

TRANSFORM YOUR CAMERA INTO AN INTELLIGENT VISUAL SENSOR

SWARCO now offers a unique camera solution so that you can select and gather the data that is most valuable to you and your city.

The only requirements for this solution are that you install a small box with an AI processor, which is connected to an IP camera. Our solution has several different applications – for use in traffic and in car parks, where our camera solution can help you collect relevant data. And you can define any data to be gathered. As the solution is based on artificial intelligence, this signifies that you have a product with a variety of different uses that automatically accelerate in accordance with the development and fine-tuning of algorithms.

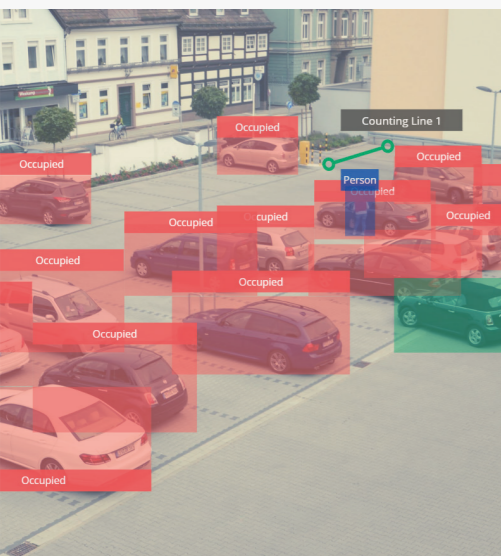
TRAFFIC INSIGHTS



The use of cameras in traffic may have a preventive effect and enhance road safety. With camera solutions from SWARCO you can also carry out measurements of various vehicles and persons over specified distances, for example speed information, queues and congestions, as well as counting and tracking specific objects.

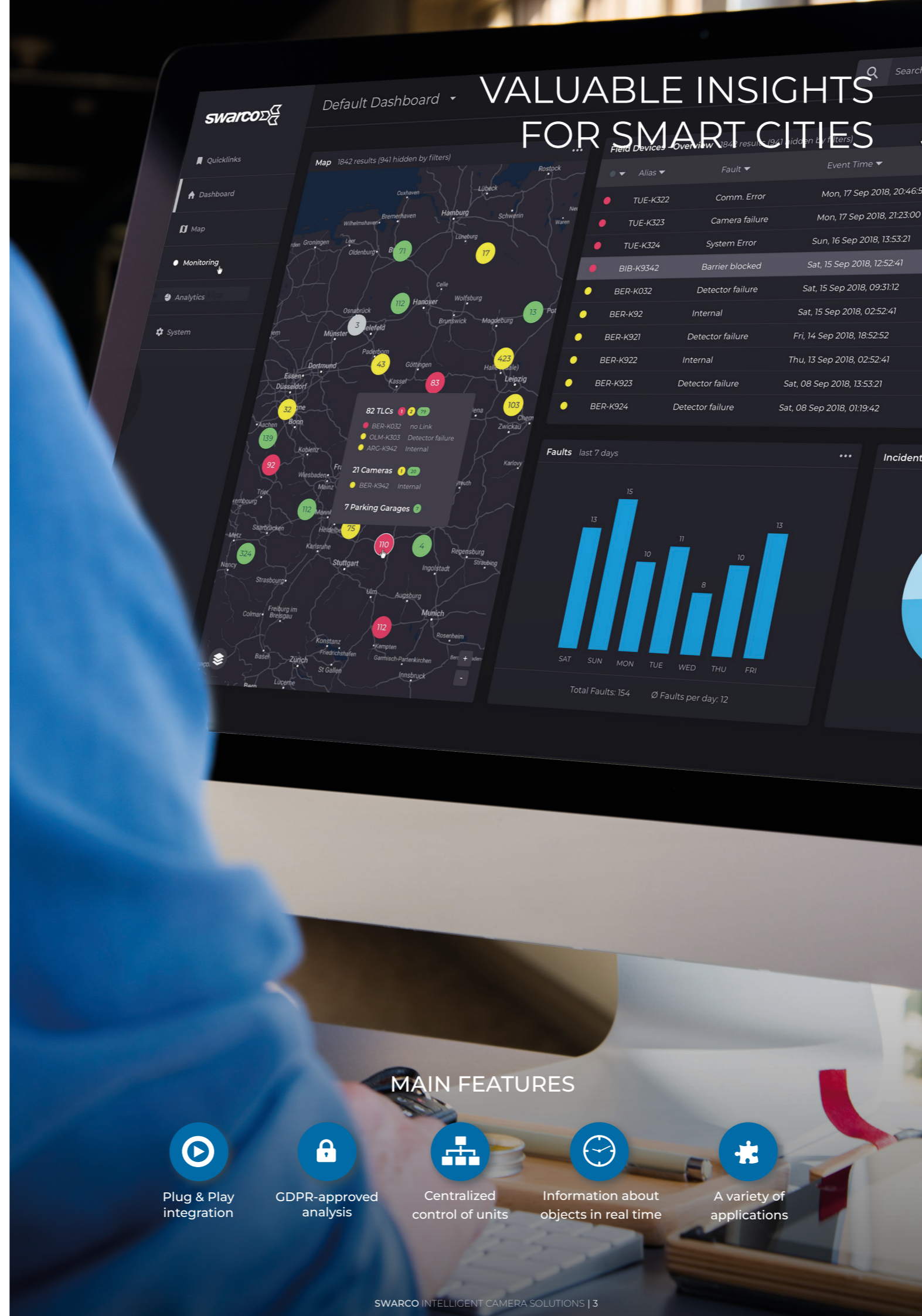
- ✓ Accurate traffic counting (>95%), speed estimates and vehicle classification (10+1 classes)
- ✓ Turning counts at intersections, t-crossings and roundabouts
- ✓ Municipality and region-wide origin-destination measurements
- ✓ Journey time measurements with classification in journey types (commuting traffic, transit traffic, touristic traffic, etc.)
- ✓ Integration to SWARCO MyCity

PARKING INSIGHTS



SWARCO's intelligent camera solution ensures full control of the car park for both on-street parking and off-street parking. It can simply help you optimise your business by delivering valuable real-time data.

- ✓ On-street and off-street parking for capacity management (single space or unmarked areas: works on all surfaces)
- ✓ License plate reading (LPR) and country classifications for deeper insights and payment integration (i.e. free-flow)
- ✓ Journey time measurements with classification in journey types (commuting traffic, transit traffic, touristic traffic, etc.)
- ✓ Integration to SWARCO MyCity PGS



VALUABLE INSIGHTS FOR SMART CITIES

Default Dashboard

1842 results (941 hidden by filters)

Alias	Fault	Event Time
TUE-K322	Comm. Error	Mon, 17 Sep 2018, 20:46:59
TUE-K323	Camera failure	Mon, 17 Sep 2018, 21:23:00
TUE-K324	System Error	Sun, 16 Sep 2018, 13:53:21
BIB-K9342	Barrier blocked	Sat, 15 Sep 2018, 12:52:41
BER-K032	Detector failure	Sat, 15 Sep 2018, 09:31:12
BER-K92	Internal	Sat, 15 Sep 2018, 02:52:41
BER-K921	Detector failure	Fri, 14 Sep 2018, 18:52:52
BER-K922	Internal	Thu, 13 Sep 2018, 02:52:41
BER-K923	Detector failure	Sat, 08 Sep 2018, 13:53:21
BER-K924	Detector failure	Sat, 08 Sep 2018, 01:19:42

Faults last 7 days

Day	Faults
SAT	13
SUN	15
MON	10
TUE	11
WED	8
THU	10
FRI	13

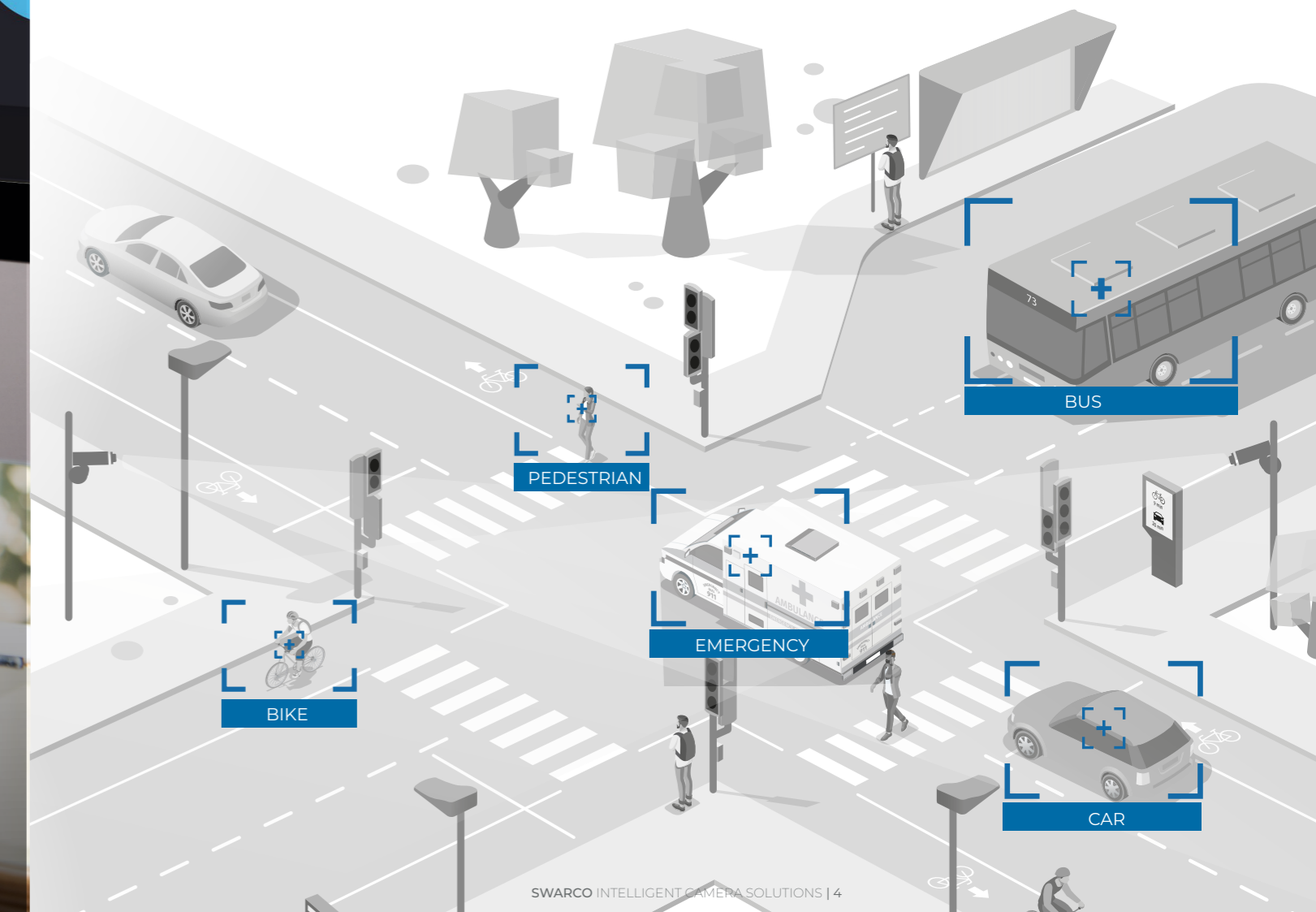
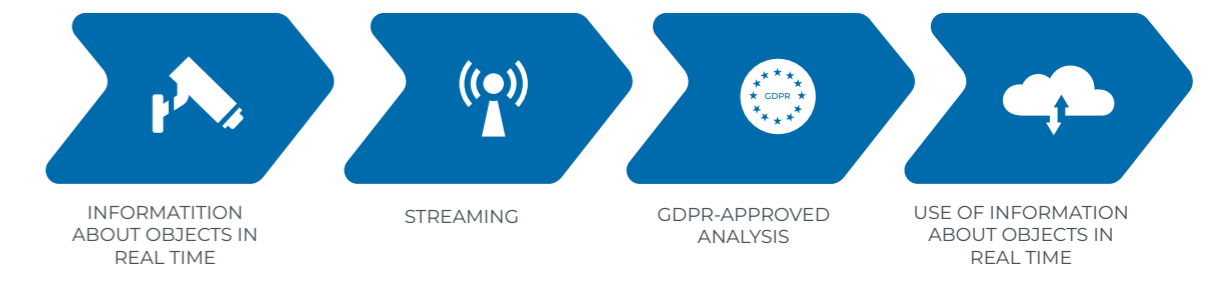
Total Faults: 154 Ø Faults per day: 12

MAIN FEATURES

- Plug & Play integration
- GDPR-approved analysis
- Centralized control of units
- Information about objects in real time
- A variety of applications

DATA IN REAL TIME

The unique characteristic of this product is that all data is extracted in real time from the video stream and it automatically filters the relevant data which results in a small data file size. The end result is a high-quality counting, detection, classification and tracking of objects, completely in accordance with GDPR legislation.



CASESTORY

BETTER TRAFFIC FLOW IN HOLBÆK

The intelligent Parking Guidance System delivered by SWARCO to the city of Holbæk creates better traffic flow by helping drivers quickly find available parking spots and increases the level of service in terms of providing information to visitors of special events. The scope also includes the requirements to create the possibility to get an overview of available parking spots, to get access to important parking data, to identify electric charging stations as well as to detect parking spots for disabled persons.

The implemented system includes Parking Guidance for 4 of the main roads leading to the city center, as well as 11 local parking areas. It utilizes dynamic full matrix VMS signs, which provide drivers with real-time information about available parking spots. In addition, the signs can also provide other helpful information, such as details about roadworks, temperature, special events and alternative routes.

Information about occupancy state is gathered from camera detection, which counts the number of occupied parking spots with the help of Single Space Detection (SSD) technology. This approach offers a high degree of accuracy when counting occupied spots and can even provide information about available parking for electric vehicles and disabled drivers within a given parking area. As the process is digital, it offers a lot of flexibility and efficiency when planning to expand or to reduce the number of parking spots – as it only requires a reconfiguration of the quantity.

To prepare the customer for using the system and managing all information for each specific sign, SWARCO organized educational classes for the city's employees and provided with the needed documentation for the MyCity PGS-platform.

The MyCity Parking Guiding System offers several smart features for managing parking in cities, including:

- ✔ User defined dashboards which create a quick overview of the city's parking areas
- ✔ Possibility to manage special events and automatization of changes for each parking sign
- ✔ Managing rights for users and groups etc.
- ✔ Alarm notifications
- ✔ Calibration of available parking spots
- ✔ Audit log
- ✔ Setup of parking areas
- ✔ Designing the signs
- ✔ Scenario control
- ✔ Tools for analysis



SWARCO INTELLIGENT CAMERA SOLUTIONS DATA COLLECTION AND MANAGEMENT FOR SMART CITIES

SWARCO | The Better Way. Every Day.

SWARCO is a growing international group providing the complete range of products, systems, services and solutions for road safety and intelligent traffic management.

With five decades of experience in the industry, the corporation supports the growing mobility needs of society with turnkey systems and solutions in road marking, urban and interurban traffic control, parking, public transport, infomobility and street lighting. Cooperative systems, I2V communication, electromobility, and integrated software solutions for the Smart City are latest, future-oriented fields in the group's portfolio.

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