

CRYSTALCHAIN

Building trust together™

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Blockchain Traceability in the Food Supply Chain

Speaker



Maxime Michelot

Head of agri-food industry projects at Crystalchain, based in Paris.

Maxime holds a Bachelor of Business Administration and a Master of Science in Innovation Management from EDHEC Business School.

Maxime has 7 years of experience in the food industry. First as an entrepreneur, then as a data consultant for leading retailers (Système U, Carrefour, ...). At Crystalchain he has led numerous blockchain traceability projects over the past 4 years.

In particular, he developed the industrialization method for blockchain projects for Carrefour, which has been used at Group level, in various countries.

Summary

1. Crystalchain: who are we?
2. What is blockchain?
3. Why do we use it for traceability?
4. Use case
5. Added value

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Crystalchain: French experts in product traceability and the deployment of accountability and compliance tools

Founded in 2016 and
based in Paris



Agri food



Chair of the French committee for the
standardisation of blockchain at ISO



Fashion, textile and luxury



Developer of a blockchain-based
traceability platform



Circular economy



Our vision : within 5 to 10 years, every product will be fully traced



Why we use blockchain for traceability and transparency (1/2)

Fundamental principle:
You can only control and improve what you measure



For this, we need a trusted, reliable and shared source of information

Why we use blockchain for traceability and transparency (1/2)



Information in a blockchain is :

- ✓ **Distributed**
- ✓ **Immutable**
- ✓ **Time-stamped**
- ✓ **Auditable**



The entities who register them are thus empowered

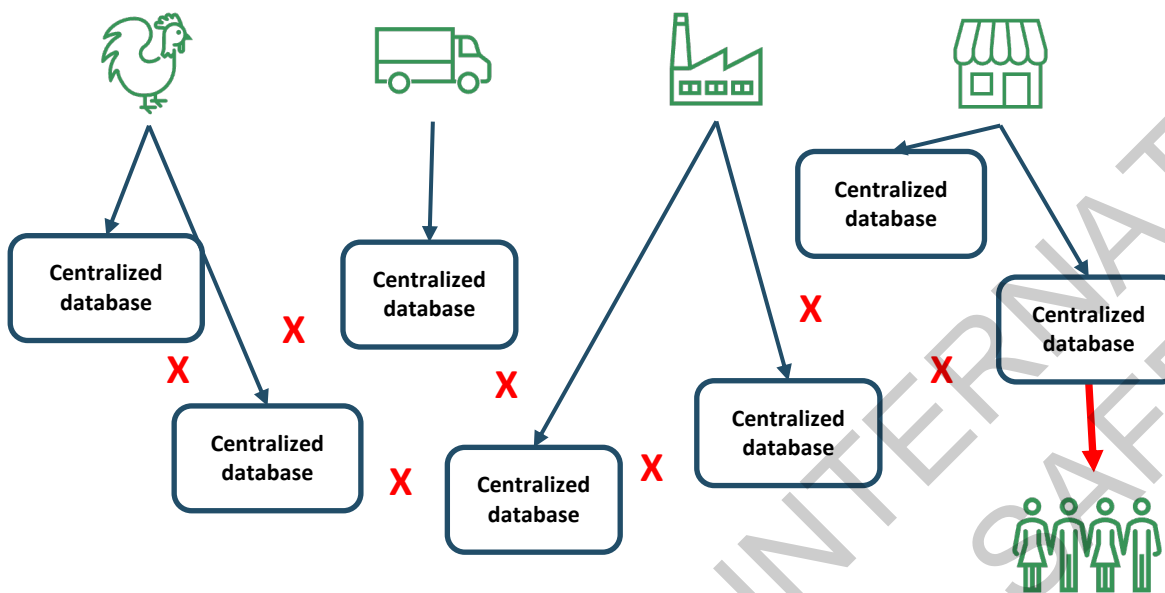


The network trusts this information

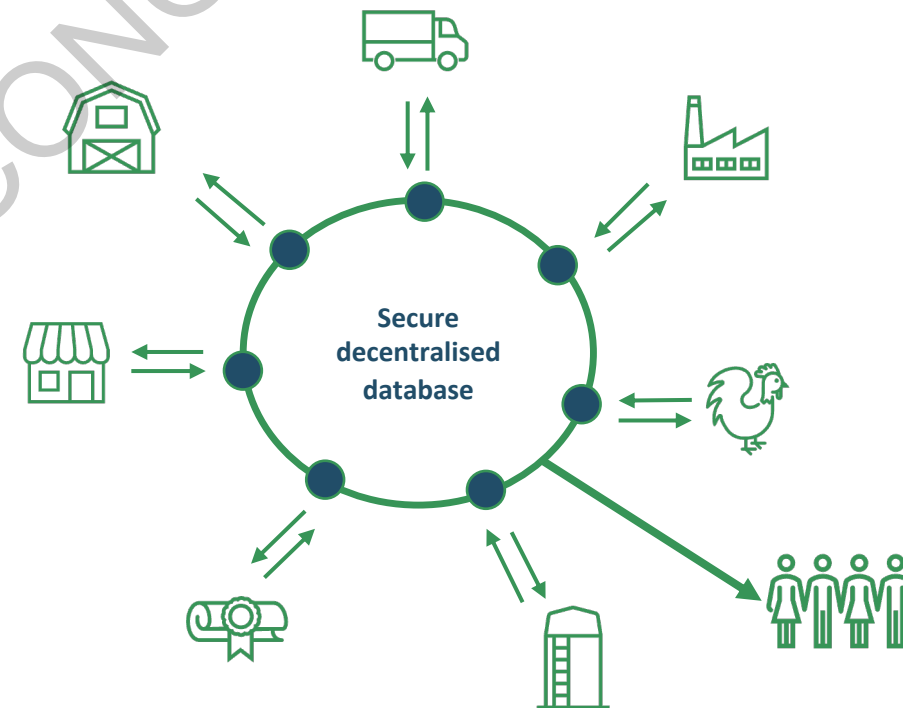
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Blockchain technology is the optimal solution for traceability and accountability

Traceability without blockchain technology



Traceability with blockchain technology



The data is

- **Scattered and fragmented**
- **Centralized and therefore corruptible**
- **Modifiable and therefore not trustworthy**

- **Shared and therefore transparent**
- **Distributed and therefore secured and empowering**
- **Immutable, encrypted and linked, therefore unforgeable**

Usecase : traceability of 'patties' for Burger King



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Project Stakes



Ensuring food safety



Ensuring brand protection

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A restricted project perimeter to promote smooth execution: a few entities involved in the traceability of 'patties'



Production site

BIGARD : 2 sites

5 traces

- Batch production
- Elements composing a batch
- Parcel shipping
- Bacteriological analyses carried out on a batch
- Biochemical analyses carried out on a batch



Warehouse

STEF : 2 warehouses

3 traces

- Parcel reception
- Parcel shipping
- Parcel transfer



Restaurant

BURGER KING: 2 restaurants

7 traces

- Parcel delivery
- Parcel removal from storage
- Putting parcels back in stock
- Outgoing parcel transfer
- Incoming parcel transfer
- Self-checks
- Actions



Laboratory

MXNS

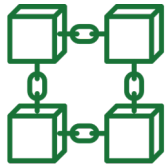
3 traces

- Product analysis result
- Result of environmental analysis
- Audit item



BLOCKCHAIN

Objectives of the project



Validate the suitability of the blockchain for retrieving and securing information



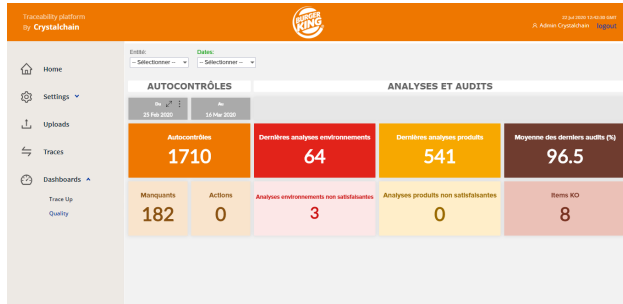
Retrieve in one click the traceability data of a batch



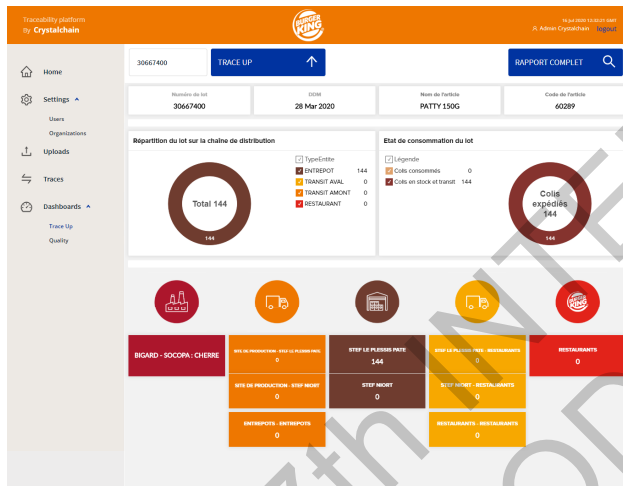
Validate the scalability of the traceability model

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Project deliverables: a traceability platform with two dashboards



Quality dashboard



Trace Up Dashboard



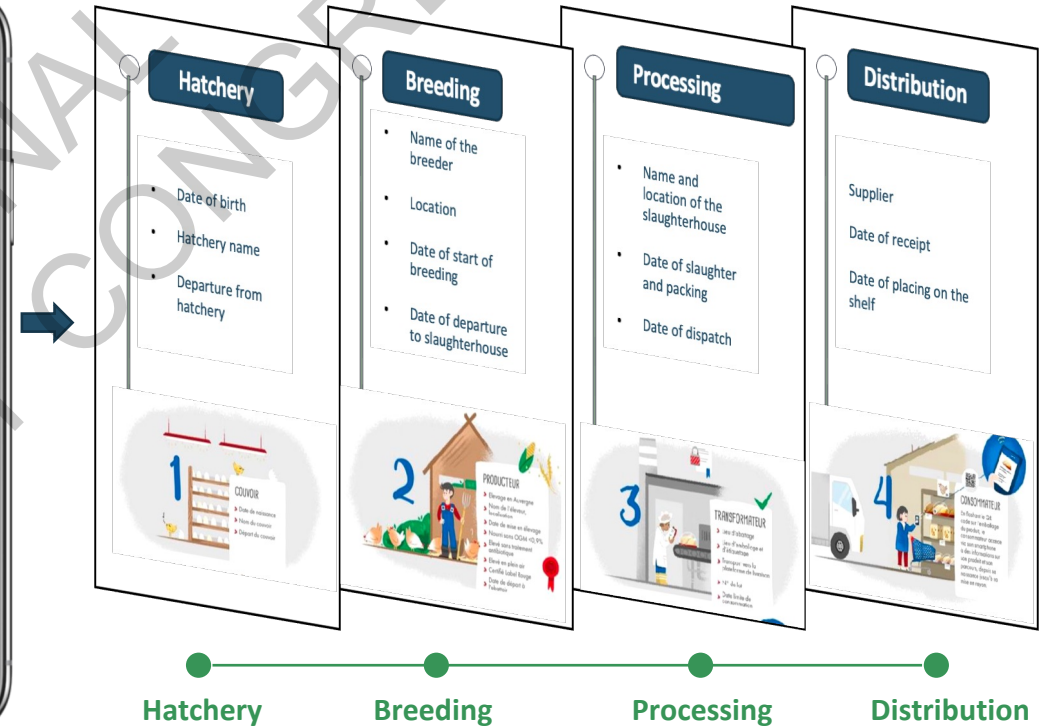
And.. it works !

Sharing all this information is possible because
blockchain generates **trust**

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Sharing trustworthy data with your clients (B2B / B2C)

The batch traceability data is retrieved & displayed to the end user via QR code



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In addition to regulation and traceability advantages, the added value of a blockchain project is huge

Business

- Display transparent processes
- Differentiate from the competition
- Add value to the product
- Enhance the value of CSR initiatives
- Justify the price or price increase of products
- Make up for a problem that has had an impact on consumer perception of the brand
- To complete a service for other customers

Risk management

- Ensure a level of quality that meets expectations or specifications
- Fight against counterfeiting
- Counter grey markets
- Comply with quality, logistics etc. standards imposed by regulations and mitigate the risk of legal disputes

Organization

- Be able to react very quickly in the event of an alert
- Ensure the integrity of the chain (especially for food products)
- Improve logistics within the company: optimal management of flows, reduced costs
- Increase interaction with customers and access statistical data from the field

Questions?

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Welcome to the age of transparency

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