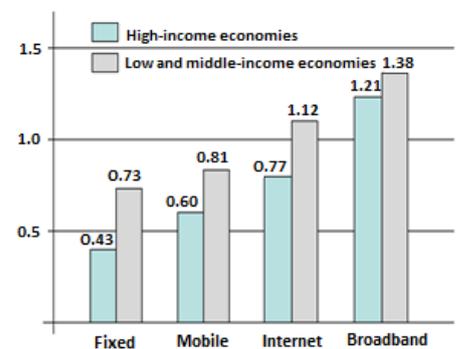# Committed to Europe

ICT key for sustainable development in Africa

By enabling information availability to consumers as well as to businesses, information and communication technology (ICT) improves economic productivity and lowers the costs of market participation.

The World Bank evidences that every 10% increase in telecom penetration yields a GDP/capita increase by 0.7-1.4% in low- and middle-income economies.[1] A recent study conducted in 3 countries where Orange operates shows that the average contribution for every 10% increase of mobile penetration to the annual GDP is estimated at 1.1% of GDP growth for Tunisia, 1.2% for Jordan, and 1.4% for Morocco.[2]

ICT also makes citizen services - such as health, education, or banking – available in remote rural areas as well as to underprivileged populations. Therefore, ICT contributes to inclusive growth and to the Sustainable Development Goals. By helping public services to be more efficient, ICT can support better, more effective government.

Growth Effects of Telecommunications

High-income economies / Low and middle-income economies

	Fixed	Mobile	Internet	Broadband
High-income economies	0.43	0.60	0.77	1.21
Low and middle-income economies	0.73	0.81	1.12	1.38

Connectivity, key for economic growth

Connectivity supports economic growth: a study conducted in Senegal showed that telecommunications directly and indirectly contributed to 13% of GDP in 2012, 23% of economic growth over 2005-2012 and 12.6% of total fiscal revenues.[3] Yet, Africa faces major connectivity challenges, regarding (a) the connection of landlocked countries to international submarine cables and (b) the extension of infrastructures to offer reliable (mobile) voice and data coverage to rural areas.

Because Africa is an important part of the Orange footprint and in order to improve access to international cables, Orange has initiated the Africa Coast to Europe (ACE) submarine cable project with a consortium of 16 operators and financial support from the World Bank and the European Investment Bank. Operating between France and Sao Tome and Principe – and soon reaching South Africa –, the ACE cable uses the most advanced high-speed broadband fiber technology and is a vector of social development and economic growth in Africa.

Access to ICT is closely related to access to energy: Orange is engaged in rural electrification projects in multiple countries providing clean (solar) and affordable electricity in order to close both the digital and energy gap. Moreover, Orange supports the digital transformation of energy distributors with smart metering solutions, unlocking the expansion of national electricity grids through resulting efficiencies.

"Access to affordable and non-discriminatory digital infrastructure and broadband connectivity remain major obstacles to development in many developing countries, notably in rural and remote areas. Its deployment requires a business friendly environment based on legal certainty and the reduction of administrative obstacles in order to boost investment." Council conclusions on Mainstreaming digital solutions and technologies in EU development policy, 28 November 2016.

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[1] Qiang and Rossotto, Information for Communications and Development, World Bank, 2009
[2] Katz, R., Callorda, F., Patel, C.: Assessment of the Economic Impact of Telecommunications in the Middle East end North Africa, December 2016, http://www.citicolumbia.org/index.php/publications/published-papers/2016-papers/
[3] R. Katz, P. Koutroumpis, Economic Impact of Telecommunications in Senegal (2010-2013)

Ecosystems and open innovation
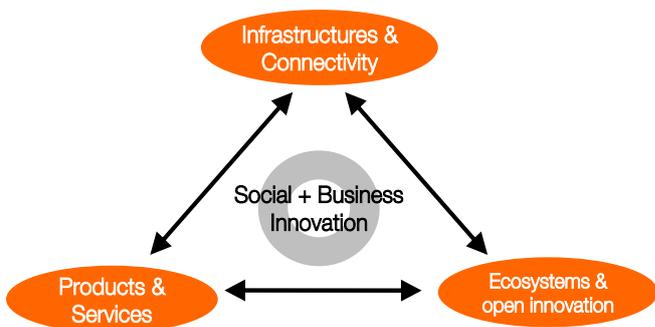
Orange places human development at the heart of its strategy and believes in win-win collaborative approaches to turn digital transformations into development opportunities. This is why ICT solutions are co-developed in partnership with local stakeholders in most Orange countries.

For a better sense of local specificities, Orange draws on its Orange Labs in Cairo and Technocentres in Abidjan (Côte d'Ivoire) and Amman (Jordan) to design and test low-price solutions tailored for local needs.

Orange also contributes to open innovation through partnerships, incubators, and its African Social Venture Prize targeting entrepreneurs in the ICT sector. Orange's "Entrepreneurs' Club" supports African entrepreneurs at each stage of their project. Orange also provides services and tools for developers: development kits, test services, and Application Programming Interfaces (APIs) such as Orange Money web payments, billing solutions, sending SMS. In addition, with open data challenges Orange promotes uses of Big data for economic and social development in emerging countries. In Senegal for example, in a research project conducted with the French Development Agency AFD, anonymised mobile data has been used for the visualisation and planning of public transport in the Dakar area.

Access to essential services

ICT is a powerful catalyst for the provision of essential services, giving citizens access to banking, health, education, or agricultural information – and more generally facilitating the interactions within government, with the private sector, and with citizens. Orange believes that e-government and e-identity solutions are a core element of Africa's digital transformation.

"Digital technologies hold great potential for enhancing the effectiveness of the public administration services and making them more citizen and business oriented […]. […] As digital technologies enhance information management and communications, they can help improve civil registries and thereby contribute to the realisation of the human right to birth registration and nationality, and subsequently facilitate the enjoyment of other rights and services." Council conclusions on Mainstreaming digital solutions and technologies in EU development policy, 28 November 2016.

Mobile money for economic inclusion

More than 29 million Orange mobile money customers in 17 countries in Africa and Middle East transfer money, make payments, or store savings in a mobile wallet on their phone. Orange Money can also be used to subscribe to low-price life or health insurance, pay bills, charge pre-paid electricity meters, or receive salaries. Moreover, mobile money is a powerful enabler for the development of vertical services.

Mobile services empowering farmers

Mobile agriculture services allow farmers to receive essential information via mobile phone, sell their crops at the best price and regain control over the value chain of their products. Buyers also benefit from better value for money. In Mali, Niger, Senegal, Côte d'Ivoire, and Botswana, Orange and its local partners offer market price information via mobile on crop and cattle markets. Virtual marketplaces connect farmers and potential customers in Madagascar, Egypt, and Botswana. In Mali Orange and the Malian Institute of Local Economy have set up a call centre to answer farmers' questions in local languages.

Better data for better treatments

Mobile phones facilitate the access to health information and allow health professionals to collect relevant data and take informed decisions. In a partnership project with UNAIDS in Côte d'Ivoire Orange has developed a platform allowing health workers to communicate with people enrolled in care by voice or text messages. Besides facilitating the interactions between patients and health professionals, the UNAIDS – Orange solution strengthens the Ivoirian sanitary information system, as better data, collected directly from patients, provide a real-time picture of the national HIV response and facilitate decision making.

Good quality education for all with mobile phones

Quality education is a huge challenge in Africa because many teachers lack formal training. Mobile phones can be used for teachers' education: Ministries of Education in Madagascar, Mali, and Niger have chosen the French Development Agency and Orange for a partnership to offer lifelong teacher training, with permanent communication between tutors and teachers and better supervision. Furthermore, Ministries of Education can use Orange Money to pay teachers' salaries and per-diems; and families can use Orange Money to pay school fees.

ICT and EU development programmes

The Council of the EU "insists on the importance of using ICT as an enabler for sustainable development, inclusive growth and inclusive societies" and asserts that "Digital by default should be a guiding principle for implementing development projects in the 21st century".[4] In its Pan-African Programme the EU asserts that "the ultimate objective is the roll-out of an inclusive, open and secured information or 'connected' society allowing everybody to reap the benefits from the use of the new emerging technologies, applications and online services."

Although recent Council conclusions call for a mainstreaming of digitalization across all policy areas, including in the EU's development policies,[5] in practice, funding is limited. Funding for ICT projects is mostly available via EU programmes for research and innovation.

This is the case of the VOICES project in Senegal, which has received FP7 EU-funding and developed a mobile data service for collecting epidemiological data and providing real-time sanitary information. Developed by the Mérieux Foundation, Orange, and the ESMT[6] in partnership with the Senegalese Ministry of Health, the service is used by the Senegalese national network of laboratories, but also to provide training and information to medical lab technicians.

ICT transforms development aid into co-operation and co-development

Citizens who have a direct access to services and information become less dependent and are empowered into taking action. By empowering stakeholders ICT opens the door to new development and co-operation approaches:

- ICT turns "beneficiaries" into "stakeholders" who can express their needs and locate the resources they can leverage, thanks to social networks, crowdfunding initiatives, etc.,
- ICT transforms the dynamics of aid distribution: vouchers for food or money can be channeled directly to individuals via their mobile phones,
- ICT enhances transparency and accountability, as individual stakeholders can input direct feedback on a development co-operation project.

The Sustainable Development Goals adopted in September 2015 include ICT both as a target and as a means of implementation.

1 NO POVERTY — access to basic services
Reducing poverty and vulnerability through access to health, insurance, education, banking, and administrative services

2 ZERO HUNGER — mobile agriculture
Independency from intermediaries through market price information, technical advice, and marketplace solutions

3 GOOD HEALTH AND WELL-BEING — e-health
More efficient health systems through systematic health/epidemiological data collection, telemedicine, and digital health insurance

4 QUALITY EDUCATION — e-education
Better training and supervision of teachers through mobile-phone based training and school management applications

5 GENDER EQUALITY — services for women
Empowering women through dedicated programs on connectivity, mobile services, and support to entrepreneurship.

7 AFFORDABLE AND CLEAN ENERGY — access to energy
Facilitating access to energy through smart metering and pre-payment solutions using Orange Money

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE — connectivity
Affordable mobile and Internet services for all, including in rural areas

17 PARTNERSHIPS FOR THE GOALS — innovation for development
Developing new tailor-made ICT solutions for developing countries through open innovation and public-private partnerships

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[4] Council conclusions on Mainstreaming digital solutions and technologies in EU development policy, 28 November 2016, §18.
[5] Ibidem, §1.
[6] African Multinational High School of Telecommunications

Recommendations for a better inclusion of ICT in development policies

1. Support ICT infrastructures and e-services for citizens
- support national governments to define fiscal and regulatory frameworks encouraging the development of a sound digital economy[7]
- include the development of national and regional ICT infrastructures in EU aid programming roadmaps, for example in National Indicative Programmes, prepared by the EU together with national governments and defining EU aid priorities for a certain budgetary period
- insist on the development of e-services for citizens such as e-government/e-identity, e-health, e-education, e-agriculture
- make sure that large projects in the field of health, governance, education, or agriculture make use of proven ICT solutions and that funding is foreseen for ICT components

2. Create a favorable ecosystem for ICT innovation in Africa – Middle East
- step up support for innovation and for scaling-up innovative ICT projects
- step up support for local entrepreneurs in the ICT sector[8]
- support ICT education and technical training to develop information and digital literacy skills[9]

3. Encourage dialogue between the private sector, local governments, and the EU Delegations
- consult the private sector at early stages of the elaboration of EU aid programming roadmaps (for example multiannual indicative programmes)
- organize joint multi-stakeholder working groups in Brussels and/or locally in the countries on agriculture, health, education… with representatives from the EU, the local institutions, and the private sector
- let the private sector attend donor coordination meetings in the different countries

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Orange in Africa: networks as key resources for development

Orange is one of the main operators worldwide in terms of turnover (€40.9bn in 2016) and provides services to 263mn customers worldwide. In Africa and Middle East Orange is present as a retail operator in 21 countries with €5.25bn of revenues in 2016, 20,000 employees, and 120mn subscribers. In 2016 Orange covers on average 85% of the population in the 21 African and Middle East countries in which Orange is a mobile operator.

In Africa, Internet and mobile telephony meet major needs for a population that mostly lives in remote rural areas, sometimes poorly equipped in infrastructure. These technologies can provide essential tools for improving people's everyday lives, in agriculture, healthcare or banking services.

In order to contribute to the economic and social development of the continent, Orange has committed to invest €1 billion per year in Africa and Middle East– mainly in new infrastructures.

For more information: www.orange.com/committedtoeurope, or follow us on Twitter: @Orange_Brussels

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[7] Council conclusions on Mainstreaming digital solutions and technologies in EU development policy, 28 November 2016, §10: "Its deployment [i.e. the deployment of digital infrastructure and broadband connectivity] requires a business friendly environment based on legal certainty and the reduction of administrative obstacles in order to boost investment."

[8] Ibidem, §13, 14.

[9] Cf. ibidem, §7, 8, 12: „Enhancing digital literacy and skills is essential to ensure that development interventions, enhanced by the use of digital technologies, generate positive outcomes for the target groups and leave no one behind".