



CITY SURVEILLANCE



GVB-CS2302

Safe City Surveillance

Video surveillance has played a central role in the liveability of cities for many years of course, particularly in keeping citizens safe and secure. The increasing sophistication of video surveillance technology – particularly related to video analytics and the ability to link data from sensors of multiple types, including video cameras – means that it can support a number of the challenges facing cities.

Three of the fundamental areas that cities are focused on are the environment, mobility and public safety. And far from being independent of each other, these factors are very much interlinked. Again, this reinforces the critical need to break down silos and enable data sharing across the city and, partnerships which are the main enabler of success in sustainability targets.

**Central platform software solution
is crucial to today's sophisticated
video monitoring services.**





Automatic Alerts with Analytics

Taking advantage of the video surveillance systems deployed throughout these metropolitan areas, we can unlock the true value of video systems.

A key component of securing public safety is video analytics, which can instantly alert

authority about an incident. The more information you have to proactively assess a situation in real time, the better chance personnel have to respond quickly, deter an illegal behaviour, and increase overall security.

Traffic Tracking & Analysis for Safer Cities

- How to reduce pedestrian risk as urban populations increase
- Identifying crowding and bottleneck hotspots
- Line-crossing alerts can prevent vehicle-pedestrian collisions
- Gathering Big Data to analyze vehicle and pedestrian traffic
- Set up real-time alerts to notify management of situations as they are evolving, such as pedestrian or vehicle traffic bottlenecks or traffic accidents.
- Tracking crowd demographics, size and movement patterns.
- Identifying crime hotspots.
- Optimizing traffic flow at major interchanges.



Artificial intelligence's role in the pandemic

Traditional video surveillance (CCTV) technology with Artificial intelligence offers enhanced public safety solutions, improves research speeds and can be a key asset for businesses, governments and individuals during these unprecedented times.

Helps to obtain real-time information as well as trend data regarding public and workplace health safety behaviors, to remain safely operational.

Social Distancing

Social distancing is important to reduce the spread of the coronavirus. To prevent crowds in a large center is challenging for staff, everywhere, at all times. This is just one example of where video analytics systems are so helpful.

Optimize Cleaning

Rather than using traditional schedules for routine maintenance of restrooms, hallways or other spaces, managers can use video analytics alerts to trigger custom maintenance alerts that are based on actual facilities usage.



Face Mask Compliance

Managers can make better decisions about where and how to encourage mask-wearing. A video analytics system can be used to aggregate and report on face mask wearing statistics, forensically search for people who are wearing face masks, and send alerts if someone is not wearing a mask, and respond quickly to avert a potential problem.

Occupancy Management

The occupancy dashboard shows the number of people in the zone, with an enter / do not enter option. Alerts can be triggered if occupancy levels are exceeded. There is also a bar-chart tracking occupancy over time, available for the entire recording period.





But what is metadata?

Metadata is typically referred to as 'data about video data'. These describe the “where, what and how” details about changes to a scene in video a stream.

Video metadata accurately describes the details that matter in a scene in terms of where those details are located, what they are and how they move in a scene.

That means attributes for metadata can describe all sort of details about moving objects of interest, e.g.:

- Location, time, colors, sizes, shapes, coordinates, volume decibels, speed, voice, direction of travel etc.

Based on AI machine and deep learning, meta descriptions can be more high level or at deeper levels. This allows for classifying a group of pixels as a person, animal, vehicle or other pre-defined object classes. Or being more precise with more refined descriptions of people or objects, for instance:

1. Sub-type:

- Vehicle
 - Car, bus, bicycle, etc.
 - License plate
 - Model and make

2. Color

- Red, yellow, blue, green, etc.

3. Movement characteristics

- Type of movement
- Speed
- Location coordinates



The value of metadata

Metadata not only provides details about people, objects and events in a scene. It also allows large amounts of video and recorded footage to be quickly grouped, sorted, searched, recovered and used.

As a result, the overall use cases for metadata fit into three areas:

1. Real-time alarm triggering and notifications
2. Post event forensic searching
3. Statistical analysis and reporting,

Adding intelligence to scenes with metadata

Metadata essentially assigns digital meaning to each video frame about the objects and events within it. In other words, it adds interpretation or intelligence about the scene rather than just the raw video footage which needs to be processed manually by an operator.

Once Digifort software can interpret scenes in this way, it can understand the scene details and enable the scene to be acted upon in real-time via events, after events (post-event), via manual search or simply analyzed for static analysis. This enables the use of metadata to design baselines that define what is 'normal' for any scene feed from any

individual camera. In turn, this allows software to recognize any degree of deviation, anomaly or specific behavior or activities, etc. as well as predict what will happen in that scene to a specific probability.

Video metadata adds immense value to Digifort VMS. Massive amounts of data from all kind of systems will help Digifort users to gain a faster, deeper and wider understanding of everything that surrounds us.



Transform Video into actionable Intelligence

Big Data can be difficult to manage and utilize unless it's delivered in a format that is easy to:

- Understand
- Analyze
- and apply

Digifort's Dashboard takes these data and presents it in easy-to-use dashboards with reports that include:

- Graphs
- Charts

Interactive and intuitive dashboard for data analysis and visualization, by Briefcam's Research module. Process and cross analyze multiple attributes within a single dashboard.



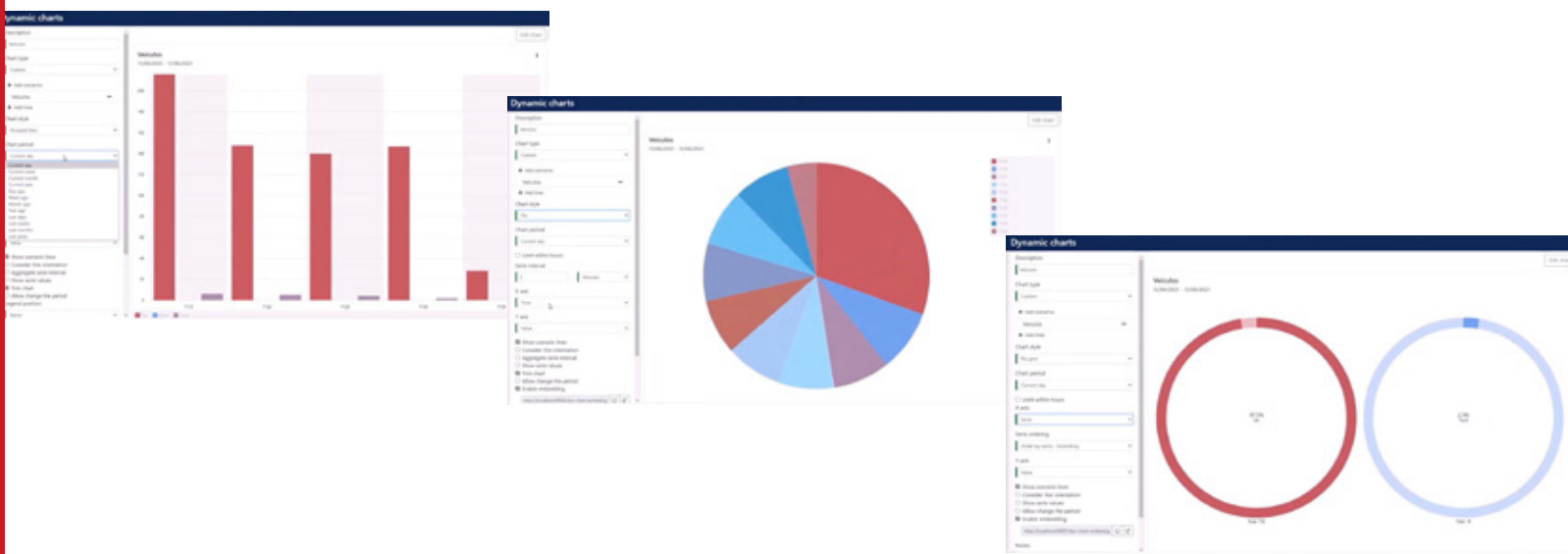
SMART CITY example: Quantify number of vehicles and pedestrians by class across 3 different junctions and crosswalks within the city.

Digifort's Z1 Dashboard

This dashboard manages any data coming from all different AI based analytics within the system.

Turn data into statistical graph, helping businesses and government foster customer/employee/citizen safety and enabling efficiency through faster investigations while being conscious of budgets.

Information that once took days or months now takes minutes with advanced Z1 dashboard capabilities.





Safeguarding of residents and tourists

Adding Audio, you create a new layer to your solution. You can turn a passive, reactive solution into a proactive deterrent.

Audio isn't only valuable in enhancing safety and security. It can also support operational efficiency across various industry sectors. Network audio can be used creatively in a variety of different ways, such as make emergency announcements.

With the cameras connected to an audio system for broadcasting crime alerts, as well as instructions and information during complex incidents such as quakes and tsunamis. In situations of monitoring real-time video, it allows an operator to communicate remotely or play a recorded audio file, either manually or automatically in response to a preset event alarm.

When Digifort sees something, hear something, or receives an alert from any events:

We can:

- ✓ Deliver an alert or a warning message.
- ✓ Play helpful instruction or a direction.

Through:

- ✓ Network audio devices
- ✓ Speaker output of your network cameras

*No additional licenses are required for this feature.

Audio message can be:

- ✓ Any PC generated alarm sound
- ✓ Pre-loaded messages on a network speakers
- ✓ Your own voice recording
- ✓ Messages recorded using Text-to-Speech Apps



Operational Map



Integration with google map

Comprehensive overview of your security systems through creation of navigation maps and event maps.

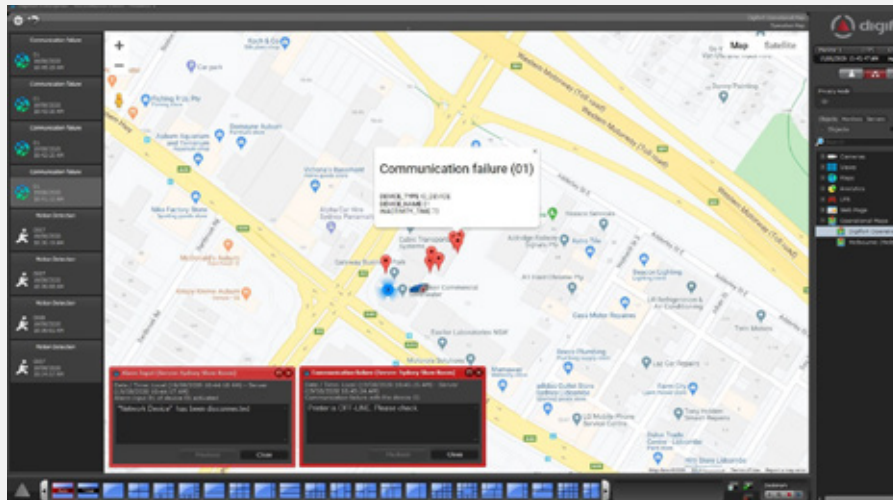
The navigation maps provide an overview with the geo-positioning of all the cameras in the system (which have geo-positioning enabled) and will allow access to these cameras through icons referenced on the map.

Event maps provides, in real time, the position of the event on the map, when it occurs, creating a powerful visualization and navigation interface that offers a detailed view

of the locations where events are taking place and allows the operator to access cameras close to an event, thereby speeding up response to the event.

Position (**geo-positioning**) on the map of **Real-time events and changes in the status of security systems** from:

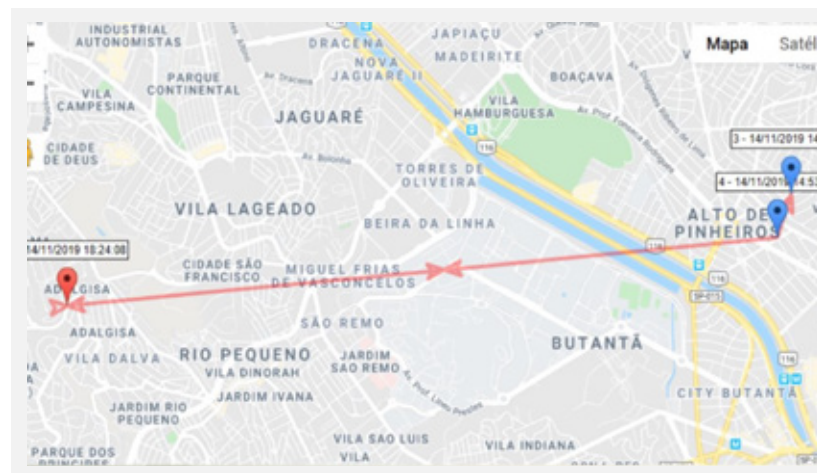
- Digifort
- From 3rd party
- Analytics
- I/O relay devices
- Audio detections
- IoT



Vehicle Trace with Google Maps

The LPR records query system in Digifort allows the display of all the recognition points of a plate on the map as an example, Stolen Vehicles, just by registering the GPS position of the LPR cameras.

The route will display all the points at which the plates were detected in the specified period and will connect the points through the time, and plot a route between the recognized points,



Successful City Surveillance References.

Cities
around the globe
are safer,

thanks to **Digifort Open Platform VMS.**





PRAIA GRANDE

📍 São Paulo
Brazil

Praia Grande is a municipality in the state of São Paulo in Brazil. It is part of the Metropolitan Region of Baixada Santista.

Brazil's most prosperous state, the city Praia Grande, is one of the most popular tourists looking for a good time. With more than 2 million visitors every year was suffering from a big increase in crime rate targeting tourists during the holiday seasons.

Existing video monitoring systems were inefficient and high in cost. With over 2500 cameras installed throughout the city, it was impossible to manage them all manually. Looking for ways to optimise its systems, the city government decided to implement an intelligent solution VMS, Digifort and Facial recognition system SAFR from RealNetworks. Using computer vision and machine learning technology, they were able to run facial recognition over the existing video. Through AI, they could get even deeper insights such as the number of people, gender, age or attention level. This solution allowed the city to find people with criminal records and identify those responsible for incidents, even in big crowds.

After the deployment, they were able to drastically reduce the number of car thefts in the city. The solution helped the city to find wanted criminals, see the thefts in real-time and arrest the criminals.

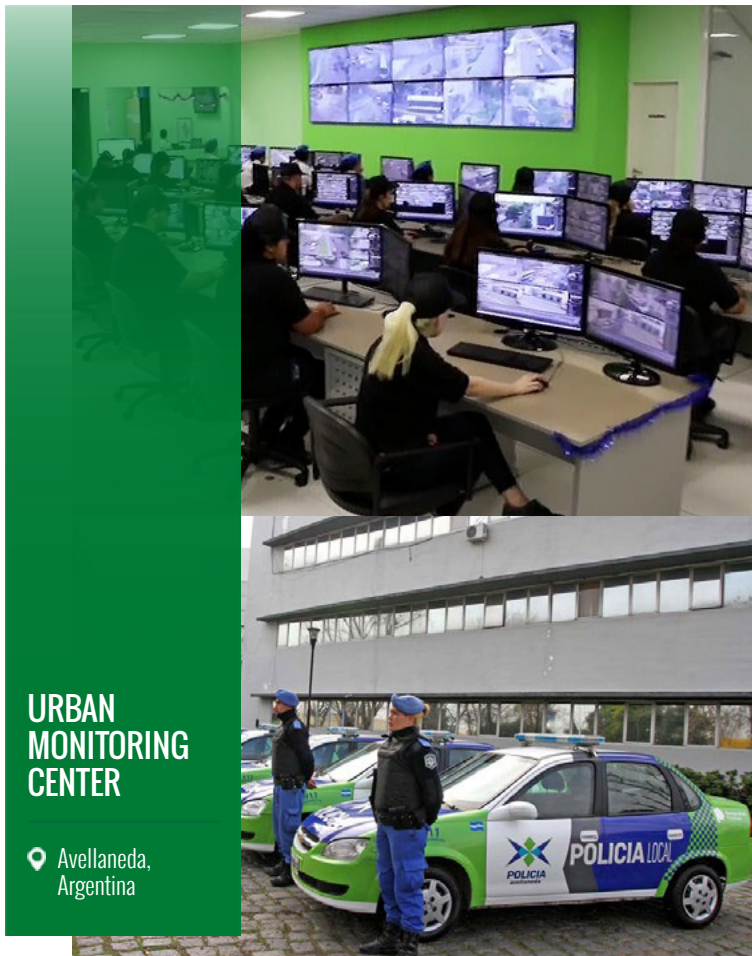
Overall, the city saw criminal activity fall by 60%.



Application

- Digifort Enterprise**
- 3100 VMS licenses**
- 1600 Analytics**
- 200 LPR**
- 820 briefCam**
- 280 Face Recognition**
- Evidence**
- All schools with alarms**





URBAN MONITORING CENTER

Avellaneda, Argentina



The municipality of Avellaneda was allocating the necessary resources to make COM an efficient support. For the implementation of video-surveillance, communication and creation of statistics, a large investment in technology has been developed. Specifically, 34,451 linear meters of fiber optics have been laid, 595 meters of communication towers and a data center of 330 TB of storage have been built. This project was the winner of the 2018 alas for the best public security project in Latin America and Caribbean.

Application **Digifort Enterprise 763 Channels**

Malagueño in the region of Córdoba with it's 9,364 residents is a place located in Argentina - 658 km North-West of Buenos Aires, the country's capital. Digifort provides services in citizen monitoring.

Application **Digifort Professional**



URBAN MONITORING CENTER

Malagueño, Argentina





**MONITORING
CENTER OF
TRES DE
FEBRERO
(3F COM)**

Villa Bosch,
Argentina

The building is a renovated integrated command and control center to address the management of security, emergencies, public services and mobility of the municipality. The building where it was built is the former Tucan factory, located in a strategic location of Tres de Febrero.

In this new space, an urban video surveillance system with state-of-the-art equipment and technology for monitoring, recording, video analysis, vehicle patent capture, face recognition and data storage systems.

Video Surveillance System

Centralized reception of the video images of the cameras available throughout the district (fixed positions, 360 ° domes, combined kits, ALPR systems and mobile cameras) that allows:

- See the selected images in the video wall
- Receive at the operator's station
- Record automatically and on demand
- Grant user permissions for viewing and recording.

Application

**Digifort Enterprise
946 Channels**





Located at the south of Bahia Blanca city, in Buenos Aires Province is Villarino City, a key point where the N°22 National Route shares its junction with N°3 National Route. 90% of the traffic that goes from Buenos Aires to Neuquen, Chile and all the Patagonia are using this intersection. The City of Villarino have chosen Digifort as a trusted VMS along with our LPR solution at such an important junction in monitoring of its citizens for protection and safety.

Application
Digifort Enterprise



MUNICIPALIDAD DE VILLARINO

📍 Bahia Blanca City, Argentina



MUNICIPALITY CONCÓN

📍 Concón, Chile

Chile is a country under constant threat of earthquakes and Tsunamis along the coast. Municipality Concon has installed Digifort surveillance system in order to prevent the crime and also alert individuals via speaker. The city benefits from a greater level of public security for citizens and tourist alike.

Application
Digifort Enterprise
272 Channels





**MUNICIPALITY
SAN SALVADOR**

San Salvador,
El Salvador



The video surveillance system of the 911 has more than 500 cameras in the metropolitan area of San Salvador linked with 500 kilometers of optical fiber, this has contributed to the clarification of a large number of criminal acts.

Application

Digifort Enterprise
514 Channels
34 License Plate Recognition Module

Within the project "Safe City", in Bermejo, a system of more than 300 surveillance cameras was installed. 95 percent of the investigations had positive results, and thanks to the surveillance system that help the Bermejo government to establish a safe city

Application

Digifort Enterprise
316 Channels
9 License Plate Recognition Module



**MUNICIPALITY
BERMEJO**

Bermejo, Bolivia



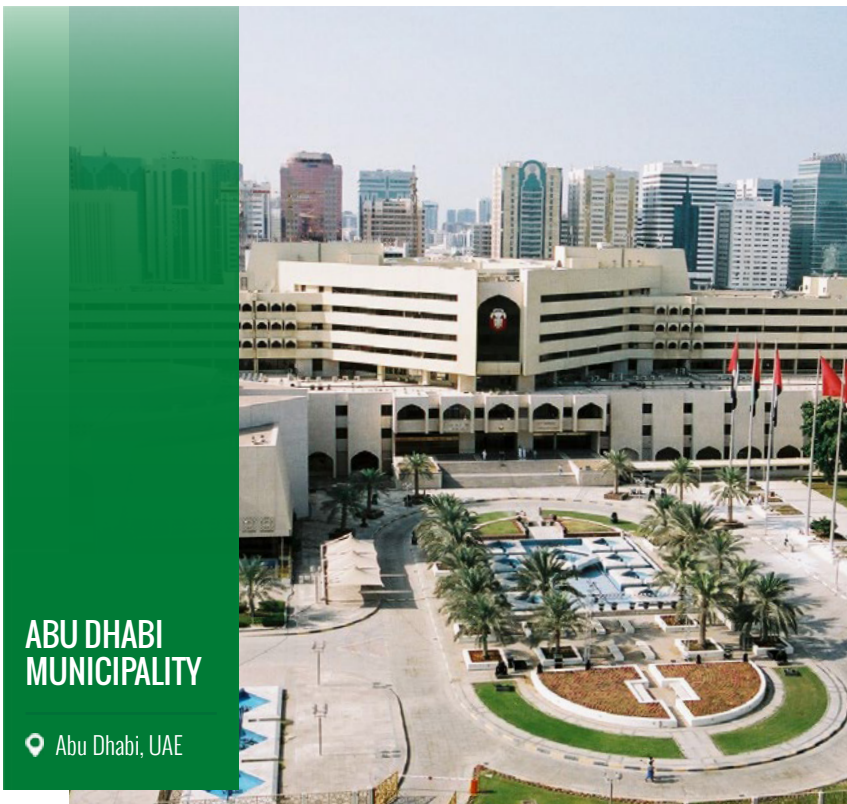


VILNIUS CITY MUNICIPALITY

Vilnius, Lithuania

Application
**Digifort Enterprise
112 Channels**

The municipal authority in Vilnius and FIMA worked together to build Lithuania's first public CCTV. More than 112 stationary and remote control video cameras were set up in vulnerable areas and around tourist attractions. Some cameras were also sited in some of the most unsafe areas including underground passageways.



ABU DHABI MUNICIPALITY

Abu Dhabi, UAE

Abu Dhabi City Municipality developed a number of key objectives, notably the implementation of projects aimed at establishing modern infrastructure for the city including bridges, drainage systems, road networks, modern means of transportation, consolidation of comprehensive development projects. In line with the policies of the government which aim at making Abu Dhabi a modern capital city, it is its priority to create an ideal living environment for city residents, with unmatched quality of life and modern amenities.

Application
**Digifort Enterprise
500 Channels**





ŞAHİNBEY CITY MUNICIPALITY

Gaziantep, Turkey

Sahinbey is a district of Gaziantep Province of Turkey. The population is 730,562 as of 2010. It is the location of a large amount of student housing for the public University of Gaziantep, as well as the site of two private universities: Zirve and Hasan Kalyoncu. Digifort is installed across the municipality such as city parks and bus stations.

Application

Digifort Standard, Professional & Enterprise
936 Channels

The police force is responsible for law enforcement in cities and some exceptional locations, such as airports, which they protect with the help of the customs office. Traffic Police ensure the safety of transportation and also work with registration of vehicles. The Turkish Police also play a big part in important intelligence and counter-terrorist operations.

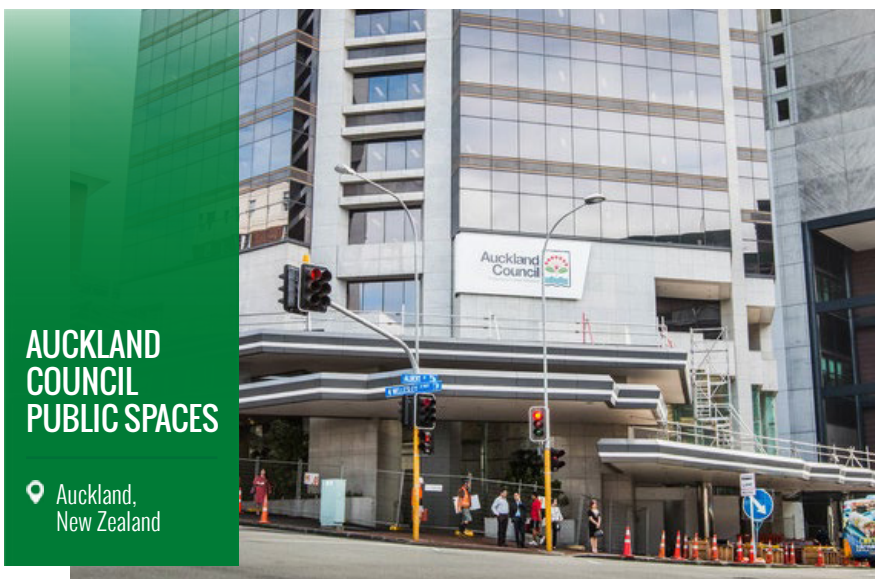
Application

Digifort Enterprise
168 Channels



İZMİR POLICE DEPARTMENT

Izmir, Turkey



AUCKLAND COUNCIL PUBLIC SPACES

Auckland, New Zealand

The ways Auckland will change over the next 30 years present challenges and opportunities for planning, developing and managing the parks and open spaces. A fast growing city inevitably means more people will use our parks and open spaces and undertake a wider range of activities.

Application

Digifort Professional
5 sites with 100 channels each



Cordoba is a city in the geographic center of Argentina, in the foothills of the Sierras Chicas on the Suquia River, about 700 km (435 mi) northwest of the Buenos Aires. The city receives a constant flow of students from the North-East, Southwest regions of Argentina and of other South American countries, which increases gradually the city population.



CORDOBA CITY PROJECT

📍 Cordoba, Argentina

Application
Digifort Enterprise
Video Analytics
License Plate Recognition



EZEIZA CITY

📍 Ezeiza, Argentina

Ezeiza is the capital city of the Ezeiza Partido within the Greater Buenos Aires area in Argentina. Ezeiza is one of the fastest-growing cities in Argentina; the city and its surroundings are known for the many gated communities there, as well as for the Ministro Pistarini International Airport.

Application
Digifort Enterprise



CITY OF DEN BOSCH PARKING

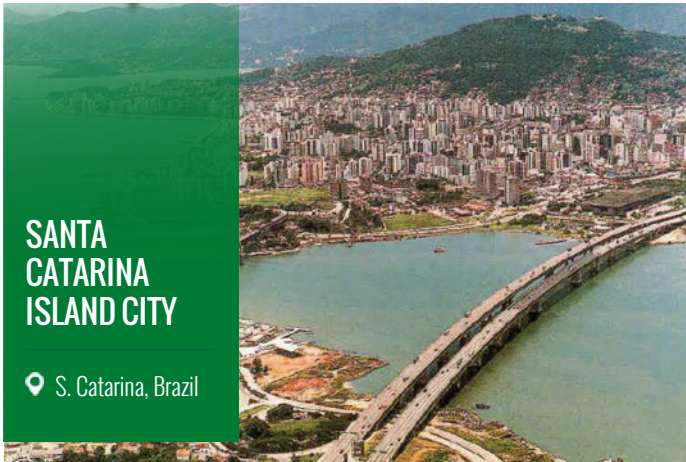
📍 Den Bosch, Holland



City of Den Bosch Parking, across 7 underground Parking. The beautiful historic Den Bosch, in the province of Brabant, is known for its beautiful fortresses, was elected the most hospitable city in the Holland.

Application
Digifort Professional





SANTA CATARINA ISLAND CITY

S. Catarina, Brazil

This city is situated on an island and was listed as one of the “Ten Most Dynamic City in the World.”

Application
Digifort Enterprise



BELGIAN FEDERAL POLICE

Belgium

The Belgian Federal Police is the national police force of the Kingdom of Belgium. It carries out specialized and supra-local administrative and judicial police operations, and supports both local and federal police services and units.

Application
Digifort Professional
400+ Channels across Belgium



THE NATIONAL SECURITY BUREAU OF THE REPUBLIC OF CHINA

Taiwan

The National Security Bureau of the Republic of China is the principal intelligence (including military intelligence) agency of the Republic of China

Application
Digifort Professional



PORTO ALEGRE CITY & SCHOOL

Porto Alegre, Brazil

Porto Alegre is the capital and largest city of the Brazilian state of Rio Grande do Sul.

Application
Digifort Enterprise





**PREFECTURE
OF MOGI DAS
CRUZES**

Mogi das Cruzes

Mogi das Cruzes is municipality in the state of Sao Paulo, Brazil, locatted within the metropolitan region of the state capital of the city of Sao Paulo.

Application
**Digifort Enterprise
Virtual Matrix**



Biggest video wall in South America

Application
Digifort Enterprise



**DEPARTMENT OF
SECURITY**

Rio de Janeiro, Brazil





DIYARBAKIR CITY SURVEILLANCE

 Turkey



Diyarbakir is one of the largest cities in south-eastern Turkey. Situated on the banks of Tigris River, it is the administrative capital of the Diyarbakir Province.

Application

Digifort Professional



GAZIANTEP CITY SAHINBEY MUNICIPALITY

 Gaziantep, Turkey

Previously and still informally called Antep is a city in the western part of Turkey's South-eastern Anatolia Region. The city has 2 urban districts under its administration.

Application

Digifort Professional



1,200 cameras cover the 23 car parks in the city of Levallois-Perret, operated from a dedicated fiber optic network.

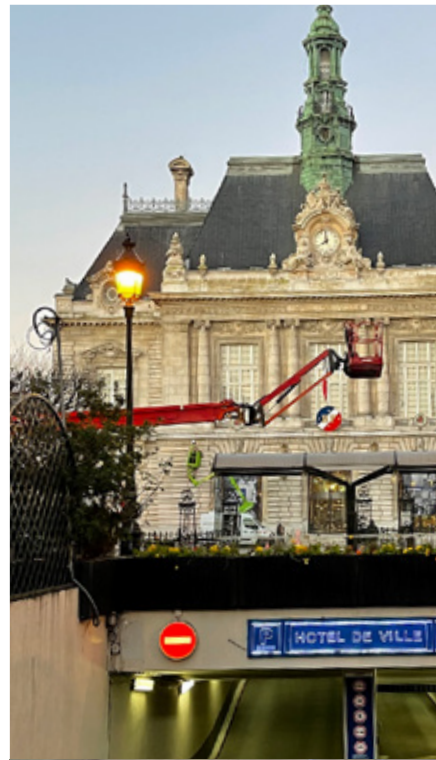
Centralized operation of all information is made from a wall of images composed of 6 Cubes 65 " Mitsubishi organized from a surface controller display powered by client workstations DIGIFORT in terms of architecture.

A permanent dialogue with an Axiom GTC Concept enables images to be controlled by function of specific predefined actions (alarms, intercom, etc.)

The operators on duty manage the whole of the 23 car parks from this centralized PC.

A second operating PC is operational for the park of the SOOUEST shopping center with 310 cameras

Application
Digifort Professional



VILLE
DE LEVALLOIS
-PERRET

France



LAVASAN
SAFE CITY
PROJECT

Moscow, Russia

Selected as 101th the Safe City in World, Lavasan is an affluent town in Shemiranat County, Tehran Province Iran.

Application
Digifort Professional





BUDAPEST CITY

District 1
District 2
District 4
District 5
District 8
District 9
District 10
Kopaszi gát
(An area of District 11)

District 15
District 18
District 19
District 20
Suburban of Budapest)
• GodolloŰ
• Szentendre

Application

Standard edition
Enterprise edition
Total of 1126 CH

VCA deployed
• **Server based**
• **Edge based**

LPR deployed
• **Server based**
• **Edge based**

BUDAPEST SUBWAYS

P+R parking lots
Kazár (Nógrád county) 452CH
Enterprise

Pásztó (Nógrád county) 299CH
Standard & Enterprise

Pécs (Baranya county) 184CH
Standard & Enterprise



CASE STUDY

Digifort provides innovative technologies and solutions at Brazil's largest multi-sectoral condominium.



Segment	Private Condominium
Application	Property Surveillance
Software	Digifort - IP Surveillance
System	System
Location	Joinville, Santa Catarina - Brazil
Manufacturers	Axis Communications and other brands
Client	Condominio Empresarial Perini Business Park

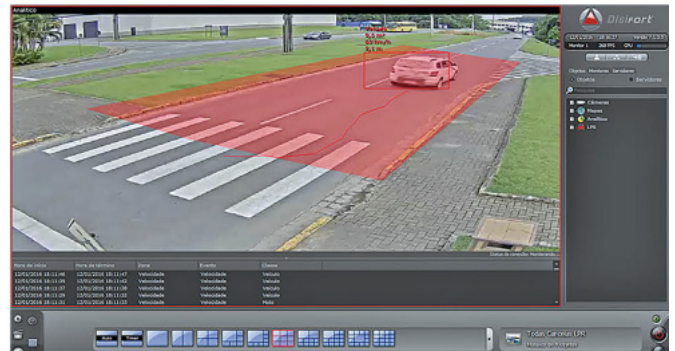


Perini Business Park is Brazil's largest multi-sectoral condominium. With an area of over 2.8 million square meters, in the heart of the industrial district in Joinville/SC.

The site presented requirements that demanded the control and record of the vehicles entering the complex, comprising speed monitoring and the automated opening of access gates.

With Digifort LPR for example, the Perini Business Park began to have records of 100% of all vehicles accessing its areas. The feature also automated the opening of gates for vehicles belonging to management, by means of special alarm licenses. "Another differential is registration of business partners, allowing the license plate from their vehicle to be on a VIP visitor list. The Analytics helped in overseeing and preventing incidents at Fabio Perini Avenue, where there was a troubling number of speeding infractions, being mainly committed by motorcyclists. Digifort technology was vital in improving this scenario".

Sandro Neves, project director at Digifort, emphasizes the major challenges of this deployment. As an example, he mentions the feature that allows condominium member access by using Digifort LPR.



“

We have developed a work of excellence and we involved a local laboratory to establish which solution would be applied. We performed exhaustive tests to find a technology that met all the customer needs. This phase of the project has just been fantastic. The shared use of Video Analytics and LPR was also an innovation, as upon using 100% plates of all vehicles that exceeded the speed limit inside the condominium”

- Sandro Neves -
Project Director at Digifort

“We intend to expand the number of installed cameras and update Digifort versions simultaneously with the innovations of the software and the advance of other tools in the segment. We will automate those activities that are routine in our property, optimizing process management to provide improved services to users, customers, and visitors. We want technology to work increasingly better for human well-being”, concludes the supervisor.





Digifort is rich in features and integrated 3rd party device. For more information about Digifort VMS contact one of our global network offices below or our local representative.

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