

# Introduction

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## The first five digital leaps

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When at the end of 2016, Étienne Giros, Executive Chairman of Cian,<sup>1</sup> and Sandrine Sorieul, its Chief Executive, suggested I write a book on digital as a prelude to the creation of the Cian digital commission, we didn't think that the printed version of the book<sup>2</sup> would be such a huge success (which is proof that print and digital aren't mutually exclusive). It has even become a reference in its field, and an expanded edition is now available in English.

The analysis we carried out with BearingPoint for this initial book,<sup>3</sup> which benefited from more than twenty years of feedback on experience in Africa and 'digital' (in all its various forms and buzz-word names including: 'information highways', 'new technologies in information and communication - NTIC', 'e-business', 'web x.0', 'digital', and so on), was based on the premise that the rise of digital in Africa could be split into five 'leaps' (see Figure I.1):

- **Telecoms**, especially because mobile phones have been successfully deployed throughout Africa since 2003, followed by underwater cables, fibre optics and satellites.
- **Electronic payment**, especially on mobile phones, is a powerful driver for financial inclusion, and has seen an unprecedented boom around the world.
- **E-commerce**, which today remains relatively successful, suggests that user behaviour is changing.

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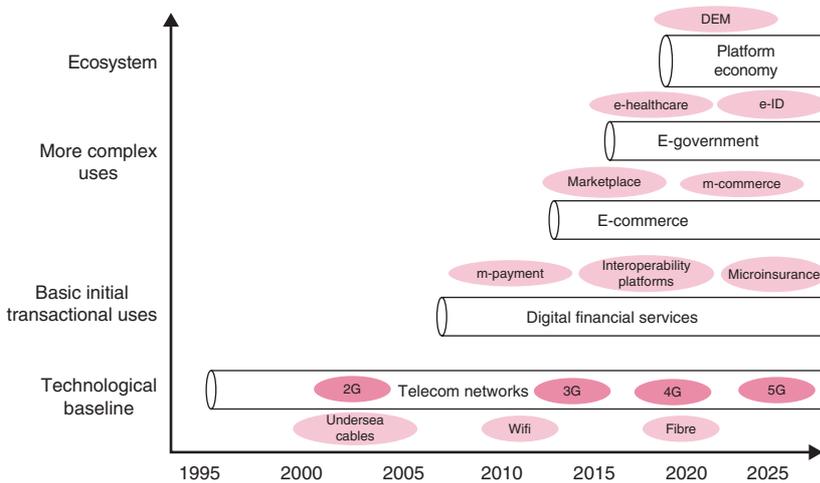
1 The French council of investors in Africa (Cian), an association created under the French 1901 law, is a private employers' organisation grouping together industrial and service companies, large corporations and SMEs-SMIs which have invested in Africa. Together, its member companies generate close to 80% of French business in Africa.

2 Read Jean-Michel Huet's, *Le Digital en Afrique: les cinq sauts numériques*, Michel Lafon, 2017, or its enriched English version, *Africa and the Digital "Leapfrog"*, Pearson, 2018.

3 The 'leaps' explained and developed in that book are not covered again here.

- **E-government** with genuine reflection on the issue and potential areas where progress can still be made, particularly in healthcare and digital identity.
- **The platform economy**, which is based on levels of confidence in new business models.

**FIGURE 1.1** The five digital leaps in Africa



The digital revolution moves at breakneck speed, and Africa is no exception. A few months passed between delivery of the first manuscript and release of the book, which is by no means extraordinary in the world of publishing, but the frenetic pace of digital meant that even on the day the book was came out, I was frustrated to find that it was already somewhat outdated! There was little mention of blockchain, even though specific projects are being launched in the African public sector; and scant analysis of data processing, even though we were in the midst of providing support to one of the continent’s largest banks on that very issue! If I had been writing a blog it wouldn’t have been a problem, but by the time a printed book is finished, it’s simply too late. Even though I was able to enrich the content in the English version a year later, especially on blockchain, I still felt frustrated. During the months and years that followed, I couldn’t shake off my frustration, so I decided to spotlight the changes that have been happening over

the past three years and make an attempt to show what is driving the digital dynamic in Africa, with its strengths (progress, innovations, high stakes) and weaknesses (the continent is still the least connected, digital education is the poorest in the world, and the digital divide is enormous). I have not repeated what I wrote in the first book. Rather I have attempted to highlight new developments and explain systemic dynamics.

- In three years, some key trends have emerged. Let's take the simple issue of mobile payment. There is no doubt that it has been successful. The figures are still impressive, and new models have been developed, with the emergence of interoperable solutions and national platforms in particular.
- You might also question the very concept of a leap, which although it is a very clear image, may not be entirely correct. The image of a leapfrog is tantalisingly inspiring, but it is not actually the most factual, because if there really were leaps, then they would be sequential and that simply is not the case. The leaps have unequal kinematics: they don't happen at the same speed, they don't have the same energy, they don't necessarily move forward in the same direction and, apart from the first leap (telecoms infrastructures, which are necessary), they are not necessarily interdependent.

## New catalysts

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Several movements seem to have taken place in recent years to increase the influence, role and importance of digital in Africa. Sticking with the leap imagery, it's easy to pick out those related to the Internet of Things, the progress of digital in agriculture and the success of African start-ups, but those subjects are very different from one another. In fact, they prove that there are three types of catalysts for digital in Africa, and these catalysts allow the famous leaps.

**The first catalyst is *technology*.** The issue of telecom networks has been raised, but there has definitely been a ripple effect recently. We won't go back over the telecoms network strictly speaking because it has been more or less the same for the last few years. However, we

do need to stay aware of this issue, because as 4G then 5G is rolled out, it will take on more importance. Part one of the book will cover three main technology issues:

- **The role of data**, especially the tools to analyse it
- **The deployment of the Internet of Things (IoT)**
- **Blockchain** as a way to bolster confidence

This book isn't designed as a technical work: we'll be analysing the individual impacts of these technologies and showing how they develop new uses in healthcare or public understanding for the first, in the industrial and logistics sector for the second, and in the public sector for the third.

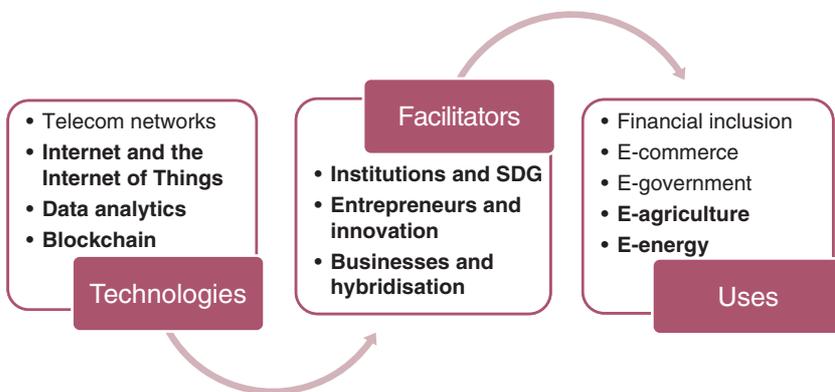
**The second catalysts are the players themselves, those we call *facilitators*.** There are a great many of them of course, but as here we are keeping our focus on economics, we'll look at three main types of facilitators in part two of the book. First of all, **public institutions**, especially **donors**, who are arriving in the digital arena from other fields. The success of the Sustainable Development Goals (SDGs) in Africa depends partly on how digital is developed. Public institutions therefore play a key role because they bring the African public sector with them. **Entrepreneurs** are another important category in Africa, and although the continent still has relatively few **start-ups** compared to the United States or Europe, the ones that have been successful have already brought in a range of new players (including support structures) which didn't exist in Africa during the first wave of online business creations. Finally, **companies** themselves, in addition to new entrepreneurs, are also key players in digital development, particularly those who are involved in developing an ecosystem of partners: the famous platform economy. Their ability to develop new business models, which is known as hybridisation, means that some of them are drivers for digital development.

**The third category of catalysts is what makes digital the basis of a new industrial revolution: *users*.** Setting aside innovation, technical considerations, and the will of structured economic players, how are we actually using digital to change lives? In the 2017 edition, which was expanded with an English translation in 2018, we developed several user cases. **Mobile payment** is the most interesting

development for digital in Africa. The development of **e-government** (given the significance of administration within African economies) is also key, as well as **e-commerce**, which bears witness to the challenge of developing commercial channels on the continent. In part three we'll take a look at two other uses that are perhaps less relevant to the “general public” than the others, regarding how digital has contributed to the two key sectors in the African economy: **agriculture and energy**. These two sectors not only account for more than two-thirds of the continent's entire economy, but they are also the basis for other sectors: feeding people and daily life and work.

We are therefore going to develop these three digital catalysts in Africa by concentrating on those that weren't covered in the previous book (in bold in Figure I.2 below).

**FIGURE I.2** The three catalysts for digital leaps



## The impact of Covid-19

And just like the other book, this one was almost out of date when we went to press! The manuscript was finalised just as the Covid-19 crisis was wreaking havoc around the world, including in Africa, although at the time of writing the continent – along with Oceania – it appears to be one of the least affected.<sup>4</sup>

<sup>4</sup> “The WHO explains why Africa is resisting Covid-19”, by Falila Gbadamassi, France Info, 30 September, 2020, [https://www.francetvinfo.fr/monde/afrique/algerie/l-oms-explicite-pourquoi-l-africa-resiste-au-covid-19\\_4121215.html](https://www.francetvinfo.fr/monde/afrique/algerie/l-oms-explicite-pourquoi-l-africa-resiste-au-covid-19_4121215.html)

When the World Health Organization (WHO) raised the alarm about the Covid-19 pandemic, most African countries made very quick decisions to put protective measures in place, close borders and enforce curfews. Africa, however, seems to be only at the start of the pandemic, and unfortunately is very poorly equipped to cope with a massive increase in the number of patients: health systems often leave much to be desired, few tests are available, its population is extremely varied in density, and, above all, the economy has a large informal sector that won't allow people to comply with containment measures as they have been implemented in the vast majority of other countries.

Digital has emerged as a way of getting around some of these difficulties. For instance there are digital tools that can support governments roll out their high-impact action plan. The action plan is based on five main principles that have a proven track record in several countries affected by the Covid-19 pandemic:

1. **Coordinate:** set up a remote crisis management unit (crisis management as a service) to support a certain number of administrative staff (key staff from health ministries and other crisis management units) in their daily tasks and lighten their administrative workload.
2. **Plan:** help deploy geolocation data processing tools for telecom operators, healthcare services and self-diagnosis to monitor how the pandemic is evolving, define specific lockdown zones, support citizens with their travel needs, provide information in real time to lockdown compliance authorities<sup>5</sup> and steer events when containment measures are gradually lifted.
3. **Treat:** deploy secure terminals and a patient monitoring platform to caregivers using contactless bracelets as medical files to speed up healthcare processes, centralise patient data, coordinate the

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 5 Due to its huge informal economy, lockdowns in Africa have been rare, with only three countries actually having strict measures in place. But that didn't prevent partial lockdowns, curfews or direct and indirect impacts on the economic crisis in African countries (drop in the price of raw materials, drop in diaspora funding, decline in tourism, decline in exports, etc.).

process among different healthcare centres, limit physical contact and collect and protect reliable data.

4. **Help:** set up a system to distribute essential food items to vulnerable populations in a similar way to the Scope platform used by the World Food Program, generating “e-coupons” which are allocated from secure terminals and based on initiatives laid out by governments and beneficiary selection systems, such as social safety net programmes.
5. **Inform:** coordinate how messages and crisis updates are shared with healthcare, security and public service organisations through awareness-raising, information and support campaigns relative to measures taken by governments, taking care to promote correct information and debunking fake news.

Beyond the Covid-19 crisis itself, these digital tools should be used to accelerate other transformations on the continent. Monitoring for economically vulnerable people, a digital ID, e-health and education are all subjects that are going to move faster as a result of how countries have responded to the pandemic. The efforts of certain African countries (with the help of global financial institutions such as the World Bank, regional financial institutions such as the European Investment Bank<sup>6</sup> and national financial institutions such as the German Kreditanstalt für Wiederaufbau, KfW) have helped digital moved along faster in some countries.

Take electronic payments. Several African countries have started encouraging people to use digital payments to reduce cash handling, which can transmit the virus. Along with lockdown measures and social distancing initiatives, digital payments do help slow the spread of the epidemic. With this in mind, the Central Bank of West African States (BCEAO) enacted a number of measures to set up free electronic money transfers nationally between individuals for amounts less than or equal to 5,000 CFA francs (7.60 euros), free payment of water and

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 6 Read the study we carried out in June and July 2020 for the European Investment Bank (EIB) and the United Nations Development Programme (UNDP), *Africa's Digital Solutions to Tackle Covid-19*, July 2020, <https://www.eib.org/en/publications/african-digital-best-practice-to-tackle-covid-19>

electricity bills on mobile phones for amounts less than or equal to CFAF 50,000 (76.40 euros), the elimination of commissions charged by electronic money organisations to retailers on retail payments, a higher limit for electronic wallets as well as less stringent conditions for opening electronic money accounts. Senegal reported a marked increase in Orange Money subscriptions, especially in cashless taxi fare payments. Similarly, Bolloré Ports began accepting digital payment solutions at Dakar Terminal, so that containment measures could be respected, and physical interactions reduced. In Morocco, a special fund set up to manage the pandemic was created and citizens were called upon to make donations via digital banks. The Moroccan authorities organised massive financial transfers to support disadvantaged households and workers affected by the drop in income.

If the current dynamic in the continent is to continue when the Covid-19 crisis is over, a number of accelerators will be needed, because certain African governments have set themselves some ambitious financial inclusion objectives.

We wouldn't go as far as to say that Covid-19 has been a digital catalyst, but it has certainly enabled other catalysts to take quick action. Based on technologies (telecom networks, data and the Internet of Things (IoT) in particular), players – especially donors, governments and a handful of companies (start-ups in particular) – have joined forces to provide solutions for m-payment, e-health, digital identity, remote working and e-learning.

Only a combination of these three catalysts (technologies, facilitators and uses) will allow us to move further (and in this case faster, because the unique context of the pandemic requires it) to promote digital acceleration.

Jean-Michel Huet  
23 April 2021