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THE BLOCKCHAIN
HAS TURNED TEN,
THE AGE OF REASON

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The 2018 Paris Blockchain conference[1], which is taking place on 27 & 28 November 2018 at the *Cité Universitaire*, provides an opportunity to take stock of the state-of-the-art Blockchain and its economic and social impact. It is a time for celebrating the first ten years of a technology that is now mature.

The Blockchain, like any other disruptive innovation, follows a hype cycle, reflecting how interest in this technology changes over time. After an initial phase of euphoria fuelled by the novelty value, the level of interest generally bottoms out, as a period of legitimate introspection sets in, only to then increase again, and on a stronger footing. We are specifically entering this period of objective analysis, and it will pave the way for a rational upswing, which will create value for companies through the Blockchain's various use cases.

A Blockchain strategy should first and foremost be founded upon an expression of needs. It is important to clearly detect the need for a decentralized approach within the structure. You do not deploy a Blockchain without having reasons for doing so. The first such reason lies in the pursuit of decentralized management, and the second, in a need to establish trust precisely where it does not naturally develop when there is a centralized architecture in place.

Once these two preliminary questions have been explored, you need to think about how to integrate the future Blockchain in relation to existing platforms, and give preference to choosing public Blockchains when there is a substantial need for trust, whilst at the same time retaining the option of a private Blockchain reserved for confidential transactions. If several different Blockchain architectures are to co-exist, it is a good idea to work on making them interoperable and scaleable. In every case, the decision-maker should always ask themselves whether it is appropriate to choose a decentralized system relative to a vertical architecture : what return on investment can they hope to achieve in their business? What business advantages emerge specifically with the implementation of a public or private Blockchain? What type of contracts can they transform into smart contracts (cryptocontracts, smart contracts), whilst at the same time keeping the same guarantees of security?

By using smart contracts, it is possible to check and perform contracts based on an automated and decentralized protocol. This is one of the most innovative aspects of Blockchain technology, on top of the cryptocurrency aspect. By their nature, smart contracts simplify and speed up transactions and make them more fluid, bringing together those organizations that implement them. They can also make up for a lack of infrastructure and enable rapid scaling up, notably in developing countries. In this context, the Blockchain becomes a powerful driver for progress and structuring, as shown by the following examples.

Some fine Blockchain experiments are currently being conducted in several African countries by local startups. In Tunisia, a public-private partnership has been formed involving the Tunisian Post Office, a Swiss company, and the **DigitUS** startup to develop a mobile application that makes it possible to perform standard banking transactions (transfers and payments) in e-dinar, a dedicated cryptocurrency. In Ghana, the **Bitland** company has

put in place a Blockchain infrastructure that acts as a digital land register safeguarding real estate. This use case proves that a disruptive technology can accelerate and secure the development of a territory by guaranteeing property rights. In South Africa, the solar energy crowdfunding platform (**The Sun Exchange**) steps in as a backup to State operators that are often found wanting. Using a Blockchain architecture, this platform facilitates customer relations, both in terms of the search for sources of financing, and in their redistribution. Here too, the Blockchain acts as a catalyst for the development of renewable energies and speeds up the advancement of territories. In Kenya, it is the agri-food sector that is taking advantage of the Blockchain, thanks notably to the **Greenspec** company specialized in the sale of seeds and in quality control. **Greenspec** has developed a Blockchain platform dedicated to making supply chains for agricultural products more secure and ensuring the products' traceability. The need to have transparency and a guarantee of product origin is covered from end to end by the technology. Other African startups are using the Blockchain to set up electricity exchange platforms using peer-to-peer microgrids, thereby considerably improving the quality of electricity distribution in certain regions poorly served by the network.

In France, the ecosystem of Blockchain startups is gaining strength year on year, with the emergence of some especially innovative «nuggets». In this regard, two examples are emblematic of the national dynamism in this area. The first of these nuggets is **Ledger**, founded in Vierzon in 2014, and now with operations in Paris and San Francisco. In less than four years, **Ledger** has become one of the world's leaders in the development and marketing of «hardware wallets»: secure electronic wallets dedicated to cryptocurrencies. With more than a million wallets sold worldwide, **Ledger** has managed to assert its know-how and technological excellence in a very competitive market, in which it notably faces competition from China. We should be emphasizing this fine French performance in the hardware field, which, all too often, is deserted by French companies!

The second French nugget goes by the name of **Keeex**, a startup founded by the researcher Laurent Henocque in 2014 that specializes in the electronic signing of documents, thanks to the Blockchain. **Keeex** deploys a technology based on a pronounceable, unique hash embedded within documents that provides proof of their integrity and of the issuer's identity. This innovation supports over 250 file formats and makes it possible to manage certificate-free file linking (versioning) at low cost using the Blockchain.

These two examples show that French creativity and excellence in the area of the Blockchain can certainly rival those of American or Chinese competitors. It should also be noted that incubators dedicated to the Blockchain, like **Chain Accelerator**, contribute greatly to the ecosystem's dynamism. We remain in the game, with the international market crying out for new use cases and new platforms to equip with decentralized components. It has taken ten years for Blockchain technology to reach a level of maturity compatible with companies' needs and requirements. A decade to reach the age of reason...

[1] Link to Blockchain Paris: https://blockchainevent.fr/2018/

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