

# European Alliance Against Coronavirus

Friday 26<sup>th</sup> June 2020 at 8:30

## Blockchain vs. COVID-19: how to immediately react and be prepared

Working format is based on "*Gilles Rules*":

1. conceptual framework
2. needs and disruptions
3. solutions

Speakers:

- Alex Vitale, President Quadrans Foundation
- Marco Crotta, Blockchain researcher and developer

[Link to session's recording](#)

### 1. CONCEPTUAL FRAMEWORK

#### Can blockchain be the tool to make the change we need?

Blockchain is a shared and immutable data structure. This technology has some core characteristics which can provide different benefits in several contexts. **Secure and transparency in an open and public blockchain guarantee trueness and verifiability.** This is possible because this technology can be also supported by other **digital technologies like Artificial Intelligence (AI) and Internet of Things (IoT).** This characteristic allows the use of blockchain not only for goods but also for tracking documents in public administration as well as in insurance and IP & Research.

#### Blockchain and COVID-19

The recent COVID-19 pandemic has highlighted the importance of digital tools to address immediate common needs and quick intervention globally. Blockchain-based applications could play a role in fighting the COVID-19 pandemic. Alex Vitale underlined **three use cases** very important to understand this technology and its applications: facilitator for tests, simulations, and data notarisation.

#### What next?

The recent pandemic has impacted many face-to-face business activities and it clear that we have to change something in our work and life organisation in order to be ready for the next global emergency.

In terms of transparency, trust and information reliability, we understood how important it is to find an effective way to prevent the diffusion of fake news and to have an organised system ready to work in different environmental conditions.

Blockchain technology brings verifiability **in data** and **facilitate relationship between decentralised organisations**. It represents a shift towards a broader collaboration between individuals and organisations across society and between different associations. One of the discussion points was the possibility of privacy, transparency, and accountability.

There isn't one specific answer about the future of the blockchain but the speakers see clear advantages.

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## IDENTIFICATION OF NEEDS

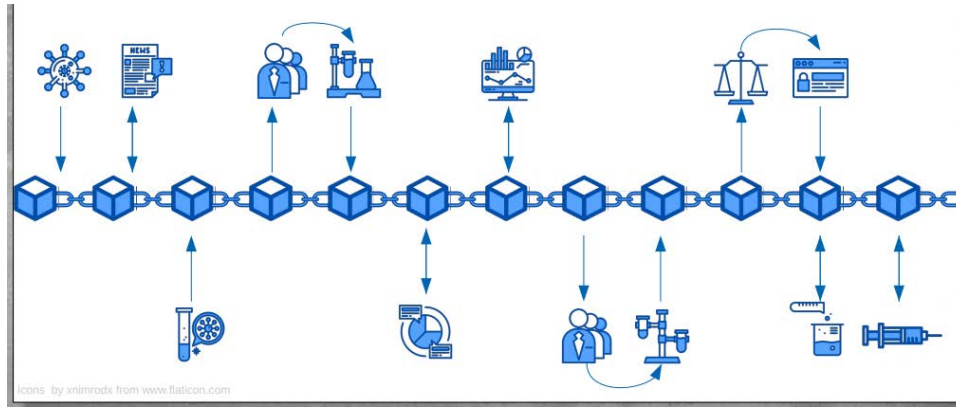
Blockchain represents a new technological trend potentially disruptive in terms of business model configuration, value proposition, and information management

Blockchain technology has the potential to play an important role in the post COVID-19 scenario, providing a quick reaction to the uncertain economic conditions of the imminent future. Blockchain is based on a system of distributed ledger among different nodes, with the characteristic to be immutable, transparent, and more secure as the number of the nodes in the network increases. Its applications are not Industry-specific, meaning that it presents a strong cross-sectorial usage: different areas of application include public administration, insurance, research, and finance.

In the context of European clusters, Blockchain could represent a quick, low cost solution to develop a public network shared among associations across Europe, providing fast communication and collaboration, strong reliability of data exchange and security as built-in aspect of the technology itself. Benefits stem from its application, in terms of resiliency, giving the possibility to the single European cluster to share information in a secured and transparent way with the network and allowing to react timely and precisely in critical situation, like a sanitary emergency ("Resiliency is a property of the network, not of the single nodes").

The following application cases were presented, to give an overview of its possible usage to improve existing processes and exploit new assets especially focusing on the pandemic situation:

1. **Using Blockchain as a traceability facilitator** for COVID-19 tests, in order to get easy, fast and secure access to their information, certifying origin, distribution and results. Blockchain permits real-time access to critical information such as date and location of test results, allowing to map affected areas by tracking positive results (not patients) giving snapshot of the situation. As the Blockchain expert Marco Crotta said, the blockchain was used in some cases as a **collaborative platform** in order to make experiments and researches available to the public to find a vaccine and to protect who discovers it.



2. **Harnessing the power of distributed computing:** Blockchain can be used to harness the power of the distributed computing nodes to help calculation in order to run simulation, searching for a treatment to COVID-19. Currently, hundreds of nodes donate computing power to contribute to the research focused on the Covid-19.

3. **Data Notarisation & Smart contracts:** due to the impact of the pandemic on many business activities, proving to be a powerful tool for:

- a. **Certify and notarise** smart working activities;
- b. **Track Record** of verbal processes, videoconferences, webinars, training and related documentation;
- c. Enable **Digital Signature** through smart contract and cryptography.

**For a potential implementation of blockchain, there is a need to**

- Achieve trust in Data management;
  - Build a legal framework to regulate responsibilities and accountabilities;
  - Integrate blockchain infrastructure to facilitate connections with decentralized organisations;
  - Design blockchain applications to suit business requirements;
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