover of Jazztel under certain conditions
November 2015	**Wholesale broadband market** Closure of the first copper distribution frames in view of the transition to a very high-capacity fixed broadband network
February 2016	Adoption of the third round of analysis of the markets 3a and 3b/2014 and 4/2014 imposing geographical remedies

Replicability of *triple play* bundles

The CNMC, in its formation Competition Authority, conditioned its approval of Telefónica's acquisition of DTS in Resolution C/0612/14 of April 22, 2015, on (1) an offer to access exclusive content under economic conditions of replicability, including for offers coupled with Internet access, as well as on (2) the provision of a wholesale access offer to Telefónica's Internet network at data rates sufficient to offer competitive IPTV services. Telefónica took on these commitments for a period of five years, renewable for 3 additional years.

Orange's bid for Jazztel

The European Commission approved Orange's proposed acquisition of Jazztel PLC on May 19, 2015, under the EU Merger Regulation. This authorization is subject to Orange's complete implementation of a number of commitments that will ensure effective competition in the markets for access to fixed-line Internet services after the acquisition.

In order to remedy the problems identified by the Commission, Orange presented the following commitments:

- for fiber optics: Orange has committed to sell an independent Fiber To The Home (FTTH) network which covers between 700,000 and 800,000 housing units, which approximates the size of the current Orange FTTH network in Spain. This high speed broadband network serves 13 municipalities in five of the largest cities in Spain: Madrid, Barcelona, Valencia, Seville and Malaga;
- for copper: Orange has committed to granting to the purchaser of the FTTH network a wholesale access to Jazztel's national ADSL network for period of up to 8 years. The commitment is valid for an unlimited number of subscribers and will allow the purchaser to position itself immediately as a competitor in 78% of Spain territory.

The buyer of the fiber optic network by the MVNO MasMóvil, was approved by the European Commission on October 16, 2015.

Wholesale broadband markets: Third round of the analysis of markets 3a and 3b/2014 and 4/2014

The CNMC has adopted its third cycle of the analysis of the markets 3a and 3b/2014 and 4/2014 on February 25, 2016. It has decided:

for market 3a:

- to retain the copper network unbundling obligations introduced in the previous 2009 market analysis and to retain access to Telefónica civil engineering infrastructure;
- to not impose *ex ante* asymmetrical obligations on Telefónica for the fiber network, in 66 cities considered effectively competitive, representing 35% of the Spanish population, given that a virtual unbundled local access (VULA) offer must be made available for the rest of Spain;

for market 3b:

- to remove progressively the obligations for *ex ante* regulation of copper networks in parts of Spain declared to be competitive, and covering 58% of currently installed broadband lines; and, in the rest of Spain determined to be non competitive, to retain Telefónica's network access obligations, with a NEBA-copper offer with no bandwidth cap and charged on a cost-based basis;
- and to retain the *ex ante* obligations with a bitstream offer on the fiber network for part of Spain declared non competitive, this obligation being temporary for the part declared competitive.

And for market 4:

- to retain, throughout Spain, Telefónica's NEBA-business offer obligation, charged on a cost-based basis for copper, meeting the economic replicability test for fiber.

Decommissioning of the copper network

The CNMC approved Telefónica's first requests to decommission two distribution frames in its copper network in October 2014. The distribution frames in question are small exchanges with no unbundling or equipment collocation. Under the terms of the regulator's decision on the analysis of the wholesale network infrastructure, market 4/2007, issued in 2009 and supplemented by the CNMC's decision of October 2014, Telefónica is obliged to continue offering the option of unbundling for five years after filing a request to decommission an exchange with the CNMC. This period falls to just one year if there are no unbundled operators. The first copper distribution frames were closed end-November 2015.

2.2.4 Poland

2.2.4.1 Legal and regulatory system

Legal framework

Orange Polska's businesses are governed by the law of July 16, 2004 on telecommunications, transposing the 2002 European *Telecom Package* concerning electronic communications into Polish law, and by the law of February 16, 2007 concerning competition and consumer protection. The law of December 2012, transposing EU directives issued in 2009, came into force on January 21, 2013.

The law of May 7, 2010, on developing telecommunication networks and services, provides access to telecommunications and other technical infrastructures funded by public funds.

As regards e-commerce, the law of July 18, 2002 that governs provision of electronic services transposes European Directive 2000/31/EC concerning electronic commerce and defines electronic service supplier obligations.

The applicable framework concerning personal data protection is defined by the law of August 29, 1997 concerning personal data protection, as amended in 2002. The 2004 Telecommunications Act also defines certain rules applicable to personal data protection and storage (1).

Regulatory Authorities

The Ministry of Digitization, created in November 2015, is responsible for telecommunications.

The Office of Electronic Communications (UKE) is responsible, in particular, for telecommunications regulation and frequency management, as well as certain functions related to broadcasting services.

The Office of Competition and Consumer Protection (Uokik) is responsible for the application of competition law, merger control and consumer protection.

Digital Poland

The government's action plan to meet the targets of its digital strategy in Poland was passed in January 2014. The plan is budgeted at 2,665 million euros and aims to ensure that all households have at least 30 Mbps Internet access by 2020. Nearly half the funds are earmarked for broadband network construction projects. The Polish government will contribute 409.4 million euros.

2.2.4.2 Regulation of mobile telephony

Mobile call termination rates

The UKE published seven decisions on December 14, 2012, ruling that Orange Polska, T-Mobile, Polkomtel, P4, CenterNet, Mobyland and Aero2 each had a dominant position in the mobile call termination market for the mobile numbers open to interconnection on their network (market analysis -3rd round). It also set symmetrical mobile voice call termination rates for all operators from January 1, 2013, and termination rates based on pure long run incremental costs as from July 1, 2013.

Date	**from July 1, 2013** (pure LRIC)
zlotys/min	0.0429
Euro cents/min	1.00

Exchange rate as at 12/31/2015: 1 PLN = 0.234 euros

Spectrum

In 2011, the UKE issued three decisions that introduce technological neutrality in the 900 MHz, 1,800 MHz, and 2,100 MHz frequency bands.

In July 2013, the UKE published a consultation on whether to assign 700 MHz spectrum to electronic communications. No decision on this has yet been announced.

Spectrum awarded is distributed as follows:

	800 MHz (1)	**900 MHz**	**1,800 MHz**		**2.1 GHz**	**2.6 GHz**
Orange (PTK)	10 MHz duplex	7 MHz duplex	10 MHz duplex	15 MHz duplex	5 MHz	15 MHz duplex
Era (T-Mobile)	5 MHz duplex	9 MHz duplex	20 MHz duplex	15 MHz duplex	5 MHz	15 MHz duplex
Plus (Polkomtel)		9 MHz duplex	10 MHz duplex	15 MHz duplex	5 MHz	20 MHz duplex
Play (P4)	5 MHz duplex	5 MHz duplex	15 MHz duplex	15 MHz duplex	5 MHz	20 MHz duplex
Aero2		5 MHz duplex	10 MHz duplex			50 MHz
Mobyland			10 MHz duplex			
Centernet			10 MHz duplex			
Sferia	5 MHz duplex					

(1) A block of 5 MHz duplex in the 800 MHz band was allocated to NetNet as part of the 2015 auction, but this operator refused the allocation and these 5 MHz are currently being reallocated.

(1) For information concerning risks linked to the regulations of the telecommunications sector, see Section 2.4.2 *Legal risks*.

Significant events in 2015 and the start of 2016

October 2015	**Spectrum in the 800 MHz and 2.6 GHz band** Spectrum allocation after the auction

Allocation of 800 MHz and 2.6 GHz spectrum

At the end of an auction process, five blocks of 5 MHz duplex in the 800 MHz band and 14 blocks of 5 MHz duplex in the 2.6 GHz band were allocated for a period of 15 years. Orange was allocated 10 MHz duplex in the 800 MHz band and 15 MHz duplex in the 2.6 GHz band for a total of PLN 3,168 million.

The licenses in the 800 MHz band include coverage obligations in the white areas at the town level, leading to coverage of 62% of the Polish population in 4 years.

2.2.4.3 Regulation of fixed-line telephony, broadband and superfast broadband Internet

All of Orange Polska's regulatory obligations concerning retail fixed-line telephony (access and communication) on the consumer and business markets have been lifted. *Ex ante* regulation of Orange Polska's fixed-line services, for the areas defined as non-competitive, relates to wholesale offers that are regulated to ensure effective competition in the retail markets (call origination and termination, wholesale line rental, unbundling, bitstream).

Orange Polska's obligations regarding cost accounting and accounting separation in the fixed-line business

The UKE decision DHRT-WORK-6090-1/14(66) of 4/10/2015 describes the obligations imposed on Polska regarding cost-accounting and accounting separation in wholesale and retail business. When retail activities make use of wholesale network services that are subject to accounting separation, these resources are recognized in regulatory accounts at the wholesale offers price.

Analysis of the wholesale broadband access market (market 5/2007)

On October 7, 2014, the UKE adopted its decision on the market for wholesale broadband access (market analysis -3rd round). The decision excludes 76 Polish towns, covering 24% of the population, from *ex ante* regulation and excuses Orange Polska from all regulatory obligations in respect of these towns. In these deregulated areas, Orange Polska offers its wholesale services on a commercial basis. Everywhere else, the obligations imposed on Orange Polska are maintained (on access, non discrimination, transparency, accounting separation and cost orientation).

Analysis of the wholesale broadband access market (market 4/2007)

In its June 2, 2014 decisions on market 4, as part of the second round of market analysis, regarding copper and fiber the UKE retained the obligations on Orange Polska (on access, non discrimination, transparency, accounting separation and cost orientation).

Reference offer for fixed-line markets

This reference offer applies to all wholesale fixed-line services: call origination and termination, Wholesale Line Rental, partial and full unbundling and bitstream access.

On July 3, 2014 the UKE authorized a new version of the integrated reference offer, where the monthly price of full unbundling is left at 22 zlotys.

Fixed-line call termination rates

Since the UKE's decision of September 22, 2009, following its second round of market analysis, call termination rates must be based on cost, with no further details given. The UKE reserves the right, however, to control rates by benchmarking or a retail minus formula and has indicated it intends to move towards symmetry in 2014. The UKE thus systematically imposes a call termination rate of PLN 0.0273 (0.64 euro cents) on alternative operators, corresponding to Orange Polska's call termination rate at local level.

For an efficient generic operator on a New Generation Network (NGN), the European Commission recommendation of May 7, 2009 requires National Regulatory Authorities to set the fixed-line call termination rates based on long-run incremental costs only. The UKE is preparing a draft decision applying this recommendation.

Universal Service

Expiry of Orange Polska's universal service obligation:

In 2006, the UKE imposed universal service obligations on Orange Polska until May 9, 2011. Since then, the UKE has taken no further steps to appoint a new universal service provider. On May 5, 2014, the UKE published a report that removed universal service obligations in Poland.

Compensation for universal service obligation

For the whole period when it was responsible for universal service (November 2006 to May 2011), Orange Polska estimated its cost amounted to 1.1 billion zlotys while only 137 million zlotys were allotted in compensation by the UKE. Orange Polska has therefore appealed to have the UKE decisions reexamined.

In March 2014, the UKE designated which operators would bear the cost of providing a universal service in 2006. Other decisions should follow for the years 2007-2011.

Significant events in 2015 and the start of 2016

April 2015	UKE decisions lifting Orange Polska's obligations on the fixed-line telephony markets for residential customers in the second round of analysis of the markets 3 to 6/2003
September 2015	UKE decision on the analysis of the Corporate wholesale market (second round), markets 4/2014 and 14/2003
January 2016	Implementation of the directive on reducing the cost of deployment of broadband networks

Deregulation of Corporate wholesale markets

After the deregulation of markets 7/2003 of leased lines in 2014, the UKE also deregulated, by its decision of September 17, 2015, the market 4/2014 (wholesale market for leased lines above 2 Mbps) and the market 14/2003 for wholesale trunk segments of leased lines.

Deregulation of fixed-line telephony retail markets

The UKE issued its decisions on the second round of market analysis on the markets 3 to 6 of 2003 on April 29, 2015, and lifting the obligations imposed on Orange Polska on its four markets: market 3/2003 (publicly available local and/or national telephone services provided at a fixed location for residential customers), market 4/2003 (publicly available international telephone services provided at a fixed location for residential customers), market 5/2003 (publicly available local and/or national telephone services provided at a fixed location for non-residential customers), market 6/2003 (publicly available international telephone services provided at a fixed location for non-residential customers).

Implementation of the directive on reducing the cost of deployment of broadband networks

In the context of the implementation of the directive on measures to reduce the cost of deploying high-speed electronic communications networks, the government issued a draft law on January 18, 2016, including an accelerated procedure for the installation of mobile base stations, access to alternative infrastructures and maximum prices for transit fees.

2.2.5 Other EU countries where the Orange group operates

2.2.5.1 Belgium

Mobile voice call terminations

Mobistar's mobile call termination rate is currently 1.18 euro cents/min.

In September 2015, the regulator submitted to the EC its draft decision for the third round of market analysis, in which it proposes a reduction in the call termination rate to 0.74 euro cents/min.

Spectrum allocation

In Belgium the spectrum is currently allocated as follows:

Operator	800 MHz	900 MHz	1,800 MHz	2 GHz	2.6 GHz
Proximus	10 MHz duplex	12 MHz duplex	25 MHz duplex	15 MHz duplex +5 MHz	20 MHz duplex
BUCD					45 MHz
KPN Belgium (Base) (1)	10 MHz duplex	10 MHz duplex	25 MHz duplex	15 MHz duplex +5 MHz	15 MHz duplex
Mobistar	10 MHz duplex	12 MHz duplex	25 MHz duplex	15 MHz duplex +5 MHz	20 MHz duplex

Source: Cullen International.
(1) Acquired by Telenet.

The licenses in the 900 MHz band set to expire in November 2015 have been automatically renewed for a period of five years.

Cable wholesale broadband markets

The regulatory framework for access to the cable operators' networks is governed by two decisions of the Belgian conference of electronic communications sector regulators (CRC) of July 1, 2011 and December 11, 2013. Under this framework, cable operators have to provide wholesale access offers to their network priced on a retail minus model. On February 2016, the CRC published a decision revising cable network access prices downwards, and separating the rates of the wholesale offers applicable 1) during and 2) after the launch phase of commercial offers.

2.2.5.2 Romania

Mobile voice call terminations

On February 1, 2014, the Romanian regulatory authority (Ancom) issued a decision on the mobile call termination rates charged by mobile operators. Ancom introduced a new calculation method that cut mobile call termination rates from 3.07 euro cents/min to 0.96 euro cents/min. These rates came into force on April 1, 2014.

Spectrum allocation

In Romania, the spectrum is allocated as follows:

	800 MHz	900 MHz	1,800 MHz	2.1 GHz	2.6 GHz
Telemobil (OTE)				5 MHz duplex +5 MHz	
Vodafone Romania	10 MHz duplex	10 MHz duplex	30 MHz duplex	5 MHz duplex +5 MHz	15 MHz duplex
Orange Romania	10 MHz duplex	10 MHz duplex	20 MHz duplex	15 MHz duplex +5 MHz	20 MHz duplex
Cosmote Romania (OTE)	5 MHz duplex	10 MHz duplex	25 MHz duplex	15 MHz duplex +5 MHz	10 MHz duplex
RCS&RDS		5 MHz duplex		15 MHz duplex +5 MHz	
2K Telecom					30 MHz duplex

Source: Cullen International.

Wholesale broadband markets

In the context of its second round of analysis of the 3a and 3b markets, completed in November 2015: ANCOM considered that the broadband retail market is effectively competitive and that, as a consequence, no obligation should be imposed on the two wholesale markets. The EC accepted the Romanian regulator's proposals without comment. The final decision was published in the Romanian Official Journal of December 29, 2015. RomTelecom's obligations as part of the wholesale market for infrastructure access will be lifted one year after the publication of the decision.

2.2.5.3 Slovakia

Mobile voice call terminations

On July 29, 2013, the Regulatory Authority TUSR issued a decision on the mobile call termination rates charged by three mobile operators, and fixed it at 1.226 euro cents maximum. The fourth-largest mobile operator, Swan also applies this termination rate since it began operating in October 2015.

Spectrum allocation

In Slovakia, the spectrum is allocated as follows:

	800 MHz	900 MHz	1,800 MHz	2.1 GHz	2.6 GHz
Slovak Telekom (Deutsche Telekom)	10 MHz duplex	10 MHz duplex	15 MHz duplex	20 MHz duplex +5 MHz	40 MHz duplex
Orange	10 MHz duplex	10 MHz duplex	20 MHz duplex	20 MHz duplex +5 MHz	30 MHz duplex
O2	10 MHz duplex	10 MHz duplex	20 MHz duplex	20 MHz duplex +5 MHz	
Swan			15 MHz duplex		

Source: Cullen International.

2.2.6 Other non-EU countries where the Orange group operates

Because the Orange group's retail market operations outside the EU primarily involve those of mobile operators, the main regulatory issues it faces in these countries are mobile voice call termination rates and spectrum access.

The following table gives the national mobile call termination rate for each country concerned:

Mobile voice call termination in the AMEA region (euro cents/min)

Morocco	1.29
Tunisia	0.69
Egypt	1.34
Jordan	1.65
Mali	2.56
Senegal	1.83
Niger	3.05
Guinea	2.40
Ivory Coast	3.66
Cameroon	3.96
Democratic Republic of the Congo	3.06
Botswana	2.62
Kenya	0.98
Madagascar	3.63
Mauritius	1.54

Source: Orange, based on data from national regulators. Exchange rate as at 12/31/2015.

The following table gives the license renewal date as well as the type of license for each country concerned:

Renewal of licenses in the AMEA region

	Expiration date of the current license	License Type
Botswana	April 2022	2G-3G
Botswana	August 2025	4G
Cameroon	January 2030	2G/3G/4G
Ivory Coast	April 2032	Global (1)
Guinea Conakry	November 2016	2G
Guinea Bissau	January 2017	2G
Equatorial Guinea	May 2019	Global (1) (excl. 4G)
Egypt	October 2022	2G-3G
Iraq	August 2022	2G/3G
Jordan	May 2019	2G/3G
Jordan	September 2030	4G
Jordan	May 2024	Fixed-line
Madagascar	April 2015 (2)	2G/3G/4G)
Mali	July 2017	2G-3G
Morocco	August 2024	2G
Morocco	December 2031	3G
Morocco	April 2035	4G
Morocco	April 2036	Fixed-line
Mauritius	November 2018	2G-3G-4G
Mauritius	November 2025	Fixed-line
Niger	December 2022	Global (1) (excl. 4G)
Senegal	July 2017	Global (1) (excl. 4G)
Central African Republic	May 2027	Global (1)
Democratic Republic of the Congo	October 2031	2G-3G
Tunisia	July 2024	Global (1) (excl. 4G)

Source: Orange, based on data from national regulators.
(1) Global: refers to the type of license that allows an operator to offer both fixed-line and mobile services through all of the available technologies (depending on the country, the Global license does not include 4G technology).
(2) Renewal under way.

2.3 Orange's group strategy

In 2015 Orange launched its new strategic plan *Essentials2020*, focused on Orange's ambition by 2020 to "provide its customers with an incomparable service experience" by being ever-present to "connect every individual to what is essential to them". This involves, providing exemplary basic services, quality and reliable access, customer connections at any time to any place, as well as even more personalized options for services and solutions.

Orange serves every kind of customer: those who focus above all else on price and those who have a particularly high-level of service expectation, as well as business customers of every type, from SOHOs to multinationals. The Group can rely on a series of key strengths for the mission that it has set out. With its brand and its 156,000 employees, the Group is present in Europe, Africa and the Middle East for the residential market, and everywhere in the world for the business market. Orange's ambition breaks down into five main drivers:

1. offering richer connectivity;
2. reinventing the customer relationship;
3. building a people-oriented and digital employer model;
4. accompanying the transformation of business customers;
5. diversifying by capitalizing on its assets.

Moreover, the strategic plan will be achieved within the framework of a company that is efficient, responsible and digitally proficient.

1. Offering richer connectivity

The multiplication of screens, the generalization of video on the Internet and customers' growing need for online services and content has led to an explosion in uses and in mobile data traffic. Moreover, the digital revolution has created new customer expectations and has changed their behavior, making connectivity even more important. Offering an efficient network to all customers is no longer enough; services must now be tailored to each individual consumer.

Orange would like to offer greater connectivity to all its customers, whether retail or business. In order to realize this ambition, the Group will make a series of targeted investments in its networks between 2015 and 2018, for more than 15 billion euros. Clear priority is given to investments in high speed broadband, in order to respond to the explosion in traffic and meet customer expectations. These will allow Orange to develop broadband services, whether fixed or mobile, as well as convergence packages in Europe. Orange aims to triple average data speeds (compared to 2014) in both fixed and mobile networks by the end of 2018.

The investments will be made in particular in the following fields:

Development of high-speed fixed broadband

High-speed fixed broadband will be developed in Europe through an ambitious fiber optics (FTTH) deployment project. Orange is working pragmatically and appropriately according to the particular resources and situations in each country: acquisition (Spain), rollout of a fiber optic network (France, Poland), use of cable when already present (Belgium). Orange's objective in France is to catch up and quickly surpass the geographic reach of cable, in order to be able to offer high-speed broadband services to the mass market. FFTH is a source of value creation for the Group, through the recovery of market share, customers loyalty and the improvement of the average revenue per user (ARPU). This approach also allows Orange to better serve business customers throughout Europe.

The number of homes in France, Spain, Poland and Slovakia able to connect more than doubled and the number of customers tripled in one year. In France, the number of connectable homes reached 5.1 million at the end of 2015, with an objective of connecting 12 million homes in 2018. In Spain, the Group considerably expanded its fiber network in 2015 (6.8 million connectable homes) thanks to the acquisition of Jazztel, thus leading to the creation of the second largest fixed broadband operator in the country. Orange's objective in Spain is to reach 14 million connectable households by the end of 2020. This extension will also help strengthen the fixed-mobile convergence strategy in this country, with the aim of doubling convergent revenues by 2018. In Poland, Orange Polska launched the deployment of its FTTH network in 2015, connecting more than 700,000 households by the end of the year, with the objective of connecting 3.4 million homes by 2018. In Belgium, Mobistar will launch its first convergent and high-speed cable television offers in 2016.

Development of high-speed mobile broadband

The Group aims to develop high-speed mobile broadband in all of the geographic areas where it operates. In Europe, the number of Orange 4G customers reached 18 million (in the fourth quarter of 2015), thereby doubling in one year. This growth is based on the extension of broadband coverage, with the goal of covering more than 95% of Europe with 4G by 2018, to respond to customer concerns about the quality of the network, both when traveling and within buildings, relying on the frequency portfolio quality. Orange therefore obtained in 2015 new 4G frequencies in France and in Poland. Moreover, the deployment of 4G+, with data rates twice as fast as 4G, has begun in France. In Africa and in the Middle East, the total number of Orange mobile customers increased by 13% in 2015, reaching 110 million customers at the end of the year. The Group continues to invest significantly in territorial coverage, with a particular emphasis on the continued deployment of broadband networks. Orange also obtained new frequencies in Cameroon and in Ivory Coast in 2015.

Continuation of network modernization

In anticipation of the future needs of its customers, the Group is transforming the design of its networks to make them more agile and automatically adaptable. Orange is thus continuing to drive the transition of its networks towards all-IP, the Cloud and the virtualization of networking functions, with the goal of being able to make them programmable in real time and dynamically, based on the evolution of traffic and needs. The Group is also preparing for the introduction of 5G, adapted to the new uses of mobile Internet and the Internet of Things. These changes will also allow the Group to reduce the cost structure of its networks, as well as their CO_2 emissions. For more information, see Section 3.2.1 *Network*.

An enriched content experience

The quality of the Group's networks, particularly in high-speed broadband, allows it to support the development of uses and respond to customer demands by offering a multi-screen experience. The development of uses is also based on access to quality content. In this area, the Group's content strategy consists in strengthening its role as a distributor by focusing on content aggregation: choosing, highlighting, packaging and offering attractive content meeting customer expectations in a simple and fluid manner. For more information, see Section 3.1.8.2 *Shared Services – Content*.

2. Reinventing the customer relationship

The relationship with the customer is a key success factor, thanks to the direct link with the end-customer, especially when facing competition from OTT platforms. The Group aims therefore to have an impeccable relationship with its customers, thanks in particular to:

- the power of the Orange brand;
- the simplification of customer journey by limiting the number of steps and intermediaries;
- the improvement of the customer experience.

Brand identity

Orange has a strong brand and decided, as part of the *Essentials2020* strategic plan, to transform its visual identity to better reflect its desire to be more attentive to its customers. This change is already in place at Orange Business Services, as well as in seven countries in which the Group operates (France, Spain, Poland, Romania, Luxembourg, Moldova and Jordan). In addition, the adoption of the Orange brand will be effective in two new countries starting in 2016 (Belgium and Egypt). For more information, see Section 3.4.2 *The Orange Brand*.

Unified customer journey

With the rise of the Internet and smartphones, mobile phone has become the entry point for sales and services, leading the Group to optimize the interconnection of its physical sales areas and reconsider their role. Customers desire more autonomy, speed and constant connection through their smartphones, which are becoming the main contact point through the customer area *Orange et Moi*. Physical stores can then concentrate on more sophisticated tasks such as advising customers on more complex operations. The previous logic of proximity, valid for physical stores, gives way to a logic of excellence of service, provided in larger and more welcoming stores that are organized by theme: home, family, work, wellness, entertainment. *Smart Stores* are thus integrated into a unified physical-digital approach. 2015 saw the opening of the first 21 *Smart Stores* in Romania, France, Poland, Moldova, Jordan and Tunisia.

Improvement of the customer experience

Customer Experience Management (CEM) tools allow services to be better targeted based on customer uses. The purpose of these tools is to reconstruct the history of a customer's relationship with Orange, regardless of their contact points, in order to better know the customer and propose customized solutions that correspond to his needs and expectations. Orange deployed CEM tools in France and Spain in 2015, as well as in Africa (Mali, Egypt, Cameroon). At the start of 2016, rollouts were underway in Slovakia and Poland, and five other countries should join them soon (Jordan, Tunisia, Nigeria, Ivory Coast, Senegal).

3. Building a people-oriented and digital employer model

Orange wants to be a company to which all employees, men and women, are proud to belong. Convinced that a positive customer experience is founded on a quality employee experience, the Group aims to have 90% of its employees recommend Orange as an employer at the end of *Essentials2020* strategic plan. In order to measure employee satisfaction, a pledge of economic performance, Orange has introduced an employee satisfaction plan with a bi-annual survey in France and annually outside of France.

A recognized policy of developing human resources

Orange's ambition to build a people-oriented and digital employer model has already materialized, thanks to the *Top Employer* certification it received in 17 countries from the *Top Employers Institute*. This certification awards actions implemented in each of these countries in the areas of professional growth, training and skills development. After receiving the *Top Employer Europe* certification in March 2015, the Group was also named *Top Employer Africa* in early 2016.

Orange's employees, first ambassadors of the company

The tools and services developed by Orange allows employees to broaden their expertise and become the company's most important ambassadors to customers. 2015 saw the European launch of *4G for All*, to provide all employees with a smartphone and a professional 4G contract.

Development of collective agility

The use of digital tools by Orange employees will help develop skills and cross-fertilization between business activities, encourage engagement within the Group and contribute to the quality of the work environment. 2015 was marked by the launch of a new social network inside the group called *Plazza*, destined to facilitate exchanges and collaborative work between Orange employees in 17 countries.

Fostering individual commitment

The granting of 5% of Orange's share capital to employees helps encourage their commitment and participation in the company's life. Orange aims to continue developing this form of employee shareholding, and a stock option plan for employees, *Orange Ambition 2016*, was approved by the Board of Directors on the October 21, 2015 for 11.5 million shares.

4. Accompanying the transformation of business customers

The digital transformation opportunities, efficiency and growth, are profoundly transforming the activities, organization, tools (customer and employee relations) and the processes of businesses. In this context, Orange is positioned as a trusted partner to support companies in their digital transformation. To this end, the Group is attentive to the needs and specifics of each of its customers' industries, business lines, processes and security constraints, from SMEs to multinationals. As part of its *Essentials2020* plan, Orange's objective is to increase the share of IT services in the Orange Business Services revenue mix by 10 percentage points by 2020.

The Group will focus on four key areas, in addition to its traditional role as a supplier of connectivity:

- providing digital solutions to allow work tools to become more mobile, more connected and more collaborative. Orange intends to become a leader in the integration of mobile solutions into work stations;
- improving business line processes, particularly through applications and connected objects, which provide companies with new possibilities;
- supplying multinationals with private and hybrid Cloud solutions, an area in which Orange wants to be the leader in France. Cloud services are an essential tool to bring agility and flexibility to companies (virtualization, systems integration, business applications, API, building blocks for connected objects, Big Data and analytics);
- security solutions for the protection of all areas of companies vital activities, an increasingly important point today: infrastructures, the company's strategic data and interactions with its customers (website, order taking and customer management tools).

2015 saw the development of the IT and integration services. For more information, see Section 3.1.8 *Enterprise*.

5. Diversifying by capitalizing on its assets

Orange focuses on two areas where it can capitalize on its assets and gain legitimacy in its customers' eyes in order to develop new sources of growth: connected objects and mobile financial services. The Group has set the goal to surpass one billion euros in revenues in these two new business lines by 2018.

Connected objects and mobile financial services have fundamentally transformed customers daily life, and Orange believes it can provide a real value-added service to customers in these areas. These services require richer connectivity and offer numerous synergies with the Group's main assets: customer relationships, digital expertise, both physical and digital distribution power, capacity for innovation, brand strength (building confidence and trust with clients), networks and international presence.

Connected objects

The Group wants to be present across the entire value chain of connected objects:

- the distribution of connected objects;
- the supply of value-added services around those objects, particularly in the health and wellness field or in the connected home field;
- and the management of data from these connected objects, in particular using *Datavenue*, its open intermediation platform.

2015 was marked by two Group initiatives in this area:

- Orange acquired a stake in Actility, a French start-up, pioneer in the Internet of Things, which provides operators with platforms for the use of narrowband networks for the deployment and interconnection of connected objects. For Orange, this means exploring and preparing solutions for the management of connected objects and data using innovative technological models;
- the Group announced the progressive rollout of a network for the Internet of objects using the *LoRa* (long-range) technology throughout France. Orange is thus contributing to the creation of an interconnected ecosystem based on *LoRa* and narrowband technology for the Internet of managed objects.

Mobile financial services

Mobile customers want to make more and more payments on the go, in a simple and fluid manner using their smartphones. In 2015, Orange continued its development in several areas:

- financial services with the development of *Orange Money* in Africa and *Orange Finanse* in Poland;
- mobile payment using contactless payment through NFC technology in Europe and the contactless payment application *Orange Cash*, launched in Spain and further developed in France;
- in the mobile banking area, which offers significant growth prospects, and where the Group concentrated its efforts in 2015. In order to launch an expanded mobile banking service in its largest European markets, the Group entered into exclusive negociations with Groupama in January 2016 to accelerate the development of an innovative and 100% -mobile *Orange Banque* solution starting in early 2017 in both France and Spain. This partnership aims to create a new banking model that will allow Orange to complete its diversification into banking services and Groupama to strengthen its online banking activities.

The growth perspectives for mobile financial services are significant, not only in Europe but also in Africa, where the mobile penetration rate is much higher than the percentage of people with bank accounts in most of the countries. Orange's customer base on the continent is now more than 100 million users, to whom it can propose these new services, which in turn foster customer loyalty. In Africa and in the Middle East, Orange aims to reach 30 million users with its money transfer and payment services by 2018. In 2015, the number of Orange Money customers grew by 31% year on year (on a comparable basis), for a total of more than 16.4 million users.

A digital, efficient and responsible company

The Group wants to meet its objectives in respect of CSR performance by being an ethical company, respectful of the ecosystem and the environment in which it operates.

Open innovation

To support these new services, Orange continues to innovate, leveraging its own resources and by following an *Open Innovation* approach. The Group's ambition is to have supported 500 start-ups worldwide by 2020 through the Group's *Open Innovation* programs. For more information, see Section 3.3.1 *Research and Innovation*.

Corporate responsibility

In order to respond to the social and environmental challenges related to the ever-greater number of devices (smartphones, tablets, connected objects), as well as to the multiplication of energy consuming uses by consumers, Orange has committed itself to two ambitious objectives: 50% reduction in its CO_2 emissions per customer use by 2020 (compared to 2006), and to promote the integration of the circular economy principles within its organization and its processes.

Ambitions

Orange's strategy, in terms of its core activities and new business areas, aims to generate new growth while maintaining a healthy financial position. Concerning operations, the Group will track several major indicators to assess the implementation of the *Essentials2020* plan presented in March 2015:

The first two indicators are global indicators that reflect the core ambition of *Essentials2020* concerning customers' digital experience:

- a leadership indicator in terms of customer recommendations, as evidenced by the *Net Promoter Score* or NPS. This commonly used metric encompasses all of the plan's drivers. Orange wants to become number 1 in NPS for three out of four customers by 2018, and to remain so;
- an indicator that measures the power of the Orange brand: the *Brand Power Index*. Orange is aiming for continuous improvement in this indicator across its markets by 2018 through the new brand identity and especially as a result of the proof it will provide customers concerning their improved digital experience.

Beyond this, Orange has one ambition per driver:

- for the first driver on richer connectivity, Orange has set an ambitious objective of tripling the average *data* speeds of its customers on its fixed and mobile networks by 2018 compared to 2014;
- for the second driver on the customer relationship, Orange is aiming for 50% digitization of interactions with its customers by 2018;
- for the third driver on the people-oriented and digital employer model, Orange has chosen an indicator identical to that chosen for its customers, based on recommendation. Orange is aiming for 9 employees out of 10 to recommend Orange as an employer by 2018;
- for the fourth driver on the Enterprise market, Orange has chosen to measure the success of the transformation of its Enterprise business model towards IT services. The Group aims to raise the share of IT services in the Orange Business Services revenue mix by 10 points by 2020;
- for the last driver, the selected indicator will measure the success of diversification into new services, with connected objects and mobile finance services. The objective is for these new services to contribute more than one billion euros to the Group's revenues in 2018.

Financial objectives

On the financial side, see section 4.5 *Outlook*, and 4.6 *Dividend distribution policy*.

2.4 Risk factors

In addition to the information contained in the present Registration Document, investors should carefully consider the risks outlined below before deciding whether to invest. The Company's view at the date of this Registration Document is that these risks could have a material negative impact on the business, financial position or profits of Orange and/or its subsidiaries. In addition, other risks and uncertainties, as yet unidentified or, as of the date of this Registration Document, not currently considered to be material by Orange, could have similar negative impacts. Investors could lose all or part of their investment if these risks materialize.

The risks described in this Chapter concern:

- risks relating to Orange's business activities (see Section 2.4.1);
- risks of a legal nature (see Section 2.4.2);
- financial risks (see Section 2.4.3).

In each section, risk factors are presented in diminishing order of importance, as determined by the Company at the date of filing the current Registration Document. Orange may change its view of their relative importance at any time, particularly if new external or internal facts come to light.

Several other sections of this Registration Document also discuss risks in some detail:

- for risks related to Orange's general strategy, see Section 2.3 *Orange's group strategy*;
- for risks relating to regulations and regulatory pressure, see Section 2.2 *Regulations* and Note 14 *Litigation* to the consolidated financial statements (Section 4.1);
- for risks relating to litigation involving the Group, also see Note 14 *Litigation* to the consolidated financial statements as well as Section 4.4 *Recent events*;
- for risks relating to the vulnerability of the technical infrastructure and environmental risks, see Section 5.6.2 *Environmental information*;
- for financial risks, see:
  - Notes 6, 7 and 9 to the consolidated financial statements for asset impairments,
  - Note 10.7 to the consolidated financial statements for derivatives,
  - Note 11 *Information on market risks and fair value of financial assets and liabilities* to the consolidated financial statements for the management of interest rate risk, currency risk, liquidity risk, covenants, credit risk and counterparty risk and equity market risk.

The guidelines for managing interest rate, foreign exchange and liquidity risks are set by the Treasury and Financing Committee. See Section 5.2.3.3 *Executive Committee and Group governance committees*:

- for the insurance plan, see Section 5.4.6 *Insurance*;
- more generally, risk management policies throughout the Orange group are discussed in the Chairman's Report on governance and internal control. See Section 5.4 *Risk management*.

2.4.1 Operational risks

Operational risks mainly include risks related to the telecommunications sector, risks related to strategy and the economic environment and risks relating to human resources.

The rapid growth in broadband use (fixed or mobile) allows global players of the Internet sector the opportunity to establish a direct link with telecommunications operators' customers, thus depriving the latter, including Orange, of a share of their revenues and margins. If this phenomenon continues or intensifies, it could seriously impair the financial position and outlook of the operators.

The increased use of networks for value-added services has led to the emergence of new powerful players, the *Over The Top providers* (OTT). Competition with these players to control customer relations is growing and could erode the operators' market position. This direct relationship with customers is a source of value for operators and to lose part or all of it to new entrants could affect revenues, margins, the financial position and outlook of telecommunications operators like Orange.

In response, Orange has adopted a strategy aimed at making significant investments to increase the capacity of its transport and aggregation networks and to set itself apart based on the quality of the high-capacity broadband service offered; and supplying more innovative and attractive communication services.

There is, however, no guarantee that this strategy, and particularly the innovative nature of certain investments, will be sufficient to offset the pressure from new entrants. With no assurance of profitability on these investments, the financial position and outlook of Orange could be affected.

Orange may be held liable for the loss, release, unauthorized disclosure to third parties or inappropriate modification of customer data. Its liability may also be triggered or its reputation damaged by its Internet access and hosting services.

Orange's activities may trigger the loss, disclosure, unauthorized communication to third parties or inappropriate modification of the data of its customers or the general public, particularly their banking details, which are stored on its infrastructure or carried by its networks.

These losses could arise (i) from the accelerated implementation of new services or new applications, for example those relating to billing and customer relationship management, (ii) from the launch of new activities in the field of connected objects, (iii) from malicious acts (including cyber attacks) particularly aimed at the theft of personal data or (iv) possible negligence within Orange or the Group's outsourcing partners.

Moreover, Orange may in some countries be obliged to disclose personal data to third parties under legal regimes that fail to offer the same protection as France, which could damage the Company's reputation and brand.

Recourse to liability proceedings is facilitated in a number of countries by legislation that has strengthened operators' obligations, and it could become even easier in the future should the legislation become more stringent.

Such incidents could have a considerable impact on the Group's reputation and a heavy impact on its liability, including its criminal liability and hence have an adverse impact on the Group's future profits.

Orange is exposed to the risk of an interruption of its networks and services following cyber attacks, sabotage, outages or human errors affecting critical hardware or software, malfunctioning of network equipment, failure of a key supplier or network saturation.

Damage or interruptions to the service provided to customers may occur following cyber attacks (on networks and IT systems), outages (hardware or software), human errors or sabotage of critical hardware or software, failure of a critical supplier, or if the network in question does not have sufficient capacity to meet the growing usage needs, or during the implementation of new applications or software.

Among these risks of interruption, telecommunications operators are especially exposed to malicious actions and cyber attacks because of the vital nature of telecommunications in the functioning of the economy. Despite the steps taken by Orange to protect its network, the growing frequency of such attacks increases the risk of an interruption to its services.

As a result of the rationalization of the network based on the implementation of all-IP technologies, the increase in the size of the service platforms and the relocation of equipment into fewer buildings, such service interruptions may in the future affect a greater number of customers and more than one country simultaneously.

Although impossible to quantify, the impact of such events could seriously damage the Group's reputation, trigger its liability and result in a reduction of traffic and hence revenue affecting its profits and outlook. If they were to occur on a nationwide or multinational scale, they might also create a crisis potentially affecting the security of the countries concerned.

The technical infrastructure belonging to telecommunications operators are vulnerable to damage or interruptions caused by natural disasters, fires, wars, acts of terrorism, intentional damage, malicious acts, or other similar events.

A natural disaster or other unforeseen incidents affecting Orange's installations could cause significant damage generating high repair costs. In most cases, Orange has no insurance for damage to its lines and must assume the full cost of the repairs itself. Furthermore, the damage caused by such major disasters may have more long-term consequences resulting in significant expense for Orange and which would harm its image, results and outlook. In addition, weather phenomena associated with climate change may increase the seriousness of disasters and of the damage caused.

The scope of Orange activities and the interconnection of the networks mean that the Group is highly exposed to the risk of fraud, which could reduce revenues and margins and damage its image.

As all operators, Orange is subject to various fraud issues which can affect the Company or its customers. Moreover, with technologies and networks becoming increasingly more complex and the accelerated implementation of new services or new applications relating notably to billing and customer relationship management, new types of fraud which are more difficult to detect or combat could also develop. Orange's revenues, margins, quality of service and reputation could be affected.

Part of the Group's *Essentials2020* strategic plan is the development of mobile financial services which are likely to generate new risks inherent to the banking business or increase the potential impact of current risks.

Besides the operational risks that accompany any service, the aims of developing a business in mobile financial services exposes the Group to risks including money laundering, terrorist financing and non-compliance with economic sanction programs. In addition, the previously mentioned risks of fraud, cyber attack, loss, unauthorized disclosure or communication of customer data and interruption to services could be particularly acute when they affect banking services.

Furthermore, the Group could face a risk of non-compliance with banking regulations via its entities which will have the status of regulated institutions.

If these risks materialize, they could have an impact on the Group's financial position, completion of its strategy and image.

The massive number of employees retirements that will occur in France by 2020 creates the risk of a skills shortage which could affect the Group's ability to carry out its projects and development strategy.

The accelerating pace of retirements during the next few years, particularly in Orange France, may mean the Group risks a shortage of skills in certain specialties if it cannot replace retirees with newly recruited or trained qualified personnel. In these circumstances, Orange's results and outlook could be affected.

Much of Orange's revenue is earned in mature countries or businesses where intense competition among operators to offer attractive prices and convergent offers could erode profitability or market share.

The main markets in which Orange operates are mature or even saturated. Orange therefore faces extremely tough competition, initially on prices but also on the capacity to deliver convergent offers (fixed, mobile and high-speed broadband), particularly with the recent emergence of cable operators such as Numericable in France after its takeover of SFR.

In response, Orange has chosen to make significant investments in innovation and continue to conduct a *transformation* and fixed cost reduction policy. It has also adjusted its asset portfolio by acquisitions (such as Jazztel in Spain) and disposals (such as its EE stake in the UK). Orange has also committed to developing new activities such as mobile financial services and connected objects.

If Orange is unable to successfully implement this strategy, it could suffer a loss of market share and/or shrinking margins. The same could occur in the event of a consolidation not involving the Group in a market where it operates.

For more information on competition, see Chapter 3 *Overview of the Group's business*.

Against the background of consolidation in the European telecommunications sector, Orange has in the past and is likely in the future to make significant acquisitions that could raise integration risks.

In 2015, the Group contributed to integration of the European industry by acquiring Jazztel. If Orange should make other significant acquisitions as the sector continues to consolidate it could face a risk of difficulties in integrating newly acquired entities or businesses that could have a material impact on its margins and profits.

Orange is relying on sources of growth in the countries where the Company has invested. Investments already made may fail to bring the expected returns, and may even generate unexpected commitments and the Group could be faced with increased country risk, including from corruption. The Group's results, outlook and image could be impacted.

The Group's growth partly depends on its activities in regions of the world undergoing rapid economic development. Orange has thus invested in telecommunications companies located in the Middle East and in Africa. Political instability or changes in the economic, legal or social landscape in these regions may call into question the outlook on profits held when these investments were made. International economic sanctions imposed on these countries could also have an impact on the value of these investments.

In addition, these geographical areas can pose difficulties or specific risks related to internal controls or non-compliance with applicable laws and regulations, such as anti-corruption rules. Despite the Group's drive to strengthen its anti-corruption policy, corruption cases could occur, which could have an adverse impact, particularly on the Group's image.

Other geographical areas where the Group operates, including central and eastern Europe, are also exposed to risks of geopolitical instability and non-compliance with applicable laws and regulations which could threaten the outlook on profits held when these investments were made.

If the expected growth in revenues from these various geographical areas was not achieved or if Orange was not able to render them profitable, the Group's financial position and results could be affected.

Exposure to electromagnetic fields from telecommunications equipment raises concerns for possible health adverse effects. Perceptions of this risk could worsen or a deleterious effect may one day be scientifically established, which would have negative consequences for the business and results of operators such as Orange.

In many countries, concerns have been raised regarding the possible health risks linked to exposure to electromagnetic fields from telecommunications equipment (primarily mobile handsets, mobile antennas, WiFi).

Although the health authorities have thus far found no health risks from exposure to electromagnetic fields below the limits recommended by the specialist international commission (ICNIRP), Orange cannot predict the conclusions of future scientific research or studies by international organizations and scientific committees called upon to examine these issues. If health risks are eventually scientifically demonstrated, there would probably be a resulting decline in the use of mobile telecommunications services, difficulties and additional expense in rolling out mobile antennas and wireless networks and an increase in litigation.

In the absence of scientific certainty, public authorities have nevertheless introduced strict regulations and health authorities have issued various precautionary usage measures. These regulations have tended to become more stringent over time and this trend could continue. The same is true of cases where various courts have ordered operators to dismantle mobile antennas and compensate neighbors. Such cases could increase in number. The regulatory and case law developments could lead to a reduction in coverage zones, deterioration of the quality of service and customer dissatisfaction, as well as a slowdown in the roll-out of mobile antennas and an increase in the costs of network roll-outs, which could have a significant impact on the Orange brand and the Group's results and financial position.

The perception of risks by the public or employees could also lead to a decrease in the number of customers and lower consumption by customers, as well as an increase in lawsuits or other consequences including, in particular, opposition to the construction of or even the existence of mobile antennas.

For further information, see Section 5.6.3.7 *Health and safety of customers*.

If a new global financial crisis were to erupt in future, its impact on the economy could depress consumption and materially affect Orange's business and results.

If a new financial crisis struck global markets, the macroeconomic situation could deteriorate, depressing household spending and business activity, which could materially affect Orange's revenue and profits.

For further information on the impact of the economic situation on the Orange group, see also financial risks in Section 2.4.3 below.

In 2009, Orange was faced with a major workforce crisis in France. Since 2010, the Group has implemented an ambitious human resources program to respond to this crisis. However, factors internal or external to the Group, such as the difficult economic context could hinder the successful implementation of this program and thus have a material impact on the Group's image, operations, and results.

In 2008 and 2009, the Group was faced with a major crisis relating to psycho-social risks and anxiety at work, the effects of which continued after this period. Despite many measures taken since under the *Orange People's Charter* and continuous monitoring in place, the project may fail to achieve the expected results and the crisis may re-emerge, affecting the Group's image, its operations and its results. Although the Group believes that the cost of implementing such projects should be more than offset for by the benefits to the Company and its employees, this project could however come into conflict with certain cost-cutting plans.

2.4.2 Legal risks

Orange operates in highly regulated markets, where its flexibility to manage its business is limited. Orange's business activities and results could be materially affected by legislative, regulatory or government policy changes.

In most countries in which it operates, Orange must comply with various regulatory obligations governing the provision of its products and services, primarily relating to obtaining and renewing telecommunication licenses, as well as to oversight by authorities seeking to maintain effective competition in the electronic communications markets. Furthermore, in certain countries Orange faces regulatory constraints as a result of its historically dominant position in the fixed-line telecommunications market, in particular in France and Poland.

Orange's business activities and operating income may be materially adversely affected by legislative, regulatory or government policy changes, and in particular by decisions taken by regulatory or competition authorities in connection with:

- amendment or renewal on unfavorable conditions, or even withdrawal of fixed-line or mobile operator licenses;
- conditions governing network access (primarily those in connection with roaming or infrastructure sharing);
- service rates;
- the introduction of new taxes or increases to existing taxes for telecommunications companies;
- consumerism legislation;
- merger policy;
- regulations affecting operators of competing sectors, such as cable;
- regulations governing data security;
- regulation of banking and electronic payments and any similar regulations requiring compliance such as laws and rules on economic sanctions.

Such decisions could materially affect the Group's revenues and results.

For further information on risks related to regulations, see Section 2.2 *Regulations*.

Orange is continually involved in legal proceedings and disputes with regulatory authorities, competitors, or other parties. The outcome of such proceedings is generally uncertain and could have a material impact on its results or financial position.

Orange believes that, on a general basis and in all countries in which it is present, it complies with all the specific regulations in force, as well the conditions governing its operator licenses. However, the Company is not able to predict the decisions of oversight and legal authorities who are regularly asked to rule on such issues. Should Orange be ordered to pay damages or a fine due to the non-respect of a given regulation in force by the relevant authorities in a country in which it is present, the Group's financial position and results could be adversely affected.

In addition, Orange – particularly in France and Poland – is frequently involved in legal proceedings with its competitors and with the regulatory authorities due to its preeminent position in certain markets and the complaints filed against Orange may be very substantial. In the past, fines of several tens of millions of euros and even several hundreds of millions of euros were imposed on the Group for concerted practices or for abuse of a dominant position, such as the 350 million euro fine imposed on December 17, 2015, by the French competition authorities for illicitly stifling competition in the "enterprise" market since the 2000s. Finally, the Group may be the object of substantial commercial lawsuits with potentially very significant penalties. The outcome of lawsuits is inherently unpredictable.

In the case of proceedings involving European competition authorities, the maximum fine provided for by law is 10% of the consolidated revenues of the company at fault (or the group to which it belongs, as the case may be).

The main proceedings involving Orange are detailed in Note 14 *Litigation* to the consolidated financial statements as well as Section 4.4 *Recent events*. Developments in or the results of some or all of the ongoing proceedings could have a material adverse impact on Orange's results or financial position.

The profitability of certain investments and Orange's strategy in certain countries could be affected by disagreements with its partners in companies that it does not control.

Orange operates some of its businesses through companies that it does not control. Articles of incorporation or agreements for some of these activities require that some major decisions, such as the approval of business plans or timing and size of dividends, need approval from the different partners. Should Orange and its partners disagree regarding these decisions, the profitability of these investments, their contribution to Orange's results and the strategy pursued by Orange in the countries in which these companies are located, could be adversely affected.

23% of Orange's capital is owned by the French public sector, which could, in practice, allow it to determine the outcome of votes at Shareholders' Meetings.

At December 31, 2015, the French public sector held 23% of Orange's capital through the French government which directly owned 13.4% of the shares and voting rights, and Bpifrance Participations (formerly the FSI) which holds 9.6% of shares and voting rights. As of April 3, 2016, it has double voting rights on its registered shares as the Florange law of March 29, 2014 comes into force (see Section 6.2.1 *Distribution of capital and voting rights*). Moreover, the French public sector has three representatives on the Board of Directors out of a total 15 members. On February 18, 2016, the French State and Bpifrance Participations signed a new shareholders' agreement to act jointly. Since there are no other significant shareholder groups, the public sector could, in practice, determine the outcome of votes on issues that require a simple majority at Shareholders' Meetings and exercise a veto over issues requiring a two-thirds majority (see Section 6.2 *Major shareholders*). The public sector could, for instance, veto a proposed merger with another operator or a takeover bid on Orange.

2.4.3 Financial risks

Liquidity risk

Orange's results and outlook could be affected if the terms of access to capital markets become difficult.

Orange raises most of its finance from capital markets (particularly the bond market), which are heavily influenced by the evolution of the economic environment. A new financial crisis could restrict or make significantly more expensive Orange's access to its usual sources of finance through a rise it the spreads it pays on its borrowings.

Also, concerns persist regarding the consequences of the Basel III and Solvency II regulations, which seek to strengthen the capital held by banks and insurance companies, respectively. Banks are reducing their outstanding loans forcing companies to increase funding obtained on bond markets, which is Orange's main source of financing. The tightening of prudential rules in the finance sector could reduce companies' access to financing or refinancing from the bond market or bank loans necessary for their business, even for first-rate borrowers or issuers such as Orange. Any inability to access the financial markets and/or obtain financing on reasonable terms could have a material adverse effect on Orange. The Group could, in particular, be required to allocate a significant portion of its available cash to service or pay off debt, to the detriment of investment or compensation for shareholders. In any case, Orange's results, cash flows and, more generally, financial position and flexibility may be adversely affected.

See Note 11.3 *Liquidity risk management* to the consolidated financial statements, which sets out, in particular, different financing sources available to Orange, the maturity on its debt and changes to its rating, as well as Note 11.4 *Management of covenants*, which contains information on the limited commitments of the Orange group in relation to financial ratios and in the event of default or material adverse change.

Interest rate risk

Orange's business activities could be adversely affected by interest rate fluctuations.

In the normal course of its business, Orange obtains most of its funding from capital markets (particularly the bond market) and a small part from bank loans.

Since most of its debt is at a fixed rate, Orange has limited exposure to increases in market interest rates. Of course the Group is still exposed to interest rate increases for future financing.

To limit exposure to interest rate fluctuations, Orange from time to time makes use of financial instruments (derivatives) but cannot guarantee that these transactions will completely limit its exposure or that suitable financial instruments will be available at reasonable prices. In the event that Orange cannot use financial instruments or if its financial instrument strategy proves ineffective, cash flows and earnings may be adversely affected.

In addition, hedging costs stemming from interest rate fluctuations could, generally, increase in line with market liquidity and banks' positions.

The management of interest rate risk and an analysis of the sensitivity of the Group's position to changes in interest rates are set out in Note 11.1 *Interest rate risk management* to the consolidated financial statements.

Credit-rating risks

If Orange's credit rating is downgraded or placed under surveillance, or its outlook is revised, by rating agencies, its borrowing costs could increase and in certain circumstances the Company's access to the capital it needs could be limited.

Orange's credit rating is partly based on factors over which it has no control, namely conditions affecting the telecommunications industry in general or conditions affecting certain countries or regions in which it operates, and can be changed at any time by the rating agencies.

The Group's financial rating and its outlook have been downgraded in 2012, 2013 and 2014. The rating may be revised again at any time in light of evolving economic circumstances, or following a downturn in the Company's results or performance or simply due to a change in rating agencies' perceptions of these factors, which would have a material adverse effect on its results and financial position.

Risk of asset impairment

Orange has booked substantial amounts of goodwill following its acquisitions. Under accounting standards, impairment losses have in the past and may again in the future be recorded against goodwill and other assets in Orange's accounts, including those of Orange SA, which could reduce its ability to pay dividends. Orange's results and financial position could also be affected by the downturn in equity markets in relation to disposal of its subsidiaries.

At December 31, 2015, the gross value of goodwill recognized by Orange following its acquisitions was 32.6 billion euros, not including impairment losses on the goodwill of associates.

The values in use of the businesses, which are most of the recoverable amounts and which support the book values of long-term assets including goodwill (and investment securities in the statutory financial statements) are sensitive to the valuation method and the assumptions used in the models. They are also sensitive to any change in the business environment that is different to the assumptions used. Orange recognizes assets as impaired if events or circumstances occur that involve material adverse changes of a permanent nature affecting the economic environment or the assumptions and targets used at the time of the acquisition.

Over the past five years, Orange recognized significant impairment losses in respect of its interests in Poland, Egypt, Romania and Belgium, in particular. At December 31, 2015, the cumulative amount of impairment of goodwill on continuing operations was 5.5 billion euros, not including impairment losses on the goodwill of associates.

New events or adverse circumstances could conduct Orange to review the present value of its assets and to recognize further substantial impairment losses that could have an adverse effect on its results.

In addition, in the case of disposals or listings on a stock exchange, the value of certain subsidiaries could be affected by changes in the stock and debt markets.

For further information on the impairment of goodwill and recoverable amounts (particularly key assumptions and sensitivity), see Notes 6 *Goodwill*, 7 *Other intangible assets and property, plant and equipment* and 9 *Interests in associates and joint ventures* to the consolidated financial statements and Section 4.3.2.2 *From Group Reported EBITDA to operating income*.

Credit risk and/or counterparty risk on financial transactions

The insolvency or deterioration in the financial position of a bank or other institution with which Orange has a financial agreement may have a material adverse effect on the Company and its financial position.

In the normal course of its business, Orange makes use of derivatives to manage exchange rate and interest rate risks, using financial institutions as counterparties. cash collateral is lodged with all bank counterparties with which the derivatives are contracted. Nevertheless a residual credit risk may remain if one or more of these counterparties defaults on its commitments.

Moreover, Orange may in future have difficulties to using its 5.7 billion euro undrawn syndicated credit facility, whose main maturity date is 2018, if several of the banks with which the derivatives are contracted faced liquidity problems or could no longer meet their obligations.

Finally, its cash management investments expose Orange to counterparty risk if the financial institutions where it has invested should go bankrupt. See Note 11.5 *Credit risk and counterparty risk management* to the consolidated financial statements.

The international banking system is such that financial institutions are interdependent. As a result, the collapse of a single institution (or even rumors regarding the financial position of one of them) may increase the risk for the other institutions, which would increase exposure to counterparty risk for Orange. Orange's positioning in regulated activities in the banking sector focuses this risk on certain Group entities.

For customer-related credit and counterparty risk, see Note 11.5 and Note 3.3 *Trade receivables* to the consolidated financial statements.

Foreign exchange risk

Orange's results and cash position are exposed to exchange rate fluctuations.

In general, currency markets remained highly volatile during 2015 and at the start of 2016, increasing uncertainty over exchange rate changes.

The main currencies in which Orange is exposed to a major foreign exchange risk are the Polish zloty, the Egyptian pound, the US dollar and the British pound sterling. Fluctuations from one period to the next in the average exchange rate for a given currency could have a material effect on the revenues and expenses in this currency, which would in turn have a material effect on Orange's results. In addition to the main currencies, Orange operates in other monetary zones, including certain emerging countries (African countries). A fall in the currencies of these countries would have an adverse effect on the Group's consolidated revenues and results. Based on 2015 data, the theoretical impact of a 10% fall against the euro in the main currencies in which the Group's subsidiaries operate would have cut consolidated revenues by 854 million euros (-2%) and Reported EBITDA by 194 million euros (-2%).

Finally, as a result of focusing its development strategy on emerging countries, the share of Group business exposed to foreign exchange risk is likely to rise in the future.

When preparing the Group's consolidated financial statements, the assets and liabilities of foreign subsidiaries are translated into euros at the closing rate. This translation could have a negative impact on the consolidated balance sheet, assets and liabilities and equity, for potentially significant amounts, as well as on net income in the event of disposal of its subsidiaries.

Orange manages the foreign exchange risk on commercial transactions (stemming from operations) and financial transactions (stemming from financial debt) in the manner set out in Note 11.2 to the consolidated financial statements.

Notably, Orange makes use of derivatives to hedge its exposure to foreign exchange risk but cannot guarantee that suitable hedging instruments will be available at reasonable prices.

To the extent that Orange had not used hedging instruments to hedge part of this risk, its cash flows and results could be affected.

See Notes 10.7 *Derivatives instruments* and 10.8 *Cash flow hedges* to the consolidated financial statements.

Equity risk

Future public sector disposals of Orange shares could affect the share price.

At 31 December 2015, the French public sector held 23% of Orange's capital, after the disposal of 1.9% in 2014 and a further 2% in July 2015 (see Section 6.2 *Major shareholders*). If it decided to continue reducing its stake in Orange, such a disposal, or the perception that such a disposal was imminent, could have an adverse effect on the share price.

Overview of the Group's business

3

This Chapter contains forward-looking statements about Orange, particularly Section 3.1 *Overview of Business*. These forward-looking statements are subject to numerous risks and uncertainties that could cause actual results to differ materially from the results anticipated in the forward-looking statements. The most significant risks are detailed in Section 2.4 *Risk factors*. Please also consult information under the heading *Forward-looking statements* at the start of this document.

3.1 Overview of business

The Group's business is presented in the Registration Document under the following operating segments: France, Spain, Poland, Belgium and Luxembourg, Central European countries, Africa and Middle East, Enterprise, International Carriers & Shared Services. Unless otherwise indicated, the market shares indicated in this Chapter correspond to market shares in terms of volume.

3.1.1 France

3.1.1.1 The Telecom Services Market

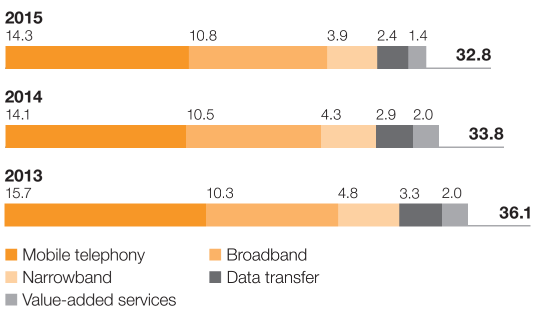
Key macroeconomic indicators

	2015	2014	2013
Population (in millions)	66.4	65.9	65.6
Households (in millions)	28.9	28.7	28.5
GDP growth (in %)	+1.2%	+0.2%	+0.7%
GDP per capita (PPA, $)	41,222	40,538	39,979
Change in household consumption (in %)	na	+0.6%	+0.4%

Source: IMF October 2015 – INSEE.

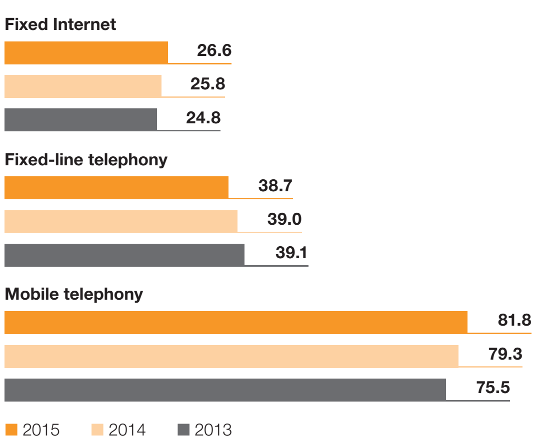
In 2015, the French economy grew more than in 2014 (+1 percentage point).

Revenues from telecom services (in billions of euros)



Source: Arcep (year-on-year cumulative to Q3 of each year).

Number of customers (in millions)



Source: Arcep (Survey of Q3 of each year).

Telecommunications operators' revenue totaled 32.8 billion euros year-on-year at the end of the third quarter of 2015, down by 3.0% in one year (source: Arcep, Q3 2015). While fixed narrowband revenues continued their downward trend as a result of the constant decline in line numbers, fixed broadband revenues continued their growth due to the increasing number of accesses. First observed in 2011, the decline in revenues from mobile services came to a halt, as the retail market price reduction trend dissipated.

Fixed-line telephony market

Telephone contracts (38.7 million at September 30, 2015) have been declining since mid-2010 (down 0.8% year-on-year in the third quarter of 2015). As a matter of fact, the higher number of broadband voice telephone contracts (25.7 million in the third quarter of 2015, up by 1.3 million year-on-year) did not offset the declining number of PSTN subscriptions (-1.5 million year-on-year). As they only have one VoIP contract, fixed-lines (20.4 million at the end of September 2015, up by 0.8 million year-on-year) have held the lion's share since mid-2012 and have been expanding consistently. This rise was mostly connected to the growth of completely unbundled lines: +360,000 year-on-year, i.e. a total of 11.8 million lines at the end of September 2015 (source: Arcep, Q3 2015).

The number of high speed broadband and broadband Internet accesses was 26.6 million at September 30, 2015, up by 3.6% from September 2014. Broadband lines account for 22.7 million contracts (over 97% via DSL access) and fell by 2.0% year-on-year. The number of high speed broadband contracts reached 3.9 million, up by 1.4 million year-on-year. The growth in the overall number of Internet accesses was entirely driven by the increased number of high speed broadband accesses (source: Arcep, Q3 2015).

Revenue from fixed-line services (telephone and Internet) reached 14.6 billion euros year-on-year in the third quarter of 2015. On the one hand, revenues from narrowband fixed-line services (3.9 billion euros excl. VAT) have shrunk by more than 10% per annum for several years now (-9.6% year-on-year in the third quarter of 2015). On the other hand, revenues from broadband and high speed broadband fixed-line services continued to grow, reaching 10.8 billion euros year-on-year in the third quarter of 2015 and thereby accounting for 74% of the overall revenues from fixed-line services (source: Arcep Q3 2015).

So-called convergence offers (bundled fixed-line and mobile telephony, Internet access and TV) continue to grow. The spread of Internet access has gone hand-in-hand with the type of Web use fostered by the growth of social networks, TV, as well as music and video downloads.

Mobile telephony market

The number of active SIM cards reached 81.8 million at September 30, 2015, corresponding to a penetration rate of 123.2% of the population (+2.9 percentage points year-on-year). The 2.5 million rise in SIM card numbers year-on-year in the third quarter of 2015 was driven by contracts, up by 2.3 million year-on-year for conventional contracts and 2.1 million for M2M (Machine to Machine) cards. Conversely, the number of prepaid cards fell since mid-2012 and they were down by 1.9 million in the third quarter of 2015 (source: Arcep Q3 2015).

The market of connected objects SIM cards continues to grow. M2M SIM cards are used to connect remotely to devices (vehicle fleet tracking, remote reading of meters, sensors, alarms, remote interventions). The number of M2M cards was 10 million at September 30, 2015. Growth in the third quarter was almost double than in the two preceding quarters (+860,000 cards).

Mobile services generated 14.3 billion euros over 12 rolling months in revenues in the third quarter of 2015, up by approximately 244 million year-on-year (versus a fall of approximately 231 million in Q3 2014). After following a downward trend since mid-2011, revenues from mobile services are now up for the second consecutive quarter (source: Arcep Q3 2015). Outgoing traffic from mobiles is experiencing strong growth since 2012 and stood at 37.0 billion minutes in the third quarter of 2015, up by 3.1% over Q3 2014, corresponding to 1.1 billion additional minutes.

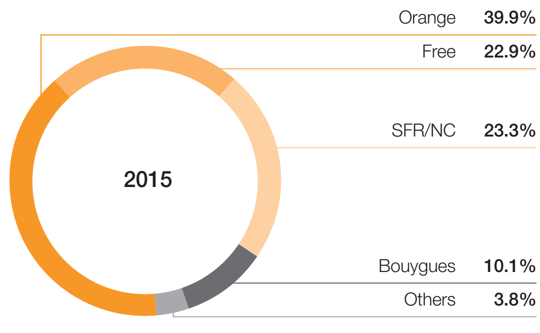
Changes in consumption trends are boosting data services on mobile networks, whose expansion is driven by mobile carriers' offers which include data services (Internet browsing, mobile TV) and the extension of new generation (3G and 4G) networks. After doubling in each of the previous quarters on a yearly basis, data traffic was up by 76.7% in the third quarter of 2015. Data usage on Internet-only cards was also up sharply (+60.3% year-on-year) and accounted for 7.3% of data traffic (source: Arcep Q3 2015).

The number of SMS and MMS sent (50.6 billion) during the third quarter of 2015, continued to rise (+4.9% year-on-year), but at a slower rate since the beginning of 2013. The number of MMS sent during the quarter exceeded one billion for the first time, and continued to grow at a fast rate (+25.3% in the third quarter of 2015.) MMS accounted for 2% of all personal message exchanges (source: Arcep Q3 2015).

3.1.1.2 The competitive environment

Fixed-line telephony and Internet

Broadband Internet market share



Source: Orange estimates (data as of end-September).

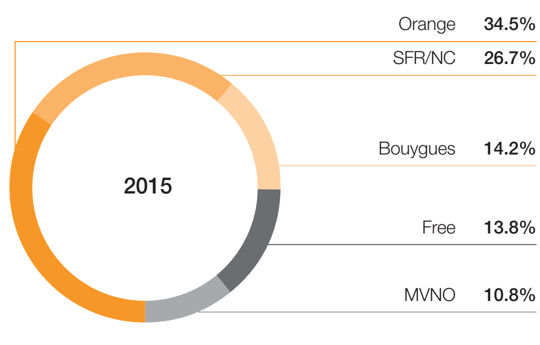
Orange is the leader of the French broadband market, ahead of its competitors Free, SFR/NC and Bouygues Telecom. At end-September 2015, Orange's market share was 39.9%, like at the end of 2014. Orange is also the market leader in convergence offers, with over 7.0 million customers subscribed to its *Open* package at the end of 2015. Bouygues Telecom also offers their customers this type of package, while SFR/NC and Free have established a system of discounts given to customers purchasing a mobile plan and a fixed-line broadband package.

High speed broadband

In high speed broadband, Orange is the leader in the rollout of Fiber To The Home (FTTH) networks, with approximately 5.1 million households connectable at end-2015, and market share of 45.6% at end-September 2015.

Mobile telephony

Mobile market share



Source: Orange estimates (data as of end-September).

Orange is the leading player in the French mobile market, ahead of competitors SFR/NC, Bouygues Telecom, Free Mobile and all MVNOs. At end-September 2015, Orange had market share of 34.5% according to its own estimates, down 0.3 percentage points year-on-year.

The year 2015 was marked by the acceleration of the 4G high speed mobile broadband network, with network rollouts and a growing number of 4G subscribers, reaching 8.0 million at end-December 2015 (up by 6.3 million year-on-year). In addition, the mobile contract market segmentation was more marked between entry-level offers dominated by *SIM-only* deals (no handset and no commitment) and the top end, characterized by subsidies for the purchase of a handset and the additional service offers. In the area of subsidized offers, operators have improved their services while adapting their pricing policy in response to the growth of *SIM-only* deals.

The prepaid market continued to fall sharply. The number of prepaid cards (13.1 million at September 30, 2015) has been declining since mid-2012 (a yearly drop of 1.9 million). Likewise, the number of active prepaid cards was down by 1.2 million compared with the third quarter of 2014 (source: Arcep, Q3 2015). The market for so-called community prepaid cards nevertheless remained very buoyant. Operators accordingly expanded their offers, launching unlimited top-ups and prepaid cards with unlimited validity.

3.1.1.3 Orange France's activities

Fixed-line telephony and Internet activities

Operating indicators

	2015	2014	2013
Revenues (in billion of euros)	**10.9**	**11.0**	**11.1**
Consumer Services	6.4	6.6	6.9
Wholesale Services	3.9	3.9	3.7
Other Services	0.6	0.5	0.5
Number of telephone lines (in millions)	**30.2**	**30.3**	**30.3**
o/w retail lines	16.3	16.6	17.1
o/w wholesale lines	14.0	13.8	13.2
Number of Internet customers (in millions)	**10.8**	**10.4**	**10.2**
o/w narrowband	0.1	0.1	0.1
o/w broadband	10.7	10.3	10.1
Voice over IP subscribers	9.6	9.1	8.7
ADSL TV or satellite subscribers	6.4	6.1	5.6
ARPU (in euros per month)			
Broadband Internet	33.0	33.3	33.8

Source: Orange.

Traditional fixed-line telephony services

Further to the rapid growth in full unbundling, wholesale contracts, and wholesale naked ADSL access to third-party Internet service providers, traditional telephone service business is on the decline. The downward trend has nevertheless slowed down in terms of both revenues and PSTN connections (down 11.4% and 12.1% respectively compared with end-2014), thanks to the aggressive marketing strategy implemented since 2012 to simplify offers while providing more comprehensive services.

Online, Internet access and Multimedia services

At end-December 2015, Orange had a total of 10.7 million Internet customers, an increase of 3.7% year-on-year. A total of 9.8 million *Livebox* were rented at end-December 2015 (+5.5% compared with end-December 2014). The growth of convergent offers continued in 2015, with the number of *Open* customers (fixed and mobile) reaching 7.0 million at end-2015 (+15% compared with December 2014).

IP telephony had 9.6 million customers end-December 2015 and continued to grow (+5.9%) albeit at a slower pace than in 2014 (+4.3%).

Television by ADSL and satellite grew by 6.1%, with 6.4 million customers at end-December 2015. At end-October 2014, Orange launched a new navigation interface (*Polaris*) offering improved content access (in particular VoD/SVoD) and integrated services in *Livebox*.

The broadband customer base increased by 3.7%, with a share of approximately 42% of new broadband and high speed broadband subscriptions over the year, thanks to the commercial success of fiber services and convergence offers. Broadband ARPU fell by 0.9%, as it continued to be affected by the increasing penetration of *Open quadruple play* offers including partial rate discounts. Nonetheless, ARPU fell at a slower rate than in 2014 thanks to the greater share of fiber services within the customer base.

For years now, Orange has been active in the research and development of connected objects as part of the *smarthome* concept. As announced at the 2014 *Show Hello*, Orange launched the *Homelive* pack. The pack includes a home safety control box and three connected objects (a smoke detector, a window/door sensor and a movement sensor). It is available for any Internet carrier and can be adjusted to suit any home configuration.

Internet portals and advertising management business

The Group's main Internet portal, Orange.fr, has multi-screen availability – web, mobile and tablet – and is one of the leading websites in France. In terms of monthly fixed-line Internet traffic (excluding applications), this portal ranks 6th after Google, Facebook, Microsoft, YouTube and Amazon, with 18.9 million unique visitors. With 5.4 million unique visitors, orange.fr ranks 3rd in terms of daily web traffic, behind Google and Facebook. Traffic from mobile devices grew 9% on a yearly basis with 12.7 million unique visitors, which puts the portal in the 5th position behind Facebook, Google, Dailymotion and Samsung (source: Panel Médiamétrie/NetRatings, Fixed Internet traffic excluding applications, November 2015).

Content-related activities

See the Content subsection of Section 3.1.9.2 *Shared Services*.

Carrier services

Carrier services include interconnection services for competing operators and unbundling and wholesale market services (ADSL and fiber), regulated by Arcep. Carrier services as a whole are growing, in particular data collection and transfer services and access services to FTTH lines rolled out by Orange.

Mobile telephony activities

Operating indicators

	2015	2014	2013
Revenues (in billion of euros)	**8.2**	**8.3**	**8.9**
Total number of customers (in millions)	**28.4**	**27.1**	**27.0**
o/w contracts	24.1	22.0	20.9
o/w prepaid offers	4.3	5.1	6.2
Number of MVNO customers	**0.8**	**1.1**	**1.6**
Total ARPU (in euros per month)	**23**	**23**	**25**
Contract ARPU	27	28	31
Prepaid ARPU	6	5	6
Total AUPU (in minutes per month)	**254**	**241**	**222**
Churn rate (in %)	22.5%	24.8%	28.4%

Source: Orange.

At the end of 2015, the total number of Orange mobile customers was 28.4 million, up 4.9%. This was due to the significant growth in contracts (including M2M), while prepaid offers continue to decline. Orange increased its subscriber base to 24.1 million at end-December 2015 (+9.9% compared with 2014) thanks to its segmentation strategy for the Consumer and Enterprise markets and the development of M2M packages.

Orange is present in all market segments, offering a low-rate service range under the *Sosh* brand, available only on the Internet, with no commitment and no handset. *Sosh* had a total of 2.9 million customers at end- December 2015.

The number of Orange 4G customers was approximately 8.0 million at December 31, 2015, a year-on-year increase of 4.3 million 4G customers. Since 2015, Orange only markets 4G offers, including so-called entry-level packages (*Sosh*, M6 Mobile). Orange's key offerings, namely *Origami*, remain divided in 3 ranges:

- *Origami Zen* offers are for customers who need only a small amount of Internet connectivity, but wish to use additional services (Orange Cloud and TV), as well as benefit from round-the-clock support including a loan telephone in the event of a fault or theft;
- *Origami Play* offers are suitable for more intense Internet usage and international connectivity;
- *Origami Jet* offers are for customers wanting the best smartphones and very intense Internet usage in France and abroad.

Orange pressed ahead with its family-based strategy through its flagship *Open* offer and the development of multi-line contracts. The *Open* offers are available in the same ranges as *Origami* and include the same level of service. This refurbishment increased the volume of offers on the core *Open* and *Origami* ranges, and also helped to improve the premium customer mix in 2015, as reflected by the growth of the contract customer mix (84.9% of customers at end-2015, compared with 81.1% at end-2014).

At the same time, the MVNO customer base hosted on the Orange network declined substantially (-25.1% year-on-year, a similar pace as in 2014) due to the success of low-cost offers and heightened competition at the entry level.

Average monthly revenues per user (ARPU) were down 1.3% in 2015 compared with December 2014. The smaller decline compared with 2014 (+6 percentage points) reflects the end of the impact of price adjustments across the mobile range in 2012 and 2013 and, in 2015, price stabilization on a market which, however, continues to be perturbed by regular promotional campaigns.

Machine to Machine SIM cards continued to grow (+65% year-on-year), reaching a total number of 3.9 million at end-December 2015. The M2M segment is one of Orange's growth drivers.

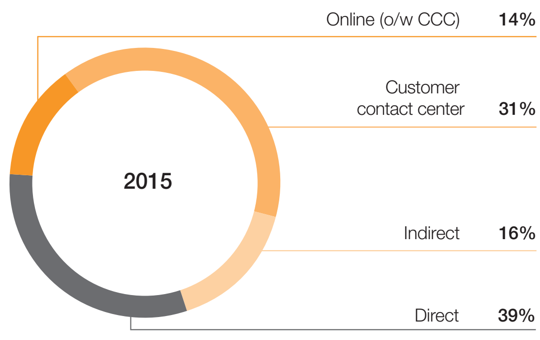
On the background of fierce competition and market restructuring, Orange has retained its leadership in traditional business areas and continued to innovate by launching new services, such as corporate payments.

Three major trends marked the professional/SME market in 2015:

- higher value customers in the broadband and convergence offers;
- lower churn rates for broadband customers, in line with the trend observed in the second quarter of 2014, thanks to improved satisfaction rates;
- lastly, the continuous pursuit of sources of growth, such as the *Cloud Pro* services with, in particular, the emergence of Web site offers.

Distribution

Segmentation of distribution channels (as a % of sales actions)



Source: Orange.

Orange's distribution and customer relationship channels consist of:

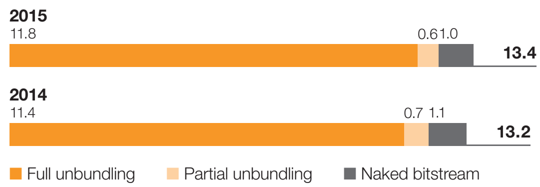
- a network of retail stores throughout France guaranteeing easy access for all its customers. At end-2015, it comprised 517 directly owned retail outlets(including 21 flagships, 1 Megastore and 5 Smart Stores) as well as 303 exclusive partners (including 2 *Smartstore GdT*) and almost 350 active outlets in the multi-operator network;

- digital channels, primarily the Orange online store on Orange.fr. Customers can browse the devices, Internet, broadband multimedia and mobile offers available from Orange, and order directly online for delivery to their home. This distribution channel is poised to ramp up gradually, especially with the launch of the *Sosh* online only offers;
- dedicated customer centers based on the type of services marketed.

The Network

The Fixed Network

Fixed-line unbundling in France (in millions)



Source: Arcep (Survey of Q3 of each year).

Number of lines

	2015	2014	2013
Number of copper lines (in thousands)	30,144	30,576	30,700
Number of FTTH-connectable households (in thousands)	5,061	3,642	2,573
Number of NRA (in thousands)	17.5	16.5	15.9
Number of Cross-Connection Points (in thousands)	94.7	94.5	94.3
Number of vDSL NRA (in thousands)	11.1	7.8	5.3

Source: Orange.

Fixed broadband coverage

(as a % of the population)	2015	2014	2013
< 512 Kbps	0.5%	0.6%	0.7%
≥ 512 Kbits/s ≤ 2 Mbits/s	7.0%	9.9%	10.3%
> 2 Mbits/s	92.5%	89.5%	89.0%

Source: Orange.

In 2015, Orange:

- continued its high speed broadband (FTTH) deployment program, with over 1.4 million new households connectable in both high-density and lower-density areas;
- implementation of a *100% Fiber* program aiming to reach 100% fiber coverage of nine key cities by the end of 2016: Bayonne, Brest, Caen, Lyon, Lille, Metz, Montpellier, Nice and Paris;
- continued the program called *Zone Logements Immeubles Neufs* (ZLIN – Newly built residential areas), replacing copper with fiber in new buildings;
- continued to modernize the copper network in parallel with the FTTH deployment, by implementing VDSL2, on the one hand, to bring bandwidth greater than ADSL to short lines and, on the other hand, by deploying new subscriber connection nodes to greatly improve bandwidth in lower-density areas.

The mobile network

Coverage

(as a % of the population)	2015	2014	2013
GSM Voice/EDGE	99.9%	99.9%	99.9%
3G (UMTS)/HSDPA	99.0%	99.0%	98.7%
4G (LTE)	79.6%	74.1%	50.0%
Number of 2G radio sites (in thousands)	20.6	20.4	19.6
Number of 3G radio sites (in thousands)	19.4	18.5	17.1
Number of 4G radio sites (in thousands)	8.3	6.9	4.2

Source: Orange.

2015 was marked by:

- a significant rollout of 4G sites, covering 79.6% of the French population;
- the continued deployment of UMTS 900 in dense areas to improve reception inside housing;
- the launch of a program to cover all the living areas and particularly journeys by subway, train (coverage of high-speed and regional express lines) or car (coverage of main highways) to guarantee permanent connectivity;
- the expansion of core network capacity to support the growth in data traffic and 4G.

Cluster, Transmission, and Transport Network

The network architecture in place in terms of aggregation and the IP backbone has allowed growth in both fixed-line and mobile Internet traffic via capacity extensions.

2016 Outlook

For 2016, Orange France has set four priorities to stabilize its EBITDA:

- to continue the commercial strategy implemented via targeted marketing and commercial actions and maintain excellent customer service;
- to continue to adapt to its environment by greater digitalization of customer relations;
- to continue efforts on the structure of its direct and indirect costs;
- to continue adapting modes of operating and organization, in managing 25,000 retirement departures expected in France between now and 2020 (approximately 1/3 of its employees) in accordance with the Social Contract.

To achieve these objectives, Orange will use three main levers:

- high-speed fixed and mobile broadband:
  - by continuing the deployment of fiber optic networks and the number of fiber connections in order to offer the best technology for Internet access over fixed lines, while preserving the value of the copper network,
  - by supporting a continuous increase in our 4G base with the challenge of maintaining a premium price on marketed offers;
- convergence, leveraging the position as the incumbent operator in this field so as to significantly increase customer loyalty;
- innovation in services to make them a powerful tool in customer retention and a driver of revenue growth, with:
  - continued marketing of new products and services and in particular the development of connected objects,
  - launch of a new Internet box integrating new services in line with new usage trends (multi-screen, 4K ultra high definition) planned in the first half of 2016,
  - the development of content uses such as entertainment in music, video and video games,
  - the Cloud and web services in business and retail markets,
  - mobile payment and financial services.

3.1.2 Spain

3.1.2.1 The Telecom Services Market

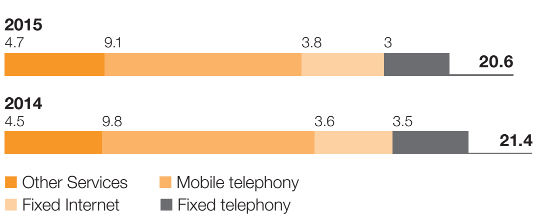
Key macroeconomic indicators

	2015	2014	2013
Population (in millions)	46.4	46.5	46.6
Households (in millions)	18.4	18.3	18.2
GDP growth (in %) [2]	+3.1%	+1.4%	-1.2%
GDP per capita (PPA, $)	35,270	33,835	32,741
Unemployment rate	21.8%	24.5%	26.1%
Change in household consumption (in %)	+1.7%	+0.6%	-3.5%

Source: INE – IMF, October 2015.

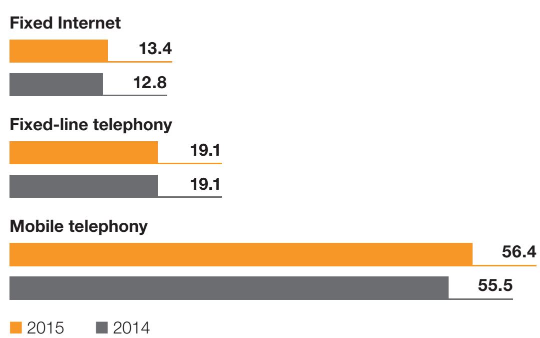
2015 was marked by a significant improvement in key macroeconomic indicators. GDP grew by 3.1% (compared with 1.4% in 2014), unemployment rate fell to 21.8% (down 2.6 percentage points from 2014) and household consumption rose to 1.7% (from 0.6% in 2014).

Revenues from telecom services (in billions of euros)



Source: CNMC excluding audiovisual services (Q3 2015 and estimate for Q4 2015).

Number of customers (in millions)



Source: CNMC (Q3 2015 and estimate for Q4 2015).

Revenue trends confirmed recovery in 2015, with a fall of 3.5%, which was less extensive than in 2014 (-8%), associated with the growing usage of high speed data boosted by the development of 4G and FTTH networks. Convergence has already become common-place on the market.

Fixed-line telephony and Internet market

The number of fixed telephone lines decreased by 0.1% in 2015, while the number of Internet customers reached 13.4 million, an increase of 4.1% (compared with 6.1% in 2014).

The Spanish market was marked by the growth of high speed broadband throughout 2015. Telefónica, Orange/Jazztel and Vodafone/ONO made massive investments in FTTH technology, which made it possible to reach a number of over 21 million connected households at end-2015. The number of customers with FTTH access doubled, reaching 3 million subscribers at end-2015.

Convergence is now a norm on the market. The number of mobile and fixed access convergence offers reached 9.5 million, accounting for over 72% of the overall customer base (source: Orange estimate). Convergence offers, including TV, have also recorded strong growth, thereby accelerating the development of the audiovisual content market. At the end of 2015, 6.2 million customers had subscribed to TV services, attracted by the new football broadcast offers and improved contents.

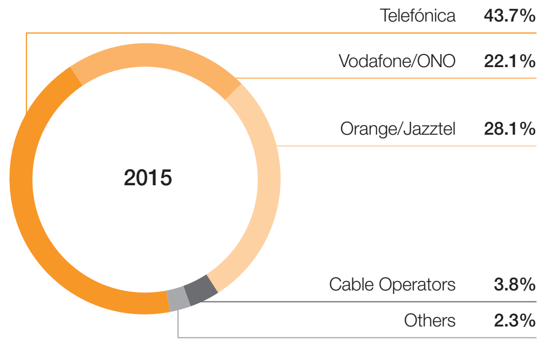
Mobile telephony market

The total number of customers rose by 1.6% in 2015, reaching 56.4 million. Subscription penetration was up by 5.6% reaching 43.1 million and accounting for 77% of the overall customer base. On the other hand, the number of prepaid customers fell 9.5% to 13.2 million. The number of convergence offer customers reached 17 million, accounting for over 47% of the mobile subscription customer base. High speed mobile Internet services continue to grow. At the end of 2015, over 11 million customers had a 4G plan, corresponding to 20% penetration of the mobile market (source: Orange estimate).

3.1.2.2 The competitive environment

Fixed-line telephony and Internet

Broadband Internet market share

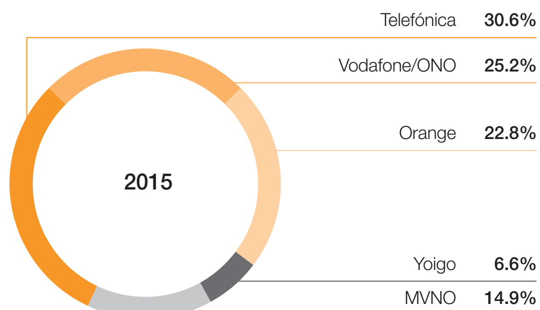


Source: CNMC (Q3 2015 and estimate for Q4 2015).

The Internet market is dominated by three main players representing over 90% of the market, with market shares of 43.7% for Telefónica, 28.1% for Orange/Jazztel and 22.1% for Vodafone/Ono. In 2015, Orange/Jazztel gained 0.7 percentage points of market share, followed by Vodafone/ONO with 0.5 points, at the expense of Telefónica, which lost 1.2 points of market share.

Mobile telephony

Mobile market share



Source: CNMC (Q3 2015 and estimate for Q4 2015).

The mobile market is dominated by three main players which account for almost 78% of the market: Telefónica (30.6%), Vodafone/ONO (24.9%), and Orange/Jazztel (22.9%). The shares of MVNOs and Orange/Jazztel grew by 1.5 and 0.1 percentage points respectively, to the detriment of Telefónica, Vodafone/ONO and Yoigo, whose market shares shrank by 1, 0.4 and 0.2 percentage points respectively.

3.1.2.3 Orange Espagne's activities

Fixed-line, Internet and mobile telephony activities

Operating indicators

	2015	2014	2013
Revenues (in millions of euros)	**4,253**	**4,355**	**4,052**
Mobile telephony	**2,403**	**2,517**	**2,852**
Fixed-line telephony and Internet	**1,375**	**1,301**	**833**
Mobile equipment and other revenue	475	496	367
Number of broadband customers (in millions)	**3.75**	**3.52**	**1.69**
ARPU Broadband Internet (in euros per month)	**29.2**	**27.9**	**31.2**
Number of mobile customers (in millions)	**15.2**	**14.5**	**12.4**
o/w contracts	12.0	11.2	8.9
o/w prepaid offers	3.2	3.3	3.4
Number of MVNO customers	**1.5**	**3.2**	**2.1**
Total ARPU (in euros per month)	**13.7**	**15.6**	**18.8**
Contract ARPU	16.6	19.7	24.6
Prepaid ARPU	4.9	5.0	5.9
Total AUPU (in minutes per month)	**203.8**	**189.0**	**169.8**
Churn rate (in %)	-26.8%	-29.0%	-30.2%

Source: Orange (Jazztel including 6 months in 2014 and 2015).

Orange Espagne based its 2015 strategy on integrating Jazztel to leverage the combined potential of the 4G and FTTH networks, growing the number of TV customers and expanding the convergence customer base.

2015 was marked by a 2.3% drop of revenues on a yearly basis, due to the sharp decline of mobile equipment sales. Fixed-line service revenues were up by 5.7% over 2014, while mobile services continued to improve with revenues of 2.403 million euros in 2015, down 4.5%, compared with a 11.8% drop in 2014 on a comparable basis. The number of convergent customers reached 1.7 million, accounting for 81% of the fixed-line broadband customer base. The success of its convergence offers enabled Orange to expand its broadband customer base by 6.7% in one year.

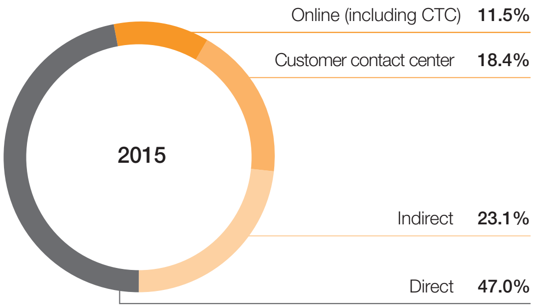
Orange was able to significantly boost its very high speed broadband (VHBB) capacity, with 6.8 million connectable households at end-2015, helped by the Jazztel acquisition, new rollouts, and the network sharing agreement signed with Vodafone. In December 2015, Orange's FTTH customer base (including Jazztel) grew by a factor of 3.9, or 809,000 subscribers.

New TV offers also worked as growth drivers. At the end of 2015, *Orange TV* had 306,000 subscribers (corresponding to a 2.8 fold increase in the TV customer base from 2014), thanks to the success of the new football broadcast offers and improved contents.

Orange maintained its position as top net seller in the mobile market and also expanded its subscriber base to 12 million, up 7% over 2014. Orange's strategy focuses on providing value-for-money, high-quality services, including low-cost offers, to meet the needs of all customer segments. Thus, Orange Espagne covers all segments: bundles, with *Canguro Sin Límites* and *Canguro ahorro*, the upper and mid-market range with *Tucan* and *Delfin*, big data users with *Ballena*, and the low end of the market with *Colibrí*. Orange Espagne is also a key player on the low-cost market with two offers available only on the Internet, *Amena* and *Simyo*, as well as *Mundo*, targeted at migrants. *Simyo* reached 683,000 customers in 2015 and *Amena* 312,000. Moreover, Orange Espagne markets a wide range of 4G offers, both for convergent and mobile only customers, reaching 5.1 million customers in December 2015, thereby increasing its 4G customer base by a factor of 2.2 in comparison with 2014.

Distribution

Segmentation of distribution channels (as a % of customer acquisitions)



Source: Orange.

The Orange retail distribution network consists of 2,000 points of sale including:

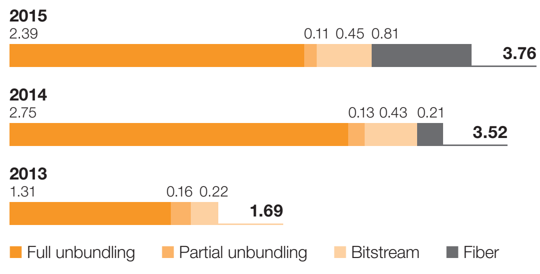
- Orange's own shops;
- franchises;
- specialized shops under the Orange brand;
- non-exclusive specialized shops; and dedicated areas inside hypermarkets.

The on-line sales share continues to grow and now accounts for 11.5% of total sales. Indirect distribution is also growing through new alternative channels such as stands, kiosks, and airports. Orange Espagne has started optimizing its retail distribution network by transforming its outlets in Smart Stores focused on services and customer experience.

The Network

The Fixed Network

Fixed-line unbundling in Spain (in millions)



Source: Orange.

Fixed broadband

	2015	2014	2013
Number of accessible copper lines (in millions)	18.50	17.77	17.34
Number of FTTH-connectable households (in thousands)	6,800	830	90
Number of subscriber connection nodes (in thousands)	1,319	1,127	1,011

Source: Orange.

With its fixed-access infrastructure, based on its fiber optic network and a vast ADSL rollout, Orange Espagne can provide advanced telecommunications services, including broadband access, voice over IP, TV over IP, TV streaming, VoD and advanced business services.

At end-2015, Orange was offering very high speed broadband (VHBB) to 6.8 million households through its fiber optic network and the network sharing agreement signed with Vodafone. Orange Espagne also had telephony and ADSL connections at 1,319 key exchanges, covering 82.5% of the population.

The mobile network

Coverage

(as a % of the population)	2015	2014	2013
GSM Voice/EDGE	99.4%	99.4%	99.4%
3G (UMTS)/HSDPA	97.6%	97.6%	97.6%
4G (LTE)	84.6%	70.1%	33.1%
Number of 2G radio sites (in thousands)	15.6	15.5	15.4
Number of 3G radio sites (in thousands)	13.5	12.5	12.2
Number of 4G radio sites (in thousands)	7.3	4.6	1.6

Source: Orange.

Orange's mobile network comprises 16,394 radio sites equipped with 2G, 3G and 4G technologies, covering 99.4% of the population with GSM and 97.6% with 3G. 4G technology covers 84.6% of the population via 7,264 installed sites.

2016 Outlook

The Spanish economy is expected to continue to improve in 2015. After the successful integration of Jazztel, Orange Espagne has renewed its growth ambitions as part of the Orange group *Essentials2020* strategy. The following priorities have been set:

- consolidate leadership as alternative carrier for high speed broadband (4G, FTTH), by:
  - increasing investment to preserve its leadership in the 4G market, and continuing to roll out fiber optics to reach 14 million connectable households in 2020,
  - improving the value of convergence services with enhanced premium TV contents offers and smart-home services,
  - leveraging growth in revenues in the Enterprise segment thanks to its position as leading alternative carrier for SMEs and VSBs,
  - preserving its leadership in the low-cost mobile market segment (*Amena* and *Simyo* brands),
  - continuing to develop innovative services to stand out in the telecommunications market, in particular mobile banking and Internet of Things (IoT);
- become the golden standard in customer relations by:
  - simplifying and customizing interactions to deliver the best possible customer experience,
  - developing e-stores and digital e-care platforms, with the smartphone serving as the first contact point,
  - rolling out a wider range of customer services in physical stores;
- continue to improve operational effectiveness by:
  - leveraging the synergies associated with Jazztel's integration,
  - continuing to benefit from the shared networks to minimize the need for investments,
  - implementing plans to simplify offers, improve purchases, streamline operations and ensure digital transition.

3

3.1.3 Poland

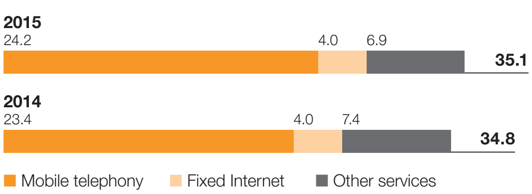
3.1.3.1 The Telecom Services Market

Key macroeconomic indicators

	2015	2014	2013
Population (in millions)	38.0	38.0	38.1
Households (in millions)	14.1	14.0	13.9
GDP growth (in %)	+3.6%	+3.3%	+1.3%
GDP per capita (PPA, $)	26,403	25,247	23,984
Change in household consumption (in %)	+3.1%	+2.6%	+0.2%

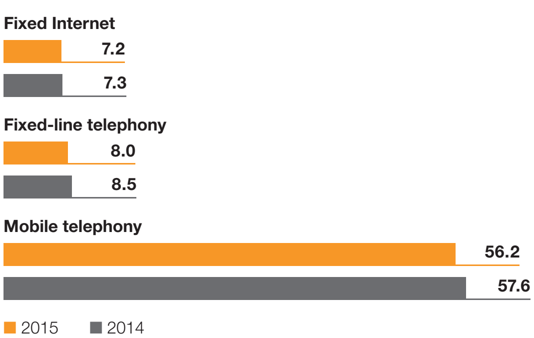
Source: Eurostat and IMF, October 2015.

Revenues from telecom services (in billions of zlotys)



Source: Orange Polska estimates.
1 zloty = 0.2391 euro (average rate in 2015).

Number of customers (in millions)



Source: Orange Polska estimates.

The Polish economy continued to grow at a slightly faster pace than in 2014. At the same time, falling oil and common consumer goods prices kept deflation at 0.9% in 2015, while unemployment rate fell to 9.8% (source: Central Polish Bureau of Statistics). These factors had a positive impact on the disposable income of households and private consumption, which grew more than 3.1%.

The value of the Polish telecommunications services market went up by 0.7% in 2015. The main growth driver was wholesale revenues, while retail revenues (fixed-line and mobile) dropped 2.9% due to lower average revenues per customer (source: Orange Polska estimates).

Fixed-line telephony market

The penetration rate of fixed lines continued to decline, shrinking by -5.3% in 2015 and accounting for 21% of the population at year-end, compared with 22% at end-2014. The number of fixed broadband lines fell by 0.5% and revenues were down by 0.9%, compared with a 1.1% increase in 2014 (Source: Orange Polska).

Telephony markets (both national and international) were deregulated in 2015. While voice offers are no longer regulated, subscription prices, which represent more significant amounts, continue to be regulated.

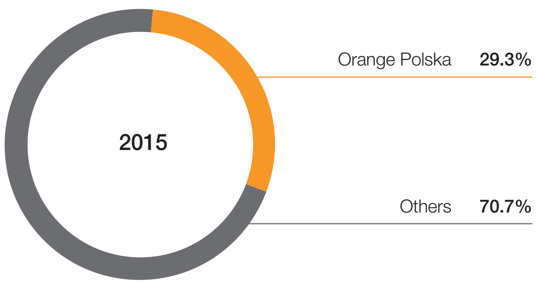
Mobile telephony market

The number of mobile telephony customers fell by 2.4% in 2015, as carriers deactivated certain prepaid SIM cards that were generating neither traffic nor revenue. The number of mobile users came to 56.2 million at end-December 2015, corresponding to a penetration rate of 146% (compared with 150% in 2014). Revenues were up 3.6% (source: Orange Polska estimates).

3.1.3.2 The competitive environment

Fixed-line telephony and Internet

Broadband Internet market share



Source: Orange Polska estimates.

As in the case of fixed telephony, affected by a strong shift to mobile services for several years now, the growing success of mobile broadband has impacted the development of high-speed fixed broadband, which was down slightly at the end of 2015. This trend gathered momentum as all mobile operators launched 4G services and attractive mobile broadband offers (in terms of prices or high or even unlimited traffic) and improved geographical coverage. LTE was also used in Poland to offer mobile WiFi broadband terminal services (for instance at home).

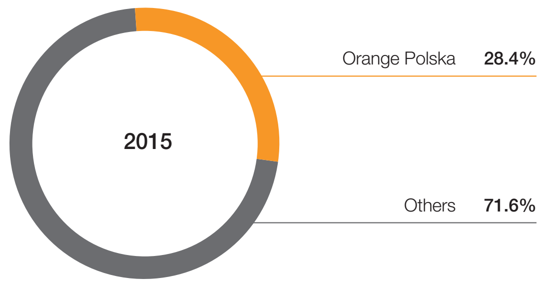
In the fixed-line broadband market, Orange Polska is still under strong competitive pressure from cable television operators, whose market share is climbing steadily. It was estimated at 35.3% at end-December 2015 (source: Orange Polska estimates). The commercial offers of these operators are backed by the investments they make in infrastructure to deploy the DOCSIS 3.0 standard and expand fiber access. Their overall market position has been steadily growing, resulting mainly from high popularity of the bundles they can offer thanks to their advantageous position on the television market. CATV is also expanding its offer towards SoHo and SME client segments.

The development of the fixed-line broadband in Poland will be spurred by the investments made in NGN infrastructure, built on fiber optic lines with European funding. Mobile broadband, however, is expected to continue to compete with, rather than complement, fixed-line broadband access.

Alternative operators, primarily Netia, still make use of wholesale BSA and LLU based services. However, the total volume of lines using bitstream access has been falling for several years now, and there were 131,000 unbundled lines at end-2015, compared with 152,000 a year earlier.

Mobile telephony

Mobile market share



Source: Orange Polska estimates.

Poland has four main mobile telephony operators: Orange Polska, T-Mobile (wholly owned by Deutsche Telekom), Polkomtel (operating under the PLUS brand, in association with broadcaster and satellite TV platform Polsat Cyfrowy, owned by Polish magnate Zygmunt Solorz-Zak), and P4 (held by Tollerton Investments Ltd and Novator Telecom Poland SARL, trading under the PLAY brand). In 2015, the four main mobile carriers represented 98% of the total number of active SIM cards in Poland.

Orange Polska's estimated market share had increased slightly to 28.4% at end-2015. Orange Polska maintained the second largest market share in terms of net sales. The overall result was slightly better than in 2014, and subscription services grew for the second consecutive year.

However, growing differences in methodology between operators in the calculation of SIM cards make it increasingly difficult to compare the data presented by these operators.

3.1.3.3 Orange Polska's activities

Fixed-line telephony and Internet activities

Operating indicators

	2015	2014	2013
Revenues (in millions of zlotys)	**5,699**	**6,072**	**6,664**
Number of consumer telephone lines	4.2	4.5	4.7
o/w classic telephony	3.6	4.0	4.3
o/w VoIP (main line)	0.6	0.5	0.5
Wholesale lines sold (in millions)	**0.8**	**1.0**	**1.3**
Number of Internet customers (in millions)	**2.1**	**2.2**	**2.3**
Subscribers to ADSL or satellite TV offers	0.8	0.7	0.7
Convergent customers (in millions)	**0.7**	**0.5**	**0.3**
ARPU (in zlotys per month)			
Fixed telephone lines (PSTN/ISDN)	40	41	44
Broadband Internet, TV and VoIP	61.2	60.4	60.3

Source: Orange Polska.
1 zloty = 0.2391 euro (average rate in 2015).

Convergent solutions and bundles

To fight off the competition in the mobile and fixed-line segments, Orange Polska encourages customer loyalty by offering attractive service bundles. The *Orange Open* convergence offer includes a complete range of fixed-line and mobile services, with a progressive discount for customers who subscribe to new fixed-line services (including VoIP, broadband and TV), mobile voice and broadband services. In consumer services, Orange Polska is the only operator offering this type of convergence solutions, which gives it a significant competitive edge. At the end of 2015, the number of convergent customers was 728,000, up 35%. The total number of services sold under the *Orange Open* offer exceeded 3 million, which means that on an average, each customer uses more than four services.

According to a report published by the European Commission, penetration of convergence services in Poland is weak compared to other Western European countries. Orange Polska believes the demand for convergence products will continue to grow and plans to strengthen its convergence offering to ensure its fiber optic broadband services are successful.

Fixed voice

Orange Polska continues to work to fight the erosion of its fixed-line customer base. Customer loyalty was strengthened, in particular with the *Adjusted Home* contract, and by lowering the threshold for the *Orange Open* loyalty program from 39 to 29 zlotys. Consequently, all fixed-line telephony contracts are now eligible. The number of lines, however, continues to fall as fixed-line services are replaced by mobile technologies driven by the growing availability of unlimited mobile offers. Broadband customers often cancel their voice subscription when they terminate their broadband access service, which contributes to the falling number of fixed telephony lines. As such, the net loss of voice customers (traditional PSTN telephone or VoIP) accelerated to 318,000 in 2015, compared with 229,000 in 2014.

Broadband access

In 2015, Orange Polska recorded a fall in the number of broadband accesses. However, the situation varies depending on the geographical area. *Neostrada* bundles and sales (broadband services offers) grew in areas where the market has been deregulated. In addition, the share of *Neostrada* TV bundles and high-speed options in total sales grew thanks to a uniform price strategy and gadget offers. Following its customers' positive reaction to the new offers in deregulated regions and faced with fierce competition, Orange Polska decided to apply uniform prices across Poland in June 2015. A single price was introduced across all three speed options (10, 20 and 80 Mbps). Lastly, *Neostrada* prices were lowered by 10 and 20 zlotys for the 10 Mbps and higher speed options, respectively.

In 2015, Orange Polska continued to promote high speed broadband. As it continued to sell vDSL offers, with over 290,000 customers, Orange also started to invest in FTTH fiber optic lines and connected 717,000 households. FTTH services were first launched in October under the *Supernova* brand, with 17,000 FTTH customers at end-2015. Orange Polska aims to use FTTH connections to regain its position on the high speed broadband market in large cities, which are currently dominated by cable operators.

3

Mobile telephony activities

Operating indicators

	2015	2014	2013
Revenues (in millions of zlotys)	**6,141**	**6,140**	**6,259**
Total customers (excl. MVNOs – in millions)	15.9	15.6	15.3
o/w broadband	2.0	1.5	1.2
o/w contracts	8.4	7.7	7.2
o/w prepaid offers	7.5	8.0	8.1
Number of MVNO customers (in thousands)	**7**	**22**	**62**
Total ARPU (in zlotys per month)	**30.3**	**31.5**	**34.5**
Contract ARPU	49.2	54.0	59.9
Prepaid ARPU	12.7	12.4	13.9
Total AUPU (1) (in minutes per month)	**219**	**199**	**178**
Churn rate (in %)	39.4%	39%	39%
o/w contracts	12.8%	13.6%	14.0%

Source: Orange Polska.
(1) Excluding M2M SIM cards.
1 zloty = 0.2391 euro (average rate in 2015).

Orange Polska had a total 15.9 million mobile customers at end-2015, an increase of approximately 2%. This growth was entirely due to the expansion of the contract base, up by more than 682,000, or more than 9% over 2014. This was the fastest growth rate in years and can be attributed to several factors:

- the launch of new attractive offers targeted at both the consumer and business market. These offers were supported by intensive marketing actions, in particular in the second half of the year;
- the actions taken against cancellation of subscriptions were also successful, with the churn rate decreased to 3%, to one of the lowest levels in several years;
- dedicated mobile broadband SIM cards, usually activated as part of a subscription, have become increasingly successful, and the mobile broadband customer base has grown by approximately 30%.

In addition, contracts have become far more affordable for customers, which explains the decline in the prepaid customer base.

Total ARPU was 30.3 zlotys in 2015, down by 3.8% (compared with -9% in 2014). This was primarily due to a falling ARPU for voice and SMS in the wake of price competition, especially in the business segment, and the growing popularity of unlimited offers. The launch of deferred payment plans for handset sales in the second half of 2014 also contributed to the fall in ARPU, as the corresponding revenues are not included in ARPU, while the cost of the subsidized handsets is included in the subscription costs. These negative factors were only partially offset by the higher data ARPU, up 18% in 2015, driven by the boom in mobile data traffic per customer, up by more than 100%. Thus, data accounted for 20% of the total ARPU in 2015, up from 17% in 2014. In addition, the ARPU of prepaid services, which are not affected by competition on the business market, was up by over 2% in 2015, (compared with -11% in 2014).

Distribution

Actively focused on delivering excellent sales and after-sales service to individual and business customers, Orange Polska operates various distribution channels: points of sale, alternative channels, on-line sales, telesales and door-to-door sales.

Orange Polska has approximately 800 outlets and franchises, offering a complete range of products and services. Orange Polska redesigned its outlets to improve customer experience: eight Smart Stores were opened, 659 outlets were upgraded to a new format, and a new smart customer management system was deployed in 5 Orange centers. On-line sales were the fastest growing channel, with approximately 15% of B2B subscriptions sold on-line. Telesales are also used to contact customers (mainly for loyalty actions). FTTH services are marketed door-to-door.

Orange Polska also endeavors to offer its customers a seamless, consistent experience through multi-channel solutions.

Prepaid cards are sold through a comprehensive network of sales points including brand outlets of Orange and distributors (convenience stores, kiosks, gas stations). Orange Prepaid kits are widely available at close to 40 thousand outlets, and can be recharged in more than 96 thousand outlets.

The Network

The fixed network

Fixed-line unbundling in Poland (in millions)

	2015	2014	2013
Total number of fixed lines	**4.4**	**5.0**	**5.5**
Full unbundling	0.1	0.2	0.2
Bitstream	0.2	0.3	0.3
Number of FTTH-connectable households (in thousands)	717	79	-

Source: Orange Polska.

In 2015, Orange Polska launched the deployment of its FTTH network, connecting more than 717,000 households in 16 cities by the end of the year, in both regulated and deregulated areas. vDSL coverage was extended to reach close to 4.7 million households. At the same time, migration of the aggregation network from ATM to IP continued.

The mobile network

Coverage

(as a % of the population)	2015	2014	2013
3G (UMTS)/HSDPA	99.6%	99.4%	90.2%
4G (LTE)	83.7%	60.9%	16.0%

Source: Orange Polska.

Orange and T-Mobile continued the co-development process of the radio network. In June 2015, after optimizing the 1800 MHz GSM band, the two operators extended their alliance to LTE, with 2X2.5 mHz taken from their own resources to form a continuous 15 mHz spectrum of 1800 mHz LTE bands. Over 10,000 stations transmit Orange's GSM and UMTS/HSPA signals, while approximately 6,000 stations transmit 4G signals. UMTS and 4G covered over 99.6% and close to 84% of the population, respectively, at the end of 2015.

In October 2015, Orange Polska was awarded two 800 mHz blocks (10 MHz) and three 2600 mHz blocks (15 mHz) for 15 years at an auction, thereby significantly improving its positioning.

2016 Outlook

In February 2016, Orange Polska announced its new strategic plan from 2016 to 2018. The plan includes significant investment to acquire new customers and deliver better mobile and fixed-line connectivity, with a view to generating long-term value and reverse negative trends affecting market shares, revenues and profit growth. The plan is built around the following objectives:

- guarantee the best fixed-line and mobile connectivity. Orange Polska wants to be flexible to be able to deliver the best possible connectivity irrespective of the customer's location. Orange Polska will be able to use the most suitable technology depending on the area: fiber, upgraded copper technology, or hybrid fixed-mobile connection;
- be the leader in convergence. Orange Polska will offer to its customers a wide range of services across the nation, enriched by products that are not telecom-specific, presenting the benefits of convergence solutions. In addition to improved products, Orange Polska will use marketing intelligence techniques, benefiting from a better understanding of customers to maximize sales opportunities within the existing and prospective customer base;
- deliver the best customer experience. In an increasingly digital world, excellent customer relations are vital for success and key to sustainable performance. Orange Polska will continue to improve the customer experience by offering attractive products and services and improving customer services and both traditional and online distribution channels. Orange Polska aims to become one of the top two Polish operators based on the NPS (Net Promoter Score), a measure of customer loyalty;
- improve business agility. Orange Polska will continue to streamline its operations to become more agile, digital and flexible, through a strong online presence, highly automated payment processing, lower indirect costs and improved efficiency. The *New Operating Model* project was launched with a view to streamlining and automating processes, optimizing IT expenses, and facilitating commercial initiatives, in particular in the convergence segment.

2016 will see this project implemented and will thus reflect the associated costs before any benefits become visible. Orange Polska plans to make massive investments to acquire high-speed fixed line and mobile broadband customers after the network is deployed. The results will be impacted by pressure on revenues and the commercial campaign launched to gain market shares, while investments should remain stable compared with 2015.

3.1.4 Belgium and Luxembourg

3.1.4.1 Belgium

The Telecom Services Market

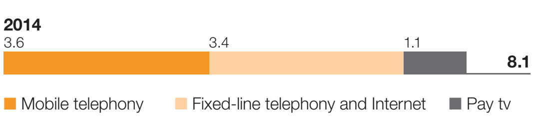
Key macroeconomic indicators

	2015	2014	2013
Population (in millions)	11.3	11.2	11.2
GDP growth (in %)	1.3%	1.1%	0.3%
GDP per capita (PPP, $)	43,629	43,139	42,154

Sources: IMF, October 2015.

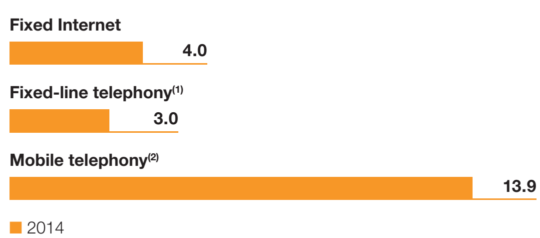
The Belgian economy experienced slight growth in 2014 (+0.2 point). Most economic indicators are showing improvement, except for the unemployment rate and the number of bankruptcies, which continued to grow.

Revenues from telecom services (in billions of euros)



Source: IBPT (not available for 2015).

Number of customers (in millions)



Source: IBPT (not available for 2015).
(1) Residential customers.
(2) including M2M.

Fixed-line telephony market

The Belgian residential fixed-line telephony market continues to be dominated by the oligopoly comprising incumbent operator Proximus and regional cable operators (Telenet, VOO, and Numericable). With no actual competition, the market is not characterized by a fall in prices, but primarily by elements such as the speed and premium TV contents on offer. Furthermore, as they are able to access the mobile network, fixed-line operators can offer convergence services, which gives them a competitive advantage on mobile-only players in terms of customer acquisition and retention.

In 2011, Belgian regulators started a process to open the cable operators' network to alternative operators with a view to boosting competition on the broadband and TV market. At the end of 2015, the regulators' conference (CRC) published a draft decision concerning the revision of wholesale prices for accessing cable networks, which was forwarded to the European Commission at the beginning of 2016. Mobistar plans to launch its convergence offers in 2016 as soon as the CRC finally approves the cable wholesale pricing system.

The fixed-line Enterprise segment is even more concentrated in terms of market shares. The incumbent operator has an extraordinarily dominant position due to the failure of the liberalization of this market segment, and thanks to their fixed-line and mobile convergence strategy and an information system integration services offer. Mobistar is the second player in this segment, with a 3000 Km fiber optic network. Regional cable operators have limited presence in this segment, but are trying to establish themselves on the SoHo (Small Office Home Office) market.

Mobile telephony market

2015 was marked by the expansion of mobile data, accelerated by the rollout of 4G and a higher smartphone penetration rate, which in turn was boosted by a wider range of voice and data bundles offered by operators. In addition, a growing share of the mobile market has moved to convergence products.

According to regulator IBPT's periodical price survey, Belgian subscriptions are among the least expensive as far as the most representative pricing plan goes, while overall average prices are in line with those in neighboring European countries. A large part of mobile customers in Belgium use prepaid cards, far more than their counterparts in neighboring European countries. Belgian prepaid prices are in line with the European average. The Belgian government published a draft decree with a view to ending the anonymous use of prepaid cards in Belgium in 2016.

The competitive environment

With three operators, the mobile market in 2015 was quite dynamic: Mobistar, Proximus (incumbent operator) and BASE.

There is a strong market presence of virtual mobile network operators of different sizes, the most prominent being cable operator Telenet. Furthermore, while the minimal contract term is generally one or two years in Europe, it is only six months in Belgium, a factor that boosts competition. In 2015, operators focused on promoting convergence offers, which have become the most important tool to acquire and retain customers. Retail sale prices remain stable in the mobile market.

The fixed-line telephony market is largely dominated by the incumbent operator, Proximus, and regional cable operators: Telenet (Flanders and Brussels), Voo (Wallonia and Brussels) and Numéricable (Brussels). In April 2015, the leading cable operator in Northern Belgium, Telenet, announced plans to acquire BASE, the third largest mobile operator, thereby strengthening its standing on the convergence market.

Mobistar's activities

Operating indicators

	2015	2014	2013
Number of customers (in millions)			
Fixed-lines	0.19	0.22	0.24
Mobile customers	3.04	3.04	3.17
ARPU (in euros per month)	**24**	**24**	**25**

Source: Mobistar.

Orange operates in Belgium through Mobistar, which is listed on the Brussels Stock Exchange. The Orange group holds 52.9% of the capital. At the end of 2015, Mobistar had 5.68 million customers in Belgium including MVNOs, i.e. up 3.6% compared with the end of 2014. Excluding MVNOs, Mobistar had 3.89 million mobile customers, compared with 3.92 million in 2014 (a fall of 0.6%). This was due to an additional 40,700 subscriptions in a year and the decline in the prepaid customer base (market downturn) and M2M cards/IoT (end of a significant contract), down by 44,600 customers and 18,300 cards respectively. Mobistar's subscription business is performing well. The change in the business share of subscriptions versus prepaid cards (73% vs. 27% at end-2015 compared with 71% vs. 29% at end-2014) reflects the faster pace of net subscription growth in the wake of improved termination and retention rates thanks to greater customer-centric investment. Mobistar's total ARPU was 23.9 euros at end-2015, up 1.3% from 2014. Subscription ARPU was up by 3.6% to 28.5 euros in the fourth quarter of 2015, compared with 27.5 euros a year earlier. Customer interest in smartphones and mobile data remains just as strong, with a 99% increase in the number of 4G smartphone users in one year, accounting for almost 32% of the mobile customer base. At the end of 2015, 4G traffic accounted for over 62% of total mobile data traffic.

Mobistar's offers

In 2015, Mobistar intensified its *Have a Nice Day* loyalty program. Launched in 2014, it rewards customer loyalty with gifts. Mobistar also provides access to the *MyMobistar* app to monitor personal usage. In 2015, Mobistar continued to market its *MySwap* trade-in offers (guaranteeing its customers the option to trade in their 4G smartphones for up to 50% of the purchase price within 2 years). In September, it launched the *Buyback* program, enabling customers to take advantage of great value buyback offers for their used devices. Since 2015, all smartphones sold by Mobistar are compatible with mobile broadband. Lastly, since 2015, Mobistar offers free access to the traffic information and road safety application *iCoyote* with subscriptions starting at 20 euros. On the prepaid cards front, in May 2015 Mobistar launched a card with 4GB of traffic and 4000 SMS for each 15 euro recharge. In October 2015, Mobistar launched *Easy Internet @home*, a solution offering the benefits of fixed-line broadband through Mobistar's 4G mobile network, including 15GB per month, at a monthly cost of 15 euros.

In the Enterprise segment, in 2015 Mobistar continued to pursue its *Entreprise Mobility 3.0* strategy to support business customers with services and applications designed to help them transition to digital technology. In 2015, Mobistar launched its *Shape & Pulse* convergence offer for PMEs, built on Mobistar's powerful 4G network and reliable VDSL2 high speed broadband lines. The offer includes different customization options, with a single point of contact and one easy-to-read, streamlined invoice.

Distribution

In 2015, Mobistar continued to review its distribution strategy, which led, in particular to:

- the internalization of employees across 35 points of sale located in Carrefour hypermarkets in Belgium;
- the acquisition of Walcom, a business specializing in the sale of personal telecommunications products and services through a network of 20 stores and a dedicated business sales team;
- the expansion of in-store services, such as smartphone repairs, insurance, mobile data training, buyback programs.

At the end of 2015, Mobistar had 151 outlets in Belgium. As part of the transformation of its distribution network, Mobistar strengthened and digitized direct channels to increase the number of visitors and conversion rates and improve customer satisfaction.

The Network

Coverage

(as a % of the population)	2015	2014	2013
3G (UMTS)/HSDPA	99%	99%	99%
4G (LTE)	99%	88%	0%

Source: Mobistar.

From 2013 to 2015, Mobistar invested over 430 million euros in its network and over 120 million euros to acquire 800 MHz frequency bands. At the end of 2015, Mobistar's 4G network covered 99% of the population outdoors (and 88% inside buildings). 4G+ technology has been rolled out and is in its testing phase. It now covers more than 21% of the population. This new technology offers users, who have a compatible device, downloading speeds up to three times faster than 4G. The commercial launch of 4G+ is planned for mid-2016.

Mobistar has established a partnership with SOFICO to expand its fiber optic network in southern Belgium. Sofico owns a fiber network of over 2000 Km in length, which completes Mobistar's 3000 Km fiber network. This partnership will allow Mobistar to develop its network in a more cost-effective way, and to accelerate the upgrade of its broadband transmission network. Lastly, in 2015, Mobistar and its subsidiary Orange Luxembourg launched a new service, offering uninterrupted mobile communication to customers as they cross the border between the two countries.

2016 Outlook

Two major events will involve Mobistar in 2016: the adoption of the Orange brand in Belgium and the launch of attractive convergence offers on all market segments. Mobistar wants to put forward a high-quality offering that meets its customers' needs, thereby ensuring a gradual return to growth of revenues from services. Mobistar will also continue the existing transformation projects which have already generated material savings, in particular by focusing on digitizing its processes and implementing a new ERP solution.

3.1.4.2 Luxembourg

Key macroeconomic indicators

	2015	2014	2013
Population (in thousands)	561	550	537
GDP growth (in %)	4.4%	5.6%	4.4%

Sources: IMF, October 2015.

In 2015, the Luxembourg market remained very competitive and clearly focused on convergence offers.

Orange Communications Luxembourg – a subsidiary of Mobistar – ranks third in terms of market share, behind market leader Post Luxembourg, a subsidiary of the incumbent operator, and Tango, a subsidiary of Belgian operator Belgacom. Post Luxembourg also has the largest market share in the fixed-line and Internet market.

At the end of 2015, the Mobistar subsidiary in Luxembourg had approximately 140,000 mobile customers, up 11.4% over 2014, driven by the strong growth in subscriptions. The number of fixed-line broadband and TV services customers reached 7,300, corresponding to 8% of the total customer base. Orange Luxembourg continued to expand its mobile and fixed-line networks, making its TV bundles available to almost 100% of the population and covering 90% of the population in 4G and over 66% in 4G+. Orange Luxembourg proved its ability to innovate by being the first operator to launch unlimited and global roaming offers in Luxembourg.

3.1.5 Central European countries

3.1.5.1 Romania

The Telecom Services Market

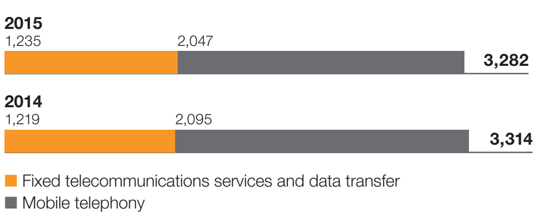
Key macroeconomic indicators

	2015	2014	2013
Population (in millions)	19.9	19.9	20.0
GDP growth (in %) (2)	+3.4%	+2.8%	+3.4%
GDP per capita (PPA, $)	20,698	19,744	18,827

Source: IMF, October 2015.

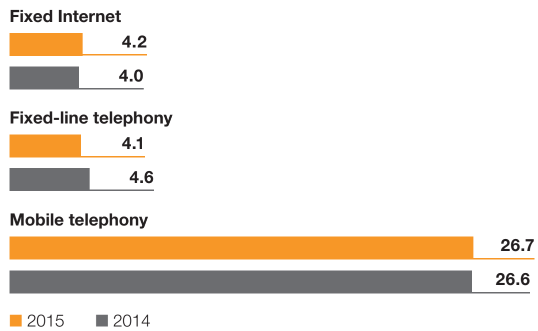
In 2015, the Romanian economy performed well compared with other European Union countries, with GDP up approximately 3.4% year-on-year, driven by strong household consumption, and by services and industry. Agriculture was affected by drought, which led to a drop in GDP growth.

Revenues from telecom services (in millions of euros)



Sources: Orange Romania estimates and ANCOM.

Number of customers (in millions)



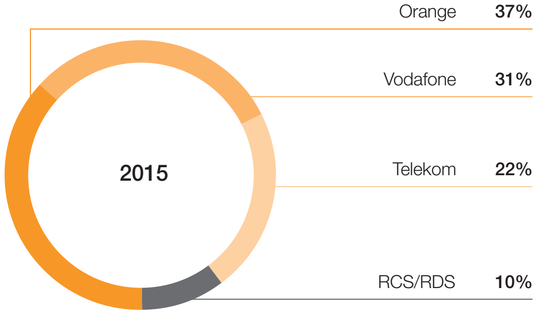
Source: Orange Romania estimates.

In 2015, the Romanian telecommunications market fell slightly, down 1% in value terms (source: Orange Romania), caused by the drop in call termination rates and by the decline in the fixed voice segment.

The fixed broadband market – which has a low penetration rate (55%) – continued to grow in volume. Pay TV also grew thanks to richer content and multi-screen offers. The mobile telephony market is in a recovery trend, thanks to the development of data services and the increase in the consumer demand for abundance offers.

The competitive environment

Mobile market share



Source: Orange Romania estimates.

In 2015, all mobile operators continued to offer unlimited or abundance offers at affordable prices, while focusing on monetizing data and competing in the rollout of 4G. The migration from prepaid services to contracts persisted, encouraged by subsidized smartphone offers. The fixed-mobile convergence grew with two convergent operators (Telekom and RCS&RDS), who benefited from customer preferences for a single provider (twice as many as in 2014).

Vodafone became very aggressive in pricing and marketing campaigns in order to win market share through regional offers (prepaid and contracts). Telekom struggled to gain ground one year after its new brand and its transformation process. RCS&RDS, which acquired a 4G license and launched its service in 12 cities at end-2015, was the main beneficiary of number portability, helping it to increase its market share.

Due to the decrease in prepaid offers and aggressive pricing policies from its competitors, Orange saw a slight decline in its share of the mobile market in volume terms to 37%, but managed to protect its market share in value terms.

Orange Romania's activities

Operating indicators

	2015	2014	2013
Number of customers (in millions)			
Mobile Customers	10.2	10.5	10.4
ARPU (in euros per month)	**6.4**	**6.1**	**6.5**

Source: Orange Romania.

Contract subscribers make up 46% of Orange Romania's total mobile customer base (excluding M2M), representing 4.5 million, up 3 percentage points. This change is due to the development of 4G services and the penetration of smartphones.

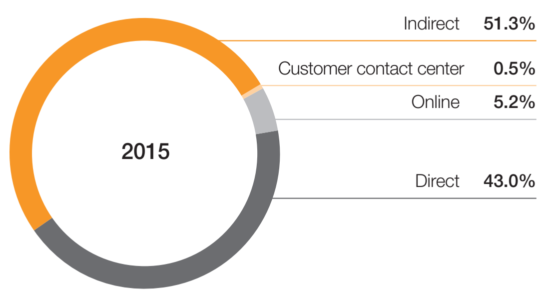
Orange included Internet access as well as international minutes for calls to fixed and mobile networks in all its contract offers. This new offering portfolio boosted the appetite for smartphones and tablets, notably those compatible with 4G, and contributed to strong growth in data services traffic and revenues. The product portfolio was redesigned and simplified in September 2015 as part of a brand change, and was structured around the offers *Orange Me*, *Orange Net*, *Orange Share*, *Orange Family* and *Business Open offers*, with a new loyalty program.

The Orange TV service surpassed 270 million subscribers and Orange TV stick was launched in June 2015. The home automation solution *Smart Home* was test launched in November 2015.

Regarding the corporate sector, the recovery trend was accompanied by the launch of the *Malima M2M* platform in February 2015. Orange has become the main supplier (Tier 1) of Microsoft solutions in Romania, and has partnered with the automaker Dacia to equip a new sport utility vehicle (SUV) model with onboard WiFi.

Distribution

Segmentation of distribution channels (as a % of customer acquisitions)



Source: Orange Romania estimates.

In 2015, Orange Romania continued to develop its franchised networks, while optimizing the performance of its own distribution network by choosing better locations, modernizing its sales points and renegotiating lease agreements when required.

The Network

Coverage

(as a % of the population)	2015	2014	2013
3G (UMTS)/HSDPA	99.9%	99.8%	99.8%
4G (LTE)	72%	62%	12%
Number of 3G radio sites (in thousands)	5.0	4.4	4.1

Source: Orange Romania.

With 72% of the population and 96% of urban areas covered, Orange offers the broadest 4G coverage in the country. This extensive coverage enabled rapid adoption of smartphones and significant growth of data traffic. The voice over LTE service (VoLTE) was launched by Orange in 2015.

The implementation of the network sharing agreement with Vodafone to improve 2G and 3G coverage is proceeding as planned, and 70% of the program is already completed. As part of its strategic plan to improve operational efficiency, in 2015, Orange implemented the agreement signed with Ericsson in 2014 to outsource network maintenance and operation.

2016 Outlook

In 2016, Orange Romania will pursue the following objectives:

- preserving its market leader positioning, in terms of both volume and value;
- utilizing the Orange brand under a new signature, *listening and responding;*
- changing the customer relationship, by investing in digital transformation;
- developing an enriched connectivity offer, supported by 4G;
- continuing to transform the network through the shared network and outsourced network operation;
- supporting the transformation of the business customer operations;
- diversifying by capitalizing on existing assets (TV, Smart-home, Money);
- evolving towards a business model that is both digital and customer-oriented.

3.1.5.2 Slovakia

The Telecom Services Market

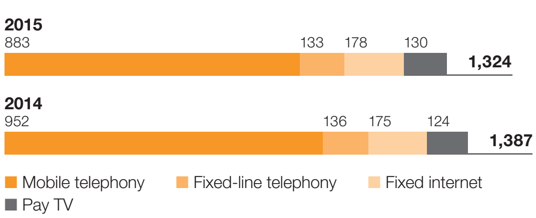
Key macroeconomic indicators

	2015	2014	2013
Population (in millions)	5.4	5.4	5.4
GDP growth (in %)	3.2%	2.4%	1.4%
GDP per capita (PPA, $)	29,424	28,279	27,200

Source: IMF, October 2015.

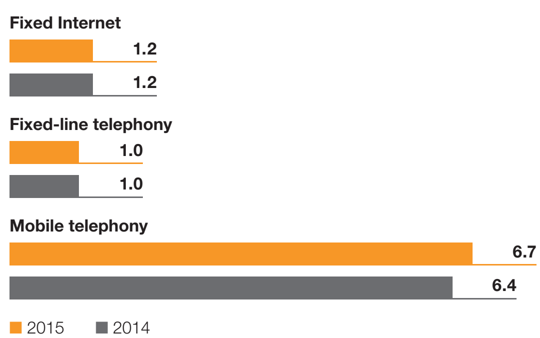
With its industry strongly oriented towards exports to Europe, the Slovakian economy continued to grow by 3.2% in 2015. This growth is also supported by renewed domestic consumption and a decrease in the unemployment rate.

Revenues from telecom services (in millions of euros)



Source: Orange Slovensko estimates.

Number of customers (in millions)

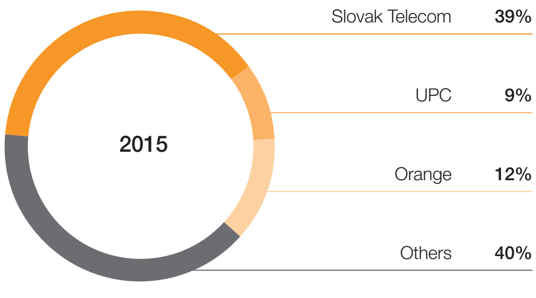


Source: Orange Slovensko estimates.

In 2015, the contraction of the telecommunication services market, an ongoing trend for several years, continued (down 4.6% in 2015 after a 7.5% fall in 2014). The decline in traditional voice services (mobile and fixed) was partly offset by increased data and television services. Fixed-line Internet services grew 4.9% in volume and 1.4% in value in 2015.

The competitive environment

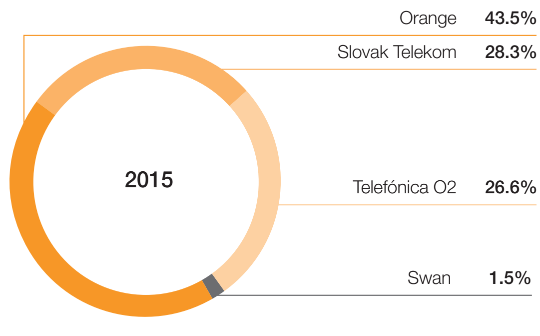
Broadband Internet market share



Source: Orange Slovensko estimates.

The fixed broadband market in Slovakia is dominated by Telekom, the incumbent operator, whose infrastructure covers the whole country. Orange Slovensko, which rolled out its fiber optic network (FFTH) to approximately 342,000 households in Slovakia, and has marketed DSL fixed-line Internet services via a commercial agreement with Telekom, is ranked second in this market and is continuing to grow (+1.2 percentage points). UPC, which has been in the market for a number of years, is in third place.

Mobile market share



Source: Orange Slovensko.

Orange Slovensko competes with three other operators in the mobile market: Telefónica O2, Slovak Telekom (100% owned by Deutsche Telekom) and SWAN. The Slovak Post and Swan began to offer mobile services in October 2015, only in prepaid formulas, available in all post offices. The company already covers 40% of Slovakia with its own 4G network. Orange Slovensko remains the market leader, with a market share of 43.5% in terms of volume, down 1.1 percentage points, and Slovak Telecom is in second place, down 1 percentage point. O2's market share remained stable in 2015. The mobile penetration rate is close to 123%.

Orange Slovensko's activities

Operating indicators

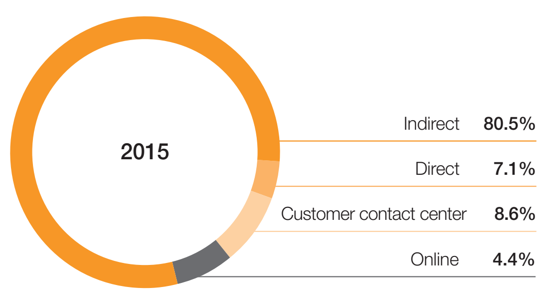
	2015	2014	2013
Number of customers (in millions)			
Internet lines FTTH	0.07	0.06	0.06
Mobile Customers	2.9	2.8	2.8
ARPU (in euros per month)	**13.3**	**14.7**	**16.1**

Source: Orange Slovensko.

In 2015, Orange Slovensko's main sales activities were focus on maintaining its market position following the arrival of a fourth operator. Orange thus increased its customer base by 52,000. Its offers are designed to position it as the best choice for families. Thanks to the *Family voice* offer, 39% of households use exclusively Orange mobile and the churn rate remains low. Orange also extended its family-orientated approach to family-run businesses with free fixed broadband for a year for families on a contract of over 50 euros. Other major initiatives include the launch of a new application for the loyalty program (*Orange Vyhody*) and steps to drive tablet sales to encourage data usage.

Distribution

Segmentation of distribution channels (as a % of sales actions)



Source: Orange Slovensko.

Orange Slovensko sells its products and services in Slovakia through various distribution channels:

- 138 exclusive franchises selling only Orange products;
- resellers and distributors of prepaid cards;
- dedicated spaces in *Nay* electronic appliance stores;
- a dedicated team of approximately fifty members for VIP and SME customers and door-to-door salespersons specialized in fiber optic products and services;
- a specialized sales team within Orange Slovensko, dedicated to the acquisition and retention of business customers (key accounts);
- a customer service platform managed directly by Orange Slovensko;
- an online store (www.orange.sk/eshop) where customers can buy Orange products, services and accessories.

The Network

Coverage

(as a % of the population)	2015	2014	2013
3G (UMTS)/HSDPA	93.0%	86.2%	79.2%
4G (LTE)	64.7%	30.2%	-
Number of 3G radio sites (in thousands)	1.83	1.72	1.56
Number of 4G radio sites (in thousands)	0.94	0.5	-
Number of FTTH-connectible households (in thousands)	342	333	326

Source: Orange Slovensko.

In 2015, Orange Slovensko continued to focus its investments on improving the quality of its 3G coverage in urban areas (in particular inside buildings), as well as in rural areas (UMTS in the 900 MHz band), to reach 93% of the population. Investments were also made to extend 4G coverage, as well as to launch 4G+ in 7 cities.

In addition, priority was given to reducing operating costs and modernizing the network in response to the growth in traffic and to improve its reliability and bandwidth.

2016 Outlook

In 2016, Orange Slovensko expects its customer base to grow, with the exception of prepaid cards, due to the negative impact of the arrival of the new operator SWAN in the market. The objective is to slow the ARPU erosion trend and to keep the annual churn rate below 6%. The Voice over Mobile LTE (VoLTE) service should be launched in 2016.

Investments planned for 2016 will continue to focus on improving LTE (4G) and LTE-A (4G+) quality and coverage in the country, as well as on upgrading the network's capacity. The network modernization program will continue (renovation of the radio access network, the *all-IP* program, optical extensions in the core and access networks).

3.1.5.3 Moldova

The Telecom Services Market

Key macroeconomic indicators

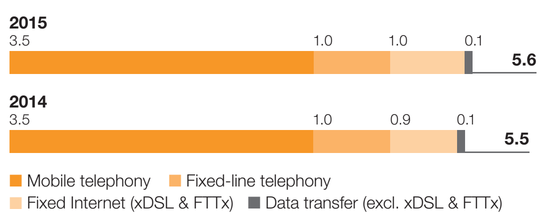
	2015	2014	2013
Population (in millions)	3.6	3.6	3.6
GDP growth (in %) (2)	-1.0%	4.6%	9.4%
GDP per capita (PPA, $)	4,999	4,998	4,698

Source: IMF, October 2015.

In 2015, Moldova's economy was negatively affected by several factors:

- the depreciation of the Moldovan currency against the euro and the dollar and a high inflation rate (9.7%);
- the decline of 16% in exports and of 33% of transfer of funds, primarily due to the negative impact of the severe regional crisis in Russia and Ukraine;
- the continued political uncertainty that has blocked the reform process and the planned aid from the IMF, the European Union, and Western donors;
- the contraction of the industrial and agricultural sectors, leading to a global economic slowdown. The IMF expects Moldova's GDP to show a slight decline of 1% in 2015.

Revenues from telecom services (in billions of lei)

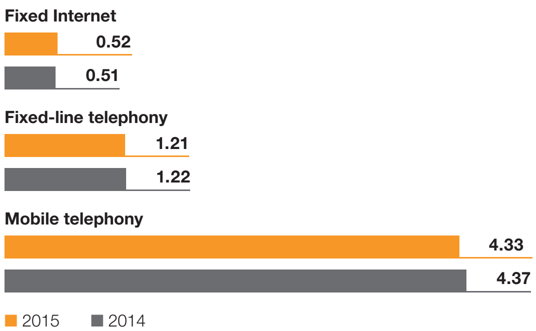


Source: ANRCETI (Q3 for 2015).
1 leu = 0.0478 euro (average rate in 2015).

Despite the economic situation, the telecommunications market in Moldova has continued its moderate growth of 2.8%, reaching 5.6 billion lei. Revenue was up significantly in the fixed broadband access and data transport market (+9.4%), mitigating the decline in revenue from fixed voice of 1%.

The mobile market recorded an annual growth of 1.5% in 2015, mainly driven by a 16% increase in mobile broadband. The main factors promoting the development of broadband access services has been the abundance of mobile and fixed broadband Internet connection offers, with an emphasis on 4G, and more attractive bundles with higher included traffic volumes.

Number of customers (in millions)

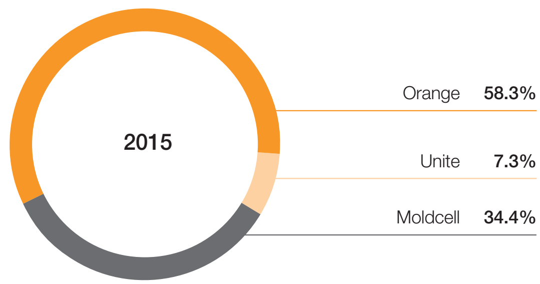


Source: ANRCETI (Q3 for 2015).

The total market was 6 million subscribers, down 0.6% year on year. While fixed-line telephony continued to decline, down 1% (-12,200 users) and mobile telephony decrease by 1% (-41,600 users), fixed Internet increased by 2.9% (+14,800 users). The mobile penetration rate reached 121.8% at end-2015 (-1.1 percentage points compared with 2014).

The competitive environment

Mobile market share



Source: ANRCETI (data as of end-September).

Despite the difficult economic situation and strong competition in 2015, Orange Moldova remained the market leader, with a market share of 58.3%, up by 1.4 percentage points. Moldcell, despite aggressive price offers and extremely generous loyalty incentives, decreased its market share to 34.4% (-0.4 points). Unite (mobile brand of the incumbent operator) despite being the leader in the convergence market lost 1 percentage points, with a market share of 7.3%. At the same time, OTT players are also competing with traditional telecommunications operators.

Orange Moldova's activities

Operating indicators

	2015	2014	2013
Number of customers (in millions)			
Mobile customers	2.1	2.2	2.1
ARPU (in euros per month)	**4.6**	**5.4**	**6.3**

Source: Orange Moldova.

In 2015, Orange Moldova managed to protect the value of its business by increasing revenue by 2.8 billion lei. Its attractive offers for deferred payments on handset purchases allowed it to fully offset the decline in revenue from the erosion of incoming international traffic due to competition from Over-The-Top (OTT) providers and the impact of the Russian crisis.

Commercial efforts have been focused on increasing value and on customer loyalty, encouraging the migration of prepaid customers to contracts and expanding the use of data and the M2M customer base, in order to slow the decline in average revenue per user (ARPU).

Orange Moldova worked to improve the customer experience in 2015 through a specific program, and launched a new Orange brand platform and opened its first Smart Store in Chisinau in October 2015.

Finally, Orange Moldova's network was recognized as the best network in the country in terms of performance and quality, with 4G coverage having already reached 84% of the population.

2016 Outlook

Orange Moldova will focus its efforts in 2016 on consolidating its leadership of the mobile market, continuing to develop data usage and protecting the profitability of its business activities. The main priorities will be to provide the best service to customers and ensure the soundness of the company's results through:

- the management of the customer base: slowing the decline in ARPU, continuing the migration of prepaid customers to contracts, speeding up the adoption of 4G smartphones and data use, and encouraging the biggest users of 3G mobile broadband to move to 4G;
- differentiation in the area of customer experience and loyalty through the continuous improvement of customer interactions;
- maintaining its leadership in 4G by leveraging the increasing adoption and use of mobile data.

3.1.5.4 Armenia

In August 2015, Orange announced the sale of 100% of its mobile subsidiary Orange Armenia to Ucom, an Armenian Internet service provider.

3.1.6 Africa and the Middle East

3.1.6.1 Egypt

The Telecom Services Market

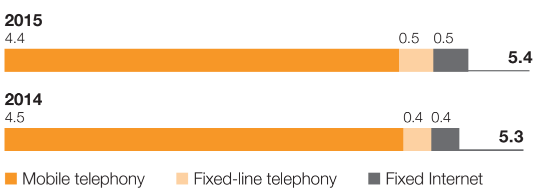
Key macroeconomic indicators

	2015	2014	2013
Population (in millions)	88.4	86.7	84.7
GDP growth (in %)	4.2%	+2.2%	+2.1%
GDP per capita (PPA, $)	11,262	11,918	10,762

Source: IMF, October 2015.

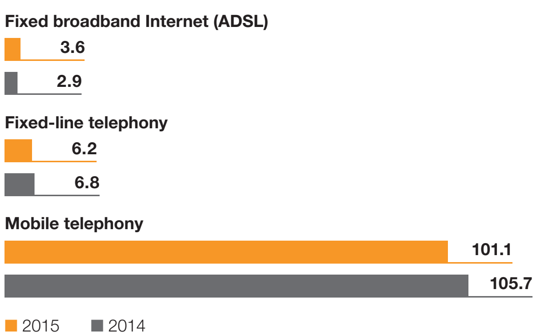
The economic situation in Egypt improved in 2015 as a result of the country's return to political stability, the resumption of public investments (extension of the Suez Canal), improved corporate morale, the resumption of foreign investment following structural reforms and the reduction of the public deficit. The Egypt's gross domestic product (GDP) growth was an estimated 4.2% at end-2015, 2 percentage points higher than in 2014. The consolidation of the economic recovery nevertheless remains dependent on the continuation of the reforms already underway as the evolution of the security situation.

Revenues from telecom services (in billions of dollars)



Source: Orange Egypt estimates.
1 US dollar = 0.9013 euro (average rate in 2015).

Number of customers (in millions)



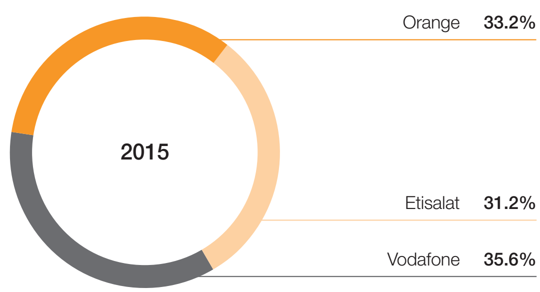
Source: Orange Egypt estimates.

In 2015, the regulatory authority (National Telecom Regulatory Authority) imposed severe restrictions on the sale of lines for security reasons, which resulted in a decrease in the number of mobile phones in Egypt. The Egyptian mobile telephony market is comprised essentially of prepaid customers. Operators are increasingly developing their offers into the lower end of the market, reducing connection charges, offering inexpensive handsets and allowing customers to recharge small amounts. This strategy is aimed to acquire middle-class and rural customers, and has resulted in a reduction of the average revenue per user (ARPU). The signs of recovery in the tourism industry during the second half of 2014, confirmed at the start of 2015, dissipated after the resurgence of terrorism in the 4th quarter, which, in turn, had a serious effect on roaming revenues.

The penetration rate of fixed-line telephony continues to fall, the development of broadband Internet remains very limited and the mobile penetration rate fell for the first time in 2015, due to the decline in the number of mobile handsets. This rate reached 112% of the population at end-2015.

The competitive environment

Mobile market share



Source: Orange Egypt.

The Egyptian market is characterized by an increasingly competitive environment. Most competition is between mobile operators, but is also moving increasingly into the Internet and B2B markets. At the same time, OTT players are competing in the traditional telecommunications sector.

ECMS was the first operator to launch mobile services in Egypt, which it did in 1998 under the Mobinil brand. Vodafone Egypt was the second operator to enter the market, also in 1998, under the *ClickGSM* brand. It has positioned itself in the high value-added customer segment by virtue of its 3G network, launched in 2006. Etisalat, a subsidiary of Etisalat U.A.E, entered the market in 2007 with an aggressive low-cost strategy.

Despite the highly competitive market and regulatory pressure to improve sales monitoring, Mobinil managed to increase customer numbers in 2015 and maintain its number-two spot with a 33.2% market share (source: GSMA February 2015). Vodafone remains the market leader, with a share of 35.6%, and Etisalat is in 3rd place with 31.2%.

Mobinil activities

Operating indicators

	2015	2014	2013
Number of mobile customers (in millions)	**33.1**	**33.7**	**34.8**
o/w contracts	6.2	5.8	4.5
o/w prepaid offers	26.8	27.9	30.3
Total ARPU (in euros per month)	**2.9**	**2.5**	**2.5**

Source: Mobinil.

At the beginning of 2015, Orange bought all the shares and voting rights of Mobinil (ECMS), increasing its stake in ECMS from 94% to 99%.

Mobinil's mobile customer base stood at 33.1 million as of end-2015, a fall of 2% compared with 2014, and 81% of customers are in the prepaid segment. However, the proportion of prepaid customers decreased in 2015 due to the success of capped contracts. Annual revenues totaled 1,340 billion euros in 2015, an increase of 4.2% compared with 2014 on a comparable basis.

Distribution

Mobinil sells products and services in Egypt through different distribution channels:

- 52 Mobinil stores;
- 53 franchise stores;
- 25 Mobinil kiosks;
- 116 express stores;
- specialized distributors and retailers.

Network and licenses

ECMS has a GSM license and a 15-year UMTS-3G license obtained in 2007. A coverage plan detailed over five years accompanies the grant of the 3G license, and the Egyptian Telecommunication Regulatory Authority (NTRA) guaranteed to Mobinil the grant of other frequency bands, the possibility of applying a special rate to its customers for communications within the Mobinil network (on net mode), and the reservation of a new network code. Additional spectrum was acquired in 2013.

2016 Outlook

The social and political situation has started to stabilize in Egypt. However, the economic recovery has been slow and is threatened by the difficulty in attracting foreign currencies as well as the impact of terrorism on tourism and on direct investment from abroad. ECMS will pursue the action plans initiated in 2012 with a strategy focused on value creation and operational efficiency. ECMS's management will continue to focus on cost-monitoring and profit margin improvements through major initiatives like a large transformation program. A comprehensive license should be granted to the current mobile operators in 2016. Telecom Egypt should secure a mobile license, thereby becoming the 4th mobile operator on the market.

3.1.6.2 Senegal

The Telecom Services Market

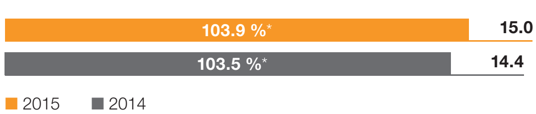
Key macroeconomic indicators

	2015	2014	2013
Population (in millions) (1)	14.4	13.9	13.5
GDP growth (in %) (2)	+5.1%	+4.7%	+3.6%
GDP per capita (in dollars PPP) (2)	2,426	2,352	2,275

Source: (1) ANSD 2015 (2) IMF, October 2015.

With a population of 14.4 million, Senegal is West Africa's third-largest economy.

Number of mobile customers (in millions)



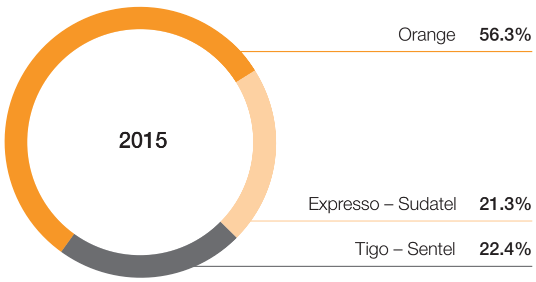
Source: Arcep fourth quarter 2015.
* Penetration rate (as a % of the population).

The mobile market reached 15 million SIM cards in 2015, up 4% (compared with +9.5% in 2014), representing 580,000 additional customers. Despite the slowdown in growth due to additional regulatory constraints (requirement to identify subscribers) the mobile penetration rate increased by +0.4%, attaining 103.9%.

The regulated mobile call termination rates dropped again in 2015 by -20% (from 15 to 12 CFA francs per minute). At the end of March 2015, the regulatory authority opened a 4G test phase for all operators. A tender offer (by auction) was launched during the month of November 2015, and should lead to the allocation of licenses for the 4G frequency band.

The competitive environment

Mobile market share



Source: Arcep fourth quarter 2015.

There are three operators in the mobile market: Orange, Tigo-Sentel (a subsidiary of Millicom International) and Expresso Sénégal, a subsidiary of Sudan Telecom (SUDATEL). Once again in 2015, competition between the operators was fierce. It led to marketing campaigns to encourage prepaid recharges for abundance offers focused on voice off net uses and mobile data. The growth of mobile Internet usage has continued, still boosted by improving service quality, the expansion of 3G coverage, enriched offers and the multiplication of smartphones. Orange was able to maintain its market share compared to 2014, despite intense competition in 2015 (source: ARTP fourth quarter 2015).

Orange Senegal's activities

Operating indicators

	2015	2014	2013
Number of customers (in thousands)	**8,797**	**8,493**	**7,761**
Fixed-lines	283	291	291
Internet lines (ADSL)	101	105	105
Mobile customers	8,413	8,097	7,365
Mobile ARPU (in euros per month)	**4.5**	**4.7**	**5.5**

Source: Orange Senegal.

The number of Orange mobile customers, almost entirely comprising prepaid options increased by 3.9% in 2015 versus 9.9% in 2014. This slowdown in the growth of the customer base is due on one hand to regulatory constraints regarding the identification of customers (extended in 2015 to the indirect sale of SIM cards), and to the near saturation of the market, whose mobile penetration rate was 103.9% in 2015, on the other.

The downward trend of ARPU continued in 2015 for several reasons:

- the decline in outgoing traffic revenues, strongly affected by the development of abundance offers, partially offset by the growth of mobile data revenues and value-added services;
- the increase in low revenue contribution subscriber categories.

However, this downward trend has slowed as a result of the growth in mobile call termination revenue boosted by ultra abundant offerings from the competition (calls to all networks), despite a further decrease in mobile interconnection rates (from 15F to 12F).

The number of fixed broadband Internet (ADSL) subscribers fell slightly (-4.4%) in 2015, due to the competition related to the development of 3G mobile Internet offers. The total number of fixed lines remained relatively stable compared to 2014 (-2.7%). This near-stabilization, despite the strong competition in mobile activity, is related to the development of new *HOME* fixed-line formulas offering the *Livebox* with voice, Internet and TV contracts.

The mobile offer of Orange Senegal consists mainly of prepaid formulas based on three types of offers: *Diamono Classique*, *Diamono S' Cool* and *Diamono Door Waar*. Furthermore, the *Kirène avec Orange* offer is an MVNO-type offer developed in partnership with Kirène. The Orange Money mobile payment offer had around 2.1 million registered customers at end-2015, representing 25% of the mobile customer base. The expansion of the partnership with new players in merchant payment and invoice payment led to significant growth in the volume of transactions (+73%) compared with 2014.

The development of the mobile Internet offer is continuing with the *Pass Internet Everywhere* sold by retailers from 100 CFA francs, with more than 1.4 million users invoiced at the end of 2015.

Distribution

Orange's distribution network is made up of:

- one center bringing together the direct network's commercial activities around 7 regional sales departments managing 37 directly owned stores (Sonatel outlets), 11 of which are in Dakar;
- one agency dedicated to the development of sales by indirect networks, which are made up of:
  - 3 reserved sales areas (*shop in shop*) in Casino stores,
  - 116 Orange stores,
  - 60,360 indirect partners (wholesalers – semi-wholesalers – retail vendors).

2016 Outlook

Orange Senegal's priorities in 2016 will be focused on:

- limiting the erosion in the EBITDA margin and stabilizing revenues (excluding exceptional events) compared with 2015;
- keeping its market share (in volume and value), stabilizing its prepaid recharges (in value) at least at the 2015 level and overhauling its mobile and fixed-line subscription offers while maintaining the same revenue;
- implementing transformation projects;
- undertaking investment projects to renew and modernize its networks, obtaining spectrum and successfully rolling out 4G, both technically and commercially;
- improving customer satisfaction (according to the COPC standard) and controlling costs of the hotlines (technical and commercial) as well as strengthening customer digitization solutions;
- developing Orange Money uses and services;
- developing synergies with the Group for international traffic (corridor offers, *OZ new look*) and the positioning of HUB Data;
- consolidating its leading position in the mobile Internet market (with

market share of over 60%) and strengthening its contribution to prepaid revenues;

- developing mobile payments by industrializing merchant payment, and improving the profitability of Orange Money;
- ensuring the success of projects to reduce operational costs (energy, maintenance, resources, purchasing expertise);
- continuing its efforts to control technical service quality, and maintaining its leading position in the indicators published by the regulatory authority;
- strengthening the partnership with the government to develop the digital economy, popularize the Internet, implement the digital transition and expand financial inclusion in Senegal thanks to mobile banking solutions.

3.1.6.3 Ivory Coast

The Telecom Services Market

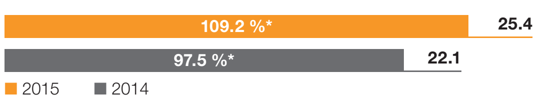
Key macroeconomic indicators

	2015	2014	2013
Population (in millions) (1)	23.3	22.7	22.6
Growth in GDP (in %) (2)	+8.2%	+7.9%	+8.7%
GDP per capita (in dollars PPP) (2)	3,304	3,101	2,901

(1) Estimate based on the last general population census.
(2) Source: IMF, October 2015.

2015 was marked by the continued improvement of the economy following the consolidation of reforms. The reforms were carried out in particular in the areas of infrastructure and the improvement of living conditions. Moreover, the successful elections that took place in October 2015 confirmed the country's political stability and fixed the institutional framework until 2020.

Number of mobile customers (in millions)

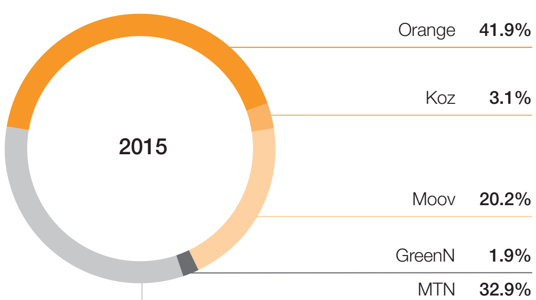


Source: ARTCI.
* Penetration rate (as a % of the population).

Ivory Coast's mobile market grew from 22.1 million to 25.4 million SIM cards between 2014 and 2015, an increase of 14.9%. The mobile operator penetration rate grew from 97.5% to 109.2%. This increase reflects continued expansion in the number of consumers with multiple SIM cards and the number of abundance offers, as well as falling communication prices and handset costs.

The competitive environment

Mobile market share



Source: ARTCI Q3 2015.

The telecommunication market underwent significant changes in 2015, with the renewal of the global licenses of Orange, MTN and Moov, and the expected allocation of a license to a fourth operator to replace GreenN, Café Mobile and Comium. The allocation of licenses for the launch of 4G is expected in early 2016.

The market is characterized by a high level of competition between the operators, which offer very attractive price promotions (recharge bonuses from 100% to 300%, and other freebies) and multiply the number of promotions aimed at new customer recruitment and at multiple ownership of SIM cards.

Within this context, Orange's market share increased in the third quarter to 41.9%, compared to 38.9% in 2014, thanks to the innovative nature of its offers (new *Animals* range), to growth in mobile broadband and mobile payments. It accordingly held onto its top spot, ahead of MTN.

Côte d'Ivoire Télécom and Orange Côte d'Ivoire Activities

Operating indicators

	2015	2014	2013
Number of customers (in thousands)	**11,111**	**9,166**	**7,337**
Fixed-lines	264	231	287
Internet lines (ADSL)	49	39	36
Mobile customers (incl. MBB)	10,798	8,896	7,014
Mobile ARPU (in euros per month)	**5.5**	**6.1**	**6.3**

Source: Orange.

The number of fixed lines of Côte d'Ivoire Télécom represents a low percentage of the total number of customers, due to strong competition from the growth of mobile.

There was strong growth in the broadband mobile market, with the arrival of 3G.

At the end of 2015, Côte d'Ivoire Télécom had approximately 49,000 ADSL Internet customers. Recruitment continues to grow, +26% compared to the targets, thanks to:

- the launch of offers such as *one citizen, one computer, one Internet connection*;
- flash promotions through the deal of the week;
- the ADSL promotion on Parents' Day.

Distribution

Since the operational merger of Orange Côte d'Ivoire and Côte d'Ivoire Télécom in 2010, Orange has had the largest network of retail stores in the country's telecom sector, a total of 130. Of these, 38 were directly owned and 92 were franchises at end 2015. Indirect distribution is managed through a network of 14 exclusive partners comprising close to 83,000 retailers.

In 2015, Orange Côte d'Ivoire continued to offer training to its partners, to help them build their business skills. The company also worked with its entire distribution network to promote the Orange Money service.

2016 Outlook

Within this context, Orange's priorities for 2016 are:

At the B2C level:

- **being the Best in Class operator on the Internet:** having the best customer interactions, the best Internet coverage and strengthening its leading position in terms of customer base and value in fixed-line and mobile data;
- **defending its position in the prepaid market:** securing the customer base by containing the churn rate and by appealing to young people and different communities (ethic, foreign, etc.), in order to respond to the competition;
- **consolidating the growth of Orange Money:** maintaining growth by improving penetration (in rural areas, among youth, women, B2B segments) and developing the distribution network;
- **having the best digital customer experience:** being the leader in *self-care* through the customer space and *Orange et Moi* with 90 million CFA francs in revenue.

At the B2B level:

- **developing a company culture focused on the customer experience:** improving service delivery, customer service and the invoicing process;
- **strengthening its leading position in terms of value and volume:** securing revenue at the top end of the market with connectivity services (overhaul of data offers), developing ICT sales through B2B sales and monitoring invoiced revenue;
- **accelerating the development of growth opportunities:** OM, ICT, data, etc.

3.1.6.4 Jordan

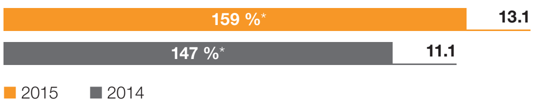
The Telecom Services Market

Key macroeconomic indicators

	2015	2014	2013
Population (in millions)	6.8	6.7	6.5
GDP growth (in %)	+2.9%	+3.1%	+2.8%
GDP per capita (PPA, $)	12,162	11,971	11,677

Source: IMF, October 2015.

Number of mobile customers (in millions)

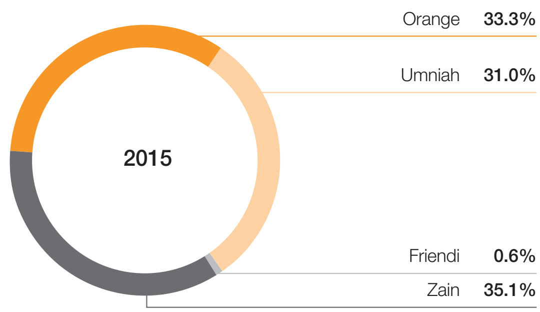


Source: TRC, Q3 2015.
* Penetration rate (as a % of the population).

The mobile market grew from 11.1 million to 13.1 million SIM cards between 2014 and 2015, an increase of 19%, and the mobile market penetration rate increased by 12 percentage points to reach 159%. The market increase was driven by competition, with abundance offers in data taking over from prepaid voice offers in 2015, together with the regular growth in broadband mobile services.

The competitive environment

Mobile market share



Source: TRC, Q3 2015.

Jordan has three major mobile operators. Orange remained in second place in the mobile market, with an increase in its market share in 2015 of 1.9 percentage points to 33.3% (source: GSMA). Intense competition continued to be the hallmark of 2015, buoyed by the launch of 4G offers from Orange and Zain during the first half of the year, and an abundance of offers for the mass market and companies.

Orange Jordan's activities

Operating indicators

	2015	2014	2013
Number of customers (in thousands)	**3,654**	**3,776**	**3,880**
Fixed-lines	430	433	433
Internet lines	214	206	191
Mobile customers	3,010	3,137	3,256

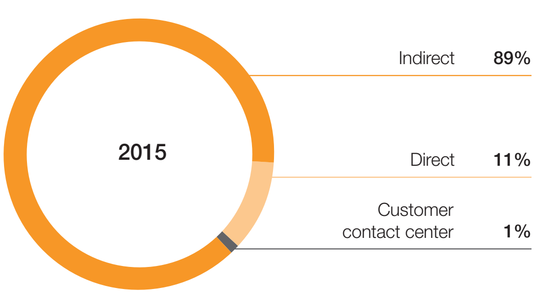
Source: Orange Jordan.

Orange had 3.7 million customers at end-2015, a decrease of 3.2% compared with 2014. The increase in the mobile base comes primarily from *Internet Everywhere* offers dedicated to data, enhanced by 4G solutions, and abundance offers responding to customers' expectations.

The number of Orange's fixed Internet customers grew by 3.7% in 2015. Orange continued to roll out a full range of Internet services based on ADSL and FTTx technologies (vDSL and FTTH), and on the implementation of abundance offers to better serve customers.

Distribution

Segmentation of distribution channels (as a % of customer acquisitions)



Source: Orange Jordan.

Indirect distribution is Orange Jordan's main distribution network, due to the fact that prepaid card sales represent the majority of its sales. Orange stores and customer contact centers make all sales regarding fixed-line services, ADSL, mobile and the Enterprise segment. Orange Jordan launched an online sales service at the end of 2014.

2016 Outlook

Competition on the market is expected to remain intense in 2016, when all operators will have a national 4G network. However, the market is expected to focus more on abundance offers for data and voice than on price reductions. The main drivers of growth will be the Internet, fixed-line and especially mobile broadband. As a leader in the Internet market, Orange Jordan is well positioned to benefit from this development. The main objectives are to slow the decline of traditional revenue by developing new revenue sources:

- developing network coverage and service quality to improve the customer experience;
- transforming the customer base to higher revenue segments (ARPU) through targeted offers;
- increasing the share of ICT revenues in the Enterprise segment.

3.1.6.5 Botswana

The mobile market is still developing, despite a high penetration rate that reached 168% of the population in March 2015 (source: BOCRA 2015 annual report). The market is composed of four main players: Botswana Telecommunications Corporation Limitel (BTCL), Mascom Wireless Botswana (Mascom), Orange Botswana (Orange) and Botswana Fibre Networks (BoFiNet), which provides wholesale services.

In 2015, Orange cemented its number two ranking in the mobile market, with almost 947,000 active customers at year-end (source: Orange Botswana) and a market share of 32%, which remained constant since 2014 (source: BOCRA 2015 annual report). 2015 also saw the launch of new innovative services such as 4G.

On the fixed broadband market, a new operator, Konnecta, is competing with BTCL.

Orange was the first mobile operator to launch 4G services in 2015. Mobile voice and SMS represent 59% of its revenues, and data services represent 19% of total revenues in 2015. Furthermore, Orange continued to develop Orange Money and ranked number one with a 65% market share of mobile payments (source: BOCRA 2015 annual report). The Orange mobile network covers nearly the entire population of Botswana, including 53% for 3G services.

Orange has a distribution network of 17 stores around the country, plus an indirect distribution network made up of retail chains and wholesalers.

Orange Botswana's priorities for 2016 will be as follows:

- continued growth in the number of customers, fixed-line broadband offers and revenues in the Enterprise segment;
- growth in mobile data usages and content;
- continued excellence in the customer experience.

3.1.6.6 Cameroon

The mobile market has a penetration rate of 93%, compared to 72% in 2014 (source: GSMA). This change reflects in particular the development of the multi-SIM phenomenon, following the arrival of a third GSM operator at the end of 2014 and the expansion of geographic coverage by the operators.

In 2015, the competition mainly focused on data formulas, through an accelerating rollout of mobile coverage, the enrichment of the offers and the development of promotions and bonuses, as well as price cuts.

Orange Cameroun had 7.1 million active customers at the end of 2015, more than 98% of them prepaid customers, up sharply compared with 2014 (+14%).

For Orange Cameroun, 2015 was marked by the renewal of its operating license for a duration of 15 years, allowing it to offer 3G and 4G services. In March 2015, Orange Cameroun launched its 3G network, relying on its broad network coverage (more than 50% of sites). Revenue from the data business continued to grow in the wake of this launch, reaching about 7% of total revenue at the end of 2015 (versus 3% in 2014). Furthermore, Orange Cameroun consolidated its leading position in mobile payments thanks to the numerous innovations of its Orange Money service.

In 2016, the competitive environment is expected to expand, with the expected launch by the incumbent operator CAMTEL of its GSM network, bringing the number of GSM operators in the market to four.

3.1.6.7 Guinea Bissau

The mobile market in Guinea Bissau, mainly focused on voice applications, continues to grow with a penetration rate of approximately 74% (source: GSMA February 2015) in 2015. Orange is the most recent entrant in a market shared by two operators. With 558,375 active mobile customers at end-2015, (+8.8% compared with 2014) and a market share of 51.2% Orange Bissau reclaimed the leadership position in volume market share at the end of December 2015, and consolidated its leading position in the value market (source: Orange). Orange Bissau launched the first 3G network in May 2015, and was also the first operator to launch 4G at the end of 2015.

Orange Bissau is the Internet market leader and had 1,350 active Wimax broadband Internet customers at the end of 2015. However, the development of the Internet is held back by the lack of electrical energy in the country.

In 2016, Orange will pursue the following objectives to maintain its growth:

- covering 90% of the population set by the specification thanks to the deployment of 30 new sites;
- the development of mobile revenue through a better marketing presence, convergent and innovative offers;
- the development of the mobile data and B2B markets by proposing competitive and innovative offers.

3.1.6.8 Guinea Conakry

Orange Guinea, the fourth company to join the telecommunications market in 2007, has been a driving force in its development and has consolidated since 2013 its leading position with a market share of 54.4% and more than 5.3 million customers at the end of 2015. Voice traffic still dominates mobile usage, but mobile Internet is growing. Orange covers the 33 prefecture capitals with 3G broadband Internet (launched in 2011) and is the only operator to cover all 304 sub-prefecture capitals with 2G. The development of mobile Internet has been possible thanks to the transmission capabilities of the connection to the ACE submarine cable. Orange Guinea is also pursuing the development of its mobile business through Orange Money, distributed through a network of 301 kiosks to more than 135,000 active customers at the end of 2015. Orange Guinea distributes its products through a direct network of 17 agencies and an indirect network made up of 185 stores. Orange is the only operator in Guinea Conakry that is ISO 9001-2008 certified and has received the Top Employer 2005 distinction in Guinea and in Africa.

3.1.6.9 Mauritius

Mauritius Telecom – Orange is the leading fixed-line (ahead of DCL) and mobile (ahead of Emtel and MTML) operator in Mauritius (source: GSMA). It offers a comprehensive range of voice and fixed, mobile and Internet data services, together with convergence packages (voice, IP and TV) through *MyT*. In 2012, Orange was the first operator to launch 4G and the Orange Money mobile payment service and launched its fiber optic network (FTTH) in 2013 with a flow rate of 10-30 Mbits/s.

The number of customers increased for all Internet (+8.0% or 183,000 broadband Internet customers), mobile (+7.2% or 892,000 customers) and fixed-line (+0.9% or 365,000 customers) segments in 2015 (source: Mauritius Telecom). This growth strengthened Mauritius Telecom – Orange's leadership position in the market. The Group enhanced its TV selection and took over the leadership in pay TV with more than 119,000 customers (+18.4%). Moreover, Orange offers Cloud solutions to companies.

The company delivers global connectivity via the Sat3/WASC/SAFE, LION and LION2, Eassy, and GIE fiber optic submarine cables. The Group also has a presence abroad through its investments in Orange Madagascar, CSL Madagascar, and its stake in TVL, the incumbent operator in Vanuatu, which was increased from 50% in 2013 to 100% in 2015.

3.1.6.10 Iraq

Iraq had a population of 35.2 million people (source: IMF, October 2015). In the third quarter of 2015, the number of customers reached 30.6 million, a mobile penetration rate of 83% (source: GSMA, December 2015). In 2011, the Orange group acquired a minority 20% stake in the Iraqi operator, Korek Telecom, which holds the national 2G and 3G mobile licenses. The economic conditions changed drastically from June 2014 with the start of the civil war in the northern and eastern parts of the country, with security problems affecting the expenditure and consumption of Iraqi citizens. However, the company continued to expand throughout the country, extending network and sales coverage, and in December 2015 it reached 7.2 million customers (vs. 6.3 million in December 2014).

3.1.6.11 Kenya

In November 2015, Orange signed a binding agreement with Helios Investment Partners for the disposal of its entire equity investment of 70% in Telkom Kenya. The completion of this transaction remains subject to the approval of the relevant authorities.

3.1.6.12 Madagascar

Madagascar's political stability was confirmed in 2015 with the municipal elections that were held in July. However, in the absence of significant progress in governance and fiscal reforms, only a few hundred million dollars in financial aid have been paid out.

At the end of 2015, the mobile penetration rate as around 22%. The number of Orange's mobile customers and its market share remained stable. Orange strengthened its leading position in the 3G and 3G+ broadband mobile Internet market, notably for businesses, thanks to the quality of the international connectivity provided by the LION cable.

On the consumer market, Orange continued in 2015 its commercial strategy based on prepaid Internet contracts at very competitive prices, combined with a smartphone offer at less than 50 euros.

In the area of Corporate Social Responsibility, Orange Madagascar continued to install solar panels in rural regions to help reduce CO_2 emissions related to the generation of electricity for its radio sites. At the end of 2015, 250 radio sites were powered directly by solar energy, out of a total of 630 sites.

Awaiting for its license renewal, Orange postponed in 2016 the launch of its 4G service in order to be able to offer a better experience to its customers.

Finally, Orange Money continued to grow in 2015, increasing its active customer base by more than 30%, which generated almost 50 million euros in transactions in December 2015, up 35% compared with 2014, at constant exchange rates (source: Orange). The Orange Money distribution network also expanded, with more than 3,000 deposit-withdrawal points in 2015.

Orange's priorities in 2016 will be:

- developing telecommunication services aimed at businesses and professionals, notably with the launch of its 4G service;
- the continued development of Orange Money;
- the improvement of its mobile network in high-demand areas;
- the strengthening of the broadband transmission network.

3.1.6.13 Mali

The mobile market slowed in 2015 to reach a market penetration rate of 126%, down 9 percentage points compared to 2014 (source: Orange Mali estimates), due to the launch of subscriber identification.

Orange, the second company to join the mobile market, is now the leader in the mobile market with a 57.9% market share (source: Orange Mali estimates). Orange's main competitor is Sotelma, the incumbent operator, owned by Maroc Télécom, which itself is held by Etisalat. The government granted a third comprehensive license to the Planor-Monaco Telecom International consortium in January 2013; the consortium will operate through the Malian company Alpha Télécommunication Mali SA (Atel-SA).

At end-2015, Orange Mali's mobile network covered about 89% of the population and 44% of the country, and had a total of 11.9 million active customers, 99.9% of them prepaid customers. The main mobile usage is voice, mobile broadband and mobile payment systems. In June 2010, Orange Mali launched the Orange Money service, which allows users to carry out financial transactions from their mobile phones. The service had nearly 3.4 million customers at the end of 2015 (versus 2.3 million at end-2014).

The broadband Internet customer base included more than 165,500 subscribers at end-2015, an increase of more than 18%.

In 2016, the main challenges for Orange Mali will be as follows:

- being the customer experience leader to then become the preferred operator in Mali;
- keeping its position as market leader in terms of volume and value;
- turning Orange Money into a financial success following on from its commercial success.

3.1.6.14 Morocco

In 2015, the telecommunications market in Morocco was marked by a significant drop of 16% in average prices for mobile services, which led to a 10% increase in average usage volume per customer (source: ANRT, 4th quarter of 2015). The main mobile usage remains voice, due to the significant decline in SMS caused by the development of OTT services. On the other hand, 2015 confirmed the market dynamic for data and value-added services, which continued to show strong growth.

Orange is present in the market through its subsidiary Médi Telecom, which markets its services under the Méditel brand. Orange increased its stake in Médi Telecom in July 2015 and now holds 49% of the shares and a majority of the seats on the Board of Directors.

Médi Telecom had a 31.9% share of the mobile market, or 1.2 percentage points more than in 2014, with 13.7 million mobile customers at end-December 2015 (source: ANRT), and covered 99% of the population. Maroc Telecom is the market leader with 18.3 million customers (42.5% market share), and Inwi is in third position with 11.0 million mobile customers. The mobile customer base is mainly made up of prepaid customers (94%).

Médi Telecom has a strong presence in the mobile Internet market with 3.69 million customers at end-December 2015 and 27.7% of the market share (source: ANRT). 3G/4G mobile Internet is the dominant Internet access mode in Morocco, accounting for 92% of the total Internet market at end-December 2015 (source: ANRT).

Médi Telecom has 420 stores and more than 50,000 resellers throughout the country to distribute its products and services.

Highlights for Médi Telecom in 2015 were:

- obtaining a 4G license and being the first operator to launch 4G services in Morocco in April, with a coverage rate of 35% of the population at end-2015;
- revitalizing the contract market in May by launching unlimited voice and SMS offers beginning at 199 dirhams (or 18.5 euros) per month with 3 Gb of data;
- launching its consumer ADSL services in October following the ANRT decisions on the rates and technical methods for unbundling the local loop and Morocco Telecom's publication of related wholesale offers;
- signing a long-term loan for 3.2 billion dirhams with a consortium of Moroccan banks in December. This new funding will allow the operator to continue to invest in broadband service, and in its strategies for digitization and customer-focused service offerings;
- at end-2015, having almost completed the renewal of its radio access network and its backhaul and IP capacities.

In 2016, Médi Telecom will focus on:

- speeding up the development of mobile data business thanks to a completely updated network;
- regionalizing the distribution and the development of digital distribution to get closer to the end-customer;
- developing ADSL and fiber offers, as well as the Enterprise market, supported by its ability to propose fixed-line broadband offers via adapted fiber and radio access.

3.1.6.15 Niger

Orange, the most recent entrant in the mobile market, has a market share of 35%, and ranks second behind Airtel and ahead of Moov and Sahelcom (source: GSMA January 2016). Its mobile customer base included 1.9 million active customers (Source: Orange). Orange Niger is the market leader in mobile broadband Internet thanks to its exclusive 3G offer. Orange Niger also ranks second behind Airtel for the coverage of its mobile network, with coverage of 80% of the population in 2015 and a network of over 515 2G sites and 151 3G sites (source: Orange Niger).

Orange Niger markets its products through a direct distribution network made up of 11 stores, supplemented by 45 distributors and 22,000 points of sale located throughout the country.

In 2016, Orange Niger aims to remain the country's leading ISP. It also aims to consolidate its position in the mobile market by reinforcing its network in the country's major cities and continuing to improve quality of service.

3.1.6.16 Central African Republic

Orange, the last of four mobile operators to enter the Central African Republic market, quickly set to work to conquer the B2B market.

Its customer base is more than 395,000 active customers, almost all of whom are prepaid customers. As the first operator to have launched 3G in the Central African Republic, followed by Telecel, Orange is the market leader in mobile broadband Internet (in 3G and in WiMAX).

Orange Centrafrique had a direct distribution network comprising 4 branches (2 in Bangui, 1 in Berberati and 1 in Bouar, the branch in Bambari was temporarily closed for safety reasons), in addition to 30 distributors and 7,200 resellers across the country.

The growth of the telecommunications market is still heavily handicapped by low purchasing power (compounded by high inflation, particularly for food products) and the lack of infrastructure, as well as repercussions of the troubles experienced by the country since 2013. The mobile penetration rate remains low, due to the very low population density, which limits network coverage (according to the IMF, the population was 4.8 million in 2015, i.e. fewer than 8 inhabitants per km²).

Nevertheless, Orange Centrafrique continues to invest in the mobile network to enhance its coverage and quality of service. It has the second most extensive network in the country, with 106 sites (63 sites in 2G only and 43 sites in 2G/3G), allowing it to offer mobile services in 51 towns.

Pour 2016, Orange Centrafrique aims to confirm its leadership in mobile data and fixed data, strengthen its position among B2B customers (military, NGOs and companies) by providing customers with the best possible experience and to be a pioneer in mobile banking.

3.1.6.17 Democratic Republic of the Congo

The Democratic Republic of the Congo has a population of 81.7 million, putting it in fourth place in Africa in terms of population (source: IMF, October 2015). However, the mobile penetration rate is only 58% (source: GSMA February 2015), much lower than in most neighboring countries.

Orange owns 100% of Orange RDC, holds a national 2G and 3G license, and boasts excellent growth potential due to the country's low mobile penetration rate.

The number of Orange RDC mobile customers was 5.3 million at the end of 2015, compared with 4.3 million at the end of 2014, an increase of 23% (source: Orange RDC).

In 2015, Orange RDC achieved revenue growth of 42%. This growth is related to the commercial success of its prepaid contract offers, *Bilengi*, and its data offers. Orange RDC finalized its new organization in 2015, with the establishment of six regional divisions primarily dedicated to customers.

In 2016, Orange RDC aims to achieve revenue growth of approximately 30%, in addition to a 46% increase in its customer base. To that end, Orange will focus on the following areas of development in 2016:

- accelerating 3G+ network coverage to strengthen the growth in data traffic, with the coverage of a 2nd major city (Kisangani) after Mbuji-Mayi in 2015;
- improving the technical quality of service and customer satisfaction (ACE program);
- improving the capillarity of the distribution and the densification of the outlets network by the regionalization of the sales activity;
- maintaining and strengthening marketing, focused on the quality and generosity of the offers;
- developing new sources of growth and opportunities concerning:
  - rural telephony: increasing network coverage in rural areas (70% of the Congolese population) with the support of technical partners, through a very ambitious program for at least 500 villages,
  - developing high speed broadband offers for large companies and flexible voice offers for small companies,
  - Orange Money, with the launch of the *Mobile Banking* service, relying on the distribution and the quality of the service,
  - wholesale traffic, by developing hubbing activities for international traffic.

3.1.6.18 Tunisia

In 2015, Orange Tunisie continued its growth dynamic started in 2014 and became a recognized operator in the telecommunications market with 4 million mobile customers (an increase of 640,000 compared to 2014). Its mobile market share also increased to 23% versus 42.5% for Ooredoo and 34.5% for Tunisie Telecom at the end of October 2015 (source: INTT).

Its share of the mobile Internet market increased to 46%, versus 31.4% for Tunisie Telecom and 22.6% for Ooredoo at the end of October 2015 (source: INTT). After five years of operation, Orange Tunisie generated positive net income for the first time.

During 2015, Orange Tunisie launched several prepaid mobile offers:

- *9alhom ossktou*, offering subscribers a bonus equal to 15 times the recharged amount on all recharges over five dinars during its launch and 16 times the amount since October 2015;
- *20/20*, which offers its subscribers a bonus equal to 20 times the recharge;
- *Edawa5*, which offers a low price-per-minute;
- and a variety of voice, SMS and data options.

At the end of December 2015, the ARPU (at 9.88 dinars) was increasing by 10% compared to 2014 and the churn rate was improving.

Orange Tunisie also revised its *Flybox* fixed-line and Internet offers, which are more generous in terms of voice and data, and extended its value-added services (*SOS Data Credit*, a new range of *SOS Voice Credit*, the *Bye Bye* service).

Moreover, Orange Tunisie has expanded its distribution network with nearly 24 directly-owned stores, 38 franchises including special areas for professional customers, 116 points of sale that have been awarded labels and more than 15,000 recharging outlets. This rollout has allowed Orange Tunisie to strengthen and consolidate its marketing strategy and to get closer to its customers.

The improvement of the customer experience remains Orange Tunisie's top priority, and is based in particular on the *Excellence* in Customer Service program, the continued improvement of customer interactions (digitization, immediate surveys) and the opening of the first Smart Store in December 2015.

As regards technical developments, 2015 saw the continuation of the plan for extending and consolidating the network, with the commissioning of 137 new radio sites, bringing the total number of optimized radio sites to 1,463 in 2015, thereby reducing the gap between Orange Tunisie and its two other competitors.

2015 was also significant for several major developments in the core network's architectures and service platforms:

- capacity extensions of the existing sites and extension of the core network in order to reach a capacity of 21.5 Gb of traffic at end-2015;
- continuing the Enterprise connectivity plan;
- continuing the fiber optic plan, connecting about a hundred sites with fiber in 2015, including 40 for LTE use.

At the level of society, Orange Tunisie's policy is part of the Orange Group's global policy, focused on the company's social responsibility, as well a policy of sponsorship and support of regions through the financing of projects such as the granting of digital tablets to the Bardo museum and the rehabilitation of schools in deprived areas, making the digital world accessible to the greatest number of people.

As part of the preparations for launching 4G in Tunisia in 2016, Orange Tunisie moved forward with the commissioning of 33 4G sites as part of the *Orange City* project.

In 2016, Orange Tunisia will pursue its growth strategy focused on developing data services through the launch of 4G, the launch of more innovative services in order to meet the needs of high-value customers and an investment plan to support growth.

3.1.7 Non-controlling equity interests

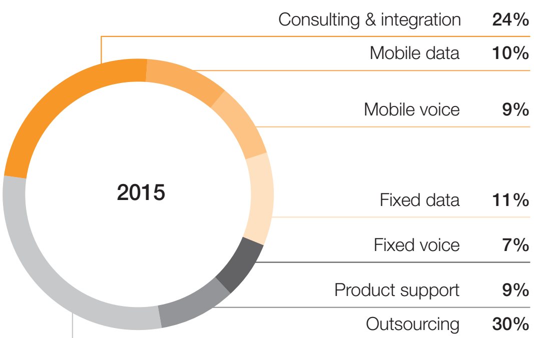
In accordance with the agreement signed in February 2015, Orange and Deutsche Telekom completed in January 2016 the sale to BT Group of 100% of EE, their joint venture in the United Kingdom, which they previously held 50/50. This agreement was approved by the Competition and Markets Authority (CMA) in the UK in January 2016.

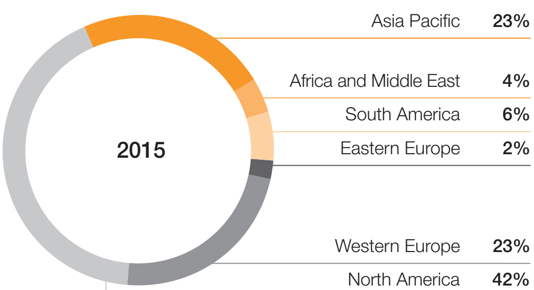
3.1.8 Enterprise

3.1.8.1 The market

Orange Business Services brings together the expertise and know-how of Equant, Orange and of its subsidiaries, and operates worldwide under the Orange brand across the whole Business communications and IT Services market. This market is part of the broader Information and Communication Technologies (ICT) sector, which includes technologies used to process and send information. Worldwide this market represented approximately 1,300 billion euros in 2015, with telecommunications accounting for slightly less than 40% of this total:

Breakdown of global ICT market in 2015, in value (%)





Source: Gartner.

Orange Business Services offers a range of services to large corporate customers, local authorities and SMEs in France, as well as to multinationals around the world, supporting their digital transformation and the implementation of their communication projects. To achieve this, and thereby become the trusted partner in the digital transformation of its customers, Orange Business Services offers a full range of services, primarily in the fixed-line communications and IT services markets.

Worldwide, the contraction in fixed-line connectivity services (voice and data), on one hand, and the sharp increase in IT services, on the other hand, led to overall market growth of 2.3%, at constant exchange rates, in 2015:

- the connectivity market continued to contract in 2015, dipping below -2%, at constant exchange rates. The decline in the legacy voice and data markets was only slightly offset by higher demand for IPVPN networks and broadband and high-capacity broadband networks, particularly Ethernet;
- the IT services market grew by over 3.6%, once again at constant exchange rates, thanks to the various consulting, integration, outsourcing and product support services.

In France, the market continued to grow in 2015 at a rate of close to 1%. The ongoing decline in the fixed-line voice market together with the erosion of the fixed-line data market, were largely offset by the growth in the IT services market:

- the enterprise network services market continued to decline, by around 3.5% in 2015. The fixed-line voice market continued to contract, due to the lower number of accesses, the erosion of prices, technological migration (SIP) and substitution by other methods of communication (mobile telephony, unified communications, email, OTT services (Over-The-Top), etc.). The data market continued to fall: growth in the broadband and high-capacity broadband markets did not offset the sharp downward trend in the legacy services market, along with the slight decline in the IPVPN networks market;
- the IT services market built on the recovery that began last year, growing by over 1.5% in 2015. This growth, which was continually revised upwards during the year by analysts and industry associations such as Syntec Numérique, reflects the improvement in the consulting, integration and outsourcing services market, support services being relatively stable.

In terms of the business market, the major trends are as follows:

- the boundaries between telecommunications operators and integrators are blurring due to the commoditization of networks and the convergence towards IP: operators are offering advanced communication services that are increasingly integrated into businesses' information systems, and are entering into direct competition with IP integrators and Internet companies. At the same time, Internet companies are enhancing their services with network solutions to take advantage of the rise in new usages such as Cloud Computing;
- confronted with new mobility-related usages within businesses (like BYOD, or *Bring Your Own Device*), both operators and integrators are updating their services line-up to meet customers' needs for administration, data security, applications, and value-added services;
- regional expansion is another growth driver in emerging countries (BT's Prosperity Plan for Asia and Latin America, Telefónica's significant expansion particularly in Brazil, Vodafone's substantial investments in America, Asia and Africa);
- lastly, companies may turn to acquisitions and partnerships to speed up their transition to new economic models, whether via acquisitions or partnerships.

3.1.8.2 The competitive environment

Orange's main competitors on the market are:

- telecommunications operators:
  - **SFR Business**, the **Numéricable-SFR** group entity operating the enterprise business. SFR Business offers a range of fixed-line, mobile and Internet solutions, and now works in tandem with Completel, since the purchase of SFR by Altice/Numericable, and also provides IT services, in particular following the purchase of Telindus France,
  - alternative local loop operators like Colt, that can target French companies as well as multinationals,
  - global telecom services operators, such as **BT Global Services**, **Verizon Entreprises**, **AT&T Business Services**, **T-Systems**, **NTT Communications** and also **Telefónica Business Solutions** (which operates in France via Telefónica Global Solutions France, its joint-venture with Bouygues Telecom), which offer global distributed services for multinational companies. In addition to their international service offers, these operators can also carry local and national calls by using the Orange network's interconnection services,
  - International carriers from emerging countries (like **Tata Communications**, **PCCW**, **SingTel** and **China Telecom**) that build hybrid solutions based on their own networks and combined with third-party operators' solutions that they manage themselves,
  - incumbent operators in some countries;
- network integrators and managed service providers with which Orange works in "coopetition" (a combination of cooperation and competition) – especially for companies developing a multi-provider approach such as **Spie Communication** and **Dimension Data**;
- players such as **IBM Global Services**, **HP Enterprise Services**, **Atos**, **Cap Gemini**, **Econocom** and also **Sopra-Steria** (whose merger is effective from end-2014), that support companies through their IT transformation projects. The main service categories in which these companies are positioned include network integration, infrastructure management, outsourcing, third-party application maintenance (TPAM), consulting and engineering;
- Internet companies or niche market specialists that offer VoIP, messaging, and Cloud Computing services: **Microsoft-Skype or Azure**, **Amazon Web Services**, **Google** or **Salesforce.com** globally, and **OVH**, particularly in France (it should be noted that OVH is in the process of buying Completel's DSL network to create a wholesale operator, **Kosc Telecom**);
- major software suppliers that offer their applications online as services, like Microsoft, Oracle, and **SAP**.

3.1.8.3 Orange Business Services activities

Orange Business Services is positioned as a reliable partner to support customers with their digital transformation in France and internationally. Orange Business Services activities focus on four key challenges for its customers:

- the need for good connectivity at the right time, whether fixed or mobile;
- evolving towards more mobile and effective working methods based on unified communication and collaboration solutions or the popularity of smartphones and tablets in the corporate world;
- the need for more flexible IT infrastructures, thanks to virtualization technologies and IT services provided upon request (as a Service);
- the use of the Internet of Things, data analytics and multi-channel contact centers to improve business performance.

Orange Business Services meets these requirements with a particularly close eye to the native security of its customers' data and information systems, while providing the best quality of service and customer experience in the market.

Operating indicators

	2015	2014	2013
France + International (number of accesses in thousands)			
Number of IP-VPN accesses	349	345	342
France (number of accesses in thousands)			
business telephone lines (PSTN)	2,961	3,161	3,355
IP-VPN accesses	*294*	*294*	*292*
XoIP	89	87	72

Source: Orange.

Key operating indicators related to business communication services

Name	Definitions	Product lines
IPVPN access (France + International)	Number of IPVPN (IP Virtual Private Network) accesses marketed by Orange Business Services in France and Internationally. These accesses allow companies to pool their applications and introduce new ways of using them (VoIP/IP Telephony).	IPVPN France, IPVPN International.
Business telephone lines (PSTN)	Access to the Switched Telephone Network (STN), from analog lines or digital lines.	Analog lines, basic access, primary accesse
Permanent access to data networks	This indicator essentially covers IPVPN and some of the XoIP offer in France: – broadband Internet accesses combined with a set of ready-to-use services (*Business Internet Office* and *Business Internet*), mainly for SMEs; – broadband Internet and VoIP accesses (with or telephone switchboard maintenance and management constraints) for businesses with independent sites; – accesses to businesses' Virtual Private IP Network in France.	*Business Internet*, *Business Internet Office*, *Business Internet* Voice, *Business Internet* Centrex, IPVPN France, Ethernet.
XoIP Offers	This indicator covers: – broadband accesses offering a Voice over IP service, with or without Centrex, for companies developing on independent sites; – managed telephony over IP solutions that use for work station networking, voice transfer and IP-VPN connectivity.	*Business Internet* Voice, *Business Internet* Centrex, *Business Talk* IP, *Business Talk* IP Centrex.

Offers

Orange Business Services offers a wide range of products and services on the French market, from the market for professionals to business accounts, as well as for multinationals operating abroad. Orange Business Services' solutions, including those that are packaged or tailor-made and using different methods such as integrated, managed or Cloud, are aimed at accompanying businesses in their digital transformation. These solutions are based around five key challenges for businesses:

- connecting people, sites and machines at the right time, using a robust and secure high-performance network;
- fostering more mobile and effective working methods between employees of the company, through unified and collaborative communication services;
- contributing to more dynamic company operations and processes via innovative, enduring solutions geared towards performance;
- offering free-flowing exchanges with business customers to ensure exemplary follow-up and support;
- working with an operator and reliable partner that is able to accompany the business in its development plans and objectives, with more flexibility thanks to Cloud infrastructures.

To meet these needs, Orange Business Services has structured its portfolio of offers around three main types of products and services:

- telephony (traditional and IP) and audio conference services;
- network offers, including certain service guarantee levels (mobile and fixed-line connectivity, data transfer, hybrid networks, fixed-line and mobile convergence offers);
- IT and integration solutions, including:
  - unified communication and collaboration services (interoperability between telephony, messaging and video conference solutions, in *triple play* or *quadruple play*),
  - IT/Cloud solutions (virtualization, systems integration, business applications, API, building blocks for connected objects, Big Data and analytics),
  - managed and integrated or Cloud security solutions covering infrastructures and users (safe work environments and infrastructure, cyber-defense, management and governance), supervised from a Cybersoc (cyber security operations center),
  - consulting and customer services (analysis of needs, solutions architecture, deployment and installation support, user training, administration of services and solutions) in various areas: switching to "all IP", adopting Machine to Machine and the Internet of Things, supervising and managing quality of service, switching to Cloud infrastructure solutions, digital transformation of businesses.

These offers are also used to develop cross-sector business solutions (finance, transport, energy, government and public sector, geolocation and fleet management).

Distribution, operations and partnerships

The market comprising professionals, small companies and SMEs is managed by a country-wide commercial branch network which, via sales personnel dedicated to a portfolio of customers and/or telephone advisers, promotes and sells solutions, updates customers on the status of their orders, and endeavors to provide top-quality service.

In the large corporate accounts market, Orange Business Services canvasses, advises and supports its customers by providing a range of solutions and expertise to assist them in their development in France and worldwide. Dedicated sales teams work in close collaboration with customers in pre-sales, during the sales process and after-sales, to ensure Orange Business Services represents a reliable partner in their digital transformation. They also promote partnership-based approaches. Lastly, companies can manage their contracts and place orders in real time using the Orange website.

Orange Business Services also relies on international partners to supplement its offer and geographical coverage in areas where its customers operate and where its presence does not offer a comprehensive solution. Orange Business Services is working to build this type of partnership in the most developed markets, preferably with the leading operator or its direct competitor, like NTT Communications in Japan or AT&T in the United States.

The Customer Service & Operations Division (CSO) is responsible for the production and maintenance of solutions worldwide. Backed by its geographical reach, the CSO supports customers in managing the rollout of their network and IT projects and in the daily operation of their services, including on-site call-outs. In some countries, CSO uses local partners for local rollouts and to supply equipment. CSO structures its operations using standardized processes and tools in order to monitor and support its customers round the clock: two Customer Service Units (CSU) for French customers, and five Major Service Centers (MSC) located in India, Egypt, Brazil, Mauritius and France serving international customers. This system, together with network redundancy, ensures service continuity for customers, especially in the case of exceptional events (natural disasters, political events, or a problem with submarine cables).

Orange Business Services works in close cooperation and bilaterally with major technology players, such as Cisco, Microsoft, Alcatel-Lucent, EMC, Avaya, Juniper, Polycom, Netapp, VMWare and Genesys, or with members of the mobile industry, such as Samsung, Apple and Blackberry. Orange Business Services also forms partnerships with service companies, such as Akamai, GFI or Accenture, to develop a joint sales approach and offer innovative solutions to its customers. 2015 saw the development of partnerships with French digital services companies such as Altran, CGI, Sopra-Steria and Proservia and IT integrators such as TechMahindra, Infosys and Wipro. Also of note was the strengthening of the technology partnership with Huawei in the Cloud and Big Data spheres, and the Dell-EMC merger, the prelude to a broader partnership in Cloud Computing.

2016 Outlook

2015 saw corporate strategy being identified as one of the five drivers of the new strategic plan *Essentials2020*, with the goal of raising the share of IT services in the OBS revenue mix by 10 points between 2014 and 2020. In 2016, OBS will:

- accelerate the development of its international business activities, primarily through its subsidiaries *Orange Application for Business*, *Orange Cloud for Business* and *Orange Cyberdéfense*;
- innovate in the sphere of the Internet of Things by rounding off its *Datavenue* solution;
- reaffirm its Cloud strategy;
- build infrastructure capable of providing on-demand and scalable network functions;
- build on the success achieved by the workspace and unified communications services;
- adapt the customer experience to make it simpler, more digital and efficient.

3.1.9 International Carriers & Shared Services

3.1.9.1 International Carriers

The market

The global international voice market was estimated at 569 billion minutes in 2014. Its growth is being driven by the economic development of areas with high geographical density (South-East Asia, China and India) as well as the development of mobile telephony (in particular in Africa), and the development of VoIP.

The wholesale of voice and data traffic as well as the provision of transmission means accounted for approximately 65% of the global international voice market in 2013 and was estimated at 354 billion minutes (source: Telegeography 2015).

There were over 1,140 operators in the mobile market in 237 countries (source: GSM Association), including 480 commercially operating 4G/LTE networks in 157 countries (source: GSA January 2016).

The competitive environment

Wholesale operators can be divided into three types – global wholesalers, multinational retail operators and regional or specialist players:

- global wholesalers have the critical mass needed to obtain the most competitive rates and to pass them on to their customers: TATA, BICS and iBasis are the main global wholesalers;
- multinational retail operators aim to optimize their end-customers' traffic and generate revenues and earnings in addition to those from their retail traffic. Orange, Vodafone, Telefónica, Deutsche Telekom and Telia Sonera are among the main ones;
- lastly, regional and specialist players that focus on a particular geographical area or offer voice or data services, for which they generally offer competitive rates. These primarily include Interoute, Primus, Citic, and Calltrade.

The wholesale market's customer base comprises voice market specialists (call-shop, prepaid cards), domestic retail carriers (including MVNOs), and Internet service providers. International carriers also sell wholesale traffic to each other.

International Carriers' activity

Orange's International Carriers activity is based on a major long-distance network infrastructure and offers a broad range of solutions on the international market.

Its presence in both the retail and wholesale markets means it can develop wholesale solutions that are particularly well adapted to the needs of the retail operators. Orange has more than 1,000 customers, which include fixed-line and mobile operators and Internet access, content and OTT providers.

The Orange group is unique in that it is very involved in the design, construction and operation of submarine cables. With its ownership or co-ownership of several submarine cable systems, the Group ranks among the world's largest owners of submarine lines. This has enabled it to satisfy the increase in transatlantic traffic.

The Group's wholesale activity counts:

- a seamless global network and an IPX protocol network supporting voice and data with presence points around the world;
- a global network of dedicated IP routes with end users in more than 220 countries, connections to more than 200 Internet service providers, and connectivity in over 100 countries in a single IP network hop (Autonomous System);
- 99.99% network availability, 24/7 centralized network supervision.

The volume of voice traffic in the International Carriers business grew 3.7% in 2015, and there was also a sustained increase in data traffic.

Offers

Voice Services

Orange's voice network has switched or all-IP routes to 400 operators, coverage in more than 1,000 destinations, and 24/7 technical support.

Services to Mobile Operators

Orange helps 170 mobile operators worldwide by providing interconnection, roaming, SS7 signaling and Diameter services, together with value-added services and GRX/IPX transport. Orange also supplies Roaming Hub, 3G/4G voice and SMS Hub solutions and operates voice/data roaming.

Orange's International Carriers Division provided 4G roaming connectivity, on IPX, to more than 250 operators at end-2015 and continues to expand its coverage. This offer allows mobile operators to provide their customers with a 4G roaming service.

Orange is involved in the development of GSMA standards with the *Open Connectivity* offer. It has expanded its LTE connectivity directly and via peering agreements. The International Carriers Division provides secure OTA (*Over the Air*) mobile management and A2P (application to person) messaging solutions.

Internet and Transmission Services

Orange's adjustable solutions meet the specific needs of Internet service providers and content providers. The offer includes a wide range of connection options in Europe, America and Asia. The Group's services were enhanced in 2012 with the commissioning of the LION2 submarine cable (crossing the Indian Ocean) and the ACE cable.

In July 2014, Orange opened the first very high-capacity IP point of presence (PoP) in West Africa. This new service located in Abidjan (Ivory Coast) offers better Internet connectivity in the region by providing faster connection speeds and enhanced security. To provide customers with enhanced security, the Transit Internet offer has optional protection against denial of service attacks (*OTI DDOS protection*).

Convergence Services

Orange provides IPX solutions through its *Multiservice IP eXchange* offer, which gives operators *à la carte* access to voice and mobile data services over a single connection. It can also improve quality of service and network costs efficiency.

Anti-fraud Services

The *@first* (*anti-fraud interconnect roaming and security of transactions*) offer is a comprehensive anti-fraud system, which protects traffic and interconnection revenues. With the by-pass anti-fraud services and the revenue assurance services, this offer improves quality of service and secures financial transactions. A new by-pass fraud detection service has been included in the @first offer since end-2015: it is a unique profiling solution built on automatic learning of fraudulent behavior. This offer is primarily designed to combat voice fraud and SMS fraud in addition to the SMS Control solution.

Orange Marine

Orange Marine is a major player for laying and maintaining fiber optic submarine cables. With the commissioning of its new vessel, the *Pierre de Fermat*, in November 2014, Orange Marine now has a fleet of six cable-laying vessels. It is thus able to supply all laying, landing end, and maintenance services for cables.

3.1.9.2 Shared Services

Orange continues to develop new growth activities, related to its core business line, that add value, in the fields of content distribution, audience monetization and health.

Content rights

Orange's content strategy is primarily based on developing partnerships with rights holders and service publishers. Orange is mainly focused on its role of aggregating and distributing content to offer improved services to its customers.

The Group is developing new services in France for its customers with a focus on multi-screen usage, interactivity and on-demand programs. In 2014, Orange launched its *Polaris* project, which offers a new interface and unified services on all screens, in a clear and intuitive universe. It was rolled out on TV decoders from November 2014 and was broadly complete across all ADSL and fiber TV decoders at end-2015.

This strategy is also deployed in other European countries such as Poland, Spain, Romania, Belgium, Slovakia and in the MEA area in Mauritius, Senegal and Ivory Coast.

In the publishing sphere, Orange is focusing on video on demand (VOD). In France, since 2014 the service has offered, in addition to VOD rental, permanent video download program functionality (EST). Orange is the only French player to have signed agreements with all US studios and can thus offer EST early video releases provided by the studios.

Orange also continues to develop its OCS (Orange Cinema Series) premium service, which is available on TV and on demand across all screens and available from most distributors in France.

For music, Orange continues to innovate in the music streaming segment, in partnership with Deezer since 2010 and through the roll-out of its Orange Radio service. The year 2014 saw significant growth in the number of Deezer subscribers and users. The Deezer music streaming service is now available in four European countries (France, United Kingdom, Romania and Spain) and in two African countries (Mauritius and Ivory Coast) and the Deezer Family offer exclusively with Orange was launched in France in 2015. The Orange Radio service has been rolled out in seven Group countries, including in France on Orange's boxTV.

In the highly innovative gaming sector, Orange plays the critical role of technical, communication and distribution partner for the leading publishers (Activision, EA, Ubisoft, Disney, Gameloft, Focus), across all screens. Listening closely to its customers, Orange develops differentiated and tailored offers: on mobile with the success of the unlimited contract and *Freemium* games in Europe and with sustained growth in Africa; on PC with quality, easy-access games; on TV streaming for all players in the family. Over 200 games are now available on an unlimited basis as part of the *Pass Famille* offer. New publishers are signing up to the catalog with games like *Skylanders*, *Sonic* and *Rayman*. The improved video quality and the expanded range of game controllers (Gamer, mobile app) create an incomparable gameplay experience. For the fourth year running, Orange presented these innovations at *Paris Games Week* and also signed partnerships in the field of eSport. In sports, the Group bought rights where necessary, such as in Spain: Orange Espagne thus launched a TV service for football, after having expanded its TV programming with La Liga, Copa del Rey and Champions League rights for the 2015/2016 season.

Lastly, the content services helped to promote 4G offers and value-added Internet access offers.

Viaccess Orca

Viaccess Orca, a subsidiary of Orange, designs and markets innovative solutions for distributors of digital content (pay TV, video on demand) enabling them to monetize premium content and the user experience in a multi-network and multi-screen environment. Its portfolio includes the protection of content rights, service platforms, and user commitment management solutions (introductory and recommended content solutions).

Health

An aging population, an increase in the number of people losing their independence and the number of patients suffering from chronic illnesses, coupled with a decrease in the number of doctors and medical desertification in rural areas make it all the more necessary for health professionals to turn to information and communication technologies. They help increase the efficiency of health professionals, reduce costs, improve illness management and strengthen the relationship between doctor and patient. Digital services also provide secure data access and transmission. Orange was the first telecommunications operator in France to be approved as a personal health data host.

Orange Healthcare, the Healthcare Division of Orange Business Services, draws on its know-how to develop its services, primarily in France, in five strategic areas, by:

- facilitating the care pathway through the *Connected Hospital*, *Flexible Healthcare Computing* and *Shared Medical Imaging systems*, that allow hospitals, clinics and doctors' offices to share vital patient information. Thanks to these services, healthcare establishments can better coordinate their activities, collaborate more efficiently, and transfer data seamlessly;
- supporting the digital transformation of healthcare industries (*Pharma*, *MedTech*), through for example the tele-monitoring of patients with diabetes or through tele-observation to treat patients suffering from nocturnal respiratory disorders, with the Connected Health Center solution;
- hosting and adding value to healthcare data (*Healthcare Big Data*) by working with all healthcare professionals to use the data while ensuring confidentiality, in particular in connection with a *think tank* dedicated to healthcare big data, the Healthcare Data Institute;
- reducing the resort to the healthcare system by improving prevention, via permanently accessible IT tools;
- go along with the population ageing in the Silver Economy sphere through pilot home care projects in regions that have partnered with mutual or other insurance companies.

3.2 Network and real estate

3.2.1 Network

3.2.1.1 Overview

At the end of 2015, Orange operated networks in almost 30 countries to serve its customers in the consumer market and in approximately 200 countries or territories to serve its business customers. These networks enable Orange to provide its customers with ever greater and enhanced connectivity wherever it operates.

In order to provide this enhanced connectivity, investment in networks is designed to improve the Orange networks in a number of respects:

- development of high-speed broadband, increased data transfer volumes and reduced connection latency;
- implementation of the program to switch all services over to the IP infrastructure ("all IP" program);
- preparation of the gradual visualization of network control functions ("programmability");
- automation of network operation and implementation of mechanisms to personalize the quality of service provided to each customer in line with his or her expectations.

The network architecture is broken down into:

- access networks (fixed or mobile);
- national and international transmission networks;
- IP transport networks;
- service control networks.

3.2.1.2 Fixed access networks

Analog access and ADSL broadband access

Orange is a copper access network operator in France, Poland and various countries in Africa (Ivory Coast, Senegal, Mauritius and Jordan).

Analog voice access services are provided to more than 10 million customers in these countries.

Broadband ADSL access (for voice applications, Internet access and television) is available:

- in France and in Poland with cover approaching 100% on the incumbent local loop;
- in MEA countries where Orange is the operator on the copper local loop;
- in other countries (for example Egypt, Spain and Slovakia), using the local loop of the incumbent operators, whether unbundled or via bitstream-type offers.

FTTH very high broadband access

FTTH fiber optic access can extend the available broadband ADSL service offer to include upstream and downstream high-capacity bandwidth (of 100 Mbits/s and more), with improved response time.

In France, Orange has for several years been deploying point-to-multipoint FTTH architecture that uses GPON technology, which can pool several very high broadband accesses on a single fiber without affecting each access point's capacity for increasing speed.

FTTH roll-out started in 2007 in several major French cities (Paris and the Hauts-de-Seine, Lille, Lyon, Marseille, Poitiers, Toulouse). It was then expanded to other large cities. During the years 2011 and 2012, Orange entered into sharing arrangements with other telecoms operators to speed fiber optic rollout. At end-2015, Orange's fiber had been rolled out to all regions of metropolitan France covering 73 departments and 530 municipalities including close to 400 municipalities in lower density areas, bringing connectivity to almost 5.1 million households.

In Spain, following the integration of Jazztel, the FTTH network offered connectivity to over 6.8 million households. A FTTH fiber network was also rolled out in Slovakia, with connectivity offered to over 342,000 households at end-2015. The FTTH roll-out also began in Poland, with connectivity offered to over 717,000 households at end-2015.

Fixed Radio Access

In a number of different countries, fixed-line services are available through UMTS, Wimax (Romania and Africa), and CDMA (Poland and Senegal) radio access.

3.2.1.3 Broadband mobile access networks

The GSM (2G), UMTS (3G) and LTE (4G) access networks support faster data and voice communication services of up to several Mbits/s that can be used to send and receive large files (audio, photo and video).

2015 was marked by:

- the continued roll-out of 4G/4G+ networks in Europe, by increasing the coverage of the population and speeds in countries where this service has already been launched. For example, in autumn 2015 Orange Espagne launched LTE-Advanced, offering speeds of up to 336 Mbits/s;
- the first 4G network roll-outs in the MEA area, in Jordan, Morocco, Botswana and Mauritius;
- the start of the roll-out of a radio network for the Internet of Things, using the *LoRa* (Long Range) technology, in 17 urban areas in France.

3.2.1.4 Transmission networks

Domestic Networks

This infrastructure is primarily made up of fiber optic, but it also contains microwave links, especially for alternative or purely mobile networks in MEA countries.

Optical links offer a bandwidth of up to 100 Gbits/s per wavelength, and Dense Wavelength Division Multiplexing technology (DWDM) makes it possible to have 80 wavelengths per fiber. Orange is one of the world leaders in the use of advanced optical functions in order to have a more flexible transmission network. For example, the first of its kind worldwide, it deployed a 400 Gbits/s per wavelength optical link between Paris and Lyon in 2013.

Furthermore, Orange offers direct connections by fiber optic to business customers, providing them with very high bandwidth services.

WidE Long-distance Domestic Optical Network (WELDON) in France

Rollout of the WELDON network (*WidE Long distance Domestic Optical Network*) began in April 2012 and aims to upgrade the entire existing long-distance network, while extending its scope to serve Frankfurt, London, Barcelona and Madrid, submarine cable stations, and other areas neighboring France as needed in future.

WELDON uses the latest WDM technology and offers enhanced connectivity at speeds of at least 100 Gbits/s per wavelength and up to 88 wavelengths per cable.

International Transmission Network

This international network is based on two networks connected to the WELDON network: the North-American backbone served by the two arms of the TAT-14 transatlantic cable system and the Asian backbone in Singapore served by the SEA-ME-WE3 and SEA-ME-WE4 submarine cables.

Satellites

Satellite communications are used by Orange to support global network connections for the French overseas territories, IP or voice connectivity with other carriers, and VSAT (*Very Small Aperture Terminal*) services for Orange Business Services terrestrial or maritime business customers. To provide those services, Orange purchases space segment from satellite operators (such as Eutelsat, Intelsat, SES and Arabsat).

Submarine Cables

In order to accommodate the increase in international telecommunications traffic, Orange has invested in a number of submarine cables through:

- participation in a consortium to build a cable that Orange will co-own;
- purchase of usage rights or transmission capacity leasing on other cables.

As with terrestrial networks, higher speeds systems on submarine cables are being implemented and 40 Gbits/s then 100 Gbit/s systems are already operational on several cables within the Orange group.

Cable name	Start – End	Number of landing stations	Number of countries	Kilometers	Commissioned	Last upgrade
TAT-14	United States – Europe	7	6	15,400	July 2001	2013
SAT3-WASC-SAFE	Portugal – Malaysia	17	15	27,850	Apr. 2002	2014
SEA-ME-WE3	Germany – Japan/Australia	39	33	39,000	August 2009	2015
SEA-ME-WE4	France – Singapore	15	14	19,000	Dec. 2005	2015
SEA-ME-WE5	France – Singapore	18*	17	20,000	Nov. 2016	
Americas-II	United States – Brazil	11	9	8,300	July 2000	2015
ECFS	Tortola – Trinidad & Tobago	14	10	1,600	July 2005	2015
LION	Mauritius – Madagascar	3	3	1,050	Nov. 2009	2015
LION2	LION extension to Mayotte and Kenya	2	2	2,700	Apr. 2012	2015
CBUS	United States – United Kingdom	3	2	3,200	Sept. 2009	2015
IMEWE	India – France	10	8	12,000	Dec. 2010	2012
ACE (phase 1)	France – Gabon/Sao Tomé	16	18	11,500	Dec. 2012	
(phase 2)	ACE extension to South Africa	4	4	5,500	2017	
EASSy	South Africa – Sudan	9	9	10,500	July 2010	2014

Europe-Asia

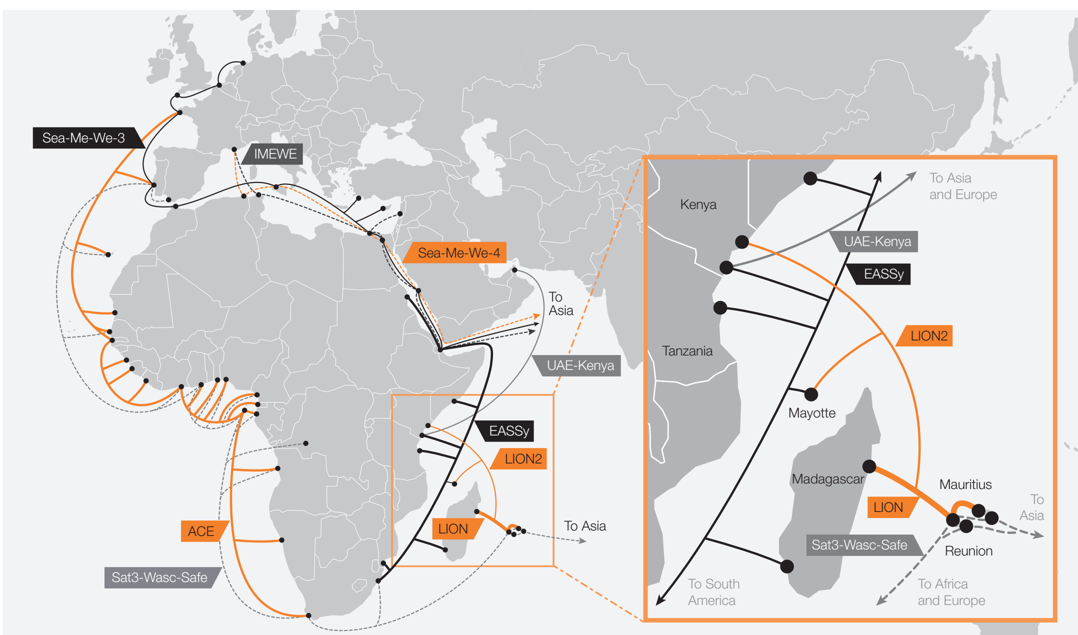
The migration to 100 Gbits/s technology on the SEA-ME-WE3 and SEA-ME-WE4 cables completed in 2015 enables Orange to support growth in traffic on the Europe-Asia route.

In the longer term, Orange is participating in SEA-ME-WE5, a cable linking Singapore to Europe, with connectivity towards the Indian Ocean, which is scheduled to become operational at the end of 2016. Also built using 100 Gbits/s technology, it will significantly increase Orange's capacity on the Asia-Europe route and will provide new connectivity towards the Indian Ocean via Djibouti to improve speeds to Reunion and Mayotte, while preparing the switch from the older SEA-MEA-WEA3 and SEA-MEA-WE4.

West Africa

Working as part of a consortium, Orange commissioned the first phase of the ACE (Africa Coast to Europe) cable in December 2012. Around 17,000 kilometers long, its potential capacity will reach 5.12 Tbits/s thanks to the use of 40 Gbits/s transmission technology. ACE currently extends from France to Gabon and Sao Tomé-et-Principe. The extension work to South Africa started at the end of 2015 and is scheduled to become operational in 2017.

At the same time, in order to guarantee the security of its traffic by diversifying its routes, Orange's capacity on the SA3T3-WASC-SAFE cable was increased in 2014.



Indian Ocean

Orange is a co-owner of the LION (*Lower Indian Ocean Network*) cables connecting Madagascar to the global broadband network via Reunion and Mauritius, and LION2, the LION extension to Kenya serving Mayotte. To meet the sustained growth in traffic, the Group has repeatedly invested in a capacity upgrade of both LION and LION2, the most recent of which was operational at the end of 2015.

Atlantic Ocean

Orange is also active in the Caribbean where it has capacity on three major cables: Americas-II, ECFS, and CBUS. The Group took part in capacity increases on these three cables to support the surge in broadband use in France's overseas departments. The additional capacity was delivered in 2015.

3.2.1.5 IP transport networks

National IP networks

In each country in which it provides consumer services, Orange operates a national IP network, supporting voice and data traffic, for fixed-line, mobile, enterprise and wholesale services.

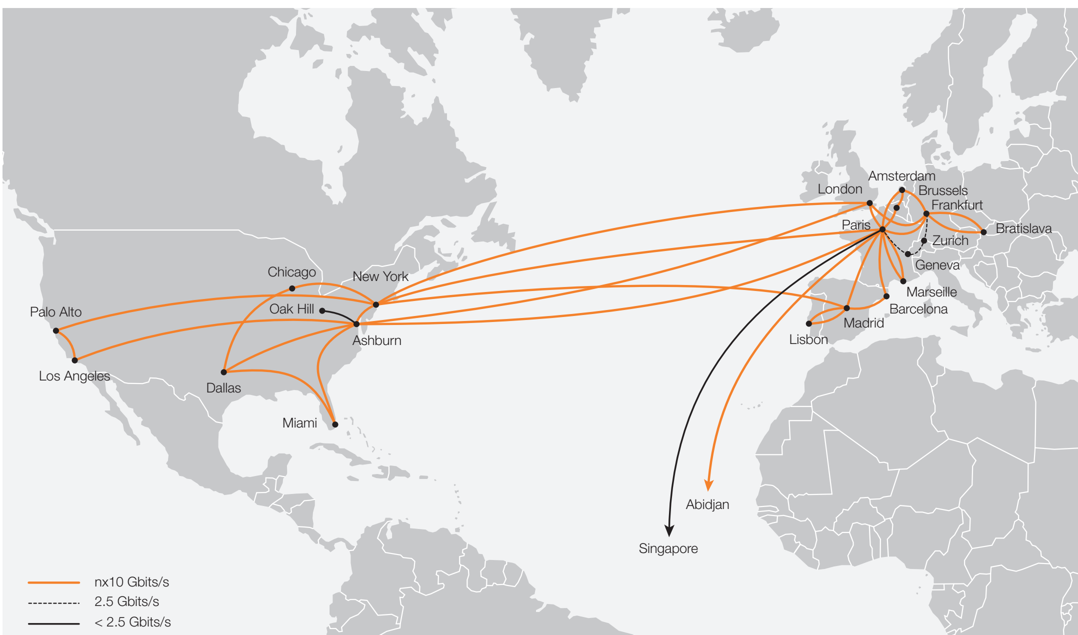
The International IP Network

Orange international IP Transit network, known as Open Transit Internet (OTI), aims to provide global Internet connectivity to Group subsidiaries' domestic IP networks, operator customers, Internet service providers (ISP) and content providers. It is based on the latest IP transmission and switching technologies.

As of end-2015, the OTI connected 23 cities (12 in Europe, 2 in Asia, 8 in North America and 1 in Africa) through broadband connections at speeds of 155 Mbits/s to 100 Gbits/s, with several hundred Gbits/s of traffic at peak times. Traffic hit 3.7 Tbits at end-2015.

The *Multiservice IP eXchange*

The IMN network (Multiservice IP Network) is a dedicated network, using the IPXGSMA IR.34 standard, tasked with transporting sensitive and high value-added data of mobile operators as well as transporting Orange's International VoIP traffic.



3.2.1.6 Service support networks and network control layer

The national service control networks

Fixed-line voice network

In the countries in which it has fixed-line operations, Orange operates a switched telephone network (STN) to deliver analog voice and ISDN services. These networks are continually being optimized because of declining usage.

Orange also rolled out fixed-line VoIP networks using IMS technology (IP multimedia subsystem) in many countries for residential and enterprise uses.

Mobile voice network

Until 2015, all mobile voice traffic was managed in switch mode by the mobile network in each country. In 2015, Orange rolled out mobile IMS infrastructure in Europe to offer VoLTE services (VoIP over LTE) and WiFi calling (mobile Voice over WiFi). The first commercial application of this technology was in Romania with the launch of VoLTE in mid-September 2015. Other commercial launches are scheduled for 2016.

The International Voice Network

Voice network

Orange has three international switching nodes in France (CTI 4G) to manage traffic to and from France in the fixed-line and mobile markets (TDM) for consumers, businesses and operators, and to centralize the transfer of international traffic for its subsidiaries. These exchanges have developed into hybrid NGN nodes to carry Voice over IP (VoIP) traffic. The architecture of the international voice network underwent a major change in 2013 with the installation of four SBC softswitches (*session border controllers*) with routing functionality dedicated to Voice over IP (VoIP). In December 2015, over 60% of VoIP traffic was fully supported by this new infrastructure. The CTI4G will remain in place to manage the decline in TDM.

Orange has two softswitches in the United States and a media gateway in Hong Kong to manage in TDM or VoIP mode customers and operators from the Americas and Asia.

Signaling Network

Signaling system 7 (SS7) on the international network is provided by two *Signal Transfer Points* (STP), which support the signaling associated with voice traffic, roaming and SMS of 2G and 3G mobile operators. A growing number of links serving roaming and SMS customers are supported by SIGTRAN signaling over IP, which at the end of 2015 accounted for 85% of SS7 traffic.

With the arrival of 4G (LTE) networks, the signaling used for international roaming is supported by IP (*Diameter-type routers*). Two DRF (*Diameter Router Function*) have been added to the international network for the roaming traffic of Orange subsidiaries and non-Group customers.

Several centralized platforms have been rolled out on the international transit points to provide value-added services to mobile operators.

3.2.1.7 Networks dedicated to business services

X.25 networks

X.25 was taken off the market in mid-2010 and the technical aspects of the service were discontinued in June 2012.

However, X.25 still serves as a connection network in France and its overseas territories for several thousand payment points, connected with "intelligent network" services. The reintegration of this "intelligent network" function into an IP network was completed in 2015 and the X.25 network will be finally switched off in spring 2016.

Frame Relay/ATM Networks

In France, the Frame Relay/ATM network is an access network used to support both business (particularly through the TDSL aggregation offers) and a layer 3 (X.25 and IP) services. It has been deployed in around 150 points of presence in mainland France, in the five overseas departments and in two overseas territories (New Caledonia and French Polynesia).

The activity on the FR/ATM network is declining, and businesses' need for increased speed is increasingly met by the IP/MPLS services available on the "Network for Business Access to IP" (RAEI). A FR/ATM network optimization program was launched.

The Network for Business Access to IP (RAEI) in France

The main purpose of the RAEI is to connect a company's sites for internal data exchange on the Virtual Private Network (VPN) and to provide it with Internet connectivity. It also provides Voice over IP transport for companies.

It is made up of a core infrastructure of around 60 transit routers that are interconnected by multiple 10 Gbits/s links, or 100 Gbits/s links. This backbone network also provides the interconnection with the Backbone and IP Aggregation Network (RBCI) for Internet traffic and for business aggregation traffic coming from NAS and BAS.

In addition, a ring of approximately 700 PE (*Provider Edge*) routers gives companies access to xDSL and Ethernet technologies, at speeds of 75 Kbits/s to 1 Gbits/s, under standard offers. The routers are located in major cities and business areas.

This network is connected to the IP Global Network through four gateways (located in Paris, Lille and Lyon) to connect international business customers.

With the takeover of the RTGE network, the number of IP presence points increased with 200 new sites added in 2014 and 2015.

The international MPLS/IP VPN network (IP Global Network IGN and AGN access network)

Like the IP network in France (RAEI), this network is designed to supply Virtual Private Network (VPN), Internet and Voice over IP services. At the end of October 2015, the network comprised 714 points of presence (including partner MPLS networks) across 141 countries. Direct presence in the countries decreased (165 countries in 2014) as Orange is developing a partnership strategy (*Network to Network Interface* or NNI) in order to cover certain regions and countries more effectively. 41 additional countries are covered by such partnerships.

The network is made up of dozens of core network routers (P routers and similar) and several hundred access routers (PE routers) that make up multiservice platforms (Ethernet, DSL, FR/ATM). The services are offered either directly on the access routers, through the Frame Relay/ATM access network (AGN-ATM Global Network), or through partner networks under NNI agreements.

IGN+ is a program to expand the geographic coverage of the IGN network that was launched to eventually offer native IP services everywhere and thus do away with the AGN aggregation layer.

The international business voice network (NEO)

NEO is a network supplying voice services for international businesses. Based on the international MPLS IP network (IGN), this business voice network has 61 points of presence in 38 countries, and is connected to some 50 operators worldwide. It allows calls to be aggregated and terminated with these operators, for customers connected to the Orange Business Services network over IP (H323 or SIP) or TDM.

3.2.2 Real estate

At December 31, 2015, the real estate assets recorded in Orange's balance sheet had a net book value of 2.7 billion euros, compared with 2.8 billion euros in 2014.

These buildings house technical facilities, customer service centers, points of sales, offices and research and development centers.

In France, the Real Estate Division is responsible for managing all properties. It follows a policy that involves optimizing the occupation of surface within premises by constantly adapting to the changing needs expressed by the Group's various entities and business lines. It works to meet needs related to changes in the telecommunications network by making sure that the necessary sites are available for implementing new technologies. It is also involved in the deployment of new points of sale within the distribution network, in particular stores applying the new Smart Store concept.

In accordance with the principles of the *Essentials2020* plan, the Real Estate Division is actively involved in improving the workspaces of Group employees as well as in the environmental transition goals by improving the environmental quality of the building stock.

At end-2015, Orange occupied 25,387 sites (including 221 with a surface area greater than 5,000 sq.m.), covering a total area of 5.7 million sq.m. including 2.2 million sq.m. of leased space and 3.5 million sq.m. of fully-owned space. These premises consist of technical centers, most of which are fully owned (2.6 million sq.m., including 2.1 million sq.m. owned), offices, most of which are leased (2,2 million sq.m., including 1.3 million sq.m. leased), and stores, most of which are leased (81,659 sq.m., including 75,135 sq.m. leased).

In Poland, the properties held by Orange Polska at the end of 2015 represented 1.8 million sq.m. The total surface area of developed and undeveloped land represented 13.2 million sq.m.

3.3 Research and innovation

The information and communication technology (ICT) sector in recent years has gone through major changes in its value chain, significantly increasing the number of players. New economic models developed by large Web players are coming into existence, while manufacturers of consumer electronics are moving towards value-added services. In this context, innovation will be a major source of growth for Orange. In 2015, Orange continued its efforts in research and innovation and devoted 1.8% of its revenues, or 726 million euros, to it. These expenses totaled 732 million euros in 2014 and 780 million euros in 2013. These amounts include employee costs, operating costs and capital expenditure for research and innovation in new products and services.

3.3.1 Research and innovation

In order to achieve its goals in research and innovation, Orange has established a network of expertise spanning four continents.

The Orange Labs carry out the Group's technical research, design and deployment activities from their locations in eight countries around the world: France, China, Japan, Poland, Romania, Tunisia, India and Egypt. Each Orange Lab is immersed in a specific environment that enables it to anticipate and take advantage of technological breakthroughs and changes in user patterns worldwide and to facilitate partnerships, thereby accelerating the Group's capacity for innovation.

The Orange Labs network is supplemented by so-called Technocentres, located in France, Jordan and Ivory Coast. Their objective is to design and market new products and services that meet customer requirements as far as possible in all the countries where the Group is present. They are also tasked with ensuring consistent user interfaces for the Group's various products and services (design strategy).

In response to new waves of technology and helping to create the applications of the future, Orange group's research covers nine areas:

- digital personal life: designing new personal and interpersonal services to communicate, produce, manage and exchange enriched digital content;
- digital society: mapping the outline of and challenges raised by digital uses in all aspects of social life including education, health, nomadism, connected transport, civic life, industry and agriculture;
- digital emerging countries: offering accessible mass connectivity in emerging countries that is tailored to available infrastructure and local needs;
- digital enterprise: supporting the digital transformation of enterprises by putting in place more flexible, collaborative and empowering tools, organizational structures and ways of working;
- ambient connectivity: developing new communications technologies such as 5G, with as a priority the ability to define a global standard for the connectivity of the Internet of Things;
- software infrastructure: preparing a dependable software environment encompassing the hardware, platforms and virtualized and automated IT systems, for the communication, calculation and storage of information distributed across networks, data centers, boxes, and terminals;
- Internet of Things: studying the manner in which users will change the way in which they interact with services, via connected objects or their "digital avatars";
- data and knowledge: developing algorithms, technical building blocks, and platforms to ensure privacy in the spheres of Big Data and artificial intelligence;
- and trust and security: researching new user enriched architectures offering a high level of trust, assurance and protection of personal data.

3.3.2 Open innovation

Since 2013, Orange has strengthened its open innovation strategy based on sharing and collaboration. The main pillars of this approach are:

- supporting start-ups and SMEs. Orange has launched a network of start-up accelerators known as *Orange Fab* in 10 countries across 4 continents. Created in March 2013 in Silicon Valley, the *Orange Fab* program was rolled out internationally in 2014 in France, in Asia, in Japan (followed by South Korea and Taiwan), Poland, Ivory Coast, Israel and Jordan. The most recent *Orange Fab* was established in Spain in July 2015. Orange helps selected start-ups grow their businesses, and in certain countries also provides financial and logistical support. In order to foster the growth of these start-ups, Orange and Deutsche Telekom announced (in June 2014) their collaboration on their respective *Orange Fab* and hub: raum acceleration programs. This initiative was strengthened in September 2015 as a result of the alliance between Orange, Deutsche Telekom, Singtel and Telefónica. This partnership provides start-ups selected by the operators' respective programs with access to the markets in which the latter operate in Europe, Africa, Latin America, South East Asia and the Middle East, thereby contributing to the emergence of new European, and even global, leaders. The partnership with NUMA (space dedicated to innovation and digital technology, launched in Paris in 2013 with Orange as a founding member) is also part of this initiative. The Group is a also a member of two tech-industry co-working spaces, bringing together innovators and entrepreneurs (scientists, engineers, developers, ergonomics experts and designers) from a wide variety of backgrounds (start-ups, large companies, SMEs, universities);
- the Orange Developer program, through which the Group opens its service platforms to application developers to provide more innovative services to its customers. At end-2015, Orange had a catalog of over twenty Application Programming Interfaces (APIs) in self-service mode, grouped into three categories: i) APIs for identification, payment, communication and the Cloud, ii) APIs for the Internet of Things and proximity, and iii) APIs connected with the development of services in Africa and the Middle East;
- a strong involvement in the research and innovation ecosystem. Orange is a key player in research programs through various partnerships and contributes to over 80 collaborative projects, at both the French level (FUI and ANR projects, and *Future Investments* Program) and at European level (seventh European Commission Framework Program, EUREKA-CELTIC, Horizon 2020). As part of the *Future Investments* Program, the Group is a member of two Technology Research Institutes. It chairs the B-com Technology Research Institute, which works on ultra-high-speed broadband fixed-line and mobile networks and the content of the future and also contributes to the SystemX institute, which works in the area of digital systems engineering. In addition, Orange participates in ten competitiveness centers in France, set up to foster local synergies for innovative projects. Notably, it chairs the *Images et Réseaux* (Image and Networks) center, where it is the lead for the *augmented reality* plan. Lastly, Orange contributes to over nine solutions developed as part of the *La nouvelle France industrielle* (New Industrial France) program unveiled by the French government in September 2013 to accelerate research and innovation;
- a policy of strategic partnerships with universities and public laboratories in France and abroad. Thus, in France, the Group is a founding member of a series of foundations at the Institut Mines-Télécom, Supelec, Université de Cergy-Pontoise, Université de Rennes 1 and Université Joseph Fourier de Grenoble. The Orange group is also financing several Research Chairs. Lastly, Orange has an active policy of forming strategic partnerships with leading industrial players worldwide, which allows it to enhance its portfolio of products and services and open itself to new ecosystems.

3.3.3 Private Equity

Orange plays a key role in financing innovation in the IT industry, notably through investments in the following three types of vehicles:

- mono-corporate ventures (fully-owned investment companies) such as in particular:
  - Orange Digital Ventures, which is the Group's investment vehicle for young start-ups. It supplements Orange's open innovation range, particularly in the following areas: new connectivity, enterprise services (SaaS, Big Data, Security, process digitization), mobile banking & mobile payment, Internet of Things, and digital services for Africa and the Middle East,
  - french holding company Orange Technologies Investissements (OTI), initially established to monetize Orange's intellectual property in exchange for stakes in high-tech start-ups;
- multi-corporate ventures (joint investment companies), typically set up with other industrial companies but occasionally also involving financial firms. These multi-corporate ventures include:
  - three Orange Publicis Ventures funds (Growth, Global, and Early-stage) set up through a partnership with Publicis and managed by Iris Capital Management, and in which the Group purchased a 24.5% stake,
  - the Écomobilité Ventures fund set up with SNCF and Total,
  - the Technocom 2 fund, financed jointly with Alcatel-Lucent, SEB, Soitec, and France's National Seed Money Fund (*Fonds National d'Amorçage*) and managed by Innovacom Gestion,
  - the Robolution Capital fund, financed jointly by Bpifrance, the European Investment Fund, EDF and Thalès, and managed by the Orkos Capital management company;
- more traditional private equity funds attracting a wide range of investors (financial and non-financial companies as well as retail investors) and managed by independent asset management firms in Europe, the United States and Canada.

3.4 Patents and trademarks

3.4.1 Patents

At December 31, 2015, Orange had a portfolio of 6,930 patents in France and abroad (issued or filed) with the goal of protecting its innovations. In order to maximize their value, some of these patents are licensed through programs such as a program for "Turbocodes" technologies that covers 3G and 4G mobile networks, or through patent pools for patents corresponding to industry standards (MP3, MPEG Audio, DAB, DVB, W-CDMA, G729, IEEE802.11x, and ISDB-T in Japan). Value maximization also concerns software such as engineering tools for the mobile network.

221 new patents were filed in 2015. These patents mainly relate to the Orange Labs network in France.

3.4.2 The Orange brand

The Orange brand is protected in 200 countries. It is valued at 17.384 billion dollars and is ranked as 61st in the TOP 100 international brands.

Most licensees operating under the Orange brand are affiliates of the Orange group that have entered into a brand license agreement with Orange Brand Services Limited, a wholly owned subsidiary of Orange SA, and the owner of the Orange brand (see Section 7.5 *Related party transactions*).

There are however a limited number of licensees which are not Group's affiliates:

- Partner Communications Company Limited: pursuant to a brand license agreement dated September 14, 1998, the company has operated a telecommunications network under the Orange brand in Israel since 1999. In accordance with an agreement signed in June 2015, Partner Communications Company Limited gave notice on January 5, 2016 of the termination of this brand license agreement;
- Orange Dominicana: as part of the disposal of Orange Dominicana to Altice in April 2014, the Group has entered into a new licensing agreement providing for the continued use of the Orange brand in the Dominican Republic.

See Note 2 *Gains and losses on disposal and main changes in the scope of consolidation* to the consolidated financial statements.