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The Know-How Network

Digital inclusion: a societal challenge?

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Its experience of mature and emerging markets, combined with its deep understanding of the structuring changes affecting the telecoms market make it a valued partner for operators, governments and international investors.

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Summary

We live in an increasingly digital and connected world. The Internet is revolutionizing our societies and our ways, and embodies countless opportunities. There is not one area of human activity that is not or will not be profoundly transformed by digital. Yet today, more than 50% of the world's population does not have access to the Internet. When being off the Web means much more than being unable to connect to the Internet. Being off the web means being deprived of a powerful driver of individual and collective development, a priority channel for accessing education, training, employment, health, social ties, public and private services, particularly financial, mobility and even the exercise of democracy.

Contrary to a commonly-held misconception, the digital divide is not just a matter of coverage: of the 4 billion people worldwide who do not have access to the Internet, 3.2 billion are covered by networks but do not use the Internet, either because they cannot afford it or because they do not know how.

Those who fall by the digital wayside are thus not only populations in developing countries where network coverage remains immature, but indeed populations found throughout the world. In France, for instance, 13 million citizens live removed from the Internet. The dialog which Orange is engaging with its stakeholders has revealed some surprising realities. While digital precariousness often goes hand in hand with social precariousness, digital exclusion also affects the elderly, people with disabilities and young people: some social network virtuosos do not know how to use the Internet for purposes that could do a lot for their socio-professional integration!

Digital inequality has indeed become a major societal challenge for the 21st century.

Orange has made the fight against this inequality one of the main goals of its Engage2025 strategic plan. Yet telecom operators cannot take on this responsibility alone. Governments, international donor agencies, associations and other digital players must take up this challenge to make the Internet an opportunity for all.

I am pleased to share this publication with you. It provides insights on digital inclusion and offers testimonials on the support and training actions in digital usage that Orange's teams are implementing around the world. The time has come to reduce the social, cultural, and generational inequalities in Internet access and give everyone the power to control their lives.

Stephane Richard
Chairman and CEO,
Orange Group

The challenges of digital inclusion

Marianne Brunat - Commercial Director, Sofrecom

Digital inclusion, or e-inclusion, is a process that aims to make digital accessible to each individual and to impart to them the digital skills they need to make these tools a catalyst for their social and economic integration.

The first challenge in digital inclusion lies in the accessibility of digital services.

At the global level, nearly half of the population still does not have access to Internet services, with major disparities between countries and territories. The second challenge consists of fostering the emergence of services and conditions that enable digital technology to become a real factor for social, economic and civic inclusion, and not limiting efforts to the development of the use of social media, for example.

There still remains much to be done before digital services are accessible to all. Despite exponential growth over the last 4 years, considerable disparities persist: according to the ITU, nearly 87% of the inhabitants of developed countries were using the Internet in 2019, compared to 47% in developing countries. Other disparities also exist between cities and rural areas, between men and women, and between young people and older populations.

This issue is too often reduced to questions of network coverage, without taking into account other potential obstacles: access tariffs, the price of smartphones, basic digital knowledge, or even literacy. However, while it is true that the coverage of rural areas remains a real challenge, even in the most developed countries, in the developing countries, the question of price is key. For example, the “Alliance for Affordable Internet” deems that Internet access is reasonable when the price of 1Gbit of mobile Internet amounts to less than 2% of the average monthly income per inhabitant. In Africa, only 10 out of 45 countries reach this threshold, and the average across the continent is 7.1%. This financial divide can be bridged, and our article on page 8, about “Seven levers to make high-speed Internet accessible to everyone" details the ways in which it can be significantly reduced.

To be inclusive, digital must also enable access to services that improve people’s development and lives (education, health, public services, employment) and not be limited to leisure and entertainment.

The development of mobile money in Africa, for instance, is seen as a real vehicle for banking on the continent. However, when we look at it more closely, the recent study carried out by GeoPill in Kenya, Tanzania, Uganda, Ghana, Nigeria, and Ivory Coast, surveying young people aged 18 to 35 shows, behind the 28% usage rate, that in all these countries, the main usage of mobile money is for online gaming (63%) ahead of internet and mobile payments (53%) and pay TV. The challenge for all the players involved, both local and international, is thus to develop an offer that is both sufficiently attractive to potential users and genuinely useful to these countries’ economic and social development. In achieving this aim, the work of operators, governments and donors will be key, as illustrated by our articles on page 10 “The role of governments in making mobile financial services a factor for financial inclusion”, and on page 16 “The Doing Business ranking argues for proactive digital policies to promote economic development”.

Lastly, certain prerequisites will need to be fulfilled if digital is to become a real factor for inclusion for all.

The first is infrastructure quality: recent history has shown that some of the networks deployed are inoperative and do not enable development, whether for access or services. Telecommunications is a field that calls for expertise. The development of skills at the local level, both for infrastructures and for digital technology, will also be a necessity. Projects such as the Fibre School in Benin (page 14) or the Orange Digital Centers presented on page 22 are two complementary tools that aim to transfer skills efficiently and sustainably, and are also levers for the inclusion of women. Further key success factors such as the establishment of a government IS and a National Digital Identification System are just as necessary for the development of digital administrative services. Also to be taken into account are public data security and governance, so as to guarantee the confidentiality and cost management capabilities needed.

This White Paper proposes, through a number of concrete illustrations, the main keys to making digital a real factor for inclusion. When developed according to roadmaps that are both ambitious and realistic, as well as provide for coordination between all the players involved, digital can become a real accelerator for developing countries, both because of its ability to create jobs and wealth and its role in improving efficiency and reducing the operating costs of public services. It is also a major vector for the economic and political transparency appreciated by all investors.

Telecoms operators, driving the digital ecosystem

Sylvie Pierrot Allain - Consulting Director for Change Management & Capacity Building, Sofrecom

Internet penetration rates in Sub-Saharan Africa are the lowest worldwide, amounting to half the global average. While there are many factors explaining this shortfall, the most significant one is the lack of capacity and infrastructure. Telecommunications operators not only provide connectivity and services. They are also pioneers in the introduction of new professions, new usages, and new working methods, in other words, the 3 pillars that make it possible to assess a country's knowledge and digital maturity. To create a powerful digital ecosystem, a real accelerator of economic and social development, operators can take aim at several levels.

Deploying the essential base: digital infrastructures and service offers

In charge of deploying broadband infrastructure in collaboration with governments, operators ensure the accessibility of services for the entire population, and in particular contribute to bringing rural areas out of isolation and connecting schools and universities. The impact these projects have is undeniable: a 10% increase in the penetration rate of household broadband connection translates into a rise in a country's GDP of between 0.1% and 1.4%. The donors have made no mistake about it: they are massively financing deployments in developing countries and have established it as a condition for bringing forward the Least Developed Countries.

However, the availability of digital infrastructures is only the start of the solution. We also need to develop a range of accessible services adapted to the usages, needs and financial means of companies and citizens.

In countries where the mobile phone remains the leading mode of Internet access, it is important, first of all, that broadband connectivity offers are affordable for all, and, secondly, that innovative solutions guaranteeing access to digital services, including 2G, be developed. Digital technology must be available to the widest possible population in order to become a reality and support actual development by facilitating exchanges and the creation of businesses and jobs. Operators have been a driving force in the development of innovative low-cost solutions such as mobile financial services, or package offers for telephony and energy in Africa. Operators are also stakeholders in the development of e-government accessibility strategies, providing the infrastructures, connectivity, and certain services, as well as ensuring optimal coverage of territories in partnership with the governments.

Develop digital skills

However, over and above infrastructure and services, operators also play a part in skills development.

The development of digital infrastructures and services will only be able to take place over time on two conditions: that the infrastructures are properly deployed and maintained, and that operators also have the marketing and commercial skills needed to create and market a range of services that will enable the full exploitation of the capacity available. Today, however, most countries are held back by a real lack of skills in these areas.

Where infrastructure is concerned, equipment operators and suppliers use either unexperienced labor or workers from other countries and cultures. In the former case, the result is often mediocre deployment quality, which then hurts the quality of service, and makes for rarely met deployment deadlines. In the latter case, the project's impact in developing skills at the local level is null, or even negative.

To remedy this situation, we need to train in network related professions upstream, whether fiber or mobile network technologies (4G, and soon 5G). The idea is not only to prepare marketing and sales executives, engineers and senior technicians, but indeed to train all the professions, starting with civil engineering, access and connection...

Well aware of this challenge, many operators, particularly in Africa, have made major commitments to enable training in and around the digital professions. Their involvement plays out in many ways:

• academic partnerships,

• the creation of vocational training courses, over short periods (under one year), jointly defined with companies, in particular for manual workers (civil engineering) and technicians (connection, ...). These courses are aimed at those with few or no qualifications and are designed to lead to employment. They can also bring on board employees from operators and companies in charge of deployment, to increase their skills,

• the development of training structures; these will serve the specific needs of operators as well as those of the ecosystem. In Ethiopia, Ethio Telecom has developed a training partnership between its corporate university, TExA, and the local universities. Orange Ivory Coast has opened up a Digital Academy to train young people in digital careers.

Through this type of action, operators become local expertise clusters, established for the long-term, in the area of networks, information systems and marketing, as well as provide pools of skilled talent for a rapidly growing TICS sector.

Supporting the launch of innovative digital start-ups

Operators are often a driving force in structuring and creating a digital ecosystem through their involvement in training, but also through their support for business creation in the digital sector.

Orange, for example, supports start-ups and entrepreneurs through a variety of initiatives. Examples include its network of Fab Labs, incubators and Development Centers such as the Orange Development Center in Tunisia, or Orange Fab Senegal in Senegal.

Orange also organizes competitions such as the Orange StartUp Cup Challenge Business Model Competition, initiated by Orange Egypt in partnership with the Nile University and designed to promote and facilitate entrepreneurship.

Helping people to make digital uses their own

Lastly, and less visibly, operators, which are generally some of the largest companies in their country, are often pioneers in rolling out and spreading digital uses:

> **Operators contribute to the development of employment and digital skills**

• through internal digitization (ERPs, HR information systems, corporate social networks, etc.) which familiarizes employees with e-services and the use of email,

• the widespread use of bank transfer systems for salary payment, which requires that all employees have a bank account and encourages the development of banking in the population.

These usages spread by capillarity to the rest of society, providing an additional basis for the uptake of digital technology and the reduction of inequalities.

Africa's digital transformation will have multiple positive effects: it will boost the continent's economy, create jobs, identify and encourage entrepreneurship, train and retain talent, and create a digital culture specific to the continent. Telecommunications operators are one of the pillars in this transformation and must be aware of the multiple roles they play.

Seven levers for putting high-speed internet within everyone's reach

Maria Macra - Director of Government Projects, Sofrecom

Throughout the world, the fixed and mobile coverage afforded by each territory form the foundation for equitable access to high-quality broadband Internet across the population. In the emerging countries, governments have to secure another key factor in their quest to turn their digital strategies into success stories: purchasing power. However, there exist a variety of levers on which they can draw to lower the cost of the Internet connection and make it affordable.

Though Internet usage is on the rise, 43% of humanity is not connected [1]. The contrast between developed and emerging countries remains striking (95% penetration rate in Northern Europe vs. 12% in Central Africa).

The two pillars for widespread access to broadband

Extending a territory's coverage using high-quality fixed and mobile networks

In Europe, despite the EU's ambitious objectives, “white areas” remain and a divide persists in the East (Baltic countries).

In Africa, government efforts to speed up mobile coverage often come up against structural difficulties: in addition to the lack of financial resources from which local operators suffer, geographical constraints (long distances, mountainous or desert regions), or the lack of road infrastructure and energy supply are just some of the factors that make deployments extremely costly.

The access price paid by the end user

To assess the affordability of a broadband connection for a population, the Alliance for Affordable Internet (A4AI) defines an indicator (affordability index) to which operators and governments would do well to refer more frequently. It estimates that the cost of accessing 1 GB of data must amount to less than 2% of average income (GDP per capita). Of the 99 developing countries included in its 2018 study on mobile Internet costs, only 10 are below that threshold. The results are fraught with stark contrasts: Sri Lanka’s index is 0.24% while that of the Democratic Republic of Congo is 33.5%.

To achieve low prices: make use of financial, technical and regulatory levers.

A variety of levers can be drawn upon to set a virtuous circle in motion, one conducive to the emergence of an efficient digital ecosystem, and thus low prices. They lie in the profitability of infrastructures, local content hosting, regulation for the wholesale market and access, modulated competition levels and the price of terminals.

Drawing upon the funds provided by international donors

Many international clients are working to narrow the technological gap.

In Europe, specifically the Baltic countries, the EU finances public initiative networks (RIP) with the aim of bringing coverage to the white areas, without seeking profit.

In Africa, across several countries, the World Bank, the African Development Bank, the European Investment Bank and a number of national development agencies are financing, through grants and loans, the construction of national backbones, accessible to all operators and managed under public-private partnerships, by a consortium of operators, or by wealth management companies.

Beyond the initial financing, these organizations also help ensure long-term asset maintenance and profitable management.

Separate infrastructure operators from service operators

There exist several separation models, all of which are intended to make an expensive resource (the infrastructure) accessible to the various service operators in a fully transparent manner, and cost-based prices.

This structural separation enables service operators to avoid duplicating infrastructure investments (multiple networks in the same city) while ensuring extensive coverage of the territory. The economies of scale achieved, whether in deployment or operation, benefit the entire industry.

Host content locally

With Internet Exchange Points (IXP) and mini-data centers (CDN) established on the backbone, copies of heavy content or content frequently sought by Internet users (e.g. YouTube videos) can be stored locally. If the increase in international capacity requirements is reined in and data transport costs reduced, this generates savings that can be reflected in lower access prices.

Make frequency allotment prices affordable

All too often, governments, eager to create short-term foreign-exchange inflows, charge an excessively high fee for licenses when the country’s interest would be to benefit quickly from the most efficient technology.

The operators, in search of profitability, are then reluctant to engage in any extensive deployments. Some governments appear to have learned from their mistakes: in France, the reserve price required for 5G licenses will be reasonable in exchange for additional requirements on “vertical” coverage and services.

Regulate wholesale market prices

Price regulation on the wholesale market is one of the most effective ways to prevent the infrastructure-owning operator to opt for vertical integration. It is, moreover, the defining thrust of the revamped European regulation, which kept the wholesale market regulated, while the retail market is almost completely liberalized.

Modulate competition within the same country

When coverage density is uneven, or when there are large disparities in income between geographical areas within a country, “modulating” the degree of competition authorized appears an effective solution. The model adopted by Portugal is very interesting in this regard: the national regulator has modulated operators' obligations according to the competitive level of the 3 markets it has defined in the country. In large cities, the incumbent operator has been forced to open up its infrastructure, while it has not been required to do so automatically in small cities; in public service areas, a single operator enjoys a monopoly situation over a specific zone, for the estimated time needed to achieve ROI.

Develop local reconditioning of mobile terminals

The price of mobile terminals providing access to data services remains a major obstacle in very low-income countries. Reconditioning plants can be built to lower this barrier, while also benefiting local employment. As a result, reconditioning is already widely developed in the Maghreb countries. Mauritania and Niger have also incorporated into their digital strategies a variety of projects to implement small reconditioning centers.

While it is impossible to provide a universal answer to the question of Internet accessibility, various levers can be used to reduce the price of connectivity. Each government must adapt its strategy according to the physical characteristics of its country and the purchasing power of the population. Policies need to be envisioned over the medium term, as broadband development plans yield concrete results only after 5-7 years.

What is certain is that each new technology re-examines the subject. The roll-out of 5G will require massive technological investment. As heavily courted as they are, private investors will not agree to go everywhere. To avoid widening the global digital divide, coordination between private and public actors will be more necessary than ever.

[1] Digital Report 2019 We Are Social et Hootsuite

The role of governments in making mobile financial services a factor for financial inclusion

Claire Khoury - Director of Marketing, Communication and CSR, Sofrecom

Telecommunications have taken on significant importance in most countries' economies. In this sense, the sector is an undeniable source of economic growth and development. The advantages of digital technology also benefit the microfinance sector and contribute to its two-fold financial and social mission. Ensuring that more favorable regulatory frameworks are in place allows the sector to continue to develop. The aim is to reach more clients in remote areas at a lower cost, to secure transactions and improve their transparency.

The mobile financial services (MFS) sector continues to develop. Access to these services facilitates everyday life and helps households and companies anticipate the financing of long-term objectives or cope with unforeseen events. To broaden access to and use of these products by as many people as possible, governments and regulators must act on several levers:

Promote and support the diversity of distribution methods

It has long been known that one of the main barriers to financial inclusion is limiting people to traditional bank branches. The lack of infrastructure in rural areas complicates the management of agents and the distribution of cash. Tapping into local partnerships, providing flexible financing for agents and making better use of transactional data will enable providers to meet these challenges.

To reach more customers in remote areas at a lower cost, it is essential that the legal and regulatory framework authorize different types of institutions and apply rules and controls in line with players' level of risk. Alongside this diversity, there must be policies that foster a competitive and fair environment for all providers.

The advent of new technologies and new players on the market take place in against a clear legal and regulatory setting that also makes it possible to reduce the risks connected with innovation.

In many countries, regulatory approaches that leave room for unusual modes of distribution, such as local retail stores acting as financial intermediaries, or the establishment of innovative providers that make use of the various means at their disposal: technology, existing customer networks, infrastructure, big data, help to lower transaction costs and provide financial products that are perfectly suited to the needs of low-income consumers. They can help strengthen the physical presence of financial providers at a lower cost and provide essential services to those who did not have access to them.

Defining a fair and flexible regulatory framework

In many markets, the absence of an enabling license or authorization framework enabling non-bank providers to access the mobile money market remains the highest and most common barrier to the launch or development of services by providers.

It is essential that these rules be fair and simple: experience shows that regulatory barriers can slow both the birth of the market and customer uptake. According to the Global Findex report on financial inclusion, more than 300 million adults worldwide list excessive paperwork is one of the main obstacles to opening an account.

The aim is thus also to define anti-money laundering and counter-terrorist financing (AML/CTF) procedures appropriate to the level of risk, including client ID verification procedures (KYC: Know Your Customer) that can simplify customer due diligence (CDD) requirements based on the specific risk posed by each product. The solution will entail a flexible AML/CTF regime, taking into account the risks and combined with a comprehensive and accessible national identification system (e.g. digital identification or biometrics).

Protect consumers using rules that guarantee access to information, fair treatment and redress mechanisms

The Good Practices for Financial Consumer Protection set out by the World Bank emphasize the need to clearly inform customers about the terms and conditions of use of products. This is essential for protecting consumers from possible abuse and ensuring that they are treated fairly by financial service providers.

The idea is to facilitate comparisons between offers, so as to help consumers make informed financial decisions and prevent risks such as over-indebtedness. In addition, regulations need to be introduced to limit abusive business practices and facilitate access to redress mechanisms.

Encourage the development of innovative financial products tailored to users' specific expectations, based on their profiles and places of residence

To maximize their socioeconomic impact, mobile financial services (MFS) must provide value to those at the bottom of the economic pyramid. Underserved populations must deal with a specific set of problems and financial needs. Public authorities and MFS providers will need to work together to remove the behavioral barriers to the use of these services and increase their usefulness. Towards this end, they will need to:

a) Identify the expectations and needs specific to rural populations, so as to create services that are accessible to all: understanding the finer shades of how rural consumers earn, save, and spend their money can help providers define a relevant value proposition for rural users that is not necessarily the same as for urban users.

b) Find solutions to the absence of formal identity documents.
The absence of mandatory population registration procedures and identification documents is a common obstacle to the broad uptake of mobile financial services. On most markets, regulation plays an important part: adapting customer ID verification (KYC) procedures to the amounts involved or the required identity documents can facilitate citizen uptake of these services, particularly in rural areas.

c) Invest in citizens' financial education.
Developing citizen uptake of mobile financial services requires significant investment in training in the use of MFS. Government, local authorities and service providers will thus be able to set up basic financial training courses, upon completion of which participants will be able to open an account and be supported by active customers who act as ambassadors by being alongside their fellow citizens as they use and enjoy the benefits of these services. Fostering peer-to-peer learning about MFS use can play a key part in developing penetration.

Lastly, these complex approaches, which take time to implement, necessitate coordination between public and private players, and their deployment requires resources and public action at a high level. It is therefore encouraging to see that mobile financial services are currently available in more than 60% of developing countries and that more and more governments have developed national financial inclusion strategies that set out their strategic objectives and define the reforms to be carried out.

Digital identification: a gateway to digital inclusion

Hicham Saoud - Head of BSS Consulting & Digital Government, Sofrecom

1 billion of the planet's inhabitants are invisible citizens. Because they do not have a legal identity, they are excluded from civic life and do not contribute to their country's socio-economic development. Though long the "forgotten ones" in the digital revolution, they are beginning to benefit from support fostering the development, by governments, of digital identification systems. A process complex to implement, but very efficient...

Identification: a global challenge

Digital inclusion is considered to be based on three components: infrastructure deployment, accessibility to content and digital aptitude (People). However, the People component is often reduced to training. It de facto excludes the "invisible": the citizens of the world who are not recognized as such because their birth has not been registered and they do not have a legal identity. Recent studies have made it possible to measure the scale of the problem and to locate the areas where identification is an inclusion challenge for States.

• According to World Bank estimates (2018 #ID4D-Findex Survey), 1 billion people worldwide are unable to prove their identity. 48% of them live in Sub-Saharan Africa and 33% in South Asia.

• UNICEF meanwhile estimates that nearly two-thirds of African children under the age of five do not have a birth certificate.

Neither inclusion nor growth without identity

Without a birth certificate, identity card or passport, it is impossible for these world inhabitants to exercise their rights as citizens. They lack the "open sesame" that gives access to health services, welfare, education, labor, and entrepreneurship. They are also unable to take advantage of public and private services (banking, telephone, energy).

Because of this, they do not contribute to their countries' growth. When 3.5 million of the one billion people living in Sub-Saharan Africa do not contribute to economic activity, the scope of a market seen as buoyant shrinks significantly. Seeing this, the major economic players may significantly slow down their investment plans.

Digital identification support programs

Now recognized as a lever for socio-economic development, identification benefits, at the global and African level, from recent donor initiative: the World Bank, the African Development Bank, and development agencies. Their programs finance either studies or plans to deploy identity systems, produce identity cards and biometric passports. In this regard, identification is supported by:

• Point 9 of 16th Sustainable Development Goal (SDG) adopted by the United Nations, which plans to "provide legal identity for all, including birth registration" by 2030. Identification furthermore plays a key part in achieving multiple other SDGs.

• The ID4D Initiative (Identity for Development) of the World Bank which aims to provide support, advice and funding to countries to build digital identification systems.

• At the African level, the ID4Africa initiative. This forum brings together all the stakeholders in the identity ecosystem - African governments, donors and providers of identity solutions - to jointly reflect on solutions to reduce the proportion of the invisible and use digital to speed up the process of bringing these individuals back into regular situations.

The emergence of projects aimed at creating integrated identity systems

Bolstered by this support, many digital identification projects are flourishing, particularly on the African continent. These initiatives operate on multiple levels:

• Registration of civil status events, in particular birth certificates which form the foundation for identification
• Population registers: reliable socio-demographic data enabling States and donors to devise national development policies for the country.

• The creation of biometric databases, either for electoral purposes or to serve sector-specific needs (facilitate the granting of subsidies to farmers, students...)

• The modernization of secure identity documents: national identity cards, biometric passports, driving licenses.

To make this type of project more understandable, the African Development Bank (AfDB) has developed a holistic vision. It recommends, rather than addressing each register in a silo, building an integrated National Digital Identity System grouping three registers: Civil status, national population register and national biometric register.

The digital identification market in figures

• According to ID4D, Africa's needs when it comes to digital identification and civil registration require a total investment of $6 billion.
• A study by the firm Acuity Market Intelligence estimates at 139 million the number of biometric identity documents produced in Africa and the Middle East.
This ecosystem is of interest to many economic players: banks, insurance companies, telecoms operators, energy operators...

Digital identity, a complex ecosystem

The deployment of a digital identity system is a complex process not limited to the subject of digitization. While the existing offer allows States to benefit from robust, secure digital identity systems capable of protecting personal data, technology is only one aspect of the subject.
It is for this reason that Sofrecom is helping governments build a vision of their National Digital Identity System in line with that of the AfDB. Its consultants and experts work alongside them during feasibility studies covering the analysis of a large number of key issues:

• Legal issues: to revise legislative enactments on civil status or personal data protection, taking into account the GDPR in particular.

• Political issues: to include the entire population, regardless of the ethnic group in power.

• Governance issues: who is responsible for identity? Who produces it? How can recipients access this data securely? In this respect, there are several initiatives to create National Identification Offices for persons in charge of identity and the production of secure ID documents.

• Organizational issues: how should the people responsible for feeding data into platforms be hired? It's a complex matter, you need resources.

• Financial and environmental issues.

Quick ROI

The deployments to date show a rapid return on investment. A reliable digital identification system contributes to including people in health, education and economic life. It steps up the efficiency of the administrative process. It curbs fraud and losses. India is a well-known example: it took only 1.5 years before the country began saving more money than its biometric identification system cost. The country also reduced single and multiple identity fraud. Digital identification has also increased the banking penetration rate and people's access to public and economic services, thus creating growth and wealth.

In order to form a real gateway to citizen and digital inclusion, the deployment of a digital identification project requires a certain national union: the convergence of efforts on the part of civil society, the administration, the Government and economic players. The latter can contribute to the effort by reinventing economic models: for example, by relying on PPPs. Banks and telecom operators are all the more legitimate to contribute to this major project as they are already established as trusted third parties required to collect, or even use, their customers' identity data in the context of their mission.

Benin: a fiber optics school as a pillar of a strong digital economy

Serge Adjovi - President, Digital Development Agency, Benin

To support the deployment and maintenance of very high-speed networks as well as the development of digital uses in the Benin economy, the digital sector in Benin has launched an original project, for a Fiber Optics School "Ecole de la Fibre". This vocational training school specialized in digital professions is intended to serve as a reference model in West Africa.

What are Benin's ambitions for digital?

Benin's government wishes to make the country the platform for digital services in West Africa, to speed up economic growth and social inclusion. This ambition is supported by many institutions: the Ministry of Digital and Digitalization (MND), the Digital Development Agency (DDA), the Agency for Information Services and Systems (ASSI), the National Agency for the Identification of Persons (ANIP), and others.

How does this ambition bring together digital inclusion and social inclusion?

In the action program set out by President Patrice Talon for his government upon being elected in 2016, social inclusion is inseparable from digital inclusion.

The 'Revealing Benin' Government Action Program (PAG) is built on 45 growth projects in key sectors of the economy and around fifteen structure-building reforms. Digital plays a significant role in each of these projects, even when they are in sectors other than digital. Digital technology is thus a key driver for speeding up economic growth and social development in Benin.

Three iconic examples of this ambition:

- The ARCH project for social development in Benin includes a health insurance component for the most disadvantaged populations, a training component in particular for craftsmen and a component dedicated to access to microcredit. To identify beneficiaries in the most remote areas of the territory and ensure proper allocation of resources and a social return on the high investments made, the project relies on the use of biometric identification and the issuance of electronic identity cards.

- In order to develop certain sectors of the agricultural sector on which much of Benin's economy is based, we have instituted, in cooperation with the World Bank, a project to develop the penetration of digital technology in farm areas. Thanks to the implementation of data banks and digital services provided by start-ups, farmers will be able to increase their production ratios. This will imply their being able to connect to the Internet in their professional activities.

- We have created some forty digital community centers equipped with an Internet connection, terminal and services, in a well-powered and air-conditioned environment. Citizens who do not have the Internet at home or on their mobile devices can request assistance to access digital services and become familiar with digital.

The development of digital technology is premised on the deployment of high-quality broadband networks throughout the country. What is the level of coverage in Benin?

Since 2017, we have deployed and rehabilitated more than 2,000 km of fiber optics. 47 municipalities currently benefit from a broadband hotspot. The aim is to cover all 77 municipalities in Benin. The ADN is finalizing funding for a new program to build an additional 1,200km of fiber optics. This will make it possible to secure the existing infrastructure by means of a redundant path and connect non-covered municipalities, in particular to the west of the border with Togo. It is also essential that metropolitan loops be developed, to bring large business centers closer to companies.

In order to take advantage of the new uses made possible by this high-speed infrastructure, we are also building, north of Cotonou, a national Data Center that will provide, in particular, secure access to the Administration's services and data.

The ADN

Created in 2017, the Digital Development Agency is the Benin Government's implementation agency for flagship projects in the digital sector. It contributes to the creation of a strong digital economy for the development of high and very-high-speed infrastructures and digital uses.

Digital literacy is one of the pillars of your digital and social inclusion ambition. What are your plans in this area?

The government's program includes three infrastructure projects to expand the use of digital technology in education and thus contribute to Benin's digital maturity: an education and research network that connects universities and will be launched in mid-2020; it will be interconnected with all the research institutions in Africa and Europe; a network of secondary institutions and vocational training; and, in the future, a network to connect the nation's 3,000 primary schools.

In addition to infrastructure, we are developing usages by setting up digital rooms at some establishments. 30 to 40 computer workstations are available, enabling students to learn what digital is and to learn using the digital tool.

What are the challenges around Ecole de la Fibre, which you plan to launch in 2020?

During the first Fiber Optics Deployment Plan, we had trouble finding local skills. What is the point in building thousands of km of fiber, facilitating the work of ISPs who are deploying FTTH and even that of mobile operators, thus bringing broadband closer to corporate and private users, if we do not have the know-how to not only install but also supervise and maintain this network? Benin was immediately interested in the idea of a fiber optics school, inspired by our partner Sofrecom. To keep the fiber market alive in Benin, it is essential that we train specialists. In addition, each year, the School will give 40 to 60 apprentices and students the opportunity to learn a sustainable profession and enter the working world.

How will the School work?

A study will be launched with all the stakeholders who lent impetus to this project once the ADN secured funding guarantees from the French Treasury: the Ministries of Digital and Digitalization; Higher Education and Scientific Research; Secondary and Technical Education and Vocational Training. It is planned that the project will focus on vocational learning, be aimed at pre- and post-Baccalaureate students and offer a combination of shorter and longer-term courses. Focused on fiber related professions at the start, it will then expand to include those in digital. I hope it will come into being quickly so that the original can be duplicated in the north of the country, and eventually across the entire territory, and possibly even exported to neighboring countries.

The Fiber Optics School is an essential pillar as we implement Benin's digital inclusion ambitions and the success of its flagship project "Extending the use of digital technology through education and training". The fiber network, data center and e-services that we deploy will only make sense if they can be operated by qualified specialists.

The Doing Business ranking argues for proactive digital policies to promote economic development

Karime Bensaid - E-Government Consultant, Sofrecom

According to David Malpass, President of the World Bank Group: "Removing the barriers for entrepreneurs means improving employment, increasing tax revenues and increasing incomes, all of which are required to reduce poverty and improve living standards". For example, governments that focus on streamlining administrative processes and providing innovative digital services to businesses generate direct and indirect benefits for their countries.

Digitalizing the public sector and simplifying its administrative procedures is not enough; these processes must contribute to curbing inequalities, fighting environmental degradation and eliminating poverty.

According to the International Telecommunication Union (ITU), nearly 87% of people in developed countries used the Internet in 2019, compared to only 47% of those in developing countries. Digital technology must above all be widely accessible, inclusive and established for the long-term. It is fundamental that public strategies provide the means for digital inclusion particularly to populations with specific needs, for instance, indigenous peoples and people living in rural areas, people with disabilities, women and girls, young people and children.

Making digital inclusion a reality means giving individuals the opportunity to fulfill their potential thanks to information and communication technologies (ICT). Being connected to the Internet means being able to get informed, complete administrative procedures remotely (civil status, property, taxes, etc.), take part in training, look for a job, consult a physician, benefit from alert services, keep in contact with friends and family...

Improving the business climate: one way to limit the digital divide

Since 2003, the World Bank's annual Doing Business report has analyzed regulations in 190 economies in 12 areas. It measures the ease of Doing Business for small and medium-sized enterprises. The report sheds light on the design of national reforms and motivates these reforms through country-by-country benchmarking.

The criteria for assessing savings range from electrification to ease of starting a business, tax burden and protection of the right to property. While digitization is not a criterion in itself, it transcends all the others. It has a significant impact on the ranking and in particular that of African economies, where digital innovation is a driver of economic growth.

This ranking has spurred governments around the world to undertake reforms aimed at improving businesses' operating environments, with the ultimate aim of enabling sustainable economic growth.

Africa and the Middle East top the list of countries having initiated reforms

Since 2005, the World Bank has identified nearly 3,850 reforms carried out worldwide. According to its latest Doing Business 2020 ranking, 115 countries implemented 274 reforms between May 2018 and May 2019. Sub-Saharan Africa alone accounts for 25% of these reforms. North Africa and the Middle East did their part as well, with 13 of the 20 countries in the zone implementing 57 reforms (21%). The list of the 10 economies that made the greatest strides in the latest ranking includes Saudi Arabia, Jordan, Bahrain and Kuwait.

Doing Business: driving investment in digital

The digitization of processes and services is one of the main means used by economies to make them simpler, more efficient and, ultimately, ever more useful to both companies and the government itself. Let us take a closer look, with a few examples.

a) Bahrain, which implemented a record-setting nine reforms between May 2018 and May 2019, rose in nine of the ten areas assessed by the study and its overall ranking rose from 62 to 43 from 2019 to 2020, making for a 19 spot surge.

Upon closer examination of the reforms themselves, it quickly becomes clear that the digital transformation of Bahrain's public sector is ultimately behind this strong performance.

In this respect, several initiatives are worth noting:

- the implementation of a Benayat online platform for managing building permits,
- the digitization and publication of electricity connection information, for greater transparency,
- or for instance electronic payment of social insurance contributions to facilitate the payment of taxes by companies.

Lastly, Bahrain facilitated contract enforcement by establishing a specialized commercial court and authorizing electronic notification for subpoenas.

b) Morocco surged 7 spots, thanks in particular to the acceleration of cross-border trade. It achieved this by rolling out electronic payment for shipping costs and implemented paper-free procedures across the customs clearance system.

c) In Saudi Arabia, building permit applications are now processed via an on-line platform.

d) Togo one of the 10 most active countries in improving business regulation in Sub-Saharan Africa uses the same approach. The country has made all the necessary documents, approval receipts and fees available online.

In order for companies to derive the greatest possible benefit from the new digital services offered by their governments, it is of course essential that modern, high-quality infrastructures first be deployed across the territory. The ambitions of Doing Business thus help motivate governments to implement inclusive and ambitious digital strategic plans.

e) the Government of Niger, by way of illustration, in partnership with the African Development Bank, commissioned Sofrecom to carry out three complementary studies for the Trans-Saharan fiber optic Dorsale project. This large-scale project will help effectively extend connectivity at the regional level and curb the high cost of telecommunications. By facilitating access to quality digital services for populations, governments and businesses, this project is also aimed at fostering the emergence of a digital economy.

Analysis of the actions taken by governments in favor of the business climate and their Doing Business ranking once again anchors the idea that the advances sought cannot take place without the digital transformation of the public sector. Both directly and indirectly, the latter is reliant on investments in telecoms infrastructures and services, which ultimately contribute to the economic and social development of countries.

Orange Group works for an inclusive and responsible digital society

Matthieu Belloir - CSR Director, Orange Group

While it does address a recent societal concern, Orange's commitment to an inclusive digital society is part of its DNA. It has been clear throughout its history and development in nearly 30 countries around the world. In its new 2020-2025 strategic plan, the Group establishes it as a foundation for its growth and social responsibility.

What are Orange Group's ambitions in terms of digital inclusion?

Inclusion is the centerpiece of the Group's new strategic plan Engage 2025, which is aimed at taking action for digital equality, one of the two pillars of the Group's responsible commitment to combating global warming.

Furthermore, in the context of the recent PACTE law, which asks companies to state their deeper purpose in terms of contribution to society and the planet, the Group has re-asserted its desire to set an example in society as follows: "As a trusted partner, Orange gives everyone the keys to a responsible digital world", and the resulting mission: "to ensure that digital services are well thought-out, made available and used in a more caring, inclusive and sustainable way in all areas of our business".

Why does Orange want to consolidate its model as a company that is committed and responsible towards its employees, its customers and society as a whole?

Because we are aware and convinced that digital technology is central to multiple human activities and a powerful driver for their development. Being excluded from digital means being, in a sense, downgraded, socially and economically.

In Africa, where we have been operating for several decades, we can see how closely intertwined access to digital services, such as Orange Money chosen by 45 million customers, and support for social and economic development are. The same can be said about the fields of education, training, agriculture... The programs that CSR and the Orange Foundation have been rolling out for several years now confirm our belief that reducing digital inequalities requires action on inclusion for the populations.

How did you define the new action program that will serve Orange's digital inclusion ambition?

We identified the causes of the digital divide, then analyzed how to reduce inequalities across all our geographies, bearing in mind that we occupy very different positions from place to place. There are three main stumbling blocks to digital inclusion:

- Network coverage. While it is mature in Europe, there is significant room for progress in Africa and the Middle East.
- Connectivity. In the introduction to his book "Human Web", our Chairman noted that nearly 4 billion people on the planet do not use the Internet, even though 3 billion of them live in covered areas. Why is this? These billions cannot afford a smartphone, lack access to a source of energy, and lack the skills needed.
- Illectronism, aka digital illiteracy. The dialogs we hold with our stakeholders show some surprising realities: significant populations, often young, do not always know how to use digital to find a job, complete administrative procedures online, or search for information, when they use social media to develop their personal relationships with virtuosic ease.

What levers will Orange's CSR use to reduce the digital divide?

Our commitment will be organized along four structuring action lines for all Orange countries:

1. Increasing network coverage according to the needs identified in each region: covering white zones and improving flows in France, deploying 5G in Europe and thousands of new 4G sites rolled out in the MEA zone.

2. Supporting digital uses by 2025, we will deploy at least one Orange Digital Center in each of our countries. These structures are truly emblematic of our commitment to inclusion in the digital field. They bring together in one place four building blocks of the digital inclusion value chain: education in coding, a workshop on digital prototyping for projects, a Solidarity FabLab, a training and digital manufacturing workshop for young people in integration programs yet by the digital wayside, a start-up accelerator and financial support for entrepreneurship. They will operate as a network so that a start-up can benefit from an extended ecosystem including other countries. They will gradually incorporate inclusion actions through training, deployed in recent years across the countries, such as the successful #SuperCoders concept. In addition, we will open an Orange Foundation in each country to roll out all our support programs aimed at making digital technology an equal opportunity factor for the social and professional integration of people in difficulty.

3. Offering an inclusive range in each country, extending from our first experiments in Europe. In France, we developed a solidarity offer for families in the Hauts-de-France Region faced with both social and digital precariousness: Coup de Pouce is a solidarity-driven offer including Internet/landline access, a recycled PC and free training, all at a very low price. Today, we are extending this offer at the national level. In Spain, the Gigas Solidarios offers customers the opportunity to pass on their unused data to families in precarious situations to whom Orange provides free Internet access and a fully equipped tablet.

4. Developing an affordable smartphone offer at less than $20 for a 3G and less than $40 for a 4G in MEA, for example. In Europe, we will position ourselves on the very dynamic reconditioned mobile telephone market.

You also want to capitalize on the momentum around Orange employees' commitment to solidarity...

More and more of our employees are supporting our efforts to build digital inclusion. Their mobilization is remarkable! To wit, 8,000 volunteers work for the Orange Foundation and within the first two Orange Digital Centers opened in Tunisia and Senegal.
In our stores, all over the country, they run digital workshops. With the launch of the strategic plan Engage 2025, their commitment to solidarity is taking on new meaning. We want to better support and foster this dynamic of digital skills sharing through skills sponsorship, local-level volunteering, volunteer training and other formats yet to be invented.

Is your digital inclusion policy tailored by country?

To give clarity to a long-standing commitment and increase the effectiveness of our efforts, we have decided to scale up our inclusion policy gradually. Nevertheless, in implementing initiatives, each country relies on its dialog with its stakeholders to meet the expectations and needs specific to its environment, its partners and the authorities. Moreover, the innovation dynamic that irrigates the countries does not always originate from the Group's head office. The Orange Digital Center concept was developed in Tunisia. And, in many ways, Orange Money, deployed in 14 countries in Africa, was the forerunner to Orange Bank!

Do you measure your digital inclusion actions for effectiveness?

For almost 3 years, we have been working to measure, particularly in Africa and France, the socio-economic impact not only of our core business actions, but also of our CSR commitments. The results are stated in percentage points of GDP. They are often significant: Orange's overall economic footprint is, for example, estimated at more than 10 percentage points of GDP in Ivory Coast and Senegal. These measures are as useful to us as they are to the stakeholders who support our efforts. They enable collective awareness.

The mobilization across our organization is another valuable indicator of the value of our historic commitment to an inclusive society, a commitment deeply embedded in the company's culture. We are all convinced that digital technology is a factor in the development of individuals, populations, companies and countries. At a time when the fight against digital inequality has become a societal issue, our assessment in this area bolsters our belief and makes us want to go even further.

The Orange Foundation, making digital technology a driver for equal opportunity

Françoise Cosson - CEO of the Orange Foundation

The Orange Foundation has a strong ambition for the Group: to make digital technology a factor for equal opportunity in the social and professional integration of individuals in precarious situations. In the 30 countries where it operates, it offers digital education and training programs focused on the employability of women and young people. In addition to this commitment, the Foundation carries out solidarity actions in areas that are vital to particularly vulnerable populations: access to water, health, education and, in some territories, culture.

What role does the Foundation play in achieving the Group's ambition for digital equality?

Orange Foundation sees one of its prime purposes as making digital technology a factor for equal opportunity in the 30 countries in which it operates. This ambition, which is part of the Group's strategy, contributes more generally to its corporate social responsibility commitment: supporting and fostering the long-term economic and social development of the territories in which it operates.
To this end, the Orange Foundation takes action to enable the integration of vulnerable populations, through digital education and training. In recent years, it has focused its action on two priority areas: the professional integration of young people and the empowerment of women through digital technology. The large-scale programs it deploys in all countries use digital technology to:

• Help the poorest schoolchildren access school learning, train and motivate unemployed young people, and prepare them for the jobs of the future.

• Giving or restoring financial autonomy to women without qualifications or employment.

Are the Orange Foundation's programs deployed in the same way across all its regions?

Our action is tailored by region and country, as the topographies, access to connectivity, socio-economic situation and security context are all distinct. This is why, in each country, we work in close connection with local players, who know the beneficiaries whom they send to the Foundation: Ministries, Public Institutions and NGOs in Africa; local chapters (Missions Locales) and Pôle Emploi (the Unemployment Office) in France. Each of these players takes part in shaping the educational modules and the organization of training courses. In each country, Orange's local teams are also committed to supporting the initiatives: many volunteer employees help make the training courses reality and pass on their knowledge and skills to our beneficiaries.

What types of actions do you carry out and how do you adapt them to different contexts?

There are three programs aimed at young people:

• The 105 solidarity FabLabs opened in 17 countries across Europe and Africa-Middle East give disadvantaged youth or young school dropouts the chance to put together a project in digital co-design and co-construction workshops using 3D printers, digital milling machines and laser cutters. This free training course then becomes a springboard to another course or job.

• In France, as part of a program driven by skills sponsorship, Orange employees are training young people and women at 7,800 free workshops in digital. They teach them how to use digital technology - online CVs, social media use, e-reputation - to find a job.

• In Africa, we have opened 820 digital schools in remote areas in 16 countries, where children have no books, notebooks or pencils. The Foundation equips schools free of charge with kits consisting of tablets connected to a local mini-server and in charge of the educational content necessary to acquire the essential basics and the curriculum of the country.

Projects by women trained in a digital home, supported by the Orange Foundation's Coups de Cœur program

In Tunisia, Ghzela Bayar, age 59, opened a weaving workshop and hired 2 employees. She plans to buy a 2nd loom and recruit 1 other woman.
In the DRC, Julienne Zawadi, age 26, set up an egg shop in her village.
In Senegal, Penda Mbaye, age 23, started a small office services and printing company and hired 2 women.
In Spain, Matilde Manzano Salazar, age 46, created her e-commerce site from a lingerie line she designed.
In Poland, Anna Wojcik, age 32, will create and sell an anti-stress object to relieve the breathing problems that come with anxiety attacks.

For women, you have launched digital houses: what party do they play, and how do they work?

The 250 digital houses opened in 20 countries across Europe and Africa Middle East, including 101 in France, help unskilled and unemployed women become financially independent through a 6-12 month digital training course. Depending on the needs identified in each country, women learn computation skills, basic computer skills, job-seeking or job-creation skills on the Internet, basic software skills... Each woman works on building her own personal project. She is supported as she seeks paid employment.

Each year, the Foundation selects a dozen "special picks" from its personal activity creation projects, and lends them its supports. In many cases, these projects enable women not only to become financially independent, but also to create jobs within their village to support other families. It's a virtuous circle.

What are the success factors for these digital houses?

Looking back now, it becomes clear that what was intended as a place of digital training also fostered social integration, as the women shared their experiences and personal stories in all the problems they faced: social, family-related and professional. The success of these digital houses is based on two factors: the support women receive on a daily basis from the trainer and mediator (NGO, association) to set up their project and find a job; the involvement of the local Orange team, which brings consistency to the project and contributes to the final success.

How would you sum up the Foundation's actions to date?

The figures speak for themselves: in 2019, we supported nearly 50,000 young people and women trained in digital technology in France, 200,000 schoolchildren trained on our digital tablets in Africa and 5,000 women employed in our digital houses. We are very close to the Ministries in Africa, and town halls and local authorities in France, with which we also work on joint projects for solidarity Third Places, where the Foundation will provide Internet access and digital training.

Orange's new strategic plan will strengthen this strong societal commitment. It plans to roll out a new concept in all Group countries, launched in 2019 in Tunis and then in Dakar: the Orange Digital Centers. These places of digital inclusion and innovation will put young people and women on the road to vocational education, training and entrepreneurship.

Orange Digital Center, an innovative concept for fighting digital exclusion

Asma Ennaifer - Director of the Orange Digital Center Africa and Middle East program, Orange

To help young people and innovators benefit from the digital revolution, Orange Group has made it a strategic ambition to open an Orange Digital Center in all its regions, including France. Asma Ennaifer played an instrumental part in the development and opening of the first Orange Digital Center, inaugurated in Tunis in April 2019. She explains how this concept showcases Orange's commitment to digital inclusion.

Orange Digital Center is a network of support structures for young people and specifically for entrepreneurs, which has begun to be deployed in Orange countries in Africa and the Middle East (MEA). Each Orange Digital Center concentrates three programs in one place:

- **a Coding School,** a free and open-access technology center;

- **a Solidarity FabLab by the Orange Foundation,** a production workshop where users can bring their ideas to life and make prototypes using digital equipment;

- **an Orange Fab, a start-up accelerator**

In addition, Orange Digital Ventures Africa, Orange Group's €50 million investment fund, funds innovative start-ups in countries in the MEA region.

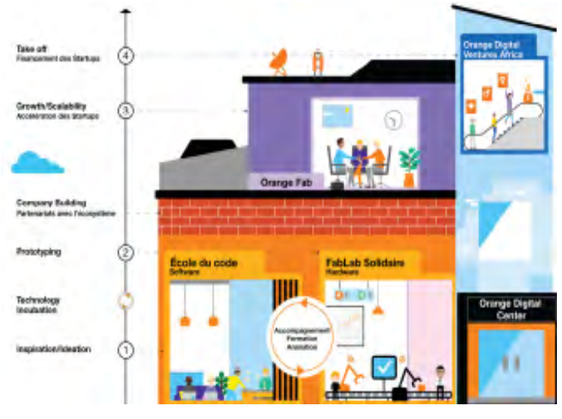
Orange Digital Center is dedicated to providing digital training, mentoring and support to young people, whether they hold degrees or not, as well as those with innovative ideas, encouraging their digital entrepreneurship ideas or preparing them for the jobs of the future (AI, Cyber-security,...). It is a support structure for employability and entrepreneurship in countries where youth unemployment is high. Consequently, the Coding School is aimed in particular at students, geeks, young developers and project owners. The Solidarity FabLab targets the same audiences, but is also intended for people without qualifications and without jobs. Orange Fab provides support to the most promising start-ups through their commercial development phase, while Orange Digital Ventures Africa helps them build commercial partnerships with Orange Group and the global network of Orange Fabs.

The Orange Digital Centers contribute to the vocational training of young people and women

Orange Digital Center provides young people, in particular girls and women, with hands-on operational training and high-quality support. By having them work on real-life, concrete projects, the structure positions itself at the interface between universities and the labor market. It responds to the needs of companies seeking immediate operational profiles, while academic training often remains all too theoretical. The Orange Digital Centers contribute to the digital inclusion of young people and women by preparing them to work in an environment close to the professional world. In so doing, they enable them to become full-fledged players in the world of tomorrow.

How does an Orange Digital Center work?

The added value offered by an Orange Digital Center lies mainly in the creation of synergies between the four spaces that structure it: after being trained in the latest digital trends at the Coding School, young people can make their prototype a reality and bring their technological project to fruition in the supportive environment of the Fab Lab, then choose to open their own start-up with the benefit of technological incubation, or move into the job market for which it will be operational. In addition, because they operate as networks, these places enable experience and expertise-sharing, which benefit students, young people with or without degrees, workers in professional retraining, and entrepreneurs.



The 1st Orange Digital Center has opened in Tunis

The Orange Digital Center in Tunis brings together multiple players, in particular the government, local and international NGOs and the academic world, with 27 partner universities. The involvement of these stakeholders is essential in ensuring that the structure will best address inclusion challenges across the broadest possible population, and all expectations: those of governments, but also those of young people and the professional world. Their involvement also helps ensure that the impact of the programs deployed by the Orange Digital Center will be lasting and effective.

The concept was built up in Tunisia using the significant feedback from various initiatives launched in the country over the last 10 years. It was in Tunis that in 2010, Orange opened its first Orange Developer Center in Africa, in effect its first Coding School, free and open to all. At the same time, 5 solidarity FabLabs were opened with the support of the Orange Foundation, followed by an Orange Fab. In total, over the last 10 years, Orange Tunisia has trained 18,000 young people in digital technology, at its Coding School and 27 universities. It has supported 38 start-ups, introduced 1,000 teenagers to coding and deployed 5 Orange Digital Center Clubs, affiliates to the Coding School, in universities.

The Orange Digital Center launched in Dakar in late 2019 was designed on the Tunisian model, and tailored to the local context

With a surface area of 2,000 m² over six floors, the Orange Digital Center in Dakar is the first in West Africa. Like its Tunisian neighbor, it includes the 3 support programs: the "Sonatel Academy" Coding School, a solidarity FabLab deployed in collaboration with a local NGO and the support of the Orange Foundation, as well as an Orange Fab start-up accelerator. It also draws on Orange Digital Ventures Africa. Based on the Tunisian model, it is nonetheless adjusted to the local context and above all to the expectations of its beneficiaries.

By 2025, Orange will open an Orange Digital Center in all its countries.

Orange Group's CSR strategy and the Orange Foundation's policy are based primarily on a concerted vision of development aid. In 2025, there will be no economic performance without social exemplarity. It is for this reason that Orange has made a lasting commitment to digital equality, with concrete evidence, such as the deployment of an Orange Digital Center in each of its countries in Africa, the Middle East and Europe. It is a simple and inclusive approach to encourage innovation and entrepreneurship, and to support the local digital fabric of the countries involved.

For the MEA region, I coordinate, under Orange's CSR Department, and in close collaboration with the project managers from each subsidiary involved, the program management team based in Tunisia. The next openings are planned in Cameroon, Ethiopia and Jordan, over First Half 2020. In the other Orange countries in MEA, deployments will take place in 2020 and 2021. All the European countries and the operational divisions in France will be equipped by 2025.

It should also be emphasized that, last December, Orange signed a 3 year partnership agreement with GIZ, a donor to the German Federal Ministry of Economic Cooperation and Development (BMZ), to support the employability of young people through the deployment and strengthening of the Orange Digital Centers network. This strategic alliance and its €30 million support fund will contribute to developing digital skills in at least 20,000 young people and the creation of 8,000 jobs in 14 countries of the MEA region: Tunisia, Senegal, Morocco, Jordan, Cameroon, Ethiopia, Mali, Madagascar, Sierra Leone, Ivory Coast, Egypt, Burkina Faso, Guinea and Liberia.

Sofrecom, committed to inclusion

Claire Khoury - Director of Marketing, Communication & CSR, Sofrecom

The development of local digital skills, in both infrastructures and digital developments, is an essential prerequisite for making digital a factor for inclusion in every country on the planet. Drawing on the cutting-edge skills of its experts and consultants and 50 years of experience in more than 100 countries, Sofrecom serves employment and training in digital professions wherever it operates.

Like Orange Group, of which it is a part, Sofrecom puts its concern for people to work for its development and that of its customers. It has structured its mission around three powerful commitments that contribute to overcoming the challenges of digital inclusion:

Contributing to local employment by recruiting diverse talents

To support the digital transformation and the development of its customers all over the world, Sofrecom draws on 11 local sites employing 2,000 experts and consultants. Together, they represent over 30 nationalities! In line with its CSR policy, Sofrecom encourages the recruitment and training of local talent and promotes women's access to technical sectors and positions of responsibility.
In 2015, Sofrecom was the first Orange Group entity to be awarded the AFNOR Diversity label for its policy of promoting diversity, non-discrimination and professional equality.

Sofrecom firmly believes that multiculturality is a lever for strengthening its integration into local ecosystems and developing partnerships there. It is also one of the ways in which it contributes to the social and economic development of the countries where it operates.

In Tunisia, Sofrecom has recruited more than 700 young graduates since 2011. In Morocco, Sofrecom Services Maroc is already nearly 500 employees strong, with an average age of 32. 89% are telecoms and IT engineers, and out of these, 42% are women. Our Moroccan subsidiary is expected to create 200 additional jobs in 2023, mainly in engineering and development.

Implementing skills transfer

Sofrecom sees its work with its customers, operators and governments as part of a co-construction dynamic: we involve our customers in building their future and help their employees become agents of change. Whether on fiber optic deployment or network supervision projects, for technical or engineering jobs, our experts and consultants share their knowledge to contribute to building the skills of local players and helping them to become more autonomous in implementing and managing their infrastructures.

They provide them with training by designing tailormade learning pathways, as well as methods and tools.

Training in digital professions: the Sofrecom Academy

Because getting a first job is not always easy in Africa, and because people rarely have exactly the training needed for the positions opening up, Sofrecom has signed a series of partnership agreements with engineering schools and academia in Morocco and Tunisia. These partnerships enable students and young graduates to build their skills in high-growth sectors such as mobility, security, data management, the cloud and IT offshoring, all quickly developing in the region.

They offer Sofrecom and its customers the opportunity to recruit highly-qualified IT developers, integrators, architects, DevOps experts, agile coaches...

Perhaps the most emblematic initiative was the creation in January 2019, of the Sofrecom Academy in Morocco. Based in Casablanca, this 8 week training program is designed to improve the employability and professional integration prospects for young Moroccan IT graduates through additional qualifying and certifying training,

Delivered by Sofrecom trainers, the course includes technical training in IT development as well as methodological and behavioral training, for instance in the Agile culture. Combining theory with hands-on learning, the training includes a common core of teaching and an immersion course in Sofrecom Morocco projects, followed by an assessment of the operational skills gained. It gives young people in every class access to working world.
Sofrecom is also a partner to several associations that promote guidance for young people and the professional integration of those facing ever-greater difficulties in finding employment, such as young people from disadvantaged backgrounds or people with disabilities.

In Burkina Faso, Sofrecom contributes to employment and training

Sofrecom provided support to the Burkina Faso Ministry for the Development of the Digital Economy and Post Offices for one year in **deploying an international interconnection network with Ghana**, i.e. 300 km of fiber optics.

The challenges: to offer citizens and businesses an affordable, high-quality Internet connection and to make digital technology a source of leverage for socio-economic development. Through this effort, our consultants contributed to local employment and training for the Department's employees.

Our experts managed this project from start to finish. They developed the specifications and design for the network, then supervised and monitored its deployment by Huawei and carried out compliance checks to ensure compliance with international standards and lasting quality.

Our teams have also worked to ensure that the infrastructure's deployment contributes to local employment, in particular that of women, and the qualification of workers: more than **2,600 inhabitants** of the conurbations crossed were trained and employed, including **800 workers,** for a total of **39,000 days worked**. In particular, women have been involved in refilling the trenches, a painstaking task that requires special attention to achieve the level of quality called for in the international standards.

Our consultants also provided **4 Ministry** workers with training in inspection projects. After 4 days of theory and hands-on training, and 2 weeks of supported on-site work, they were able to fully step into their new responsibilities within this project. They now carry out their tasks self-sufficiently and can in turn pass on their digital skills by training colleagues.

Burkina Faso thus now has the first local-level resources qualified to carry out future projects.

The digital transformation is stirring excitement at every level. In just a few years' time, it has become an issue of key importance for the economy and the society of tomorrow. Although the public authorities and, more and more frequently, digital players are working to establish pragmatic frameworks, and best practices and initiatives are multiplying, much remains to be done before digital can truly be said to benefit everyone.

Paradoxically, the advent of digital technology as part of the everyday can prove a real obstacle for some, and even a factor of exclusion, including in activities that seem so simple to us today. As a result, a gulf could grow between, on the one end, those who use the potentials of digital technology for their personal or professional fulfillment and, on the other, those not able to take advantage of these potentials for lack of access to various technologies or insufficient skills.

Discrimination and inequalities could thus set in or become heightened in many areas, including: access to employment, training and opportunities for lifelong learning; access to consumer goods and services; unequal means for accessing public services and participation in democracy...

The social process towards digital inclusion must accordingly integrate three essential dimensions: reducing the digital divide; taking advantage of digital opportunities; and fostering the involvement and expression of all in the information society.

With Covid-19 affecting so many societies and economies today, the importance of digital inclusion is once again in evidence, whether in maintaining social ties, going about professional activities, or fighting the virus' spread.

Through this publication, we wanted to analyze various avenues and put forward solutions so that the explosive growth of digital technology can be an opportunity and a factor of development for all. We hope to have succeeded in this.

Guillaume Boudin
CEO, Sofrecom

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