

Better by blockchain?

**Reap your business
benefits with the right
consultancy approach**



**Business
Services**

Executive summary

Blockchain has arrived at an inflection point, with many businesses starting to investigate practical applications and how it can fit into their strategy. If you are not studying blockchain's capabilities and reaping its benefits, your competitors will be. Transparency Market Research forecasts that the global blockchain technology market will be worth \$20 billion by the end of 2024, up from \$316 million in 2015¹.

To maximize blockchain's potential for your business, the right expertise is required. In this white paper we will take a closer look at how Orange Business Services is tackling the blockchain challenge and how we can support you in getting the most from blockchain's benefits with our consultancy and proven methodology. We will show you how blockchain can answer key business challenges with practical use cases, proof of concepts (PoCs) and real world projects across many different verticals.

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What is blockchain?

Blockchain is the decentralized digital ledger technology that first found its niche in financial services, but now is being used in many other industries. It started life being used as a tool to manage cryptocurrencies, but its ability to securely and automatically verify, record and store large volumes of transactions and data, digitally and independently, has now presented a whole wide range of other possible applications.

Blockchain is a disruptor. At a basic level, blockchain can provide a secure, decentralized platform for transactions, but interest in blockchain's possibilities is growing across the board. No matter what the industry, blockchain can be used for storing, processing and transferring data, digital contracts, documents and much more, and its decentralized format means it can be used in any area where confidentiality and proof of identity are important. For example, it can help prevent forgery by ensuring documents are genuine, which gives it a role in the fight against identity theft.



Addressing business challenges

Blockchain is solving problems in industries as diverse as financial services, healthcare, real estate, construction, the public sector, manufacturing and industry 4.0.

Anywhere there is a need for confidential and sensitive documentation and protection of data, blockchain can offer a new solution that delivers benefits in terms of scalability, storage, privacy and governance.

Improving your supply chain management and enhancing relationships with business partners is a business challenge that falls within blockchain's potential: companies want to improve efficiencies, reduce costs and improve the ways they work with multiple parties. By creating one version of a ledger that is synchronized across computers, blockchain eliminates out-of-sync data, meaning all parties can see when goods have shipped and can review every step of a transaction, significantly reducing settlement time.

Blockchain can also address financial management challenges like cash flow, profit margins, cutting costs, financing and more, by storing transaction details as an unfalsifiable record, making transaction reliability greater.

\$2 trillion

According to Gartner, by 2023, blockchain will support the global movement and tracking of \$2 trillion of goods and services annually.²



There is also the regulatory compliance factor: as markets and technologies evolve, so do rules and regulations. Blockchain can help organizations address regulatory compliance by drastically reducing the time, cost and effort that companies spend on regulatory reporting while also improving the quality, accuracy and confidence of the overall process. It does this by compiling, tracking, and storing massive amounts of data that can be parsed and delivered to regulators in a timely manner to avoid fines.

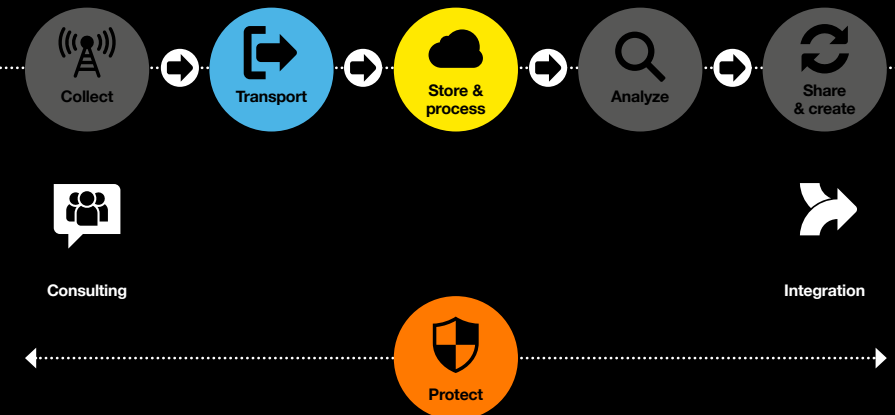
84% of businesses



believe blockchain will achieve mainstream adoption, while 77% say that their suppliers, customers, and/or competitors are discussing or working on blockchain solutions to address challenges in the value chain³.

Data journey: the role of blockchain

Orange works to help companies address key challenges at every stage of the data journey to enable progressive business ecosystems. Blockchain is directly applicable to the transport, store & process, and protect areas of the journey.



Why do I need blockchain in my business?

Blockchain technology can help you save time and be more cost efficient, by replacing legacy systems and record-keeping infrastructure, while reducing IT costs. There are also savings from reducing the need for payment intermediaries.

1 The financial factor

Decentralized blockchains can enable transactions to be made directly from person to person without the assistance of a third-party. This improves your company's financial efficiency and makes you less reliant on banks or other financial institutions – resulting in big savings in fees and other associated costs.

2 The security imperative

Security is more important than ever in today's business world, with cyberthreats ever present. Blockchain keeps your data encrypted and impossible to modify covertly. You can also save cryptographic signatures of documents or files in blockchain, giving your users a way to make sure files are not tampered with without needing to save the entire file on the blockchain.

3 Smart contracts

The Internet of Things (IoT) is seeing smart contracts come into their own in business. Smart contracts enable the automation and autonomy of management processes based on data transmitted by the devices and necessary to fulfill the conditions of execution of the smart contract. They also offer the benefit of giving an infinite and immutable data history based on a general ledger that records all data. This guarantees transparency and simplicity, because the corresponding data is present and secured in the blockchain without any action on the part of another party.

4 Transparency

Blockchain conceals users' identities using powerful cryptography, making linking public addresses to individual users a difficult task. However, the transparency of a blockchain comes from the fact that the holdings and transactions of each public address are open to viewing.

5 Data privacy

In the GDPR era and beyond, data privacy is a continually complex issue. Blockchain's decentralized nature helps you ensure the security of data because it publicly tracks, records and verifies the legitimacy of all transactions.

6 Regulatory

Blockchain helps you address regulation with a systematic approach to both internal and external data consolidation. When allied to the right platforms and infrastructures it can also help you disintermediate third-party data reporting services providers like Approved Reporting Mechanisms.

Delivering blockchain

Our blockchain expertise is cross-industry: our consultants understand how blockchain works and what benefits it can bring when applied correctly to your business and sector. Example use cases include:

Financial services

- Document certification: smart contracts solution for certification of documents like IBAN, vehicle registration cards or diplomas
- Property insurance: blockchain register listing properties in a secure ledger, without the possibility of modification
- Orange money interoperability: global exchange network based on blockchain
- Financing: multiple use cases including loans between individuals, payment, alternative currencies and money transfer

Public sector

- Academia: identifying fake diplomas with a university-run register to complete and store names of graduates
- Managing employment through Synereo: legal documents, diplomas, permits using Bitproof and Bitland
- Registration of patents and intellectual property: using Monegraph
- Protecting music industry assets: using Ujo Music and copyright ownership through Museblockchain.com
- Citizenship: a mobile voting solution for local authorities based on blockchain to enables citizen consultations in elections

Smart cities and infrastructure

- Energy: exchanging solar energy (Brooklyn) via Token (SolarCoin) and Energy Management with Bouygues Immobilier
- Identity management: allow passengers to identify themselves using blockchain to simplify control procedures at an airport

Healthcare

- Patient medical file access: a database managed by hospitals that manages access rights to patients' medical files
- Emergency access: a decentralized directory shared by hospitals listing available transplantable organs

Logistics

- Supply chain: blockchain deployment follows objects like smartphones as it moves through the supply chain from manufacturer to logistics company and retailer
- Tracing the origin of materials in a food manufacturing chain using thingchain.org
- Circular economy: using our Thing'in platform for managing connected objects that tracks the life of an object from its manufacture through transport up to its recycling



Blockchain consultancy methodology

With blockchain it is best to address implementations with a business use case-centric approach. We have developed a proven consultancy methodology to help you achieve success.

Our consultants engage with you and start from your business need, not from the technology angle: we analyze your potential use cases and establish which of them can benefit from blockchain.

Four pillars

Our proven methodology centers around four pillars that deliver benefits to your business:



1. **Efficiency:** instantaneous transactions to make your company more agile



2. **Managing risk:** mitigate threats to your company, reduce potential for of cybercrime



3. **Cost reduction:** use blockchain to limit and reduce costs through disintermediation



4. **Trust:** improve trust by using blockchain in your business processes

Working with Orange

Our consultants work with you on the use cases that need transformation. This involves building the business case and determining the investment needed. We take you from inspiration to implementation, depending on your level of maturity – such as:

Discovery: the “I want to know” stage

We work with you to investigate blockchain technologies, explore potential use cases and business models, and demo applications. This can include meetings with blockchain experts, technology and market watch, and mapping out a blockchain customer journey for you.

Opportunity detection: the “I know what I need” stage

We first establish design thinking for identification of use cases, followed by prioritization and evaluation of use cases, and then to creating the first models, such as smart contracts.

First projects: the “I know what I want” stage

If you are already further down the line of your blockchain knowledge, our consultants work with you to design and run a first proof of concept (PoC) in agile mode and to integrate it into your environment. After completion, we analyze the PoC to measure its value and the ROI it has created for your business. With a proven, viable blockchain solution in place that works for your needs, we then work with you to scale it to best serve your business.

Orange: your blockchain partner

Your blockchain initiative can benefit from engaging with Orange and leveraging our multilevel ecosystem that lets you call upon a wide range of expertise and partners.

Startups

Orange gives you access to innovative startups that are working with blockchain at the cutting edge of digital technology. This includes Orange Fab, which is our ecosystem of 1000 startups, including a dozen in the blockchain area. Examples of successes include:

Chain

Orange has invested €3 million in this startup. Chain develops blockchain technologies for the finance sector, for creating, managing and transferring digital assets. This innovative model for transmitting data or assets eliminates intermediaries and replaces them with secure, encrypted and decentralized networks.

These private networks, based on an open protocol, are fully interoperable with each other and with other open-source blockchain standards. Chain includes development tools to create prototypes of blockchain-based services.

Le Vote

An online voting solution that encourages citizen participation in the associative, educational or professional world, at a local, territorial and national level. Le Vote is a free mobile app and dedicated website for organizers based on blockchain that secures organization and results of polls without any personal data being stored in the databases of the service.

Adenovo

A fintech start-up for risk management in car loans. Using AI and blockchain, Adenovo provides better risk management, minimizes the threat of outstanding debt and automates and accelerates loan applications.

Partnerships

Orange has the right partners in place to assist you in taking your blockchain projects forward. These include:

- **ChainForce:** connects companies interested in blockchain's potential to create pilot projects with startups and expertise
- **Our communities of experts:** on top of 8,000 Orange researchers, Orange has partnerships with universities all over the world
- **Relationships with 60 major groups on innovation** including Air Liquide, Renault, EDF and more

Blockchain as a Service (BaaS)

The on-demand nature of Orange's work with BaaS means you can propose new services on blockchain architectures and develop and test new approaches quickly and easily. BaaS is founded on Hyperledger technology, which provides a native security management and modular architecture in which to carry out PoCs in a fast, convenient way.



Why Orange

Through our consulting services, we enable a digital, globally connected business world by helping our customers realize the power of data for human innovation – with a full portfolio.

We offer three types of consulting:

Business consulting

Develop a practical approach to rapidly innovate and accelerate your business leveraging digital






Technical advisory consulting

Delivers business value by identifying new and evolving technology capabilities

Integration consulting

Build a seamless design and align your operating models with business imperatives

Our differentiators

-  Co-innovation leveraging the Orange Group ecosystem
-  Accompany clients from ideation and business challenges to co-design of digital solutions
-  Global presence with local consultants worldwide
-  Consulting vertical expertise and best-in-class partner ecosystem
-  Business and technical skills, best practices and over 700 certifications

For more information on how Orange can help you, [click here](#).



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