

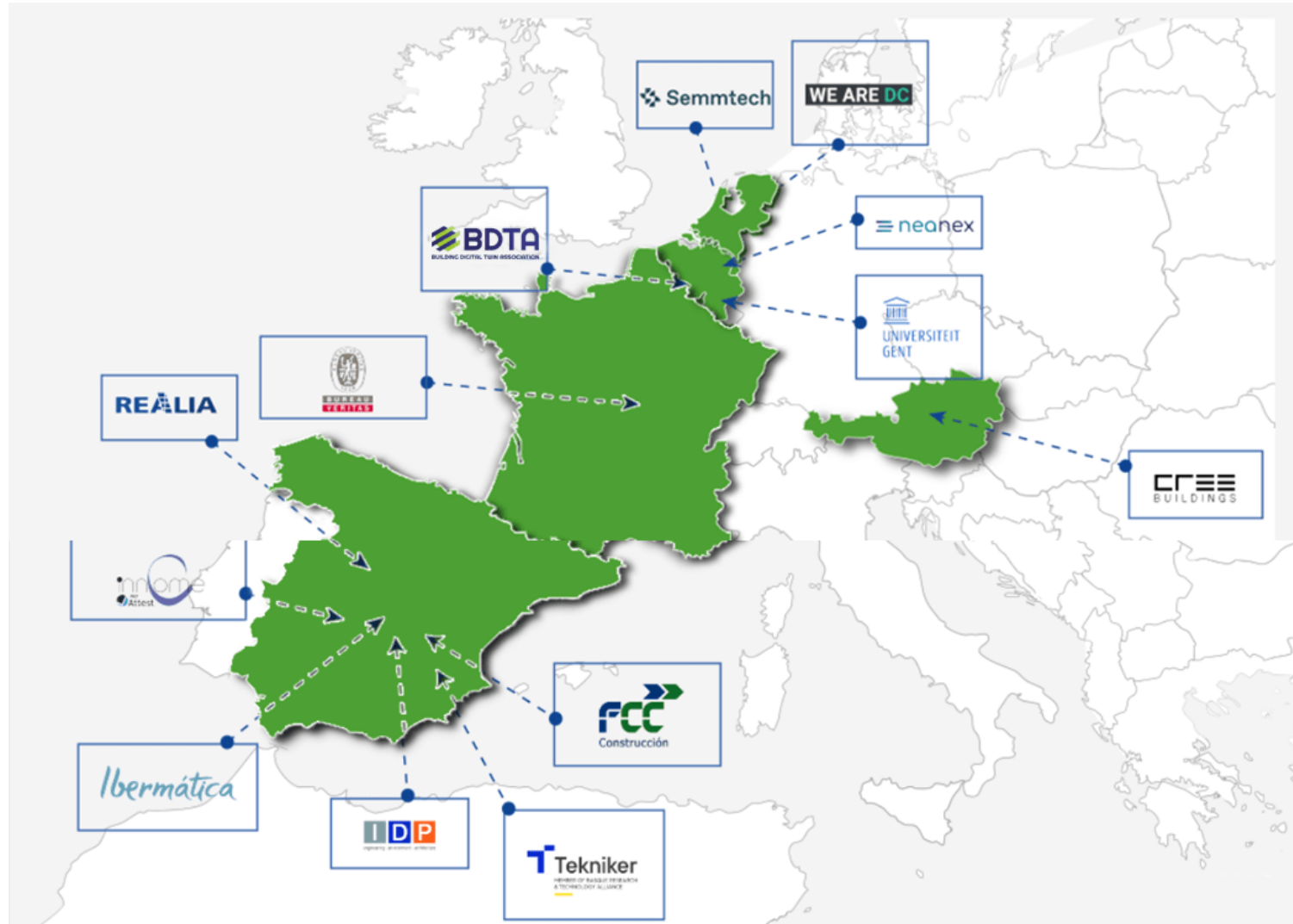
DIGICHECKS

Speaker: Juan Ramon Mena

ORGANIZED BY:



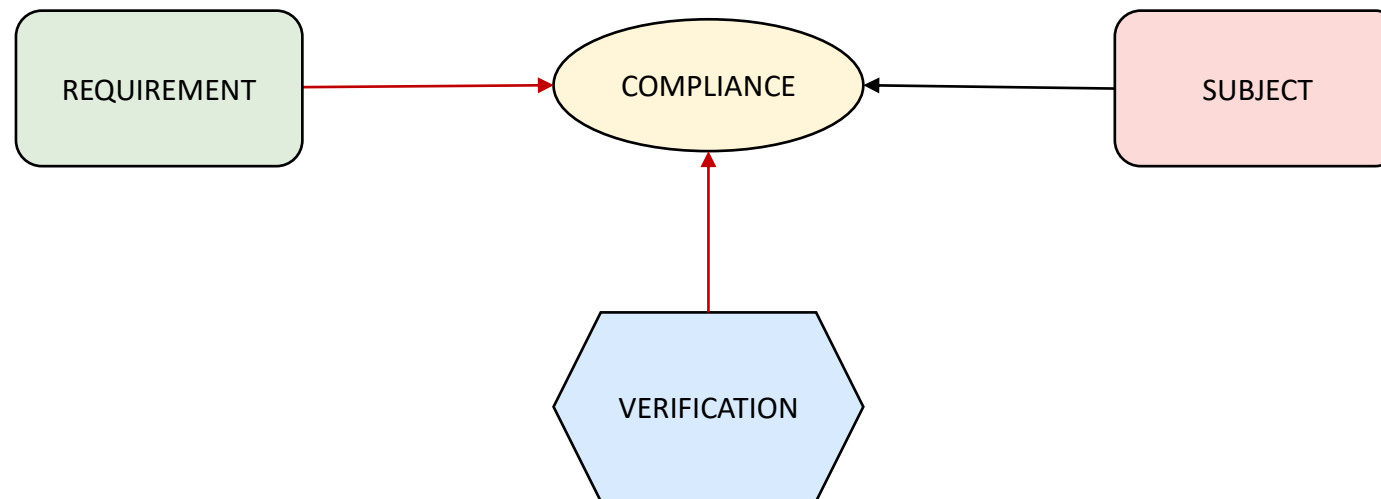
1. Consortium
2. Principles
3. Framework
4. Project Pilots



Task	Description	Leading participant	Timeline																																			
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
WP1	Definition of the standard framework relevant to new and emerging requirements	BV	[Grey shaded]																																			
T1.1	Analysis of the permit management process, standards and regulations in each country	BV	[Grey shaded]																																			
T1.2	Characterisation of the information involved in the process	BV	[Grey shaded]																																			
T1.3	Compilation of the internal systems of the actors involved in the process	FCCCO	[Grey shaded]																																			
T1.4	Definition of the requirements for the DigChecks Framework	TEK	[Grey shaded]																																			
WP2	Design of the Framework	TEK	[Green shaded]																																			
T2.1	Design of automated compliance checks Defining Compliancy Engine	GU	[Green shaded]																																			
T2.2	System architecture design Alignment of various frameworks and architectures	TEK	[Green shaded]																																			
T2.3	Design the System Layer (as referenced by IDSA) data connector - brokers and data apps	TEK	[Green shaded]																																			
T2.4	User interface design stakeholders / actors	IBER	[Green shaded]																																			
T2.5	Design of AI tools/models to integrate	IBER	[Green shaded]																																			
WP3	Interoperability	NEA	[Green shaded]																																			
T3.1	Design of Semantic model / Permit Ontology	GU	[Green shaded]																																			
T3.2	Identification of data usage needs / various data models (and mapping to our ontology)	NEA	[Green shaded]																																			
T3.3	Design integration with IFC models (BIM-GIS) extraction of data and geometry	GU	[Green shaded]																																			
WP4	Data sovereignty	BDTA	[Green shaded]																																			
T4.1	Privacy metrics development	BDTA	[Green shaded]																																			
T4.2	Design privacy protocols / methods into the data exchange within the data space	BDTA	[Green shaded]																																			
T4.3	Designing cloud infrastructure for a application based on Data Space principles	IBER	[Green shaded]																																			
T4.4	Design of data exchange based on Data Spaces	TEK	[Green shaded]																																			
T4.5	Trusted Information Sharing Framework on SSI and DLT	IBER	[Green shaded]																																			
WP5	Development of DigChecks Framework APIs (result)	IBER	[Blue shaded]																																			
T5.1	Configuration of the cloud infrastructure	IBER	[Blue shaded]																																			
T5.2	Development of BRMS service Business Rule Management System	IBER	[Blue shaded]																																			
T5.3	Development of BPM service Business Process Module Service	IBER	[Blue shaded]																																			
T5.4	Development of ontology engine Ontology	GU	[Blue shaded]																																			
T5.5	Integration of BRMS / BPM / Ontology	IBER	[Blue shaded]																																			
T5.6	Develop interfaces with public EU databases (Cadastral for example)	IDP	[Blue shaded]																																			
T5.7	Implementation of advanced AI-based tools to support the process	IBER	[Blue shaded]																																			
T5.8	Development of specific System Layer items (IDSA) data connector - brokers - data apps	TEK	[Blue shaded]																																			
WP6	Development of the Business Case - Pilot Platform	IDP	[Orange shaded]																																			
T6.1	Design of the internal sub-processes of the different participants	DC	[Orange shaded]																																			
T6.2	Development of the internal sub-processes of the different participants	DC	[Orange shaded]																																			
T6.3	Development of the user interface (UI)	IBER	[Orange shaded]																																			
T6.4	Setup integration with Dwin platform (BIM - GIS)	IDP	[Orange shaded]																																			
T6.5	Development of VR interaction	IDP	[Orange shaded]																																			
T6.6	Connect to datasources (local or EU)	IBER	[Orange shaded]																																			
WP7	Demonstration of the Business Case - Pilots deployment	FCCCO	[Orange shaded]																																			
T7.1	Construction pilot process deployment (Wales) - FCC	FCCCO	[Orange shaded]																																			
T7.2	Building pilot process deployment (Spain) - FCC	FCCCO	[Orange shaded]																																			
T7.3	Building pilot process deployment (Austria) - FCC	CREE	[Orange shaded]																																			
T7.4	Welsh pilot validation - Business and Technological KPIs	FCCCO	[Orange shaded]																																			
T7.5	Spanish pilot validation - Business and Technological KPIs	FCCCO	[Orange shaded]																																			
T7.6	Austrian pilot validation - Business and Technological KPIs	CREE	[Orange shaded]																																			
WP8	Communication, Dissemination and Exploitation Activities	BDTA	[Green shaded]																																			
T8.1	Definition and execution of the communication strategy	INN	[Green shaded]																																			
T8.2	Industrial and scientific dissemination Target groups engagement	BDTA	[Green shaded]																																			
T8.3	Framework standardization activities	BV	[Green shaded]																																			
T8.4	Innovation and IPR management and Business Exploitation of KERS	BDTA	[Green shaded]																																			
T8.5	Liaison with connected initiatives	GU	[Green shaded]																																			
WP9	Project coordination and management	FCCCO	[Green shaded]																																			
T9.1	Consortium and project management and governance	FCCCO	[Green shaded]																																			
T9.2	Administrative and Financial Management	INN	[Green shaded]																																			
T9.3	Creation and Maintenance of the Advisory Boards	FCCCO	[Green shaded]																																			
T9.4	Technical developments, quality and risk management	TEK	[Green shaded]																																			
T9.5	Data Management Plan	IDP	[Green shaded]																																			

PERMITS...FOR ALL

- Digichecks explores the processes in all types of permit, not only the Building Permits
- Permit = compliance check



- On-going Permits (eg inspections)

DigiChecks: Create and demonstrate a new Digital Framework to enable interoperability and communication across platforms, based on international technologies and initiatives to facilitate construction permit management, including compliance checks.

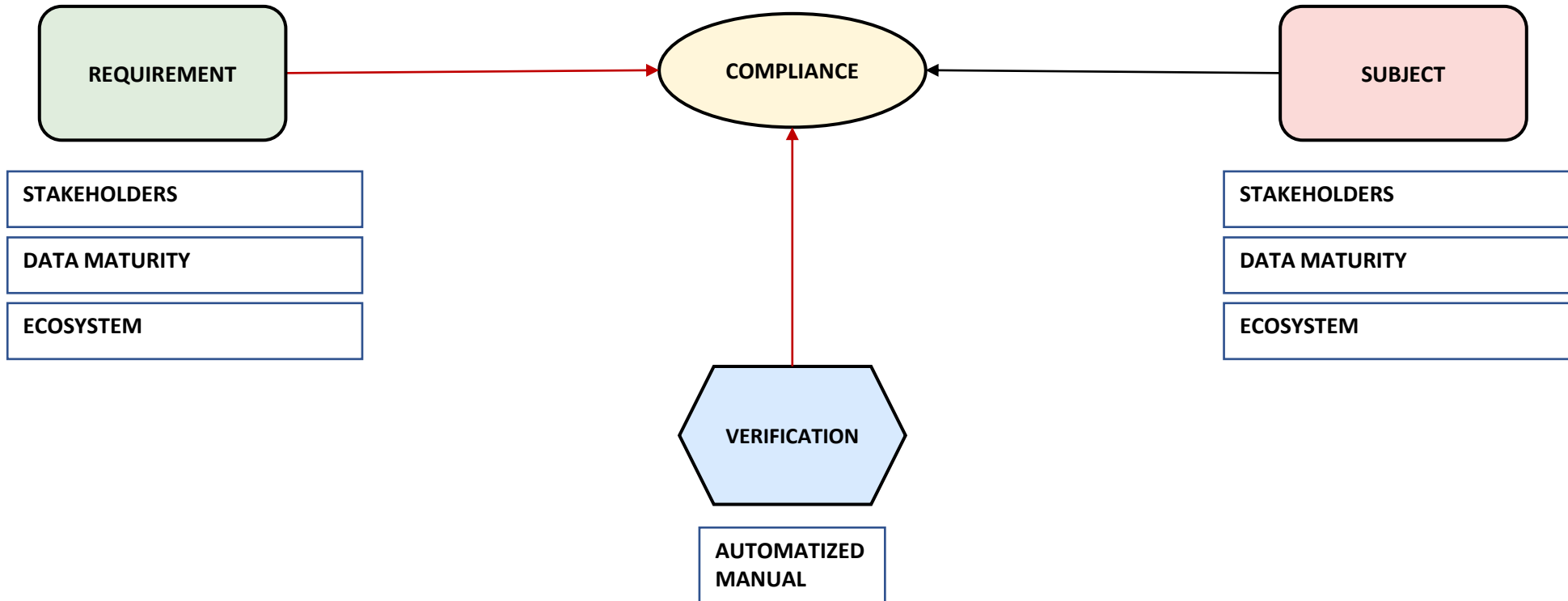
Principle 1: The framework is a **federated ecosystem**, rather than a centralized monolithic application.

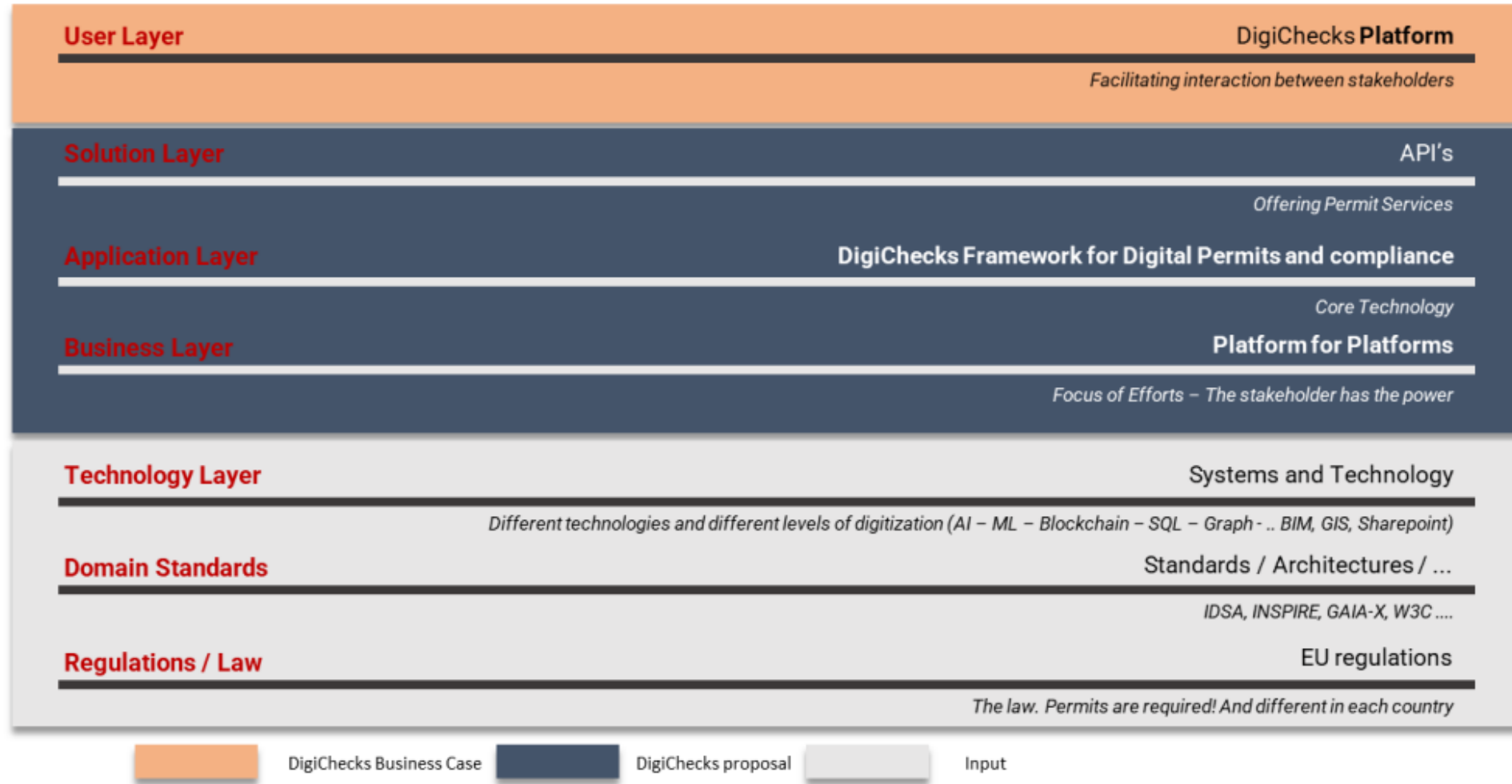
Principle 2: The framework allows a **modular and scalable approach**, where project or third party services can be included and swapped easily (best-of-breed).

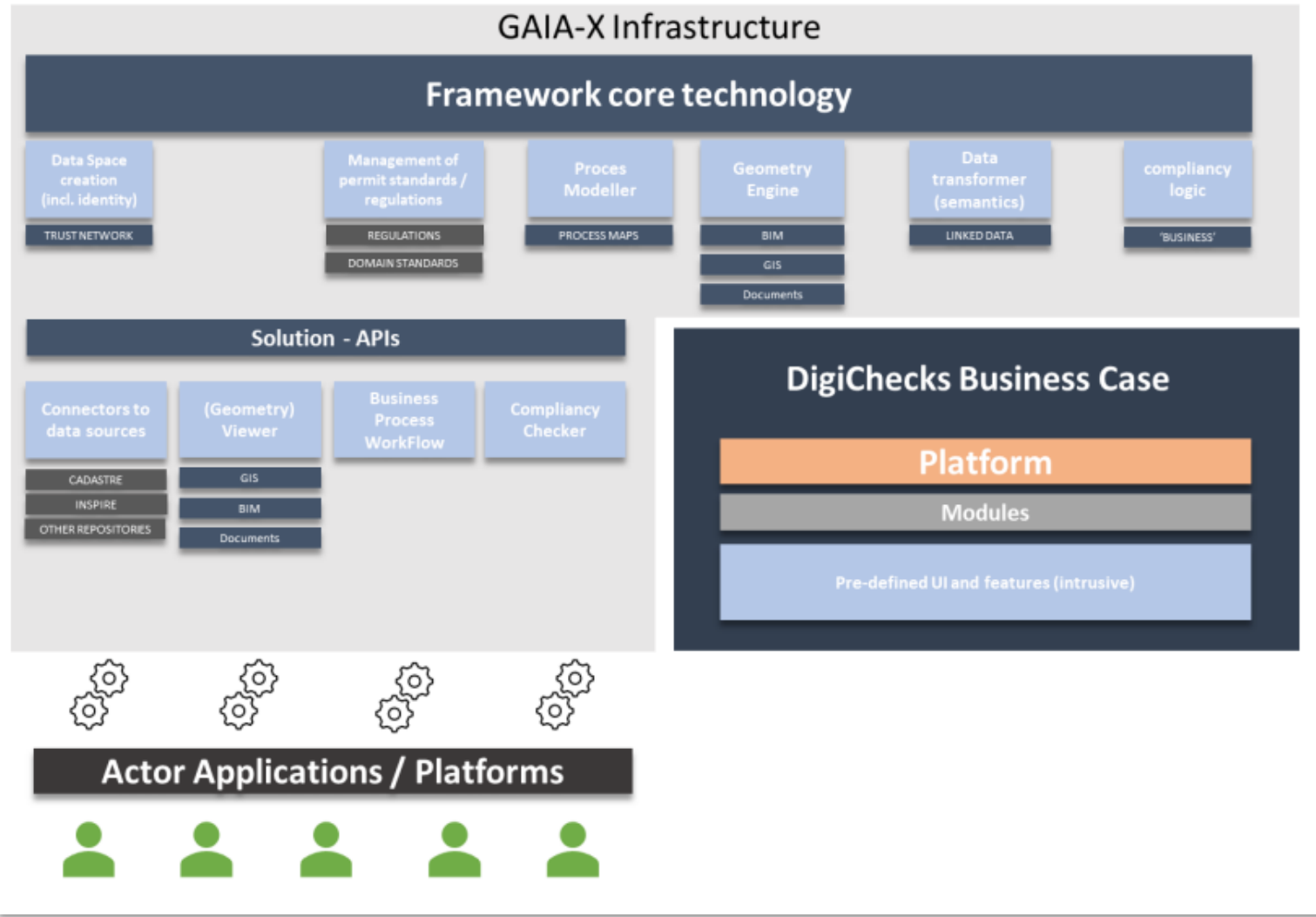
Principle 3: The framework uses a **shared set of conceptual information models (ontologies)**, that align with existing domain ontologies

Principle 4: Data that is generated within the framework (*construction project data, rules, compliance reports*) is **formalised based upon open and widely-accepted standards**, including W3C Linked Data standards.

Compliance check analysis







Principles

Permit Ontology

- Common language for permitting
- Process Management Standard

Digitalization of Permit Management

- OMG standards-based tool
- Actors Model their processes

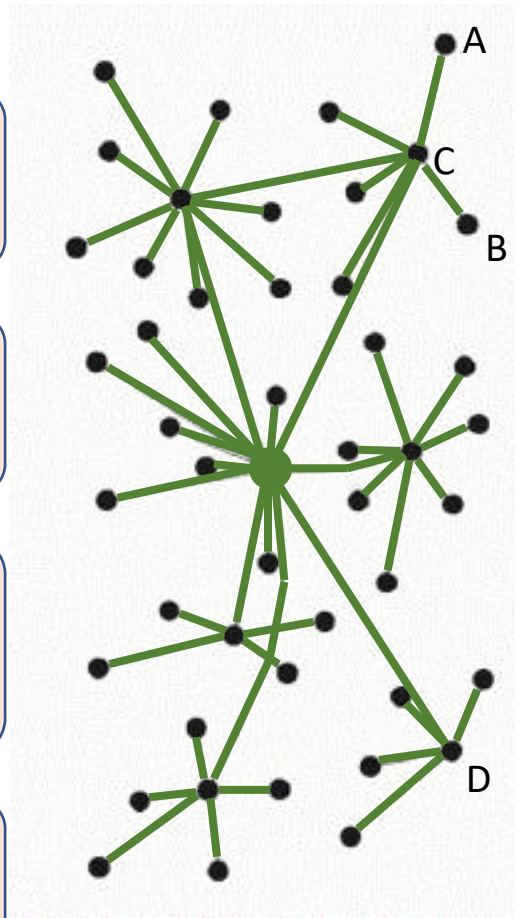
Definition of Permit Rules

- Define your own Rules
- Automated compliance checker

Permitting Services (API)

- Open API
- No changes in its processes

DigiChecks



Modules

Service – Process Modelling

- Process Modeling (OMG Standard)
- Automated linked processes

Service – Compliance Check

- BRMS (Business Rules Management System)
- AI based

Geometry Engine

- Digital Twin
- VR –Visualization

Conector de BBDD

- Cadastre
- Inspire



ENVIRONMENTAL –
ANIMALS PERMITS
(UK)



RESIDENTIAL
BUILDING PERMITS
(SPAIN)



COMMERCIAL
BUILDING PERMITS
(AUSTRIA)



3rd BUILDING DIGITAL TWIN
International Congress

ORGANIZED BY:



THIS PROJECT HAS RECEIVED FUNDING FROM THE EUROPEAN UNION'S HORIZON EUROPE RESEARCH AND INNOVATION PROGRAMME – PROJECT 101058541 – DIGICHECKS