



*Ensuring field worker's safety*  
**OIL & GAS**

**Dahua & NNTC**

## Background

Oil & Gas industry is one of the largest employers of workforce involved in hazardous operations. All facilities, from oil rigs to refineries and tanker fleets, must operate in line with the strictest safety rules, which are, however, not always followed, thus causing accidents, damaging facilities, and disrupting operations. These problems are solved to some extent by enforcing the use of personal protective equipment (PPE), training, and managing safety with the help of various technologies.



## Challenge

Although the use of PPE, trainings, and HSE officer supervision are helpful, these are not always enough. One of the key accident causes is human error. People cannot be supervised all the time, senior specialists get overconfident disregarding the rules, and, which is more, the operations in general have inherent uncertainty leading to accidents.

## Solution

NNTC has developed the Digital Worker software platform to monitor both moving (people and machines) and fixed objects on production sites. Its ultimate goal is to enhance occupational safety, health and environmental protection (HSE) along with labor productivity and quality.

**Vertical: Oil & Gas**

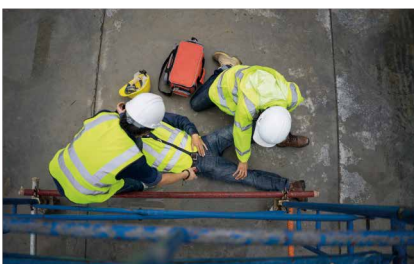
**Cases: Video Analytics, Video surveillance**

**Technology: AI**

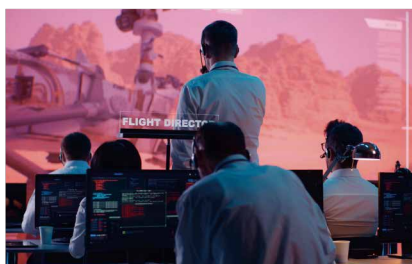
The platform comprises the following software components: device and system adapters, event stream processing bus, business rule-driven event processor, analytical database, reference database, file storage, reporting module, and client application.

### The platform includes several modules:

- Video analytics recognizes specific events and triggers an alarm if a person lacks personal protection equipment. Moreover, a neural network can respond to atypical actions and processes.



- Digital enterprise: a visual and manageable model gives you a true control over production processes.



- A smart IoT module for hard hats is essential to ensuring field workers' safety.



## Smarter Together

Digital Worker performs detailed onsite safety and efficiency monitoring in real time using Dahua cameras and software, including video analytics, face and event recognition functionality. CCTV cameras quality and functionality are of paramount importance, since they help Digital Worker to provide as detailed data as possible to alert users and prevent accidents.

## User Benefits

The Digital Worker can be customized, allowing you to focus on a particular task or deal with all safety hazards to implement the Vision Zero strategy. The solution identifies safety gaps to then close them and enhance the capabilities of the existing surveillance systems.

Supported by Dahua technologies, Digital Worker is ideal for:

- HSE drills and breach prevention
- Alerting to people falls, immobility, and entering hazardous areas
- Prevention of accidents involving people and machinery
- Emergency alerts
- Searching for people in case of emergency



## Key Industries



Oil & Gas



Metallurgy



Petrochemical



### Media Links

<https://nntc.digital/products/industrial-safety/digital-worker-platform/>

#### Product Videos:

<https://www.youtube.com/watch?v=h2IPBvgpvcA>

<https://www.youtube.com/watch?v=7qnFBOzbq0s>

<https://www.youtube.com/watch?v=Kp0KDksO4Fw>

[www.smarter2gether.com](http://www.smarter2gether.com)

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### Dahua Technology Co., Ltd.

No.1199, Bin'an Road, Binjiang District, Hangzhou, China

P.C: 310053

+86-400-672-8166

[ECOsysteem@dahuatech.com](mailto:ECOsysteem@dahuatech.com)

[www.smarter2gether.com](http://www.smarter2gether.com)



INNOVATIVE TECHNOLOGY COMPANY

### NNTC

Address Office G16&G20, Block 13,

Dubai Knowledge Park, Dubai, UAE

+971 4 44 66043

[info@nntc.digital](mailto:info@nntc.digital)

[www.nntc.digital](http://www.nntc.digital)