Executive Summary - InfraChallenge 2021

One of the main problems related to the inability of an infrastructure to respect its characteristics over time (example: resilience) is linked to incorrect construction in the various construction phases and / or incorrect maintenance over time.

These activities (construction and maintenance) are always entrusted to outsourced firms, so the critical aspect is represented by monitoring in the various construction phases and at different moments of ordinary and extraordinary maintenance.

To meet this need, a traditional constant check can be carried out through dedicated personnel.

Our intention is to offer instead a highly innovative methodology that allows monitoring through a patented technology called IAC (Instant Automatic Certification) - MSE 102016000043312 - PCT / IB2017 / 052234.

IAC technology presentation (3 minutes) : https://www.youtube.com/watch?v=Ck3ZlNME4No

This allows, through the photographic collection directly by the employees, at each phase of the construction work or before and after maintenance interventions, to have a web consultation environment to check in the back office if each intervention has been carried out in that place at that 'now as stipulated in the contract, as well as the quality of the intervention.

In fact, IAC technology allows to certify with legal value the date and place where the photograph is collected.

The collected image is conveyed through the sectioned memory of the device before landing on the server of an AGID accredited certifying body, therefore a TSP (Trust Service Provider).

At this point, a certified copy of the certified image is sent to the consultation environment together with the certification log and a document that summarizes all the information of the image: date, place and verification of immutability.

This last feature is guaranteed not only by the security protocols, but also by the fact that the user of the service (employee) never enters the availability of the data and the back office only has a certified copy of the image.

This process can also be enriched with Artificial Intelligence processing to report critical issues based on the specific needs of the person who must control the construction and / or maintenance processes.

The experiments carried out with Ferrovie dello Stato and Terna listed below are practical examples.

FS (1,5 minuti) : https://www.youtube.com/watch?v=84tODhNPgsM

Terna (1,5 minuti) : https://www.youtube.com/watch?v=H4r_bHXVkik

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