CATTLE CHAIN

Enhancing farm productivity and guaranteeing cattle traceability with blockchain

FIWARE FOUNDATION

SENSOWAVE

INSTITUT DE L'ELEVAGE idele

natrus DE LA VALL D'EN BAS

THE EUROPEAN LIVESTOCK SECTOR CHALLENGES AND NEEDS

CHALLENGES

1. Aging and rural depopulation.

2. Lack of self sufficiency, relying on public subsidies.

3. Satisfy consumers' demands for food quality, safety and traceability.

4. Technology barriers:

   • expensive implementation without guaranteed return of investment.

   • difficult management that requires specific knowledge and training.

   • limited transfer of the information and value generated to other steps of the value chain.

   • large amounts of data from a variety of sources.

5. Premium products need manual time-consuming tracking systems to provide full guarantee to retailers and consumers.

NEEDS

The European livestock sector needs innovative and competitive tools to increase productivity, efficiency and assure transparency along the supply chain.

Farmer's need "decision support systems", monitoring devices to track animals' health and behaviour to reduce farm operational costs and increase overall productivity and efficiency.

SMART TOOLS MUST BE

• Cost-efficient
• User-friendly
• Transversal
• Standard and interoperable

CATTLECHAIN will disrupt the livestock farming sector, providing an alternative to traditional paper tracking and manual inspection systems, which can leave supply chains vulnerable to inaccuracies.

Cattlechain will guarantee animal welfare indicators, providing a single version of truth to all actors in the meat/dairy supply chains.

ANIMAL WELFARE INDICATORS

BLOCKCHAIN GUARANTEED

CATTLECHAIN 4.0 SOLUTION

TECHNOLOGY

Disruptive/complete monitoring solution to increase farm productivity and sustainability while promoting animal welfare.

Based on IoT wearables, Artificial Intelligence (AI) algorithms, FIWARE, Sentinel satellite imagery and blockchain technologies.

BENEFITS

FARMERS: comprehensive and relevant information on their cattle status (health, location and reproductive conditions)

RETAILERS AND CONSUMERS: traceability of the dairy/meat products they are selling/purchasing, resulting in trusted information for consumers.

ANIMAL WELFARE INDICATORS

The animal welfare indicators will guarantee that the living conditions of the animals meet a set of defined animal welfare standards.

Disruptive Technology
IoT Devices: ear tags, gateways, collars.
Connectivity: Sigfox, NBIOT, LoRa.
Long battery life.

Animal monitoring
Health, welfare, growth rate and reproductive status.

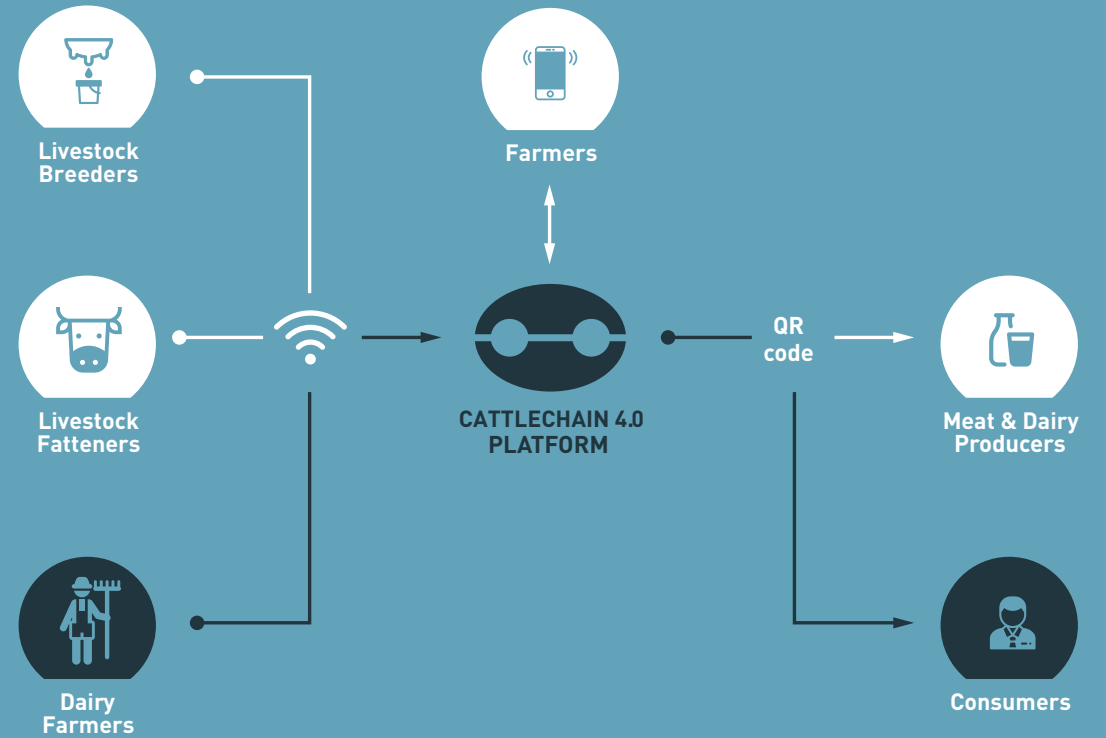**Intelligence (AI) algorithms**
FIWARE Open Source Platform.
Harmonized standard data models.
Multi-device user apps (B2B and B2C).

Blockchain enabled
transparency and traceability.
Animal welfare indicators.

CONNECTING FARMERS TO CONSUMERS

Livestock Breeders

Farmers

Livestock Fatteners

CATTLECHAIN 4.0 PLATFORM

QR code

Meat & Dairy Producers

Dairy Farmers

Consumers

ANIMAL WELFARE INDICATORS

BLOCKCHAIN GUARANTEED

Cattlechain 4.0 will support monitoring, management and decision making with complete traceability of the beef and dairy cattle supply chain.

IoT devices + blockchain = reliability of the data, no possibility to modify records (data from device directly to the centralized cloud).

Animal Welfare Seal Blockchain Guaranteed.

CATTLECHAIN 4.0 BENEFITS

FARMERS (dairy and beef cattle)

- Support decision management tools to improve the profitability of their farm.
- Notification alerts when an anomaly is detected with an animal.
- Tools to manage the animals' grazing conditions of their pastures.
- Tools to monitor the animals during transport.
- Management apps to help farmers to avoid paperwork tasks.
- Information coming from public authorities and consumers.

MEAT AND DAIRY COMPANIES

Providing customers with trustful information on the origin of their products.

CONSUMERS

Thanks to the blockchain certified welfare indicators, consumers will obtain one source of truth with information about purchased products, and may even provide feedback to farmers.

VISUAL APP

- Multi-Platform (web platform, iOS and Android) application for dairy, breeders and fatteners farmers.
- Consumers will access through a QR code to visual information on the animal welfare and product: birth, breeding and growing periods, product processing and distribution.

CATTLECHAIN PARTNERS

SENSOWAVE

SensoWave (www.sensowave.com) is the trademark from MISC International, S.L. devoted to the development of technological solutions in the ICT sector.

SensoWave was launched in 2013 and focuses its activity on the Internet of Things, Cloud computing and mobile apps fields. It applies similar solutions to different fields such as: eHealth, farming, industry, homes, defence, and smart cities.

One of Sensowave's products is DIGITANIMAL (www.digitanimal.com), a SaaS platform that consists in hardware add-ons and software modules to monitor and locate livestock in farms.

FIWARE FOUNDATION

The FIWARE Foundation is a non-profit organization that drives the definition and encourages the adoption of open standards - implemented using Open Source technologies - that ease the development of smart solutions, based on FIWARE technology, across domains such as Smart Cities, Smart Energy, Smart AgriFood and Smart Industry.

The FIWARE global community has the common effort of achieving a solid headway towards making FIWARE open source technology the best instrument for companies to reach their full potential and scale their activities to enter new markets and grow their businesses.

With its Inclusive approach, lowering barriers to contribution, FIWARE Foundation will ensure the long-term availability of FIWARE technologies for all, for free, for ever.

natrus DE LA VALL D'EN BAS

Bas Alimentària S.L. (Natrus) is an Spanish hamburguer company dedicated to the production and marketing of burgers and noble pieces of beef with a high added value. Natrus processes and markets Angus veal meat raised in Carrera d'en Bas S.L. All products natural and do not contain chemical additives.

For BAS ALIMENTÀRIA, traceability, animal well-being and food safety go before any project.

INSTITUT DE L'ELEVAGE idele

L'Institut de l'Élevage (The French Livestock Institute) (acronym Idele) is a professional institute of expertise and applied research on herbivores: cattle, sheep, goats and horses. It conducts experimentation, engineering and consulting work to improve the competitiveness of the farms and the conditions for exercising the profession of stockbreeder, to adapt the production and livestock systems and to meet the demands of the processing sectors concerning products and quality approaches.

Idele is a non-profit, non-governmental R&D organization appointed by the French Ministry of Agriculture as a technical centre for agriculture and it is a member of the ICTA network (network of Technical Agriculture Centres). It is the national reference and normative body in livestock farming systems. Its main source of funding is the Trust Account for Agricultural and Rural Development (CASDAR), a fund fed by the turnover tax of farmers.

C A T T L E
C H A I N

Do you want to **connect with consumers** and show them how you ensure the welfare of your animals?

Are you looking for further opportunities to improve the efficiency of your farm?

Contact us via **cattlechain.eu**

DAIRY FARMERS

CATTLE FARMERS

INFLUENCERS

DIFFERENT COUNTRIES