DigiChecks. Digital environment for management of permits and compliance in building and construction

Consorcio: FCC Construcción; Affiliated Entity - FCC Construcción (UK); Affiliated Entity - Realia Business (ES); Tekniker (ES); IDP Ingeniería Medio Ambiente y Arquitectura (ES); Ibermatica (ES); Affiliated Entity – i3B (ES); Building Digital Twin Association (BE); Neanex Technologies (BE); Affiliated Entity – Semmtech BV (NL); Digital Construction (NL); Bureau Veritas Construction SAS (FR); CREE (AT); Ghent University (BE); INNCOME (ES)

Tecnología: Inteligencia Artificial; Blockchain: Tecnologías del Lenguaje; Espacio de Datos

Descripción general:

DigiChecks proposes to build a digital framework that implements the following steps to overcome the challenges mentioned and pave the way to a more streamlined approach to manage and process permits:

- Step 1: Standardized Permit Ontology. The first step is to create a shared language for permitting. This language, formalized in a permit ontology, enables the framework to map data from various sources into a common structure and make it processable by a computer in a repeatable manner.

- Step 2: Digitizing Permit Processes. To deal with the many different actors and their respective processes for permitting, DigiChecks proposes to develop a tool, based on OMG standards, where these actors can model their processes into DigiChecks. These process models can be updated and or removed when the processess change.

- Step 3: Building Permit Rules. DigiChecks proposed solution contains the ability for permitting authorities to build youre their own rules. These rules are used as a base for an automated compliancy checker.

- Step 4: Integration of the previous steps into a Permit Service (API). To transform the solution into a service, DigiChecks combines steps one (Permit Ontology), two (Permit Process) and three (Permit Rules) into a service offered through an (Open) API. The DigiChecks Permit Service API implements the concepts from the ontology to defined rules and these rules are mapped to a process, thus digitizing the permit workflow. By having an accessible Permit Service, third party developers will be enabled to create new, innovative and reliable permitting applications.

The ultimate objective of the solution is to provide flexibility, ease-of-use and efficiency to the permit validation and approval system in the construction project environments. A solution framework is thus required that allows - regardless of the country, region or municipality -, an easy interoperability with the tools commonly used in construction.

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