

Digital Transformation of Registry System Opportunities of a Technological Ecosystem

ELRN Workshop. Session: *Blockchain of Real State*

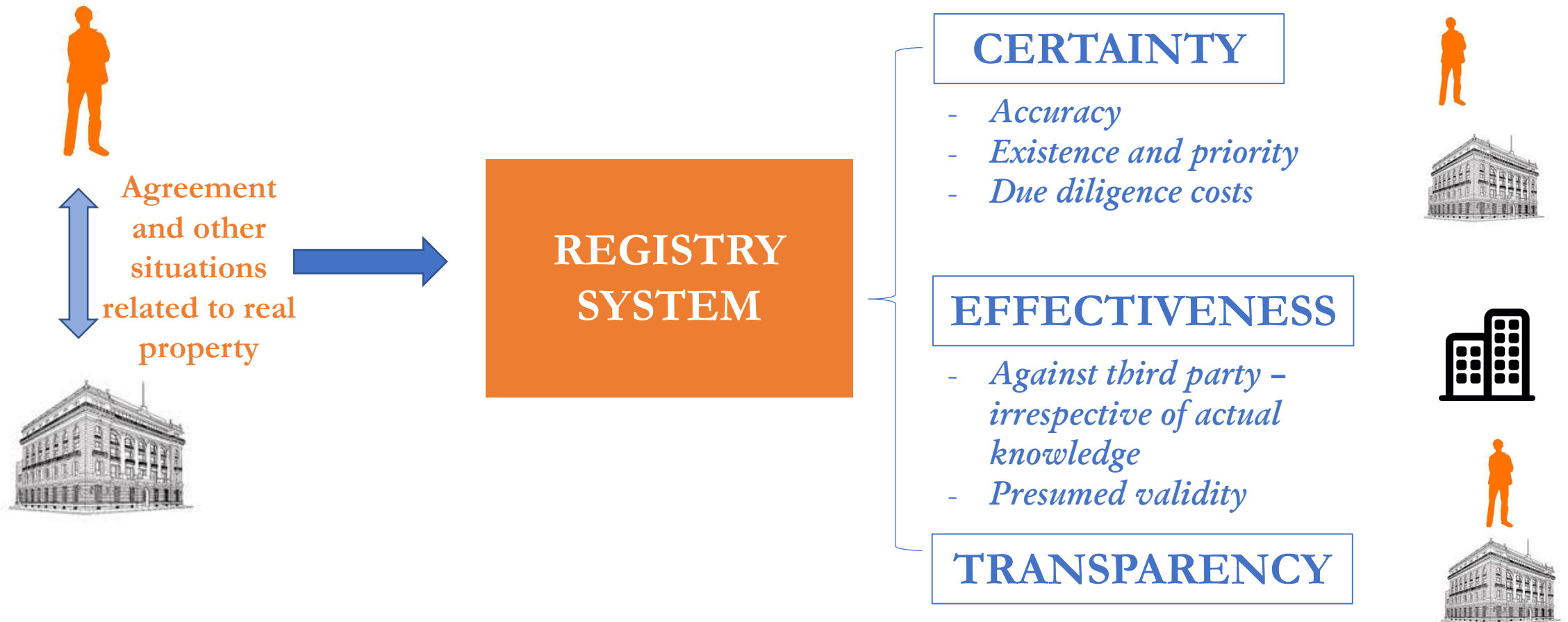
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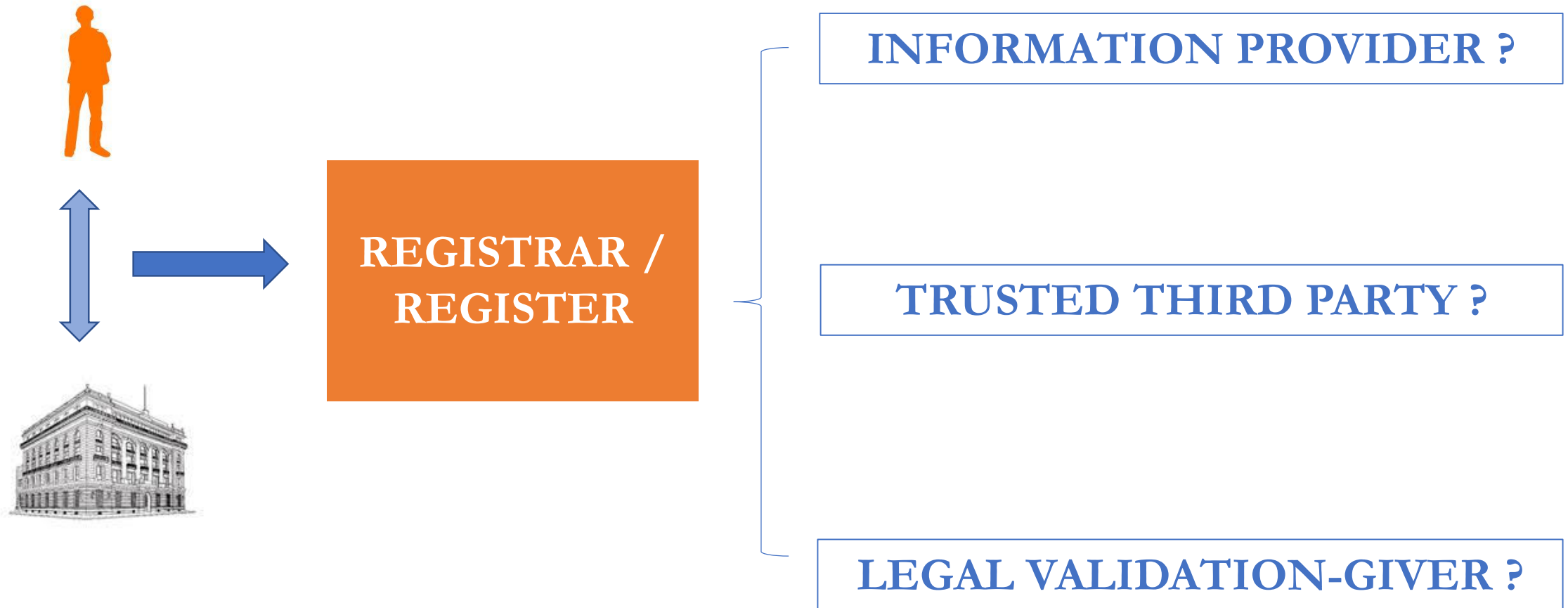
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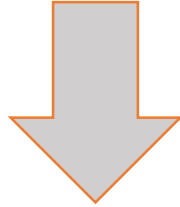
1.- Rationales for registration – The Roles of Land Registers



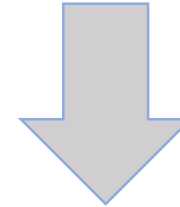
1.- Rationales for registration – The Roles of Land Registers



A.- The Roles of Technology – APPLICATIONS AND USES



AS AN INSTRUMENT



AS AN ARCHITECTURE

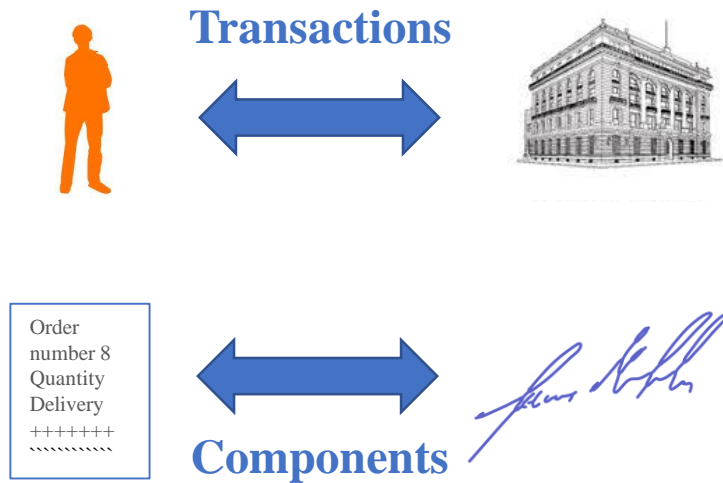
THEORETICAL FRAMEWORK TO FACE TECHNOLOGY APPLICATIONS.

The Case of Blockchain as an illustration :

- 1.- Is then Blockchain a new instrument enabling a more effective performance of same functions?
- 2.- Is Blockchain a new instrument enabling the performance of new functions?
- 3.- Is Blockchain a new architecture? Does it enable to perform same functions?
- 4.- Is Blockchain a new architecture enabling the performance of new functions?

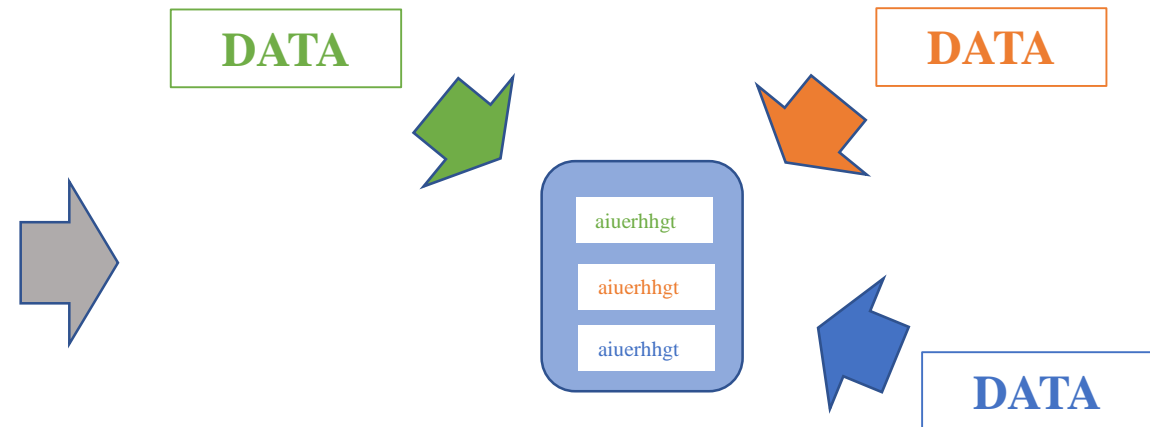
A.1.- Technology as instrument in transactions – PRIOR DISTINCTION OF RELEVANT TERMS

PRINCIPLE OF TECHNOLOGICAL NEUTRALITY



PRINCIPLE OF FUNCTIONAL EQUIVALENCE

'DYNAMIC OPEN RECORDS/DOCUMENTS'



A.1.- Technology as instrument in transactions – PRIOR DISTINCTION OF RELEVANT TERMS

ELECTRONIC



Use of electronic communications throughout the process

DIGITAL



Information codified, produced, transmitted, and stored in digital medium

AUTOMATIC

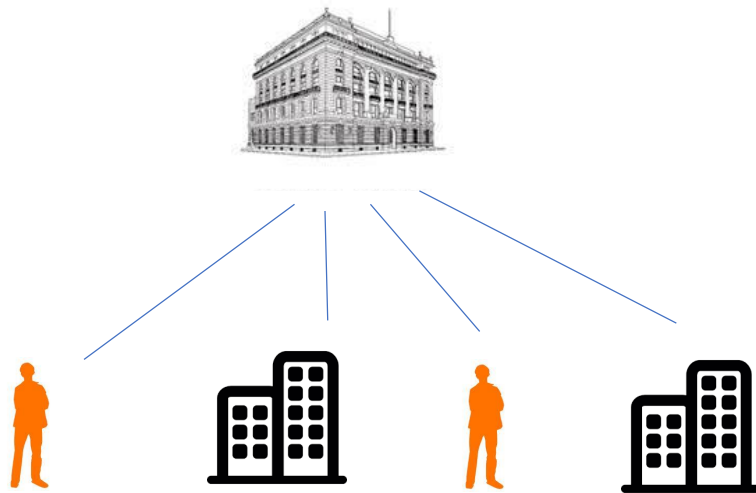


Performance of tasks without human intervention: programming of instructions



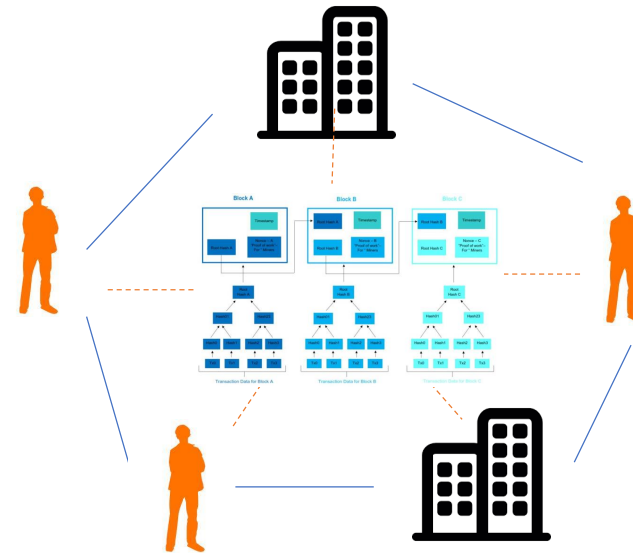
A.2.- Technology as Architecture – UNDERSTANDING TECHNOLOGY ARCHITECTURE

PRINCIPLE OF TECHNOLOGICAL NEUTRALITY



PRINCIPLE OF FUNCTIONAL EQUIVALENCE

PRINCIPLE OF SYSTEM/ARCHITECTURE NEUTRALITY



PRINCIPLE OF SYSTEM/ARCHITECTURE EQUIVALENCE

2.- Electronic Registry System as a Platform: Defining the Model A

REGISTER AS A PLATFORM

INTERNATIONAL REGISTRY

Role: GUEST

Informational Search

MSN: Search

To perform a priority search on any object, please select from the list below and add to the priority search list.
If you cannot find the object you are searching for in the Informational Search Listing you can add it by clicking [here](#).

Filter	MSN	Manufacturer	Model	Matches Manufacturers' Current List	Registration Exists
Showing 0 to 0 of 0 entries					

The mechanism used by the International Registry to search for an object based on the serial number you enter (the Search Algorithm) is described in the FAQs.

In line with Section 5.2 of the International Registry Regulations, the use of **provided object identification information** (whether in making registrations or searches) or the [Supplemental Object Identification Materials](#) relating thereto, each provided by the manufacturers, is subject to the [Manufacturers' Disclaimer](#).

Add Close

Email Password Login

Keep me logged in Forgot your password?

Sign Up

It's free, and always will be.

First Name:

Last Name:

Your Email:

Re-enter Email:

New Password:

I am: Select Sex:

Birthday: Month: Day: Year:

[Why do I need to provide this?](#)

Sign Up

Create a Page for a celebrity, band or business.



2.- Electronic Registry System: Defining the Model - FEATURES

An electronic version of Registry

A screenshot of a web registration form. At the top, there are fields for 'Email' and 'Password' with a 'Login' button. Below that is a 'Sign Up' section with the text 'It's free, and always will be.' The form includes input fields for 'First Name', 'Last Name', 'Your Email', and 'Re-enter Email'. There is a 'New Password' field and a 'Select Sex:' dropdown menu. The 'Birthday' section has dropdowns for 'Month', 'Day', and 'Year'. A green 'Sign Up' button is at the bottom. A link 'Create a Page for a celebrity, band or business.' is at the very bottom.

a). Use of electronic means and digital medium for all processes:

- Registration
- Further amendment and cancellation
- Search

2.- Electronic Registry System: Defining the Model - FEATURES

An active registry model: bilateral flow of data



INTERNATIONAL REGISTRY Role : GUEST

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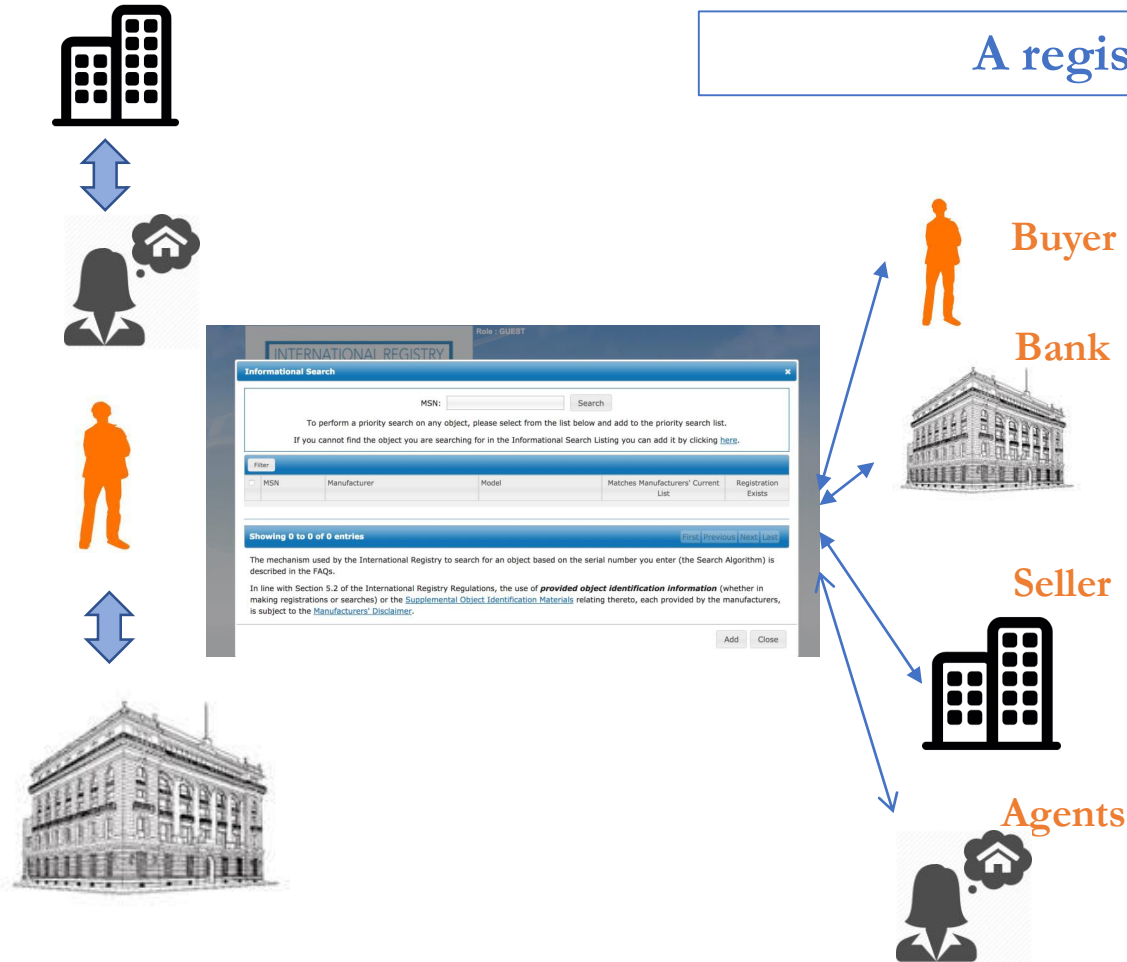
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b). Register may interact with registered users and proactively transmit relevant notices and communications (i.e. expiration date, detected errors, etc)

2.- Electronic Registry System: Defining the Model - FEATURES

A registry system as a multilateral platform



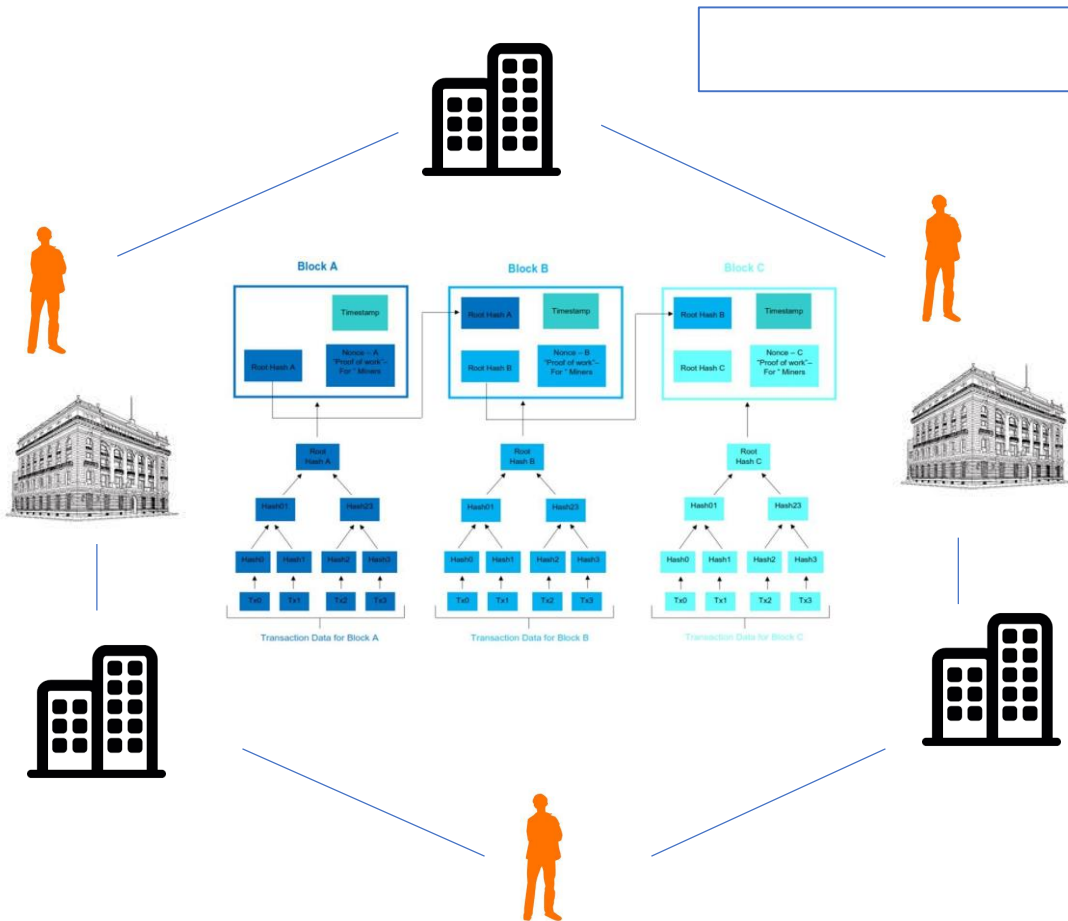
c). Users participate in the registry and interact each other

Multilateral communications are enabled

All relevant data are available to parties on the same platforms

All transactions are conducted through the platform

2.- Electronic Registry System: Defining the Model - FEATURES



A decentralized registry?

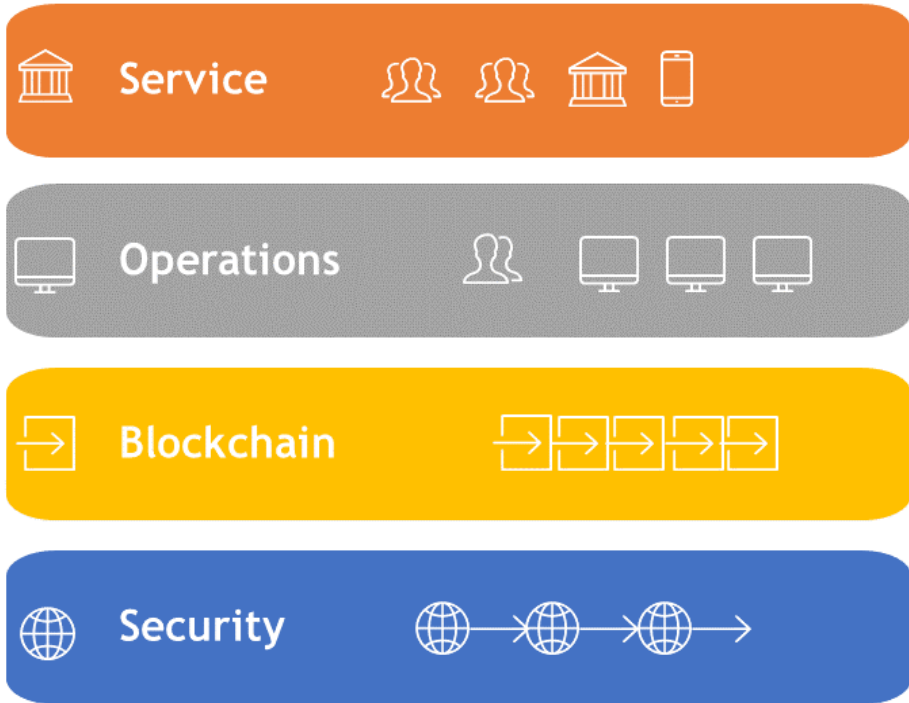
X). Might a blockchain-based registry be an option?

Y). Is blockchain operation compatible with legal design for secured transactions register?

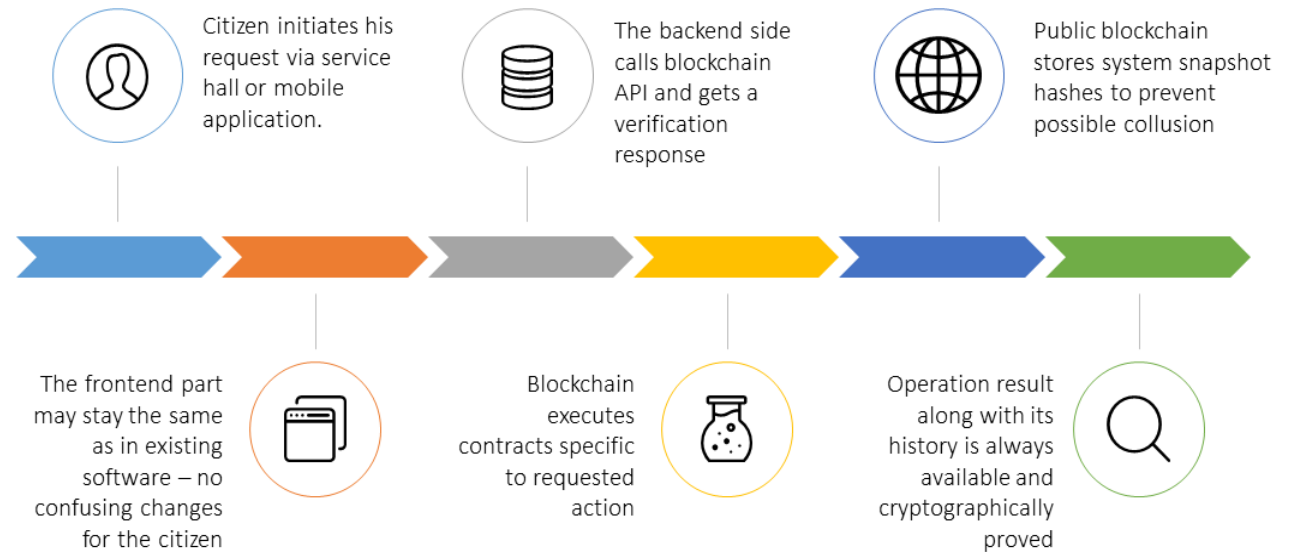
** See next example for mixed models*

* Example of Blockchain-based register design: BitFury for Georgia – a combination of decentralized and centralized schemes

Solution Design: Registries



Blockchain Registry: How Does It Work?



2.- Electronic Registry System: Defining the Model - FEATURES

A decentralized registry?
DECODING A BLOCKCHAIN-BASED MODEL

DECENTRALIZED SYSTEM:
disintermediation

DISTRIBUTED TRUST:
public / private / hybrid models

CRYPTOGRAPHY

VALIDATION

SCALABILITY

+

AUTOMATION

+

SELF-
EXECUTABLE
TRANSACTIONS

2.- Electronic Registry System: Defining the Model - FEATURES

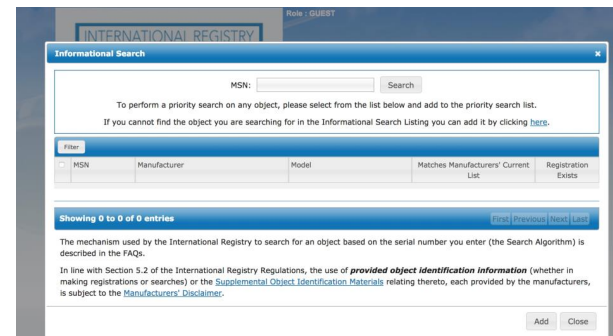
A highly-automatic registry model in a ECOSYSTEM OF SMART CONTRACTS, SMART PROPERTY, AND TRUSTED THIRD PARTIES

REGISTER AS A PLATFORM

Oracles

Feeding and
verifying data

Other Registers



Smart
Property



Flow of data

3.- Opportunities of a Technological Ecosystem

I.- Understanding Technology as an **Instrument** and as an **Architecture**

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II.- Assessing **Roles** of Registries prior to Implementing Technological Solutions

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III.- New Opportunities for Registry **Legal Design and Registrar Roles**

- Registry as a Platform – multilateral interaction
- Proactive Registry
- Automation of Processes and Tasks
- Dynamic Registrations – Updated data

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II.- Assessing **Roles** of Registries prior to Implementing Technological Solutions

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IV.- **Regulatory approach and policy options:**

- General enabling legal framework based on functional-equivalence principle
- Registry-specific legal rules setting out principles, legal design, and legal effects
 - * *option 1: attributing legal effects to legal design*
 - * *option 2: attributing legal effects to reliability standards for technology*
- Second-level regulations defining processes, tasks, and outcomes

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Session: Blockchain of Real State

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