# **ARGO** TOMORROW'S TECHNOLOGY ON TODAY'S ROADS



ARGO is the extended platform for **managing and monitoring infrastructure life cycles**. All the potential of Digital Engineering in a single solution:

Complete **digitization** of infrastructure assets

Mobile APP and Digital Twin to support on-site and remote inspections **Database** for management, governance and control of data and processes

**Artificial Intelligence** 

for image recognition and defect analysis Integration of data collected by **IoT sensors** for structural monitoring



### **Argo's Benefits**



Digitization of assets



Transparency and data control



Increased **productivity** and **efficiency** of **inspection processes** 



Modular and scalable platform



Analytics and reporting on assets and their defects



Health monitoring of infrastructures in real time





#### **ASSET MANAGEMENT AND DIGITIZATION**

All infrastructures just a click away

The digital inventory is an archive that allows the **collection**, **management and control** of structural data concerning the individual components of bridges, overpasses, viaducts and tunnels, information and process quality, while simultaneously defining the Data Governance tools **in real time**. Based on data stored in the digital inventory, the system

generates simplified **Building Information Modeling (BIM)** of the infrastructure: crucial support for the operator when navigating the asset during the inspection process.

### THE MOBILE APP

In operators' hands, standing by their side

During on-site or remote activity, the user is fully supported by the Mobile App, which allows to **browse the infrastructure and enter all the inspection information** for each individual component: from the detected defect (or its absence) to the precise location on individual components, and photographs. The Mobile App makes sure everything has been inspected and only does it authorize the final stage of the process, with **maximum precision** and **safety**.

#### **DIGITAL TWIN**

Each asset has its digital twin

Equipped with very high-resolution video cameras and LIDAR lasers, the drones provided by Fincantieri Next Tech perform a **3-dimensional scan**.

The **millions of geo-referenced points** generated are associated with the **related real photographs of the asset** and are transformed into an **accurate and completely digital reconstruction.** 

#### **ARTIFICIAL INTELLIGENCE**

Algorithms supporting decisions

The **detection and analysis of defects** and their evolution is **assisted** by the application of **AI. Image Recognition algorithms** support operators' decisions through prompt analysis of photographs taken in the field and by drones and the identification of defects associated with the infrastructure components.

#### **IoT SENSORS**

To monitor infrastructures

The installation of **IoT sensors** on infrastructures allows the collection of a large amount of data to perform **assessments and health checks** on them. The data is measured automaticallyon the platform and flows into the system in aggregate form, providing precise indicators for evaluation.





Argo's figures on Autostrade per l'italia's network

## 4,400+

3,000

km road

network

600+

tunnels

bridges, viaducts, and overpasses

## 650,000+

components

#### **ABOUT US**

We are leaders in the development and integration of Intelligent Transport System solutions and Autostrade per l'Italia's centre of excellence for research and innovation.

We are **digital engineering for mobility**: we design, integrate and implement **innovative solutions to design the future**, which, for us, is already intelligent, sustainable and powered by an invisible but ever-present technology.

We operate in **Italy and abroad**, developing systems for monitoring and managing infrastructures, for controlling and managing road conditions and road safety, for toll payment, smart roads and smart cities.

We work with our customers - public administrations, distributed infrastructure providers, large companies, and service providers - to make the travel experience more convenient, easier and safer for the community.

We are committed to improving operational processes and finding innovative and technologically advanced solutions.







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