deepomatic

CONSTRUCTION

A CONSTRUCTION SITE FOR VIDEO RECOGNITION

VIDEO RECOGNITION IN THE FIELD

INTRODUCTION

Demand for development projects and new buildings **reached a record** level in France. Public orders, increased demand for new housing and energy renovation are driving the construction industry to rationalize. But this industry is a poor performer on several levels: concerning the **environment**, 40% of the volumes of waste generated and greenhouse gas emissions are attributed to it. And in terms of **safety**, the construction industry remains over the years the industry with the highest occupational accident rate.

The construction industry has a lot of potential for improvement to **digitalize its activity** and optimize its impact on these various aspects. **62% of construction companies still use manual reporting systems**. Video recognition is one of the technologies that provide concrete answers to control operations and develop security systems.

3 KEY FIGURES OF THE SECTOR

50%
OF CONSTRUC-
TION COMPANIES
IN THE WORLD

have not **defined technology roadmaps.**

1BN
EUROS

is **what acts of vandalism cost** the construction industry, i. e. 1% of the turnover of the construction sector.

88K
ACCIDENTS

were recorded on **construction sites** in France in 2016.

SAFETY ON CONSTRUCTION SITES

CHALLENGE

Promoting **safety and tackling strenuous working conditions** are **essential issues** for the construction industry, which is the most accident-prone sector. In 2016 in France, there were 88,273 accidents on construction sites and 112 deaths. The construction industry is seeking to exploit new digital technologies to **move from a curative to a preventive operating mode.**

OBJECTIVES

- Ensure compliance with safety standards
- Intervene before an incident

SOLUTIONS

Detection of the non-use of PPE
Alert your foremen in real time when a worker is not wearing his personal protective equipment (PPE).

Detection of dangerous areas to demarcate
Set up an alarm system when a person crosses an imaginary line of protection.

Speed control of wheeled vehicles
Control the movements of construction machinery to avoid collisions, especially when reversing.

Detection of a dangerous proximity between a worker and a machine
Trigger an alert when the positioning of a machine presents a danger.

Inspection of inaccessible structures
Inspect your infrastructure with drones or robots and automatically detect signs of deterioration or anomalies.

Detection of a potential collision between a crane and a worker
Be alerted to the risk of collision when a crane handling large objects is in the vicinity of workers.

ADVANTAGES

A study by the OPPBTP has shown that prevention improves economic performance in most cases: "For every €1 invested, the average return is €2.19."

- Improve your employees' work environment with optimal prevention
- Avoid delivery delays
- Reduce costs related to work accidents

SECURITY ON CONSTRUCTION SITES

CHALLENGE

In France, **acts of vandalism on construction sites** are globally estimated by the FFB at a minimum of **1% of the turnover of the construction sector**, i.e. more than one billion euros.

These include theft (construction machinery and vehicles with their contents, technical materials and equipment, tools), various types of damage, arson and squatting in premises awaiting reception.

OBJECTIVES

- Prevent the theft of equipment and materials on construction sites
- Prevent unwanted intrusions

SOLUTIONS

Intrusion detection on construction sites
Be alerted when a person enters the site at closing times, of a masked person or a person with suspicious behavior.

Access control on site
Secure your site by controlling access authorizations as well as the unauthorized use of tools or equipment when employees enter and leave the site.

ADVANTAGES

- Avoid delays related to equipment theft or damage
- Secure your sites 24 hours a day at lower costs
- Reduce the costs associated with the purchase of stolen equipment and materials

DIGITALIZE THE INDUSTRY

CHALLENGE

The construction sector is one of the least digitalized. The **progress of the work is monitored manually**, often causing **errors and confusion** and consequently delays in delivery. One of the solutions identified to remedy this is the development of Building Information Modeling (BIM), a kind of digital model of the construction site, which is essential for the digital transformation of the sector. Video recognition allows you to **extract information about completed steps and stocks.**

OBJECTIVES

- Go from manual monitoring of site progress to digital solutions
- Know the stock situation in real time
- Eliminate non-value-added activities

SOLUTIONS

Site mapping by video analysis
Measure in real time the progress of the construction site.

Automatic monitoring of site activities
Report on the tasks performed by each employee with a single click.

Stock management
Monitor in real time the stock status of your raw materials.

People counting
Be informed in real time of the dynamism of your site by counting the number of workers present.

ADVANTAGES

- Reduce non-value-added activities and optimize your site management
- Increase the productivity of your workforce
- Reduce construction delays due to stock issues

ABOUT DEEPOMATIC

Deepomatic provides an end-to-end deep learning platform that enables companies to build and operate image and video recognition applicatios at industrial scale. Data scientists and business executives use **Deepomatic Studio®** to design custom video recognition systems and **Deepomatic Run®** to operate image recognition applications in production.

We help enterprises increase the efficiency of operational processes (anomaly detection, behavior monitoring, self checkout) and solve specific business challenges across targeted industries (infrastructure, facility management, retail, catering, oil and gas)...

The applications developed by our clients are among the most advanced use cases in the world. The Compass group operates corporate restaurants. By simply taking one picture of each meal tray, Compass has developed a fluid cash register system that benefits 5000 people every day (this is a world first). The Abertis group develops tolls where vehicles are charged without going through any gates and without using anything other than cameras.

TALK ABOUT YOUR PROJECT WITH OUR SALES DIRECTOR, **CÉCILE PAPIN**

CONTACT US >

deepomatic

WHY US

END-TO-END SOLUTION ✓

From design to large-scale production, our products and partners support businesses every step of the way, whether it is annotating data, training AIs, or installing and maintaining AI-specific hardware.

OPEN THE BLACK BOX ✓

All of the applications developed, in particular datasets and algorithms, belong entirely to the client.

PRODUTION-READY IN 3 MONTHS ✓

Our easy-to-use software allows operationals as well as data scientists to quickly create best-in-class, production-ready AI applications. Businesses can expect a ROI in less than 3 months by deploying an AI on an industrial scale.

EDGE DEPLOYMENT ✓

We help entreprises deploy and monitor AI-ready edge devices at scale to comply with hardware and security hardware constraints.

THEY TRUST US

AIRBUS   **SNCF**   **OSCARO**   **Valeo**

INDIGO   **SANOFI**   **emovis**   **RATP**

COMPASS GROUP   **BELRON**   **bouygues**