

# Blockchain Governance initiative

A proposal for the Blockchain Standardisation Workshop – Brussels, EC  
Sept 12<sup>th</sup>-13<sup>th</sup> 2017

M.Faher (Gemalto) , S.Cariou (CrystalChain)



# Content

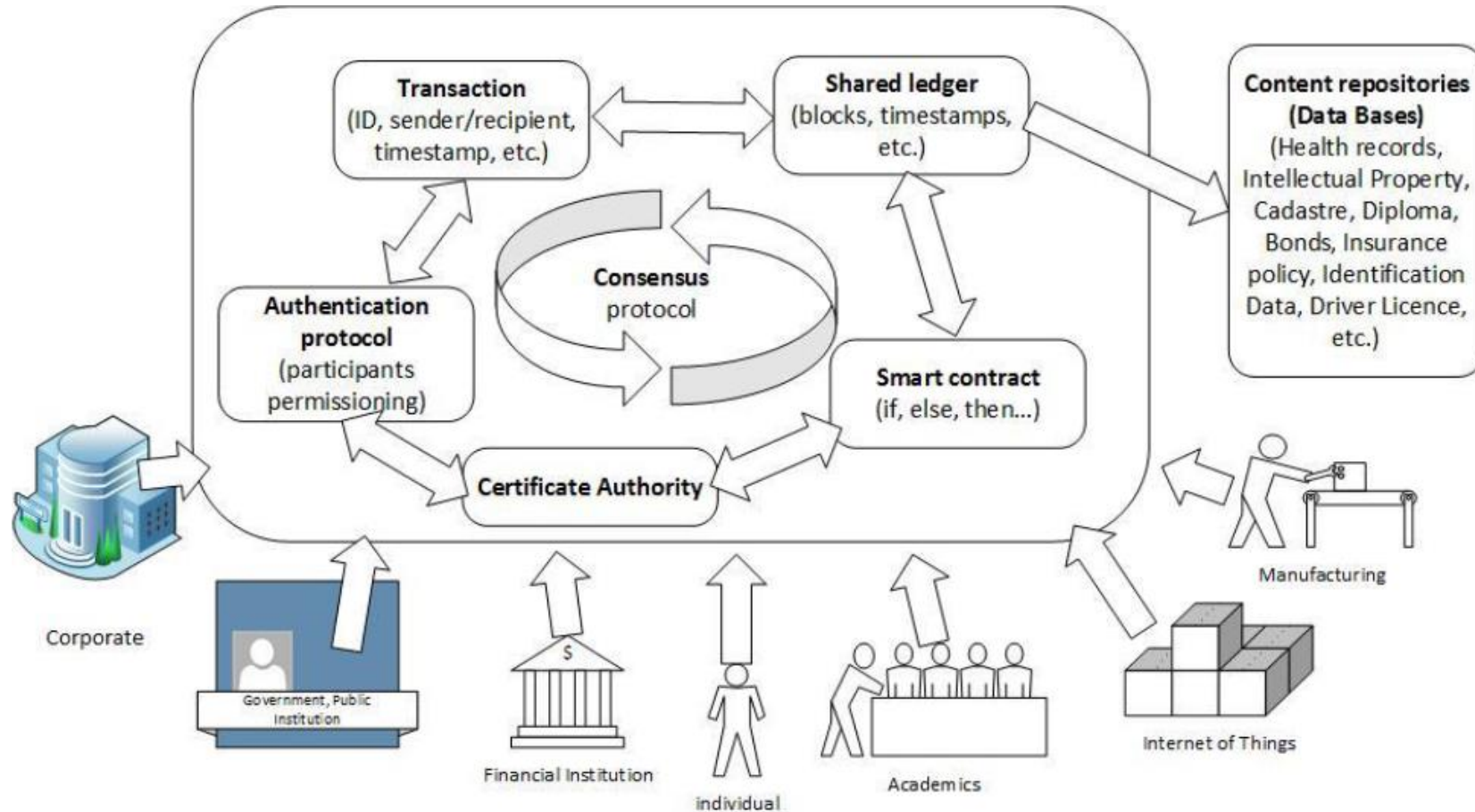
- ✦ Blockchain standardisation purposes
- ✦ Blockchain ecosystem
- ✦ Governance concerns in practice
- ✦ Blockchain specifics and governance
  - ✦ List of potential topics

# Why contributing to blockchain standardisation?

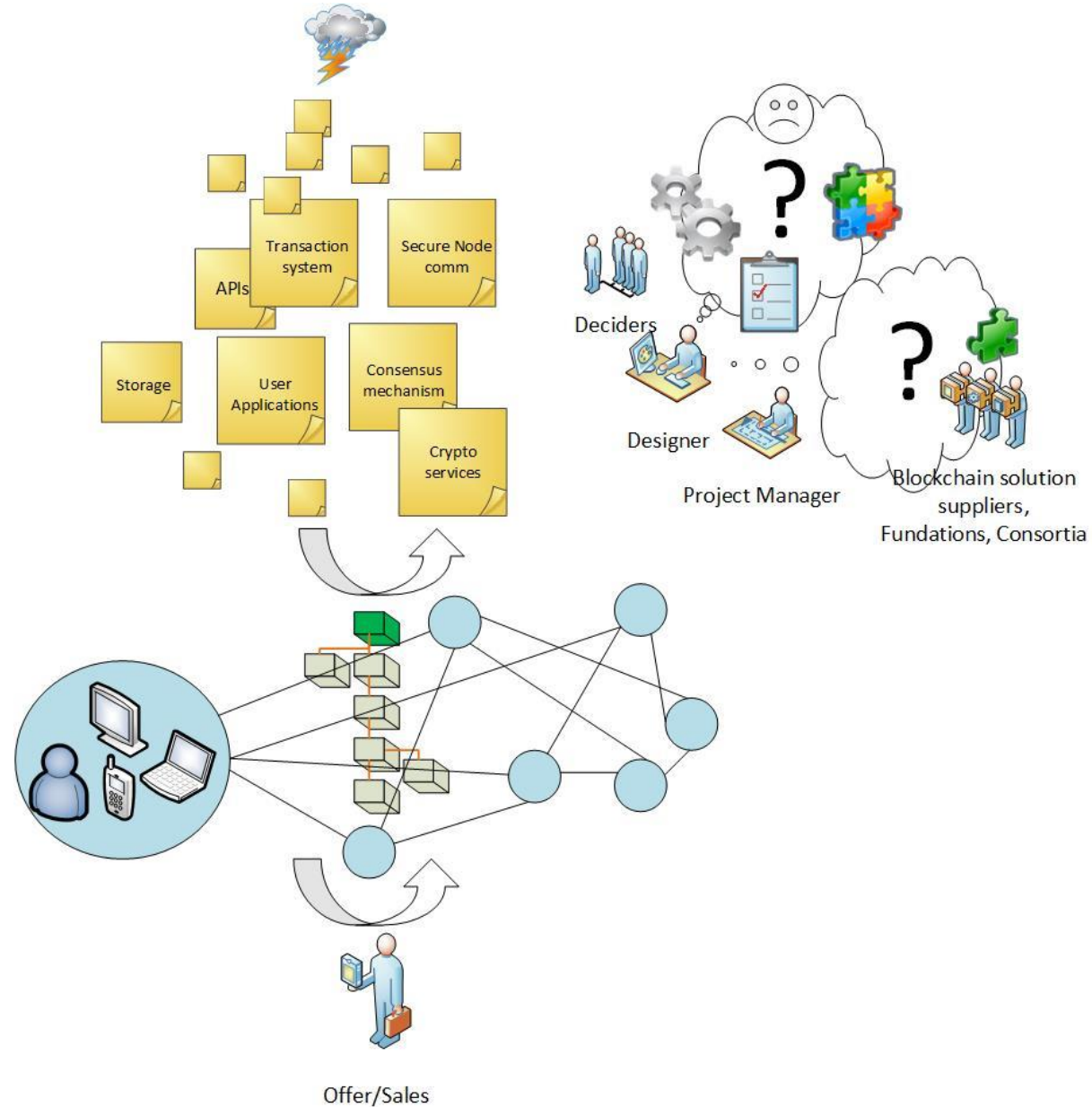
- 1) To investigate valuable and unsuspected use cases and related business opportunities
- 2) To contribute to establish trust and blockchain reliability, security, viability, and interoperability to some extent
- 3) To consider further features not likely to be investigated by blockchain core developers (i.e. Ethereum, Bitcoin, Hyperledger, ...)
  - ❑ Differentiators' added value
- 4) To deliver normative references and/or framework for tenders
- 5) To orientate the terms of references for ongoing future TC307 NWIP
- 6) To deliver **blockchain governance guidelines and organizational and decision tools**

# Blockchain ecosystem (outline)

- Minimum set of **operations** and **actors**

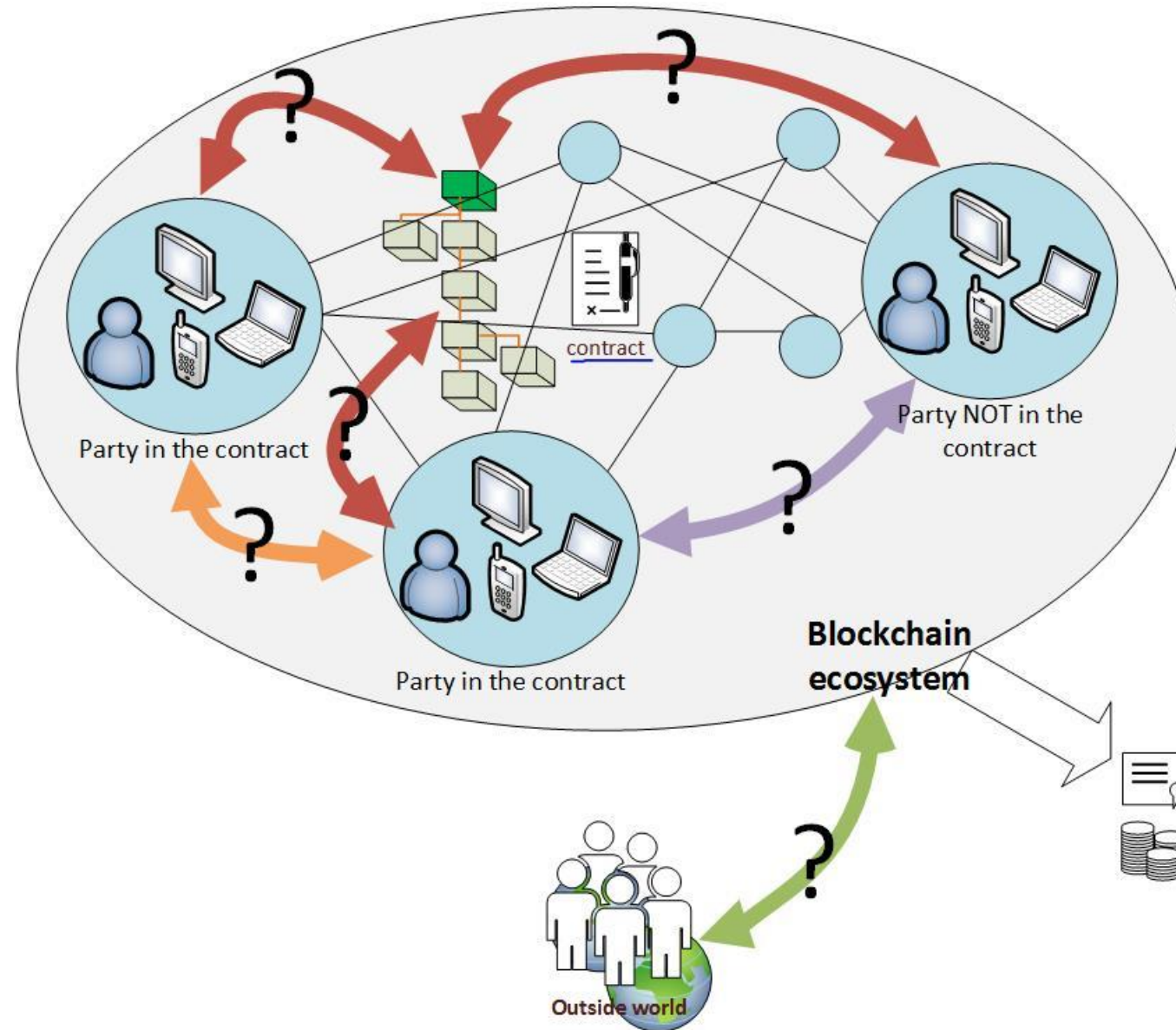


# Governance concern in practice - multidisciplinary technology




# Where does governance aspects show up?


- Organizational dimension



Symbols:

? =  +  +   
legal      technical      process

 = Assets at stake

 = Collaboration rules, interactions

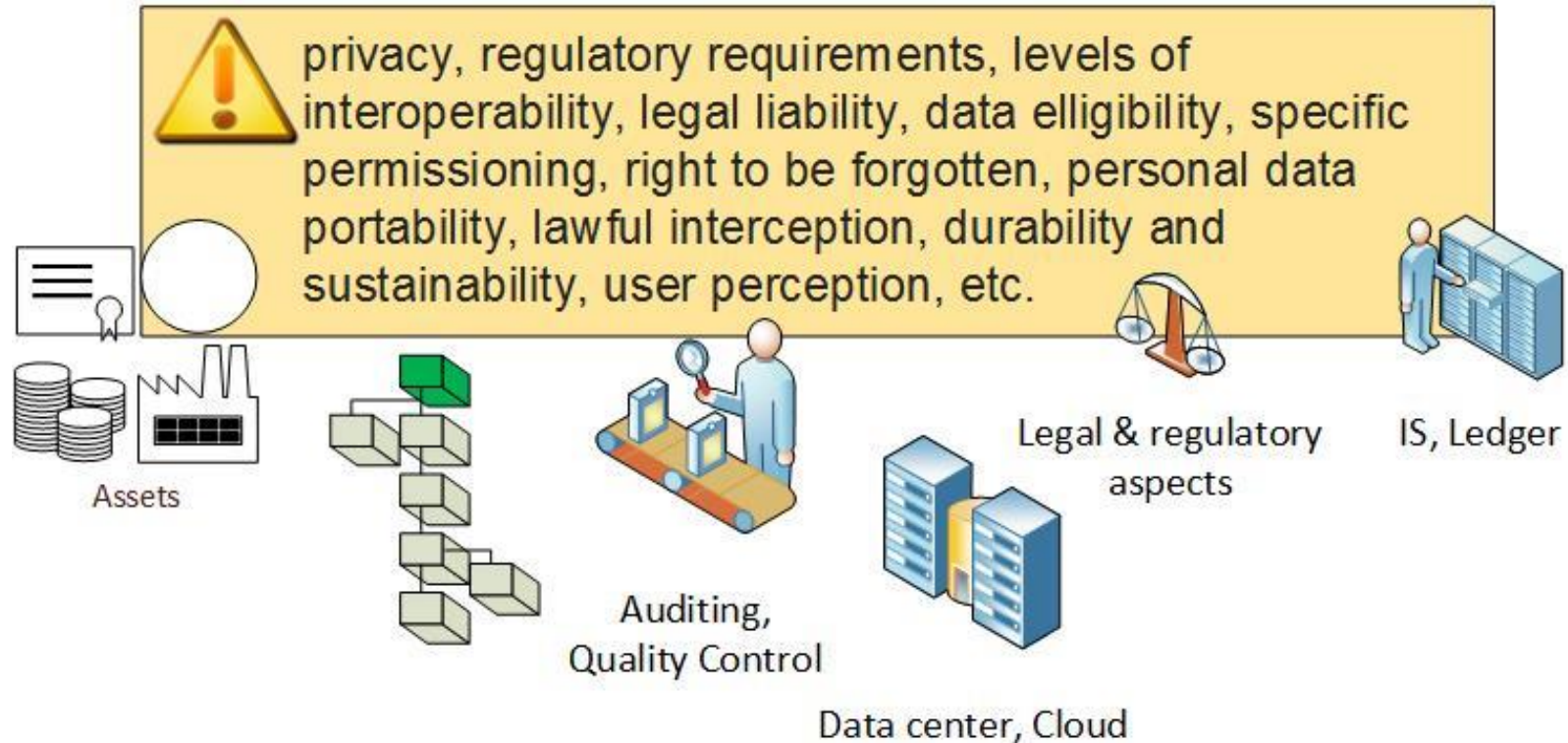
# How to establish a process reference model

- **strategic enablement process** (in terms of business objectives and planning, strategic assets, market, benefit, etc.),
- **relationship process** (between blockchain users/stakeholders, with external world),
- **solution processes** (development, smart contract and consensus lifecycle management including decommissioning, etc. ),
- **transitions** (enrolment, ruling out, service delivery, infrastructure set up, users mobilization, etc.)
- description of :
  - the **context** (what is covered by the process),
  - the **purpose** (of the process), and
  - the expected **outcomes** (resulting from the appropriate implementation of the process)
- Interrelationship across the future parts of the TC307 standards
- **NOTE: for further info see ISO/IEC 33004 Information technology -- Process assessment -- Requirements for process reference, process assessment and maturity models**



# What is missing?

❑ Governance-oriented approach on:



❑ **Caution:** the term 'Governance' lends itself to several interpretations, often restricted to 'Government', or to 'sovereignty' or to 'specific national policies'.



# Most common 'Governance' definitions

## □ Business dictionary definition for 'Governance':

- *Establishment of policies, and continuous monitoring of their proper implementation, by the members of the governing body of an organization. It includes the mechanisms required to balance the powers of the members (with the associated accountability), and their primary duty of enhancing the prosperity and viability of the organization.*

- <http://www.businessdictionary.com/definition/governance.html>

## □ Wikipedia definition:

- *Governance is all of the processes of governing, whether undertaken by a government, market or network, whether over a family, tribe, formal or informal organization or territory and whether through the laws, norms, power or language of an organized society. It relates to "the processes of interaction and decision-making among the actors involved in a collective problem that lead to the creation, reinforcement, or reproduction of social norms and institutions."*

## □ The IT Governance Institute's definition:

- *"... leadership, organizational structures and processes to ensure that the organisation's IT sustains and extends the organisation's strategies and objectives"*

- <http://www.isaca.org/About-ISACA/IT-Governance-Institute/Pages/default.aspx>

# Existing standards

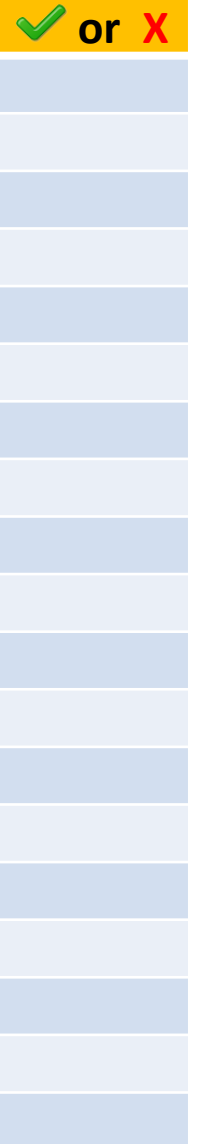


- ISO/IEC JTC1 SC40
  - IT Service Management and IT Governance
  - Scope:
    - Develop standards, tools, frameworks, best practices and related documents for IT Service Management and IT Governance, including areas of IT activity such as audit, digital forensics, governance, risk management, outsourcing, service operations and service maintenance, but excluding subject matter covered under the scope and existing work programs of JTC 1/SC 27 and JTC 1/SC 38.
  - Publications e.g. :
    - series **ISO/IEC 30105** (Process outsourcing), series **ISO/IEC 20000** (Service management concepts and guidance), **ISO/IEC 38121** (Digital forensic)
- ISO TC309 (quite new: 2016)
  - Governance of organizations
  - Scope:
    - Standardization in the field of governance relating to aspects of direction, control and accountability of organizations
  - Publication e.g. : **ISO 37001** (anti-bribery management systems)
- Conclusion: Enough room for a new work item on Governance in TC307

# List of blockchain specific topics requiring governance

A selection of relevant topics is required

- a. Normative references for governance safeguarding measures
- b. Specific terms and definitions for governance
- c. Introduction to the different main governance models
- d. Permissioned, permissionless ledger and permissioning
- e. Establishment of the consensus
- f. Scalability and sustainability
- g. System cost evaluation
- h. Legal and regulatory aspects
- i. Privacy, repudiation and right to be forgotten
- j. Smart contracts framework (e.g. state machine, sandbox, contract accounts, alarm clocks)
- k. Collaboration between participants in a blockchain (especially permissioned ones) and common blockchain usage (technical, legal, and processes related aspects)
- l. Smart contracts concerns (e.g. privacy, risk of callback, call stack)
- m. Lawful interception and/or audits
- n. Trust, reputation and user perception
- o. Interoperability and portability
- p. Blockchain fork management
- q. Contract portability across multiple Blockchain platform
- r. Resilience and recovery plan
- s. Confidentiality and usage of data
- t. Security management



# Additional benefit from Blockchain Governance

## Additional benefit from a Governance guide

- **1)** the forthcoming TC307 standards will describe in a scattered way and in whole or in part the subjects raised by the Governance questions. A decision-maker is not expected to read all TC307 standards **before initiating a project**; It would be counterproductive. There must therefore be a **checklist guide** which sends it back to the appropriate standards (TC307 or elsewhere) that apply to all the major problems that it may encounter in initiating its project.
- **2)** the governance guide rather as a **working tool** rather than a set of requirements.
- **3)** A decision maker does not necessarily have the means **to distinguish / evaluate a blockchain offer from one supplier over another**. The governance guide will serve as well to give it a reading grid to apprehend all the major differentiators in the application of its blockchain.
- **4)** for a blockchain solution provider, the governance guide is a means of **educating its potential customer**, both to raise its attention to the operating phase and sustainability, and to valorize the means deployed by the supplier to implement preventive measures.

# Thank you for your attention!

[mourad.faher@gemalto.com](mailto:mourad.faher@gemalto.com)

[scariou@crystalchain.io](mailto:scariou@crystalchain.io)

