WINE BLOCKCHAIN: A NEW PARADIGM OF TRASPARENCY AND TRACKING IN WINEMAKING PROCESS

DIGITAL DAYS

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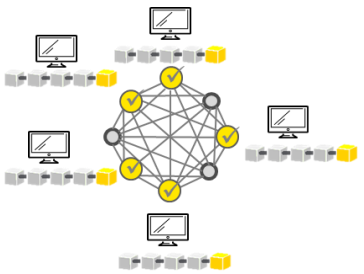
Blockchain technology

The Blockchain is a **public and distributed register** shared among different participants of a **peer-to-peer network**. The name of blockchain is related to a chain of **blocks chronologically ordered** and protected by **cryptography**.



NOTARIZATION

- Immutability/non-repudiation
- Timestamping
- Cryptography

Always available auditability

TOKENIZATION

- Exchange of non replicable digital asset by mantaining privacy and security of information
- The parties do not share the infrastructure but they take advantage of full interoperability

SMART CONTRACT

- To make the exchange dynamic
- To create automatic execution of business rules when certain criteria are met

TRACKEY background

Globalization and competition increase*

30 billion litres wine global consumption within 2020

Limited awareness for Italian wines abroad

Climate change creates new competitors

Export and marketing crucial for growth and sustainability

Communication and Marketing as competitive leverage

B2C
Communicate products to end customer

60% check the label to verify sustainability

71% available to pay a premium price

74% affected by transparency and traceability

89% wants to know Italian wine world and criteria for origin certification

B2B
Differentiation along the distribution channel

More transparency for export and foreign Institutions

Guaranteed quality and more info for business clients

Opportunities and trends

Blockchain allows to take advantage of a global interest

TrackEY

Suite of integrated services for differentiation, internazionalization and authenticity of Made in Italy Wine, trough new ways of communication based on innovative technologies like Blockchain

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*: Analisi EY, Global Food Forums, Pambianco report, Competition in the Food Retail sector, inumeridelvino
**: "Atteggiamenti e comportamenti del consumatore" Veronafiere in collaborazione con C.R.A., Gambero Rosso

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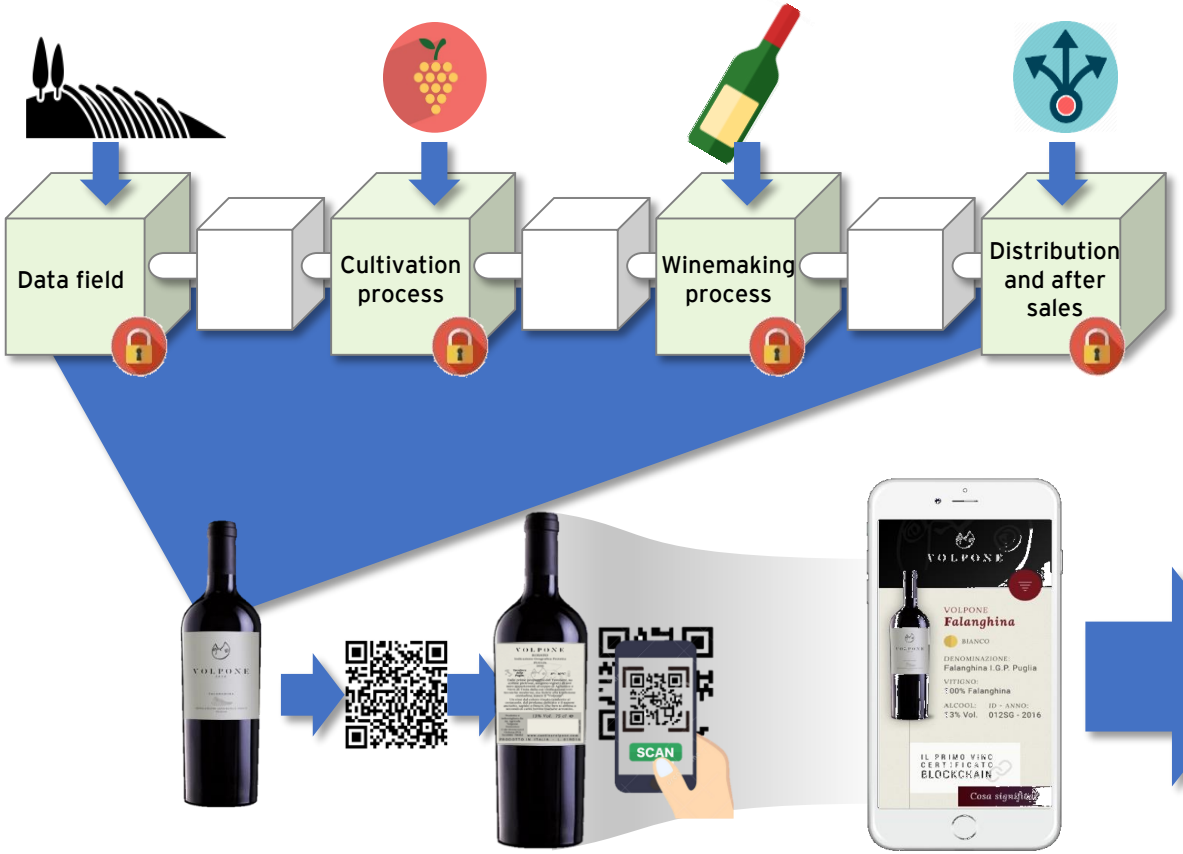
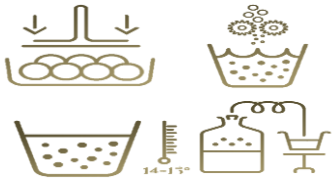
The first application of Wine Blockchain EY



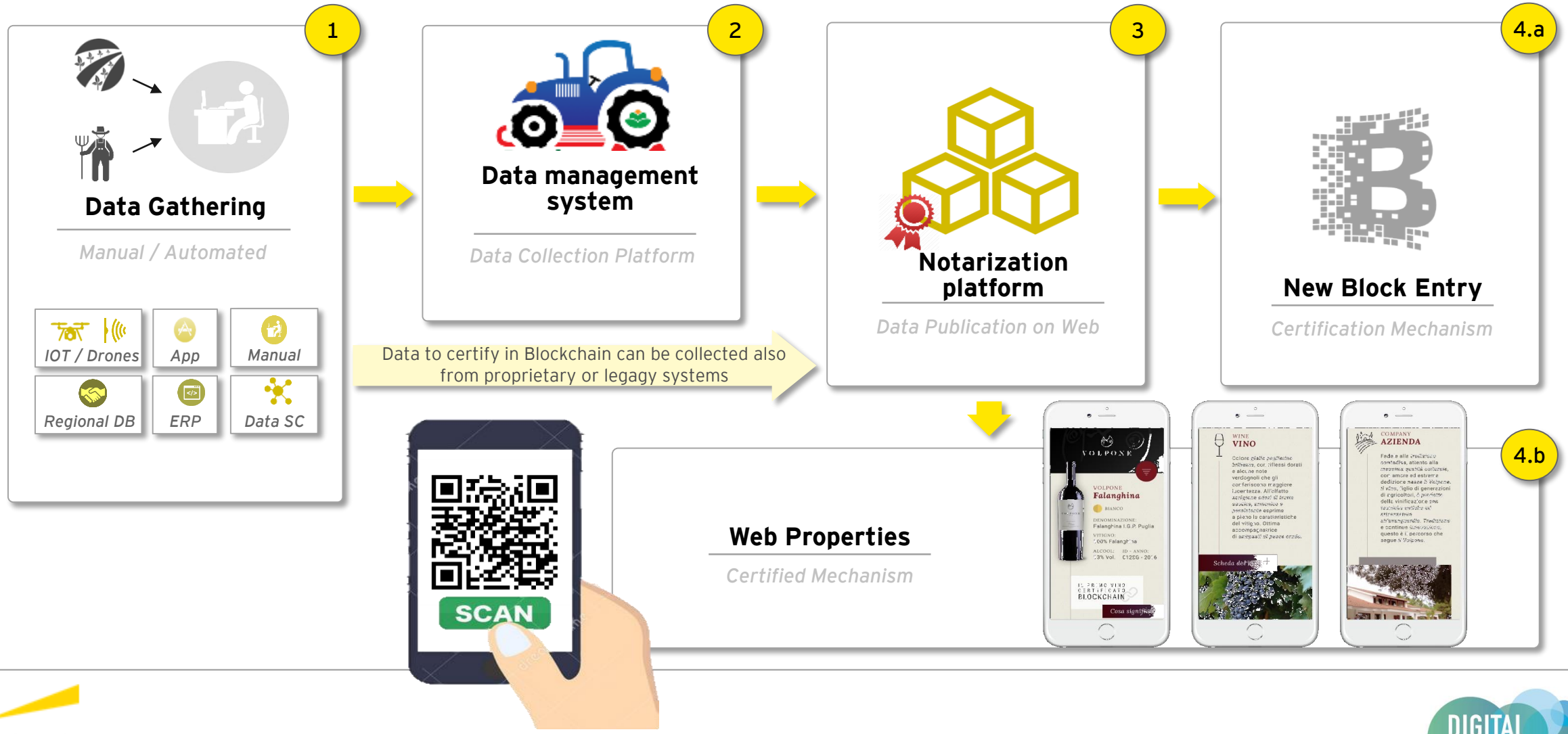
Geographical context and winery information

History and images from the field to the grapes

Winemaking phases



The building blocks of TRACKEY



Tracking and certification of each step

A plenty of informations can be **gathered** and **continuously tracked** from each production step along the entire supply chain, with the goal to deliver certificated products data among their **origin** and **quality**.

Process Steps

Production
From fields cultivation to harvesting process

Transformation
Raw material transformation

Packaging
Products enclosure and protection sales

Distribution
Logistics to grant availability downstream

Post Sales
Traceability, Claims, Consumers Requests

DATA DATA DATA DATA

Blockchain

23456a
October 2nd - h 6.26 PM
Data gathering directly from the field (e.g. cultivation, harvesting)

23456a-01
November, 9th - h 4.05 PM
Data gathering from the transformation process

23456a-01/b
July, 11th - h 10.20 AM
Data gathering directly from the packaging process

October, 21th - h 7.30 PM
Data gathering from logistics among entire distribution process

Inspections and lab analysis that can be executed by Institutions able to notarize their certification straight on the Blockchain

The end consumer can access all information through a smart label linking to a landing page with story-telling and interactive solutions

SCAN

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Storytelling and Data Analytics

Web Properties

Front-end and story telling lending page

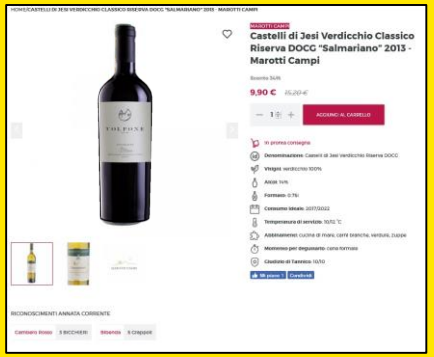
Blog

Forum

WebSite

Social Media

E-Commerce



Analytics

Geographic Data

Demographic Data

Other data

e.g. Technology for scanning of the QR code

High value tangible benefits for manufacturers…

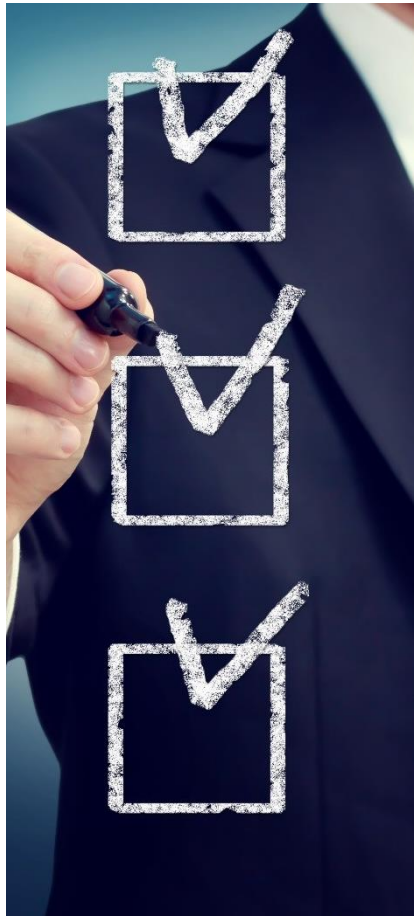
Operation

Data collection model for auditing and digitization

Immutable and tamper-proof data

Real-time access to ministerial and regional data

Precision farming / business intelligence systems integration



Business

+ Brand value increase and better reputation / awareness on the market

+ Profits increase and overall process costs reduction

+ **Profit increase** due to higher prices thanks to guaranteed quality and transparency

+ **Value Added Services** to leverage all the opportunities of TRACKEY

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…and consumers

High quality product warranty to final consumer

Production process **transparency**

User-generated content on social media platforms which lead to **knowledge sharing**

- Direct mobile access to certified informations through **security code** on smartphone
- Easy interaction with certified informations through a targeted **storytelling**
- Benefits related to **education** about whole industrial processes for goods production

Wine Blockchain EY can bring immediate advantages

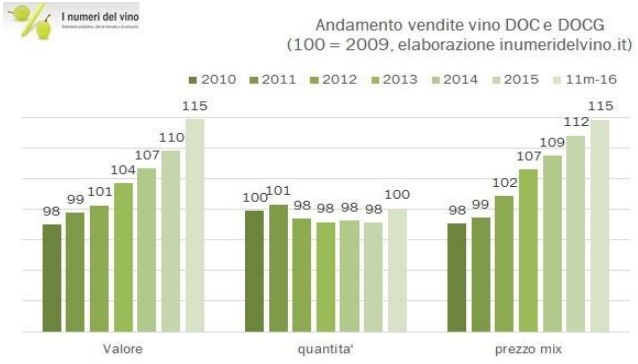
1 Certified Wine is continuously growing

2 Customers are willing to pay more for certification

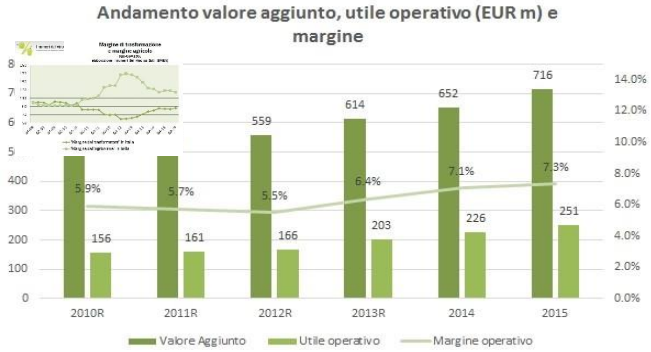
3 CPG thinks that they success factor is no more price, but the transparency and authenticity

Quanto alle lamentele di scarsa sensibilità da parte della gdo, giungono tuttavia a proposito alcune precisazioni espresse per voce del responsabile reparto vini di **Coop Italia**, **Francesco Scarcelli**, il quale riconosce che in effetti «la leva principale fino a oggi utilizzata dal canale è stata quella promozionale. Noi tuttavia – aggiunge – siamo dell'idea che non sarà più quella chiave per le vendite, ma bisognerà unirvi una componente di sviluppo della conoscenza del prodotto».

5 Better performances for certified wines are related to increases in price, not volume



6 This brings to high margin



7 It is hard to guarantee authenticity with traditional certifications

Wine Blockchain EY can bring **results in terms of revenues** at least equal to those brought by **traditional certification**

~ +5%

Revenue / Year

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The first wine supply chain registered in Blockchain

VOLPONE

TRASPARENCY

- **25%** time saving nei Q&A checks

Data and certifications of Winery

Treatment products

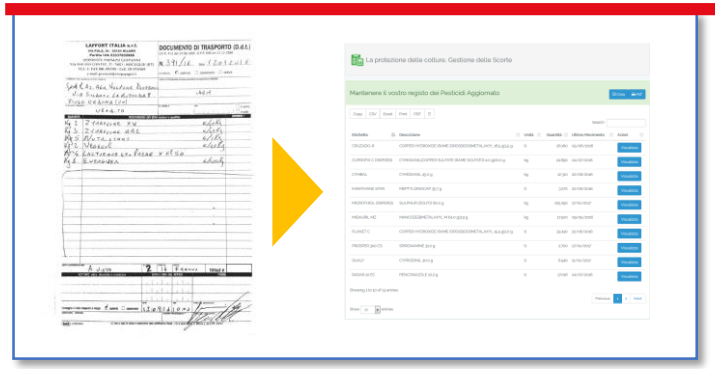
Analysis and water consumpion

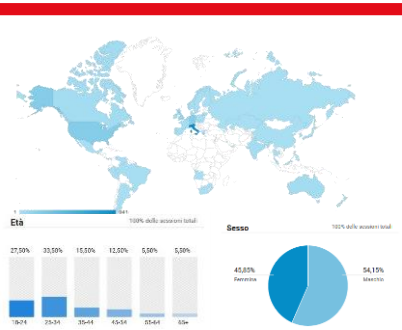
Registro dei trattamenti

DIFFERENTIATION

+ **580%** click on the company website

DIGITIZATION





CLIENT PROFILE

1741 Sessions
33% age 25-34
54% Male
5,5% Running
54% Italian

ELAPSED PROJECT: 4 WEEKS

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Sustainability approach

WATER CONSUMPTION

549* L/Bot
value estimate for 0,75 L

CHEMICAL PRODUCTS USAGE

ECOLOGICAL FOOTPRINT

ECOLOGICAL FOOTPRINT

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Media coverage for the first Blockchain solution

Key success factor

- Food quality is under the spotlight and customers demand more and more transparency
- **Blockchain** is the most **innovative tool** to certificate products and support the quality communication
- The news has been posted by the principal Italian newspapers and international Press

France

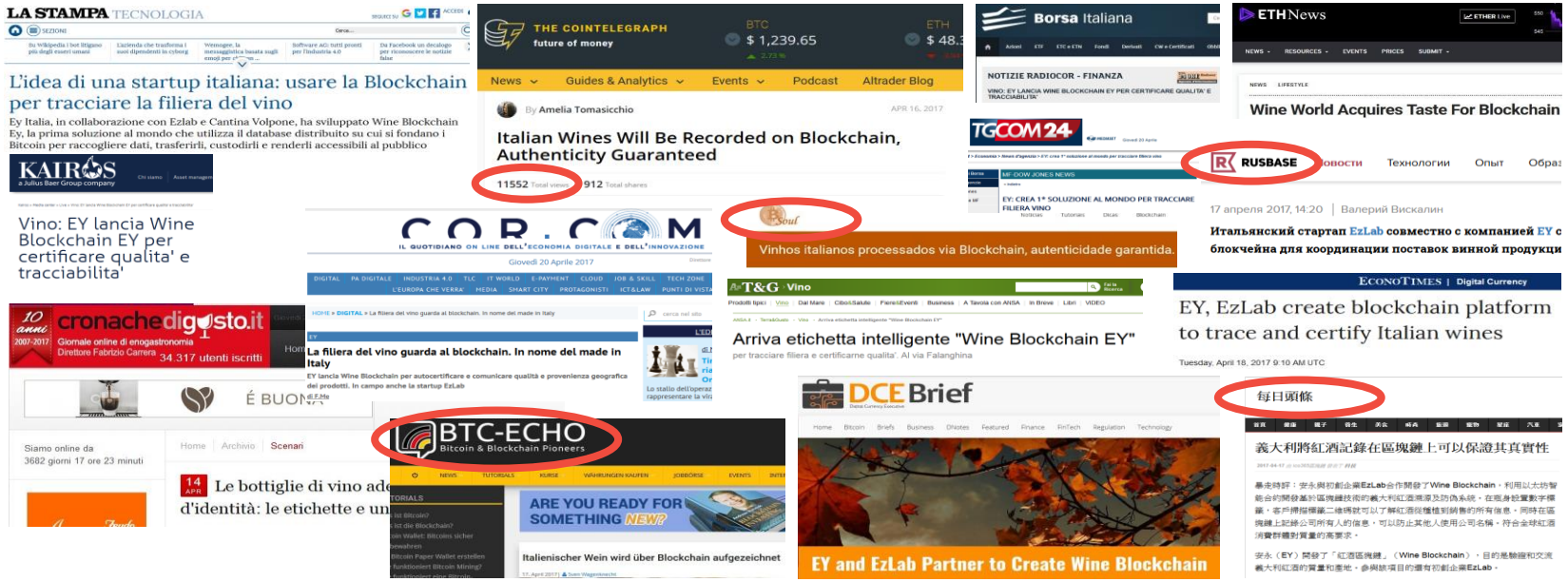
China

Germany

Spain

Russia

USA



Targets and forthcoming developments

Wine

First market to be targeted is Wine: high value production that strongly relies on certification and that suffers the counterfeiting.

Wineries

Consumer packaged goods

Wholesale and retailers

Olive oil

Bio products

Cheese

Fish supply chain