

September 6th  
10.00AM CET

Topic

# How to build your mobile CCTV tower



**Henk de Haan**  
CEO  
Telescopic Mast



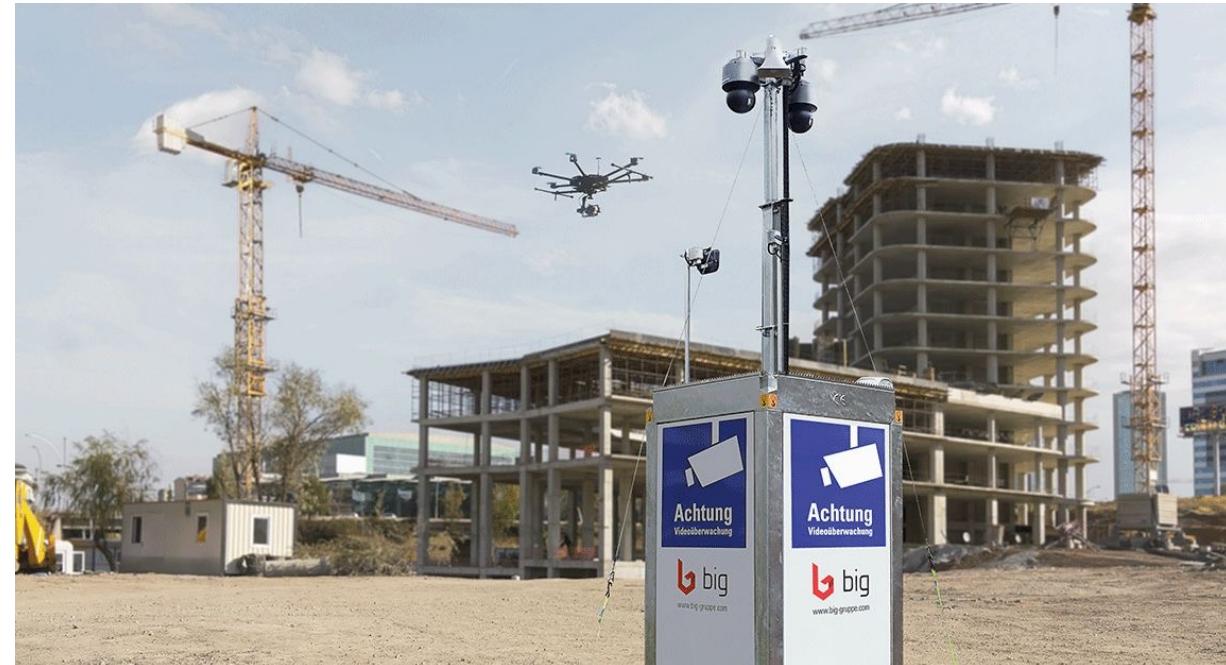
**Gerrit van Weeren**  
pre sales engineer at  
Hikvision Europe



**Erik Herrmann**  
sales director at  
SFC Energy AG

# Agenda

- 10.00 Welcome and introduction
- 10.15 SFC Energy AG
- 10.45 Hikvision
- 11.15 Q&A



# Typical applications :

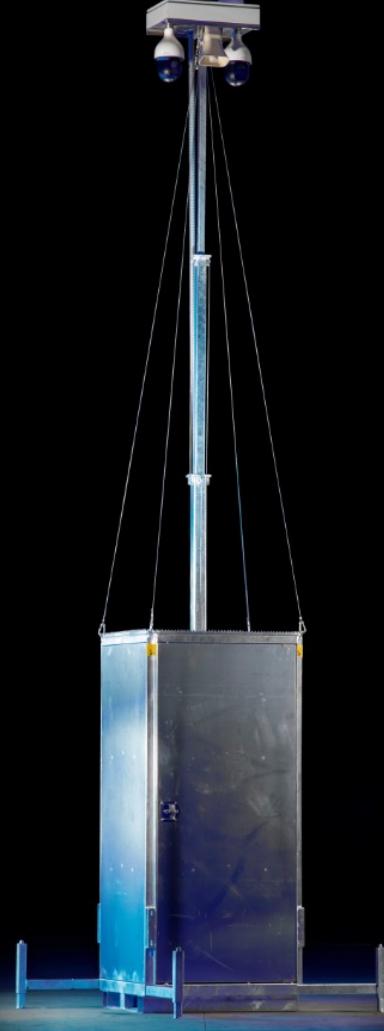
- Improving safety at major events, festivals, concerts & public gatherings
- Construction and industrial site security
- Roadside and traffic monitoring
- Protecting vacant properties
- Protecting infrastructure
- Reducing cable and metal theft
- Wind and solar farm security
- Crime hotspots such as car parks or isolated locations
- Preventing and minimising fire risk
- Railway sidings

# TelescopicMast

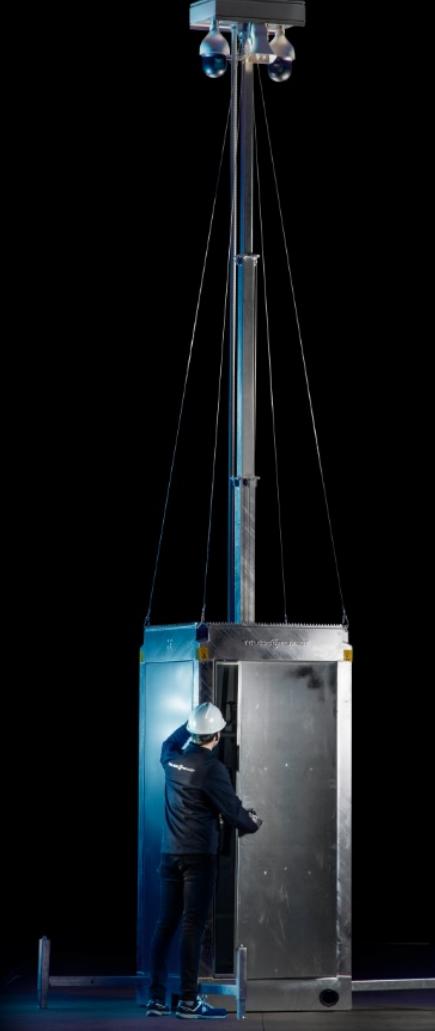
- Founded in The Netherlands
- Focus on high quality steel CCTV Towers
- 25+ years experience in steel products
- Global operations
- 185 + customers
- Continuous innovation based on customer feedback
- CE and TuV



**MSB Basic**



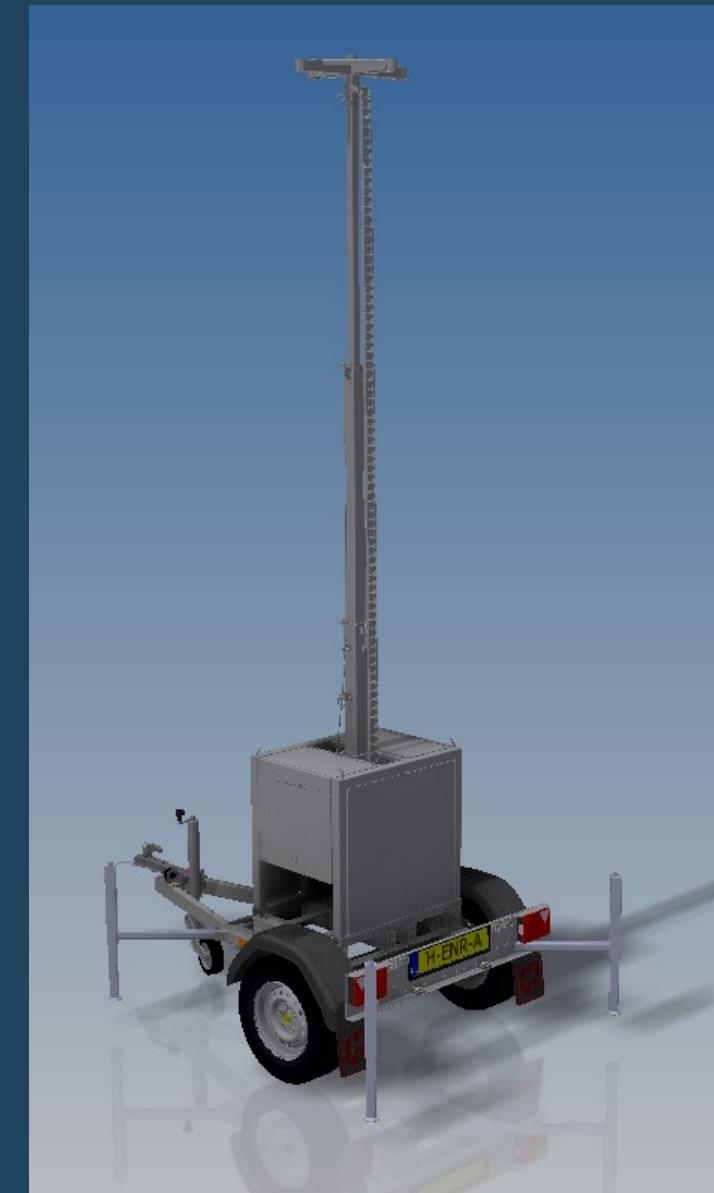
**MSB Basic Plus**



**MSB Premium**

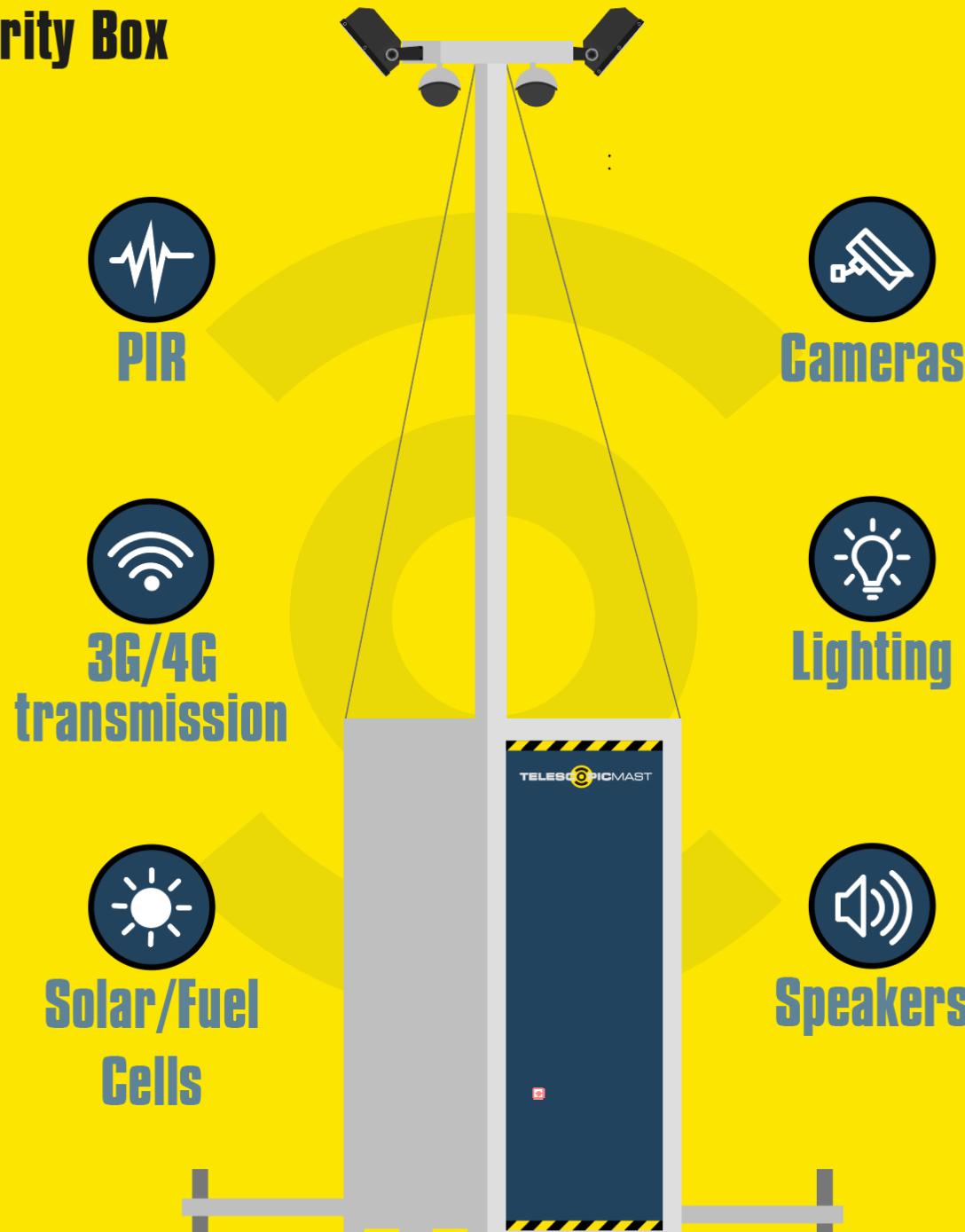
# Compact + Trailer

*(pre-order Q1 23)*



# The Mobile Security Box

**ADD  
YOUR OWN  
DEVICES**



TELESCOPICMAST

# Keynote - SFC

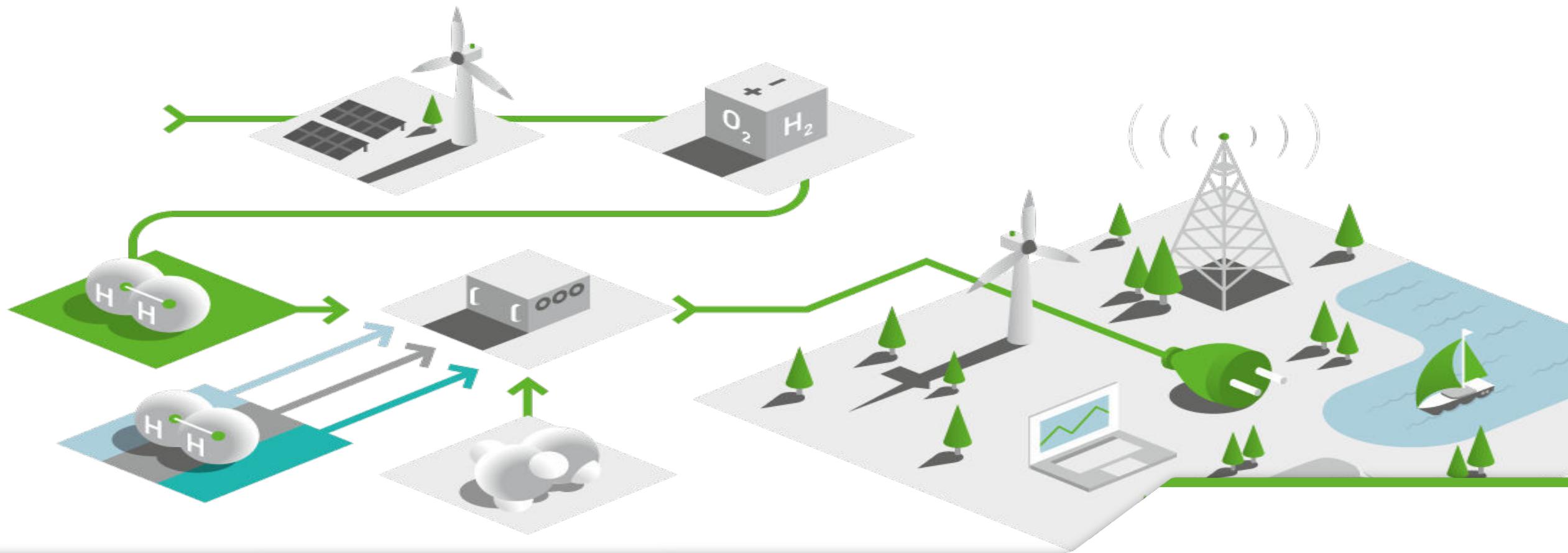


**Erik Hermann**  
**Sales Director**

**SFC**  
ENERGY

# EFOY Pro Fuel Cell Solutions

# Clean Energy. Anytime, Anywhere.



September 2022



**64** million €

Sales (2021)

**296**

Employees

**4**

Locations

Brunnthal (HQ)   
Calgary   
Almelo   
Cluj

**>55,000**

Fuel cells sold  
worldwide



ISO-certified for quality standards  
and environmental guidelines

European Innovation Award  
winner in 2021

**100+**

Global Sales and  
Distribution  
Partners



**110 million\***

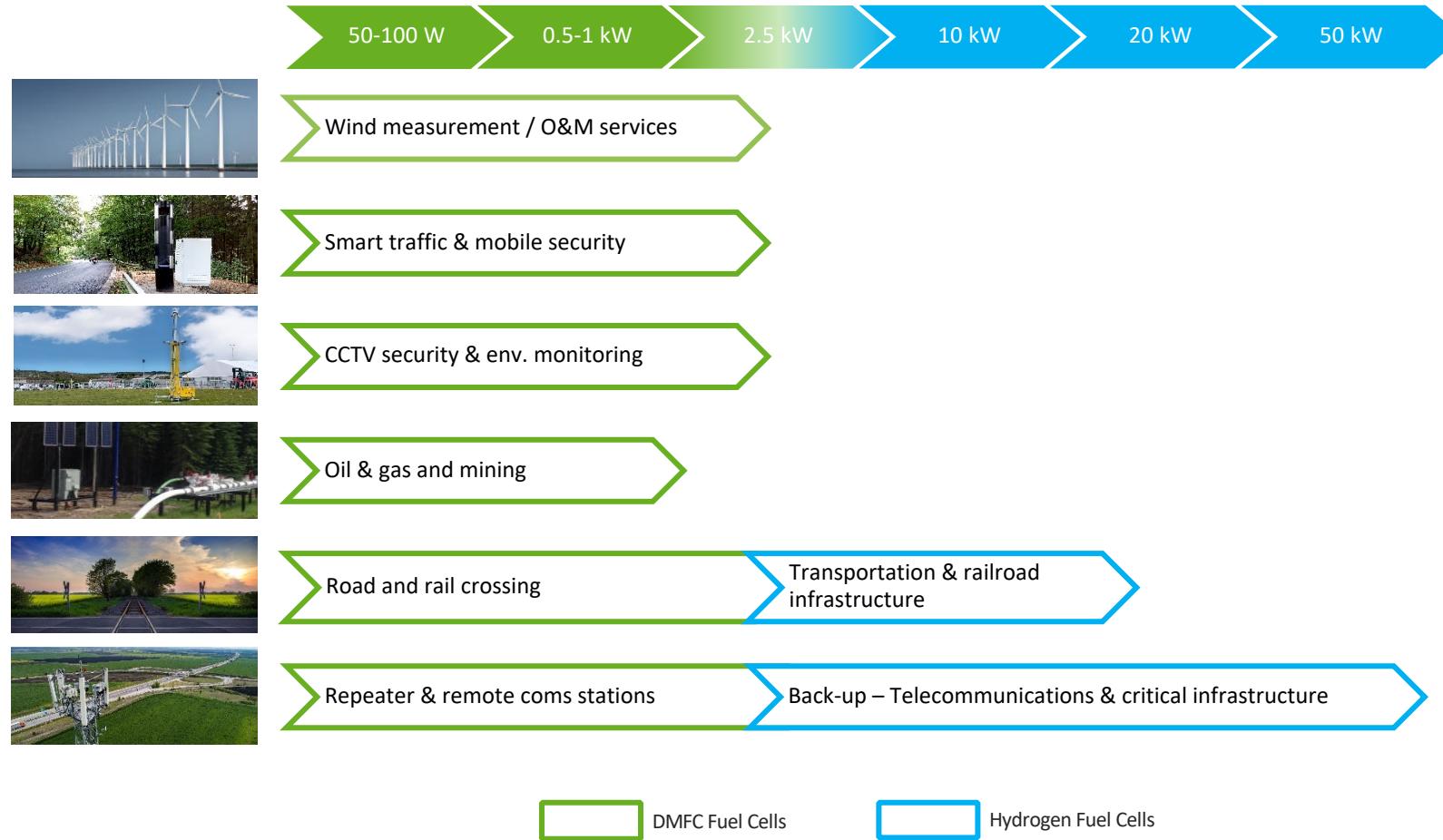
Operating hours

**7.2 million kWh\***

Environmentally friendly  
energy

# Fuel Cell Market Segments in industrial applications

Growing demand for green power solutions in remote and urban areas



# Market Success

## Security & Monitoring

SFC's Security Market Growth

28% CAGR



Video Surveillance Market

62,3 Billion Euro

Forecasted market size in 2026

Source: Marketsandmarkets

### Drivers for Adoption

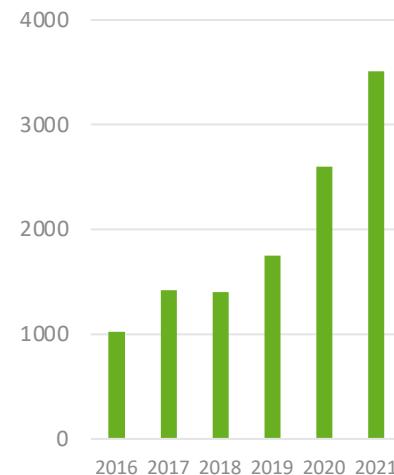
Public safety and security

Remote monitoring & data storage

More hardware per installation

Source: Marketsandmarkets

EFOY Fuel Cell Growth



### Opportunities

Smart cities

Autonomous energy solutions

Environmentally friendly & quiet

Source: Marketsandmarkets

# Testimonials

## Press Releases

01 Mar 2022, Investors, News, Press Release

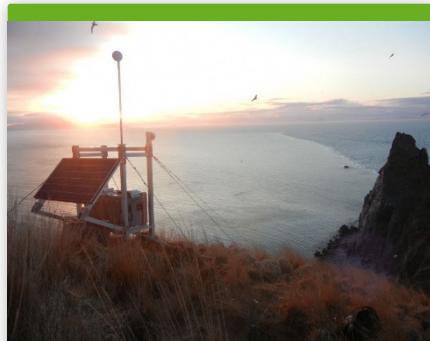
LiveView Technologies (LVT) ordered almost **300 EFOY fuel cells** for use in mobile surveillance technology. The order is worth more than **USD 1.7 million**. As a new customer, LVT already ordered more than **1,100 EFOY fuel cells** in 2021.

22 Feb 2022, Investors, News, Press Release  
SFC Energy receives **million-euro order** from Fuel Cell Systems Ltd. for EFOY fuel cells - Fuel Cell Systems **doubles order volume in 2021**.

02 Aug 2022, Investors, News, Press Release

Oneberry Technologies has purchased more than **1.800 EFOY fuel cells to date** for use in numerous applications such as flood early warning systems ... ad-hoc and mobile monitoring

# Application Requirements



Focus on environmentally friendly solutions



100% reliable energy supply



Savings in personnel and logistic costs



Long autonomy and low maintenance



Permanent connectivity

# How does the EFOY Pro work?

## Energy on demand – automatic charging



More on the EFOY fuel cell technology:  
<https://www.efoy-pro.com/en/efoy/technology/>

# EFOY Fuel Cartridges

## High energy density and level of safety

- ⊕ High energy density of fuel cartridges with 1.1 kWh/liter
- ⊕ 1 kWh = 0.9 liter
- ⊕ Child safety lock and safety valve
- ⊕ Certified according to UN3473 for road, sea and air freight



# Superior Energy Density of Methanol

Alternative solutions to provide 10 kWh of energy

## Methanol

EFOY Pro Fuel Cell (DMFC)



8.5 kg  
10 l

## Propane

With an SOFC Fuel Cell



27 kg  
7,5 l

## LiFePO4 Batteries



100 kg  
12 l

## Lead Batteries

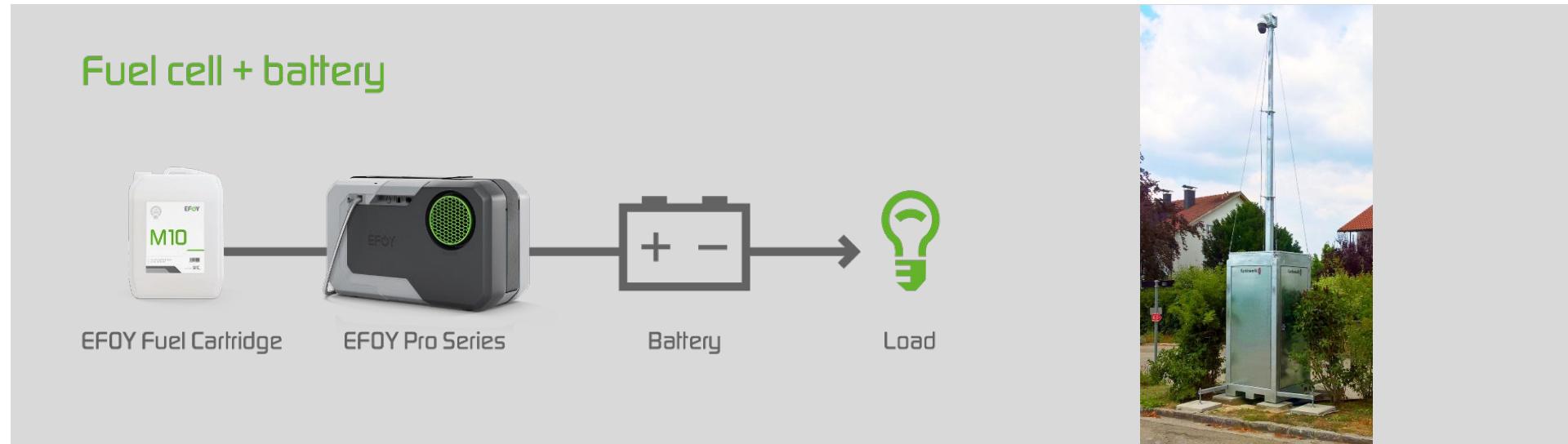


270 kg  
140 l

Methanol combines superior energy density with  
easy handling, shipping and low overall cost

# EFOY Fuel Cells

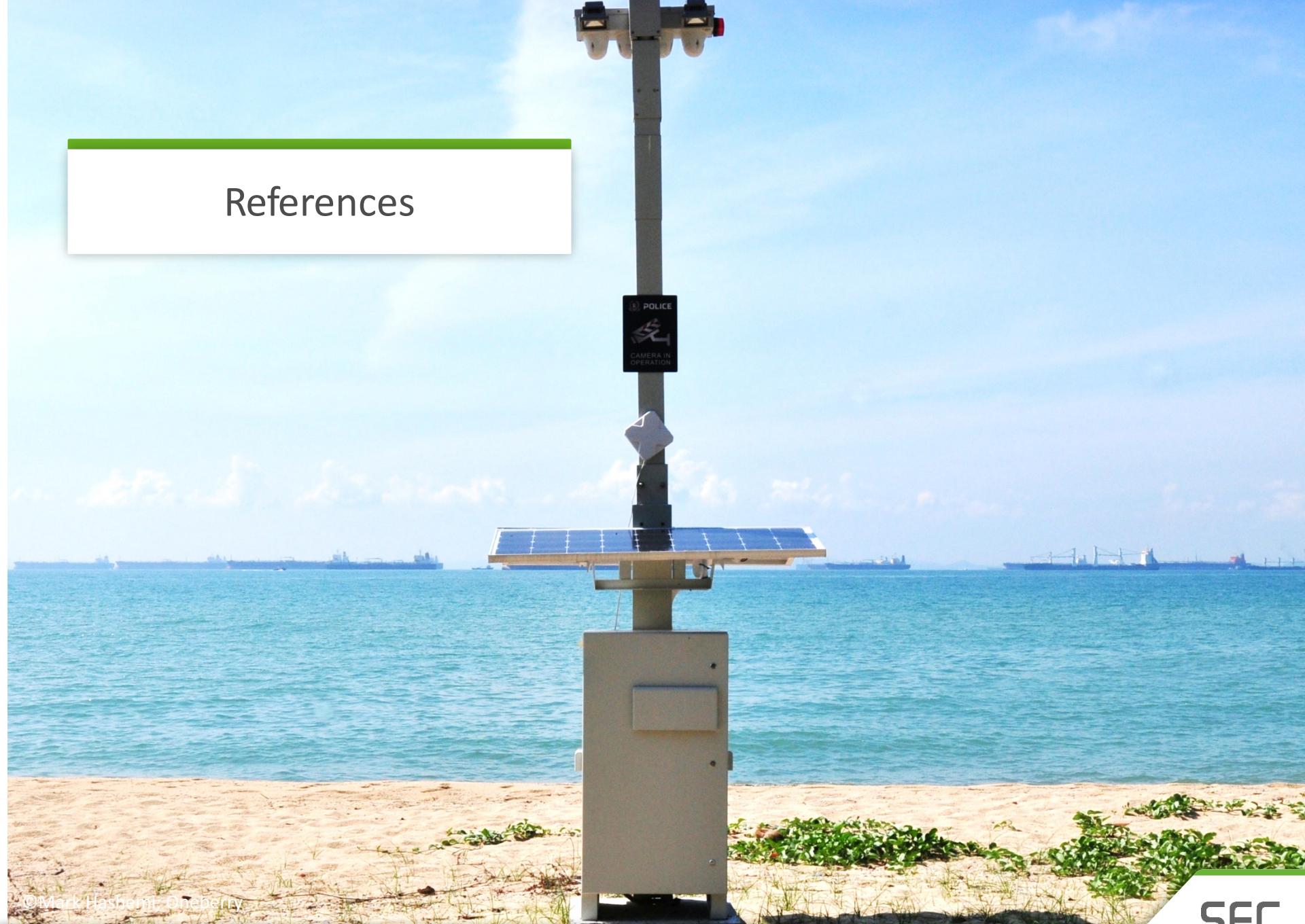
## CCTV System setup (Primary Back-up & Hybrid)



### Fuel cell + solar + battery



## References



©Mark Hashemi, Oneberry

# Mobile CCTV security – G7 summit



## EFOY PARTNER

Wireless CCTV Ltd.

## LOCATION

United Kingdom



\*Corresponds to New EFOY Pro 2800

## CHALLENGE

WCCTV was commissioned to provide 24/7 surveillance of the G7 Summit in Cornwall, UK. The locations where CCTV was needed had no fixed infrastructure to mount a CCTV camera, to run internet cabling or to supply power.

## SOLUTION

- ⌚ 21x EFOY Pro 2400\*
- ⌚ Contained in CCTV Tower
- ⌚ 7 day event

«The EFOY Pro allows us to provide temporary and rapid deployment CCTV services in the most remote locations in a cost effective and reliable manner. We have utilised the EFOY Pro fuel cell solution for close to 10 years.»

Daniel del Soldato, Marketing Manager, Wireless CCTV Ltd.

## BENEFITS

- ⌚ Cheaper than guards
- ⌚ Optimal CCTV coverage
- ⌚ Around the clock security

# Mobile & stationary video monitoring systems



## EFOY PARTNER

Oneberry Technology Pte Ltd.

## LOCATION

Singapore



\*Corresponds to New EFOY Pro 2800

## CHALLENGE

High level security is required for an event with over 300,000 spectators in an arena with an immediate periphery totaling five square kilometers requiring short-term and temporary deployment of turn-key CCTV surveillance with multiple entrances and crowd and traffic flow.

## SOLUTION

- ⌚ EFOY Pro 2400\*
- ⌚ Load: 60W, cont; 12 V for camera, Wi-Fi Router, controller device
- ⌚ 16 days of self sufficiency @ 60 W

«We are able to provide a more efficient and autonomous source of power which is 100% reliable and is essential in maximizing data availability.»

Ken Pereira, CEO Oneberry Technology Pte Ltd.

## BENEFITS

- ⌚ Autonomous, reliable and quiet source of power
- ⌚ Maximizes data availability
- ⌚ Environmentally friendly

# Mobile CCTV – Reliable power for security towers



## EFOY PARTNER

Linc Polska Sp. z o.o.

## LOCATION

Poland



## CHALLENGE

To ensure the reliable operation of the systems, a permanent power supply is essential. The reliable supply of iTower applications with environmentally friendly electricity at any time and in any place is very important.

## SOLUTION

- ➔ EFOY Pro 2800
- ➔ 2 x M28 fuel cartridges
- ➔ 2 x 300 W solar panel
- ➔ Autonomy: 4 weeks

«With our technical safety solutions, we want to provide our customers with comprehensive situational awareness without burdening the environment. EFOY fuel cells expand the application possibilities of iTowers and give our customers more flexibility.»

Harald Dingemans, CEO of Linc Polska Sp. z o.o.

## BENEFITS

- ➔ More flexibility - Increased run-time
- ➔ Perfect solution to replace diesel generators
- ➔ Compliment to solar
- ➔ Remote Monitoring with EFOY Cloud

# Mobile CCTV security – remote off-grid



## EFOY PARTNER

LiveView

## LOCATION

North America



\*Corresponds to New EFOY Pro 2800

## CHALLENGE

Often, the deployment sites lack access to the conventional power grid. Supermarket chains place the camera systems in their car parks for monitoring and more efficient use of parking spaces. On construction sites, they take over the function of traditional guards.

## SOLUTION

- ➔ EFOY Pro 2400\*
- ➔ 2 x M28 fuel cartridges
- ➔ 1 x 210 Wp solar panel
- ➔ Autonomy: 20 days without sun

«We are thrilled to partner with EFOY so we can provide rapidly deployed surveillance that is truly capable of operating anywhere on earth—no power, no internet, no problem.»

Derek Boggs, Director of Marketing and Demand Generation, (LVT)

## BENEFITS

- ➔ Increased run-time and fuel efficiency
- ➔ Low maintenance
- ➔ Perfect compliment to solar
- ➔ Easy installation and handling

# Mobile CCTV - Rapid Deployment Security Tower



## EFOY PARTNER

Funkwerk video systeme  
GmbH

## LOCATION

Germany



\*Corresponds to New EFOY Pro 2800

## CHALLENGE

For time-limited events such as concerts, the monitoring systems are only used for a short period of time. The surveillance systems used should remain independent of permanently installed power supplies.

## SOLUTION

- ⊕ EFOY Pro 2400 Duo\*
- ⊕ Telescopic Mast tower solution
- ⊕ 2 x M10 fuel cartridges
- ⊕ Optional with solar panels
- ⊕ Autonomy: 4 weeks

«The simple and professional unit convinces us in the various application scenarios where environmental factors such as temperature, noise and exhaust gas behavior are involved.»

Norbert Meißner, Managing Director Funkwerk

## BENEFITS

- ⊕ Perfect solution to replace diesel generators
- ⊕ Reliable fuel cell solution
- ⊕ Hybrid power solution with solar
- ⊕ Environmentally friendly

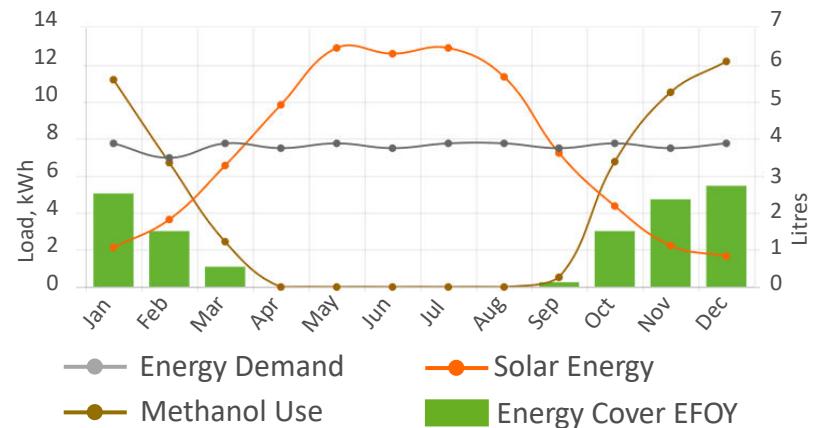


Find more references on  
[efoy-pro.com/references/](http://efoy-pro.com/references/)

# Autonomous & Continuous Off-Grid Energy

## EFOY Energy Calculator

### Hybrid solar system operation



- ⊕ With the EFOY Energy Calculator you can precisely calculate your energy demand
- ⊕ Immediately receive the recommended fuel cell for your energy needs
- ⊕ Forecast your autonomy and subsequent maintenance schedule
- ⊕ To the calculator: <https://www.efoy-pro.com/en/service/energy-calculator/>

Simply and effortlessly select your fuel cell system customised to your application

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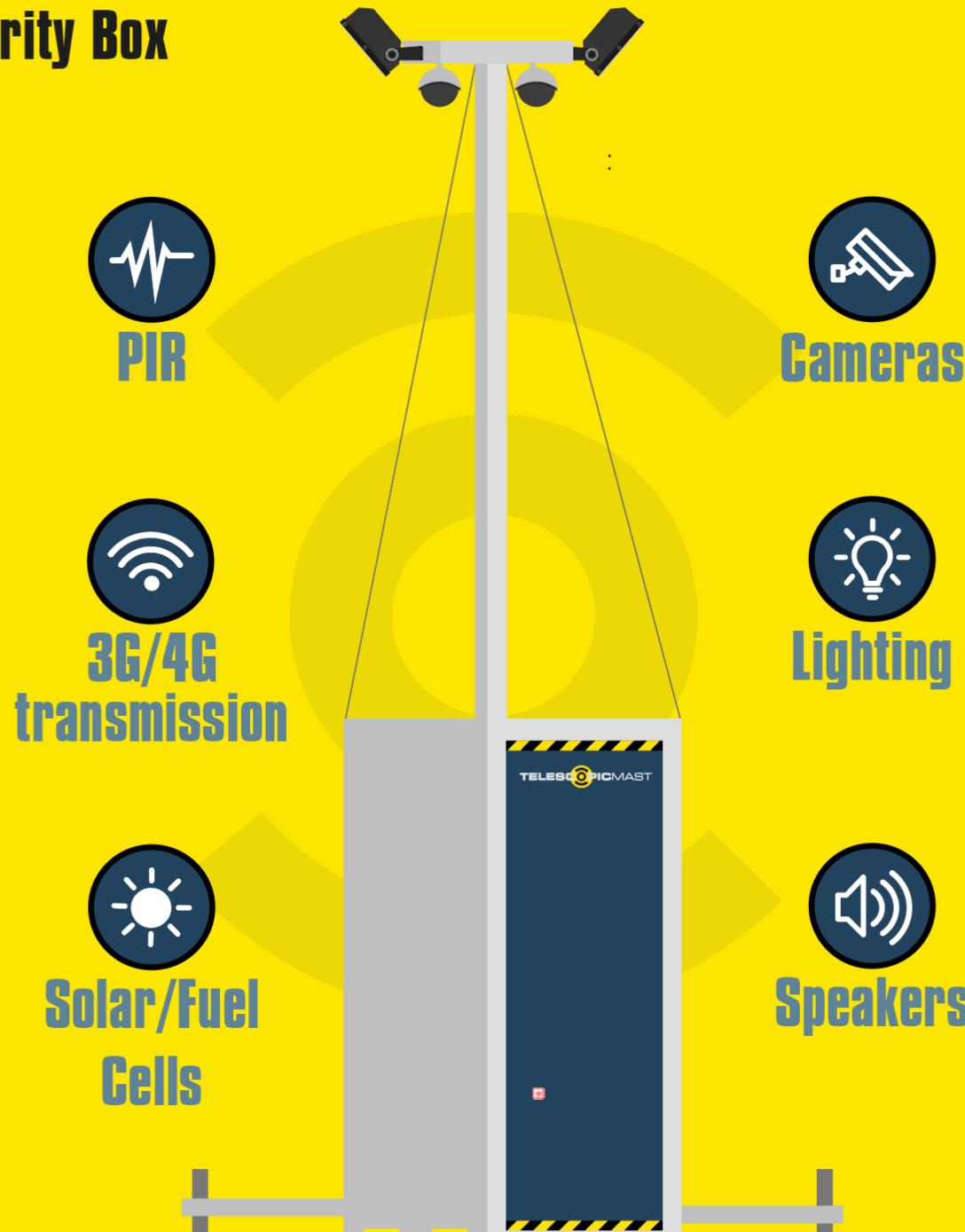


Thank you  
for your attention



# The Mobile Security Box

**ADD  
YOUR OWN  
DEVICES**



TELESCOPICMAST

# Keynote Hikvision



**HIKVISION**

**Gerrit van Weeren**  
**Pre Sales Engineer**

**Arno Tromp**  
**BDM**

**TELESCOPIC**MAST

# Mobile Tower Solution

**HIKVISION®**

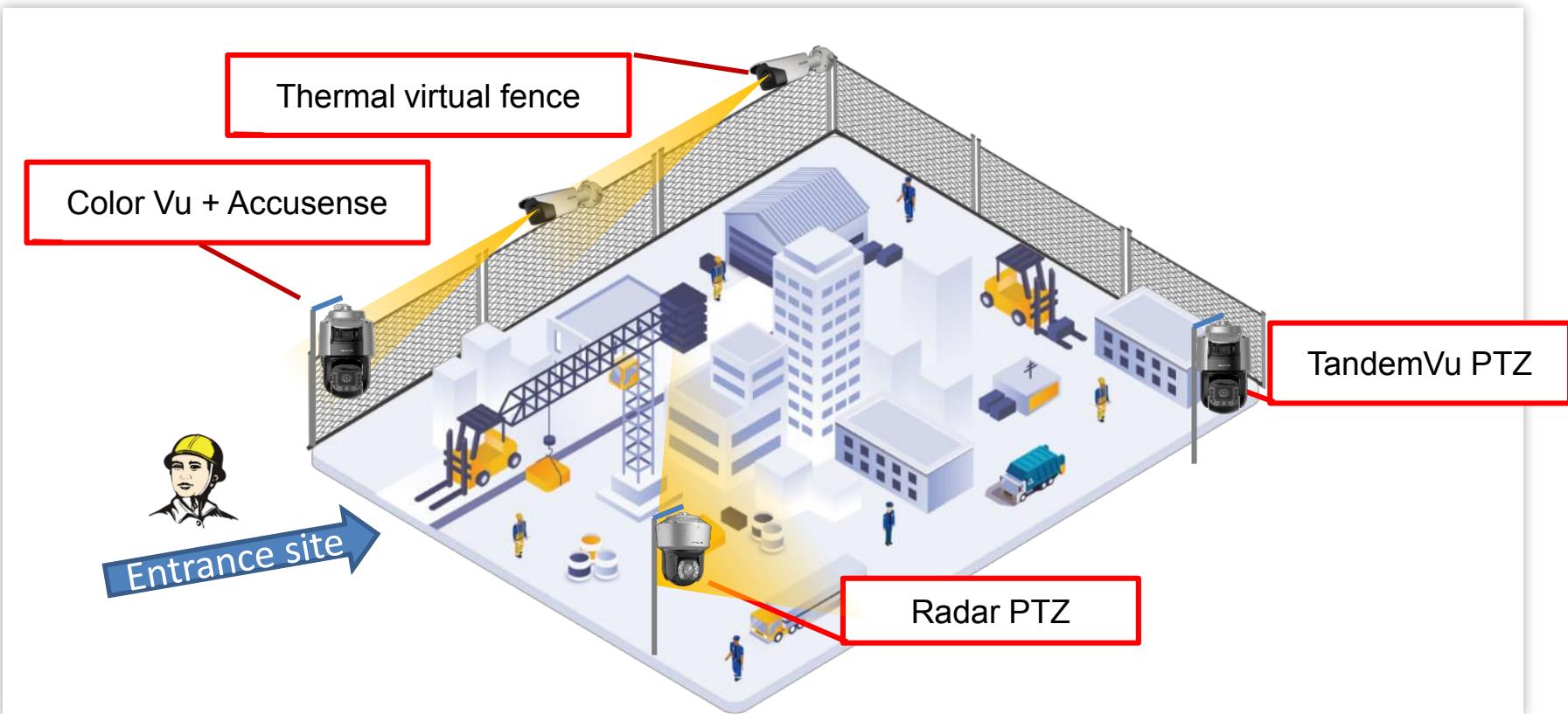


**Gerrit van Weeren**  
**Pre-Sales Engineer – Alarm Receiving Center**

**Arno Tromp**  
**Pre-Sales Engineer – BDM**



# Temporary and mobile surveillance



# Pain Points of Conventional Perimeter Solution

Accuracy Easily Affected by Challenging Environment



**Rain**



**Snow**



**Windy Day**



**Darkness**



**Foggy**



**Sandstorm**

# 8 MP Panoramic ColorVu Fixed Turret Network Camera

NEW



## 8 MP Panoramic ColorVu Fixed Turret Network Camera

- High quality imaging with 8 MP resolution
- One image that presents all the scenes covered by the camera
- 24/7 colorful imaging
- Efficient H.265+ compression technology
- Clear imaging against strong back light due to 130 dB WDR technology
- Focus on human and vehicle classification based on deep learning
- Active strobe light and audio alarm to warn intruders off
- Water and dust resistant (IP67)



# TandemVu PTZ

**Big Picture and Details**  
in One View

Cameras



## TandemVu PTZ Introduction



Colorful Overview



Detailed PTZ View

# What Should Smart Monitoring be Like?



## Step 1 Spot a target

TandemVu can monitor a larger area and find the target faster.

## Step 2 Track the target

It can track the target without losing it.

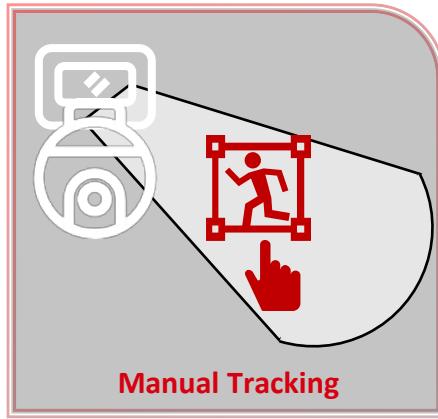
## Step 3 Warn the target

If offers proactive defense, informing the target of detection.

## Step 4 Get the evidence

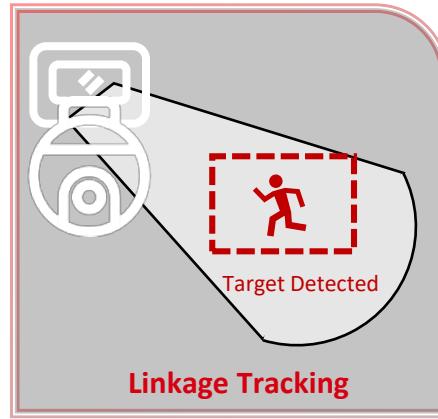
It keeps recorded evidence that is easy to locate for review.

## Smart Linkage



### Manual Tracking

Manually select a target and the PTZ lens will track it. This mode has the **highest** priority.



### Linkage Tracking

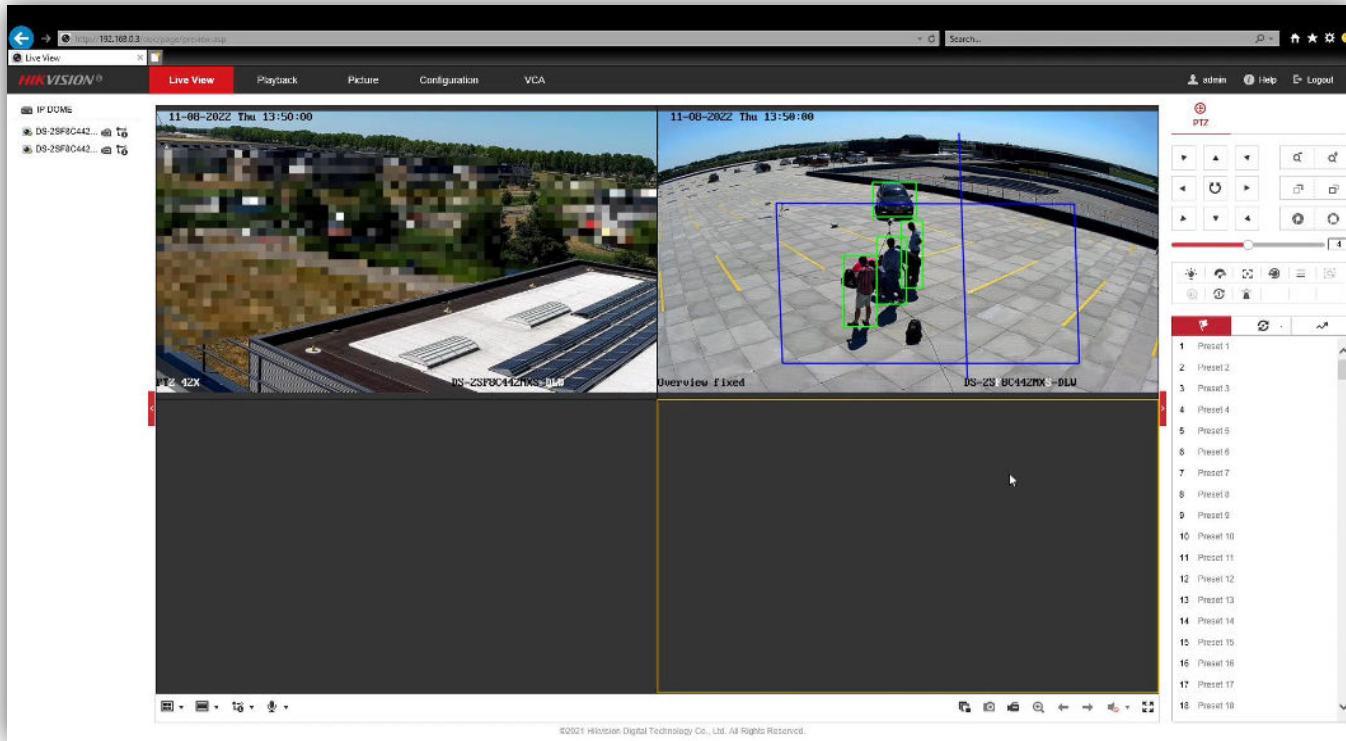
When a target appears in the specific monitoring area of the bullet lens, it will link the PTZ lens to automatically track.



### Take-over Tracking

Even if the target has left the monitoring area of the bullet lens, the PTZ lens will continue to track the target.

# Smart Linkage Tracking



## Visual and Auditory Warnings



### Customized Audio

Audio customization is supported.  
(Three audio messages)



### 30-Meter Audio Alarm

Audio alarms can accurately transmit  
warning information

### 30-Meter Strobe Light

The strobe light can give powerful  
warnings to targets within range

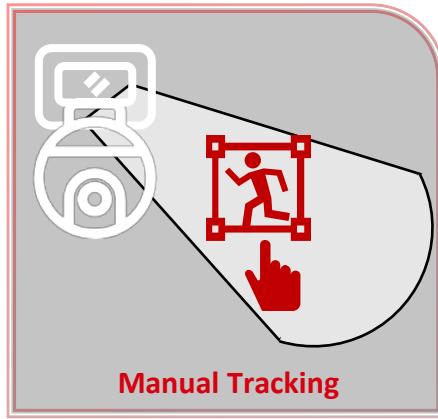
## Rapid Focus

### PTZ Optics calibration

Result after 2 scenes calibration  
Mounted on unstable camera pole

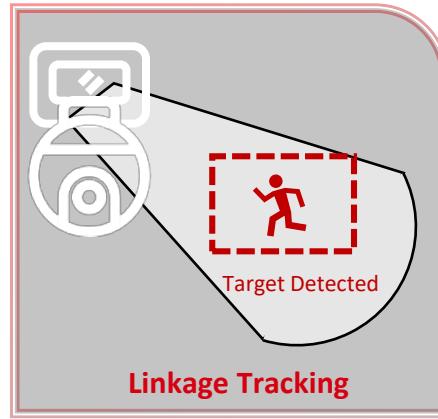


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HIKVISION



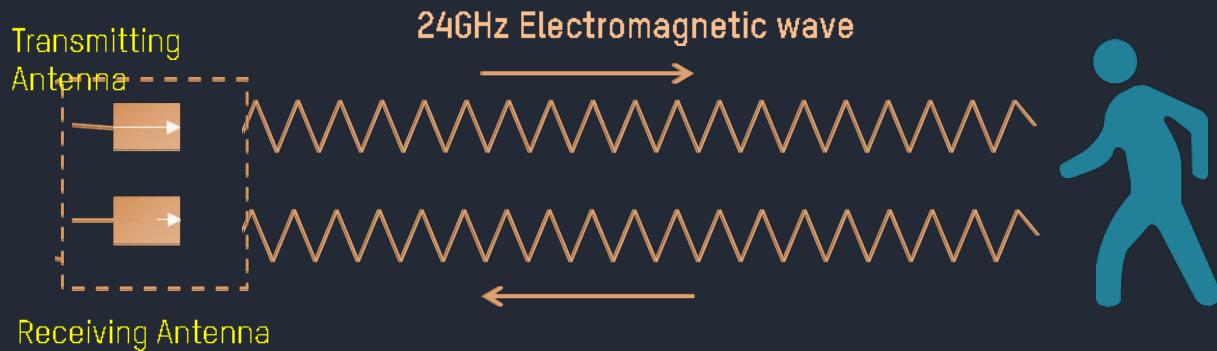
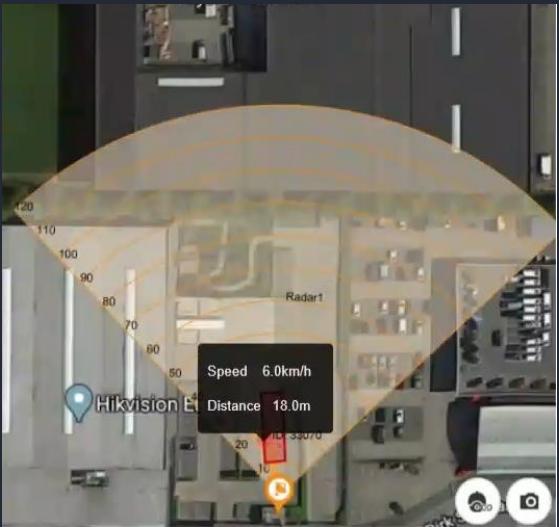
HIKVISION All-in-one Radar PTZ Camera



Looking for all weather approved solution?

# Radar Based Intruder Detection

HIKVISION  
EXPLAINS **LIVE** 



Alarm triggered according to the comprehensive judgment of trajectory , speed, size.  
Performance will not be affected by bad weather and light condition

Unique Product

HIKVISION  
EXPLAINS **LIVE** 

## All-in-one Design



# Product Showcase

HIKVISION  
EXPLAINS **LIVE** 

## 7 x 24 All-weather Approved

**Radar Detection**  
90° Horizontal Detection Angle  
120m for Vehicle Detection  
100m for Human Detection

## Video Double Verification

PTZ linked to verify the targets detected by radar and alarm will be generated only triggered by human & vehicle.



## Easy to Deploy

All-in-one design.  
Automatic calibration supported.

## Smart Tracking

Stable tracking focus on human and vehicle.  
Multi-target switch tracking  
100m Strobe Light Linked to Warn off Intruders

## Attributes Extraction & Modeling

Support human, vehicle attributes Extraction.  
Quick Search by specific attribute[With DeepinMind NVR].

# Hikvision Radar PTZ Camera

HIKVISION  
EXPLAINS **LIVE** 



05-27-2020 Wed 15:12:19

Perimeter Alarm

Face and Body

	Gender	Male
Weari...	Yes	Unknown
Age Gr...	Middle Age	Unknown
Carryi...	No	No
Carryi...	Yes	No
Weari...	No	No
Weari...	No	Unknown
Hairstyl...	Short Hair	Short Hair

	Gender	Male
Weari...	Unknown	Unknown
Age Gr...	Unknown	Unknown
Carryi...	No	No
Carryi...	Yes	No
Weari...	No	No
Weari...	No	Unknown
Hairstyl...	Short Hair	Short Hair

Vehicle Detection

	Plate No.	Unknown
Licens...	Unknown	Unknown
Vehic...	Sedan	Grey
Vehicle...	Unknown	Grey
Plate No.	Unknown	Unknown
Licens...	Unknown	Unknown
Vehic...	SUV/MPV	Black
Vehicle...	Unknown	Black

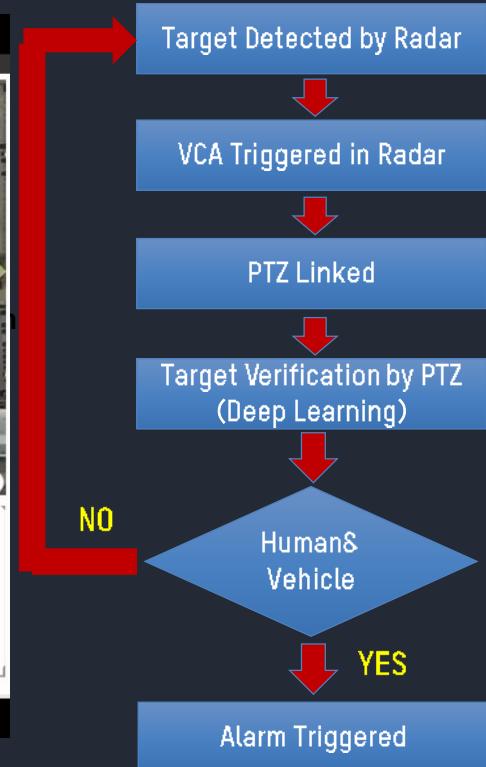
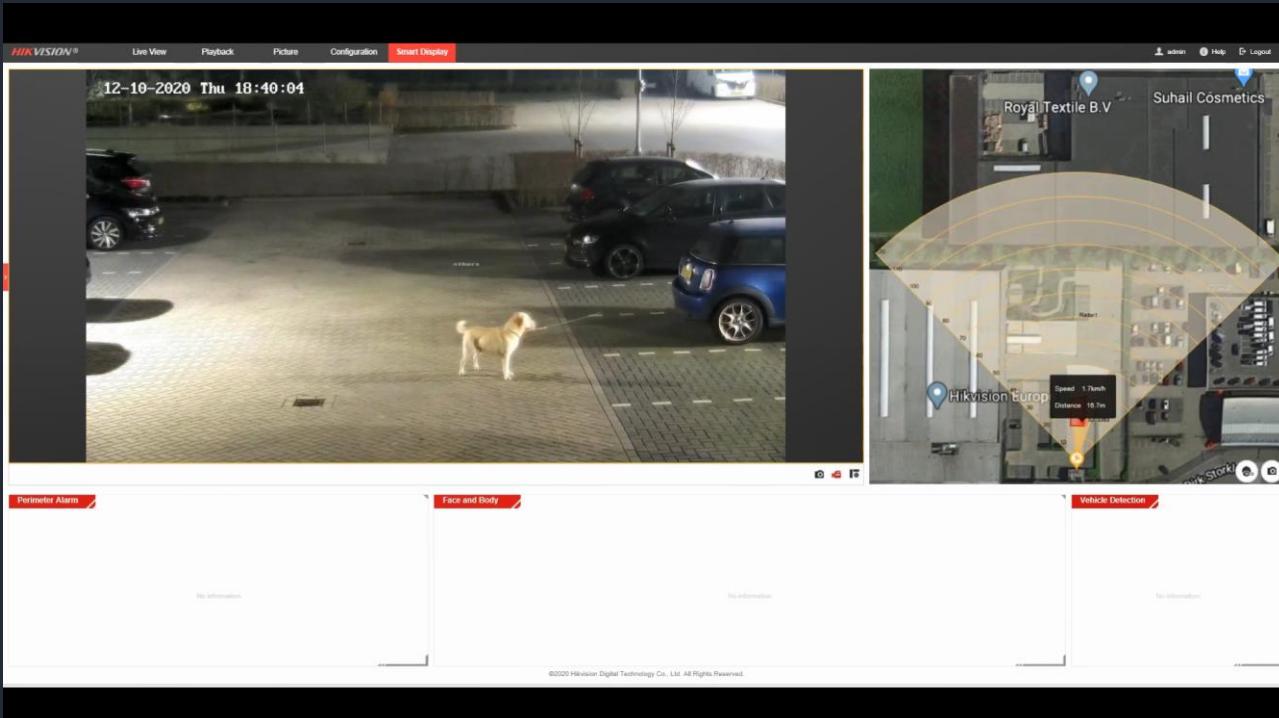


# Video Double Verification to Minimize False Alarms

# Video Double Verification

HIKVISION  
EXPLAINS **LIVE** 

Recognize and classify targets detected by radar as human/vehicle/others based on deep learning technology



# Smart Tracking 3.0 Achieves Stable and Accurate Tracking Performance

# What is Smart Tracking 3.0?

HIKVISION  
EXPLAINS **LIVE** 

Smart-tracking 1.0

→ Smart-tracking 2.0

Smart-tracking 3.0



Only triggered by Person & Vehicle

Triggered by all moving objects

- Person/Vehicle Arming Tracking
- Real-time Vehicle & Person modelling
- Upgrade manual tracking algorithm

# What is Smart Tracking 3.0?

HIKVISION  
EXPLAINS **LIVE** 

Smart-tracking 1.0

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Only triggered by Person & Vehicle

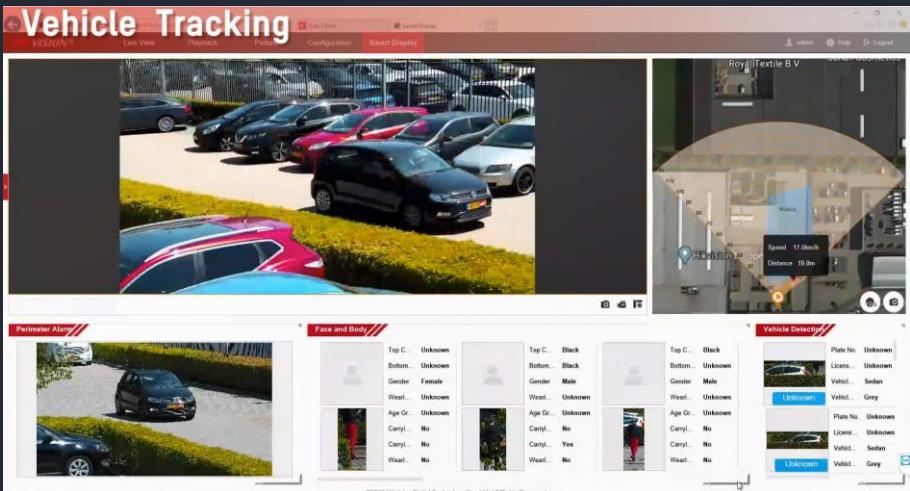
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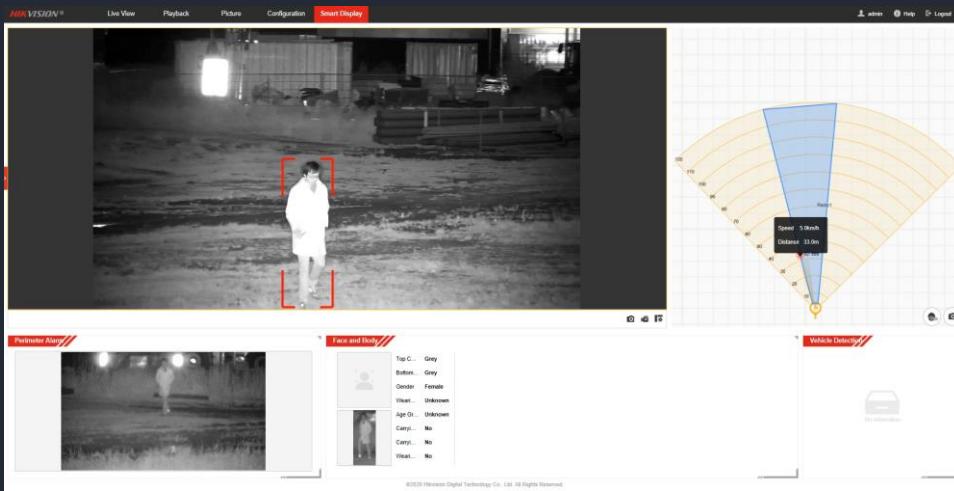
## Smart Tracking 3.0

# HIKVISION EXPLAINS LIVE

When alarm finally generated, PTZ will take over the target and track it accurately and smoothly based on Smart Tracking 3.0 technology. In really poor environment conditions, if the target is not clear, PTZ will based on the position data responded via Radar to track the target.



## Human & Vehicle Tracking



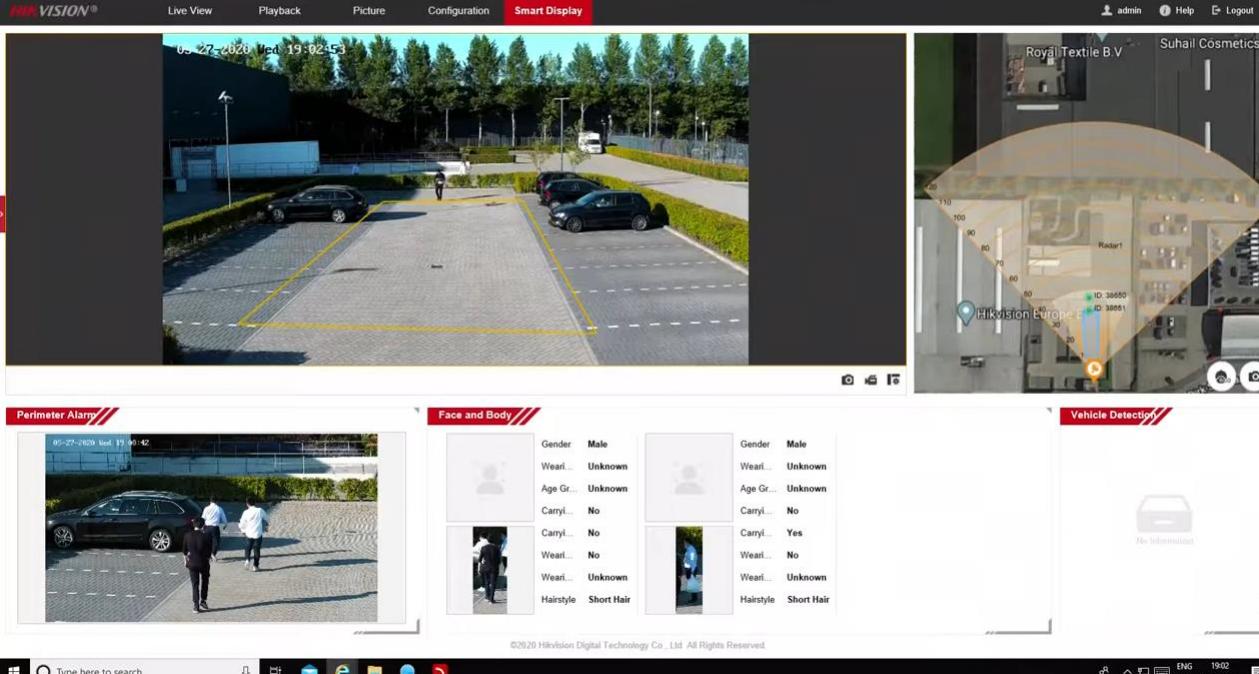
## Tracking In Nighttime

# Smart Tracking 3.0

HIKVISION  
EXPLAINS **LIVE** 

Tracking for Multiple Target.

Maximum 32 targets can be detected by radar at the same time.



The screenshot displays the Hikvision Smart Display interface with the following sections:

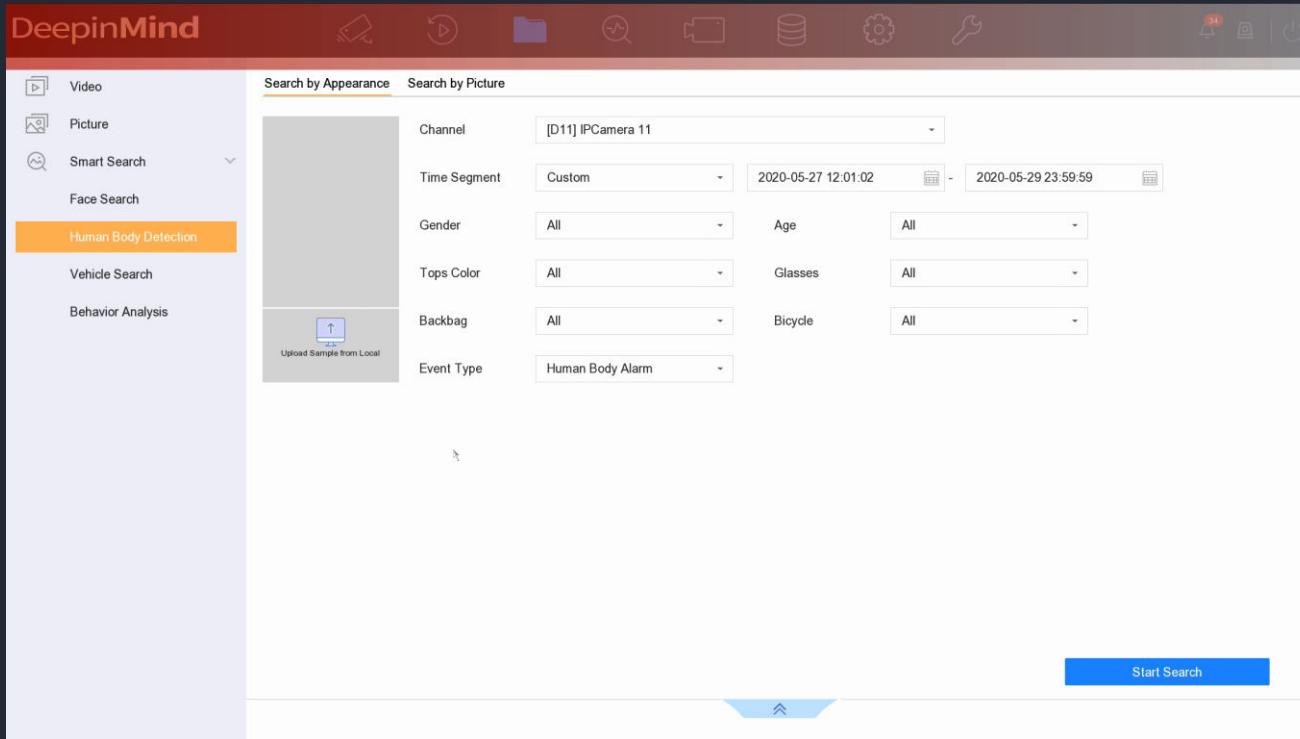
- Perimeter Alarm:** Shows a perimeter alarm zone with a yellow polygon on a parking lot scene. A sub-panel shows two people walking near a car.
- Face and Body:** Shows two columns of target details for detected individuals. The first column includes a placeholder icon and a person icon. The second column includes a placeholder icon and two person icons. Each row provides details like gender, wear, age group, carry, and hairstyle.
- Vehicle Detection:** Shows a radar detection interface with a map of a building interior. It displays radar locations and vehicle IDs (e.g., ID 38650, ID 38651).

At the bottom, the Windows taskbar shows the search bar, pinned icons, and system status.

# Any Other Benefits?

# Attributes Extraction & Modeling

When the using of the smart search function, you can quickly locate the targets you want in massive data, save your time.  
(Supported by DeepinMind NVR and HCP1.7)



The screenshot shows the DeepinMind software interface with the following details:

- Left Sidebar:** Includes icons for Video, Picture, Smart Search (with Face Search, Human Body Detection, Vehicle Search, and Behavior Analysis), and a "Upload Sample from Local" button.
- Top Bar:** Features icons for Video, Picture, Smart Search, Face Search, Human Body Detection (highlighted in orange), Vehicle Search, Behavior Analysis, and a "Start Search" button.
- Search Section:** Titled "Search by Appearance" (underlined) and "Search by Picture". It includes fields for Channel (set to [D11] IPCamera 11), Time Segment (set to Custom, with dates 2020-05-27 12:01:02 to 2020-05-29 23:59:59), Gender (All), Age (All), Tops Color (All), Glasses (All), Backbag (All), Bicycle (All), and Event Type (Human Body Alarm).

# Rapid Focus

HIKVISION  
EXPLAINS **LIVE** 

With Hikvision **Rapid Focus** technology, camera focus accurately and fast without delay.



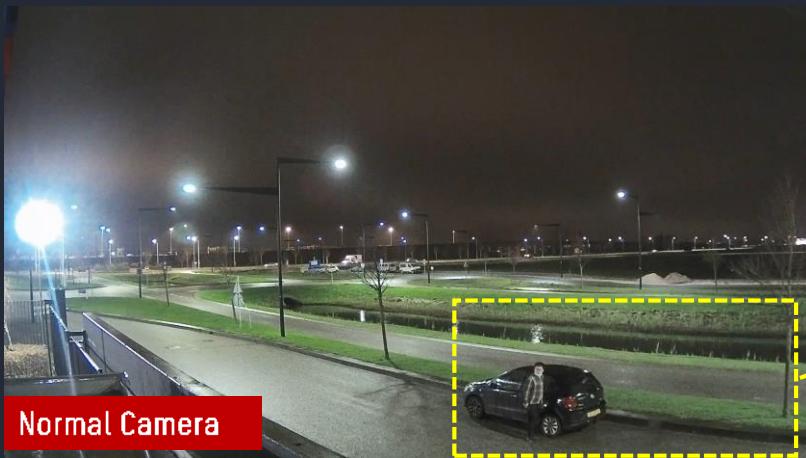
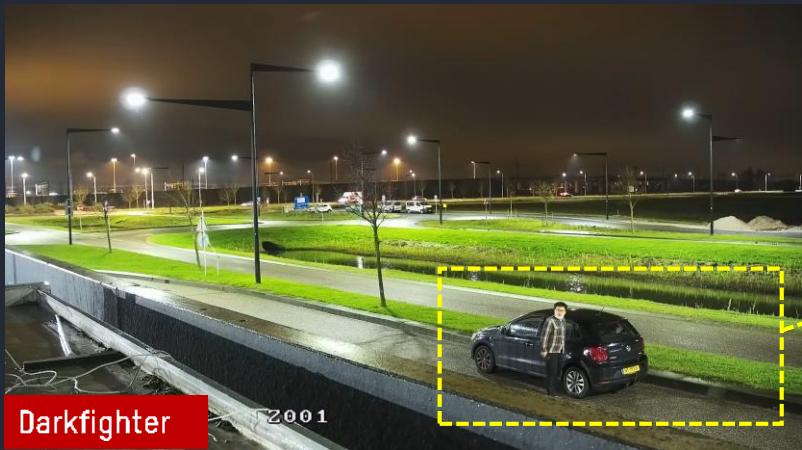
Conventional PTZ



Rapid Focus

# Darkfighter

HIKVISION  
EXPLAINS **LIVE** 



# What is Smart Tracking 3.0?

HIKVISION  
EXPLAINS **LIVE** 

Smart-tracking 1.0

→ Smart-tracking 2.0

Smart-tracking 3.0



Only triggered by Person & Vehicle

Triggered by all moving objects

- Person/Vehicle Arming Tracking
- Real-time Vehicle & Person modelling
- Upgrade manual tracking algorithm



**iDS-2SR8141IXS-AB(40X)**

Sap Code: 301315966

- 4MP@60fps
- 40x Optical Zoom
- Darkfighter & 140dB WDR
- Radar Detection Distance: 100m
- Horizontal Detection Angle: 90 Degree
- Max. Detectable Targets: 32
- Video Double Checking Based on Deep Learning

# Application Scenarios

What kind of perimeter solution is suitable for the following application scenarios?

Poor light condition; Long area distance coverage; High requirement for perimeter alarm accuracy



Borderline



Industrial Sites



Construction Sites

# Hikvision Thermal

## Fog



Optical camera  
with Fog

See Far, Go Further



Thermal camera

# Hikvision Thermal

## Low Light



Optical camera



Thermal camera

# Hikvision Thermal

## Low Light

Optical camera lose **contrast** if there is low light



Optical camera



Thermal camera

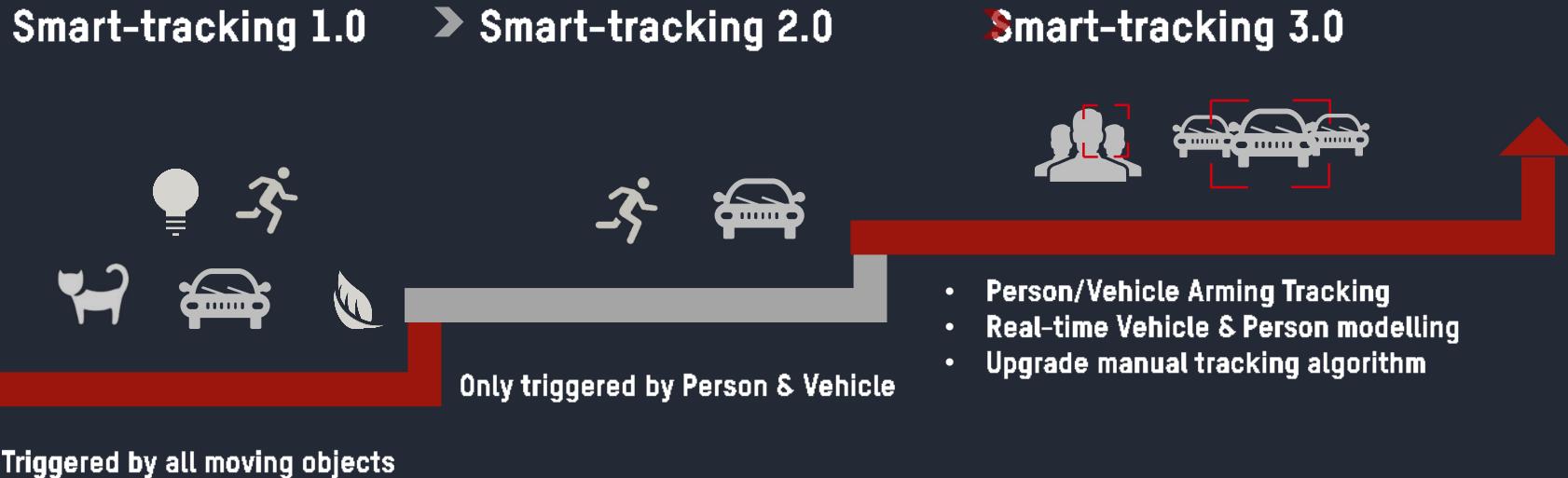
# Hikvision Thermal

## Backlight



# What is Smart Tracking 3.0?

HIKVISION  
EXPLAINS **LIVE** 



Triggered by all moving objects

# Hikvision Thermal

## Backlight

Thermal camera with backlight



Optical camera



Thermal camera

# Hikvision Thermal

## Long distance

Thermal can see long distance instead of Optical



Optical camera



Thermal camera

# Hikvision basics

## Resolution

384\*288



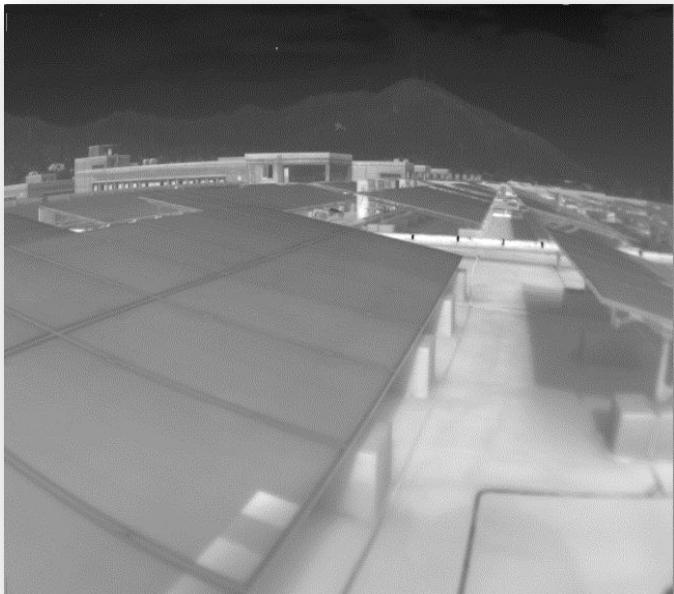
640\*512



# Hikvision basics

## Resolution

640\*512



1280x108



# Image – Palettes

HIKVISION



White hot



Black hot



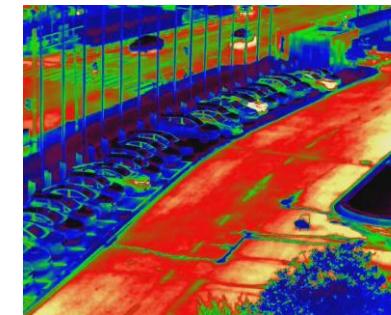
Fusion1



Color 1



Sepia



Rain

# Why Thermal?

HIKVISION

Scene: Trash site in Slovenia - Product: DS-2TD2136





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