











### Editorial by Michel CADOT, Paris Police Commissioner



Greater Paris is a major world city with a very high concentration of innovation and creation capabilities. It is an open region that is fully involved in globalization whose objective is to become a deploument hub for new technologies in all areas of urban society such as transit, energy, waste treatment and housing. It is being turned into a smart citu.

The police commissioner directs security and res-

cue forces in Paris plus the three adjacent administrative departments and sees that security policies are aligned across the entire lle-de-France region. He must ensure that these advances do not overlook any of the serious security challenges that this large metropolitan area will face in the years to come. In other words, it is about making sure we build a city that is smarter as well as safer. A

While Greater Paris is a concentration of talent, it is also a place with many dangers. Paris and its three surrounding departments contain 10% of the French population, but about 18% of the nation's crime is committed here. Paris fire and rescue teams respond to 1,400 calls per day. Its concentration of institutions, major corporate headquarters, tourist and cultural attractions, large sports facilities and big trade shows poses exceptionally high risks for law enforcement at large gatherings and public protests. This cluster of vulnerable locations also makes it a prime target for terrorist groups that want to strike places or events symbolizing the country's vitality.

Security and rescue forces must overcome these challenges by using all the new technology available to them. But they also have to control the new vulnerabilities that these innovations create, the first of which is security holes in computer systems.

Paris Police Headquarters is fully engaged in addressing this challenge. Backed by a long tradition of innovation, it is putting together all the components of a safe city brick by brick. For example, as part of a widespread digitization plan we are in the process of linking together a regional video surveillance network with thousands of cameras, a centralized emergency call management platform to field calls to France's emergency numbers (18, 17, 112), a mapping tool for viewing all our geolocalized resources, all the industrial and natural threats, etc. In 2017, we will gradually begin equipping our field agents with smartphones specially designed for their activitu so theu can access all these tools.

We are entering an era of connected police and rescue. Alongside this effort to bring in modern technology, we must retain and develop our human competencies. The safe city will not be a city where police officers and firefiahters are staring at a cell phone screen. It will be a city where these professionals use this technology to simplifu their dau-to-dau activities and spend more time listening to the public and interacting with the population they are assigned to pro-

The police department is doing everything in its power to make the Greater Paris metropolitan area a model smart and safe city around the world.

# Capability Functions

Safe cities capability components can be sorted in a number of ways. For example, they can be broken down by stakeholder (residents, authorities, municipal workers, elected officials etc.), by objective (safety of people, society, economy, environment...) or by required capability and the means to provide it. We prefer the capability-driven approach because it provides a better understanding of what the companies in this brochure can offer. Our breakdown delineates a total of 16 basic capabilities in 5 categories (detection, analysis, decision-making, action, support). While not claiming to be exhaustive, it does help create an intelligible ranking for most of the solutions available for Safe Cities. This categorization contains different solutions that help establish a high level of confidence and a feeling of safety in public places or support other capabilities, such as smart public lighting.

### 01 | Detection

The first priority of a Safe City project is to gather and manage realtime information. Most communities have typically started with video surveillance, which is still usually the main (staple? )of their equipment system. But cameras are now merely one component of a much larger set of tools that includes smart lighting, sensors and high-tech strategies to collect massive datasets and feeds, video, sound and a variety of other information. This category also includes human resources (canine units, undercover agents and informants). These are not covered here, but their data also need to be received and integrated.

### CCTV and Cameras

Ground-based video surveillance or video surveillance on-board flying vehicles, can now provide highly accurate and very highdefinition geolocated images. Traditional RGB video is supplemented by multi-spectral and radar imagery that is capable of detecting concealed objects, and distance measuring systems used to locate any objects or persons under surveillance with a high degree of accuracy.

These image sensors are now able to automatically track a moving target, establish the trajectography, and detect abnormal or suspicious behaviour. Theu can be rendered even more effective bu the use of appropriate lighting systems.

Cameras are not only the perfect addition to human resources, they also lead to savings. They have a very useful dissuasive effect and are a very reliable source of evidence and verification.

### Facial and Vehicle Recognition

Facial and vehicle recognition offer major benefits in terms of efficiency, the reduction of work-related fatigue among personnel and savings, as it can be used to monitor a particular area and to quickly carry out a search using a large number of sensors to find an individual or a vehicle that has eluded surveillance (or to quickly initiate such surveillance). It also reduces the risk an important event being missed as a result of the tiredness or inattention on the part of an operator. To further reduce this risk, the systems are generally set so as to have a high tolerance, which causes them to give false positives. The efficiency of the systems is measured therefore by the number of false positives for a given event and the number of missed events, although this is more difficult to measure.

In the past these functions were carried out by ad hoc equipment connected to cameras. An important development of current equipment is that it incorporates these recognition functions directly in the sensors that no longer transmit the flow to the central system but alert it when an event occurs. This means that a large quantity of bandwidth can be freed up and mobile or abandoned sensors can be used.



### **Gunshot Detection**

Gunshot detectors are used to quickly alert operators so that they can direct other sensors towards the point where the gunshot was detected and/or quickly despatch response and first-aid units. This means that the arrest rate is increased, collateral damage is reduced. and the chances of obtaining evidence and identifying witnesses

They are also used to precisely locate the incident, which avoids multiple alerts being given if a number of different people contact the authorities. Finally, they have a genuine dissuasive effect both with criminals and people who like to fire guns into the air in

### (((•))) Alert Sensors

This category of sensors combines multiple data sensors. The most traditional are smoke, heat, liquid leak, gas, break-in, traffic counting, and vibration detectors, but there are also detectors of ambient light, rain, fog etc. This category also includes system status indicators (faults in equipment such as traffic lights) and vehicle location systems. These sensors provide permanent monitoring without any human intervention and in spaces that may be unoccupied, hidden or difficult to access (sewers, technical units in buildings...). They transmit a wide range of information to the central unit that allows it to take better decisions that are more suited to the context. They also significantly reduce maintenance by calling out responders when they are required.

It is expected that this seament will experience major upheavals as a result of the generalisation of the Internet of things, the generalisation of these systems with private individuals and the connecting up of those installed in buildings in the public or private

### 02 | Analysis

It is essential that any information operatives receive from sensors must be legible and actionable. Analysts are therefore tasked with helping personnel angluse and extract pertinent and potentially crucial information as quickly as possible. These tools can be used in real-time mode (alert, surveillance, or intervention) or in delayed mode (intelligence, investigations, blind-spot mapping, SOP updates, performance analyses and determining training programmes etc.)



### Sensor Fusion

This function is designed to bring together all the data from various sensors. The first level of this integration is the composite image or displaying an image on a map. The second level is the use of some pieces of information to carry out automatic actions (designation of objective for another sensor, search for corroborating information,...)































In future, and with the help of deep learning, it is expected that this function will become an abstraction layer and provide help in decision-making. This will mean that one will no longer think in terms of data or sensors but in terms of events, such as an accident, a traffic jam or a lighting problem etc. This sort of approach will allow the integration of business logic into the system. This business logic will assist operators at the time of an event by offering them decisions and response plans.



### Pattern Analusis

These functions should also benefit greatly from the advances made possible by deep learning. These technologies operate at two levels. In real time, any data obtained from the sensors can be analysed in order to identify alert situations, such as the abnormal behaviour of individuals in a crowd, or an attempted break-in. But they also allow in-depth analyses thus considerably improving the detection of latent threats and weak signals.

### 03 | Decision-Making

This category contains communications networks, command centres, system defence equipment and post-event analysis tools.



### **Communications and Cooperation**

Network connectivity is one of the most important components of any safe city project and particular vigilance is required with regard to the expression of requirements, design and implementation. It must allow command to issue orders, co-ordinate the actions of the responders, receive any information required and report to the authorities. It is a fundamental requirement that the network be efficient, fast, safe and capable of carrying voice, data and video, in both directions, with no risk of transmission delay, fluctuation or packet loss. Scalability must be taken into account to allow for expansion as and when new requirements and uses arise.

Co-operation between stakeholders is also essential even if only to provide an efficient response to any event, and to ensure the safety of the responders. This co-operation must include access to external data such as identity records or special operating methods in the event of non-standard incidents. Co-ordination with other, not specifically Safe City stakeholders (such as for example traffic control), is also an advantage. Such co-operation must occur both during and before the event to ensure effective prevention.



### **Command Centres**

A cutting-edge command centre is indispensable. It includes the functions of command, control and co-ordination and is used to assess the situation, direct operations and report to the authorities. It also provides access to reference data (plans of towns and buildings, digital models, database of people and goods, etc.). It also offers the functions of higher level synthesis (search over the whole of the perimeter, people counting, satellite or aerial view, etc.). Finally it enables general sharing of information by functions

It generally consists of three zones - an operational management zone that is used to direct operations in real-time, a mission preparation zone to prepare responses and a post-event analysis zone. It is also often judicious to provide a space for the officials in order to allow them to maintain a certain distance from the events (this space can often be physically removed from the central unit) and a press and public area where certain pieces of information can be displayed after screening

The Command Centre is, however, not only a question of technology. Operational teams are required to spend long hours there in often stressful conditions. It is therefore essential to pay particular attention to ergonomics, interfaces and more generally the quality of life of the operators.



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### Data Protection

Data protection includes three large families of problems. The first is the protection of the integrity of the systems. For a determined criminal, it is easier to create chaos in a town by triggering multiple false alarms, or by saturating the networks, rather than going to the bother of creating multiple incidents in the real world. In addition, if a cyber-attack takes place at the wrong time, for example just after a terrorist attack, there is a risk of disorder arising in front of the global press, which will seriously damage the image of the city and its elected officials and will increase the risk of panic.

The second area of protection is data protection. The data contained in the citu's information systems, contain a great quantity of sensitive data for citizens such as their civil status, their home. their children's school, their travel habits (via their transport season tickets), their financial situation (via social programmes) etc. The theft of such data is likely to have serious consequences for them. The destruction of this data would deprive them of any service for days. More insidious is the risk of data corruption. A terrorist could seek to damage or destroy their profile to escape detection. A criminal could place a false suspect in the police files to muddy the waters. A forger could try to produce fake driving licences, etc. Trust mechanisms must therefore be of the highest possible standard.

The third and final areas is internal monitoring. It has to be recognised that, since the dawn of civilization, internal fraud and illegal access to documents has always been a marginal, albeit unfortunately real, phenomenon in all administrations. Systems must therefore be put in place to ensure traceability of access and operations so as to be able to identify and deal with any potential breaches of ethical guidelines. This is the price of public confidence.



### Post-event Management

This category includes all methods used in investigations and to obtain feedback. It includes, as a minimum, a system for storing temporary system data connected to the event. It also normally comprises various management applications and mechanisms for any evidence gathered, documents used in the investigation and other related documents. It may also include detailed analysis systems, systems for finding correlations and weak signals, along with means for summarizing, providing advanced visualisation of and managing information.

### 04 | Action

Once a decision has been made, it needs to be put into action. This is a vital part of the process as it entails intercepting criminals, rescuing victims, securing witnesses, preventing secondary and collateral damage, and finally bringing about a return to normality and incident closure. Responses differ by incident, but they can be broken them down into general categories. It should be noted that choosing the right first responders is frequently a determining factor in preventing an incident from escalating or becoming worse. It should also be mentioned that given the nature of current threats, authorities are often required to send in multiple teams (e.g. firefighters and law enforcement).



### **Onsite Automation Action**

A first level of response is automatic action, generally onsite. The aim is to gather information, to implement confinement measures, and to start to deal with the problem. There are numerous examples in buildings (extinguishers, smoke extraction, current breakers, emergency lighting...). They are less current at the scale of the city but the situation will rapidly change.



### **Police and Investigations**

These first responders are those that correspond to the incidents caused by criminals. Their aim is, on the one hand, to apprehend any suspects and perpetrators, and, on the other hand, to protect the zone and finally to gather up evidence (witness testimonies and evidence). The emergence of the conclusive evidence provided by video recordings and the spectacular advances in forensic science have transformed the job. It is now clear that the use of technology has led to outstanding improvements in both arrest rates and clearup rates. These first responders also comprise those with specialist skills such as deminers.

### Rescue

These first responders are more often than not firefighters and doctors. The speed of their response and the suitability of their equipment are key factors in any success.



### Law Enforcement

The first role of the law enforcement agencies is to ensure the safety of both property and people, in particular those who are not involved in the event. They are also employed to contain the event to a given geographic area and to contain any crowd movements that may result from the event. They also sometimes need to respond to protect the first responders.



### **Public Information and Social Media**

It is essential that the public be kept well-informed in order to avoid any panic, networks being overwhelmed by pointless calls, the spreading of rumours, and irreversible damage in terms of image. These systems include two sub-families. The first is incident alert management. New technology-based resources have been added to the tried and tested siren. The second is information management. As soon as people become aware of the incident, they will seek on the one hand to obtain information, but also, to report what they have seen, which is a new development. Social media has a major role to play in this, alongside of course detailed management of communications and the press.

### 05 | Support

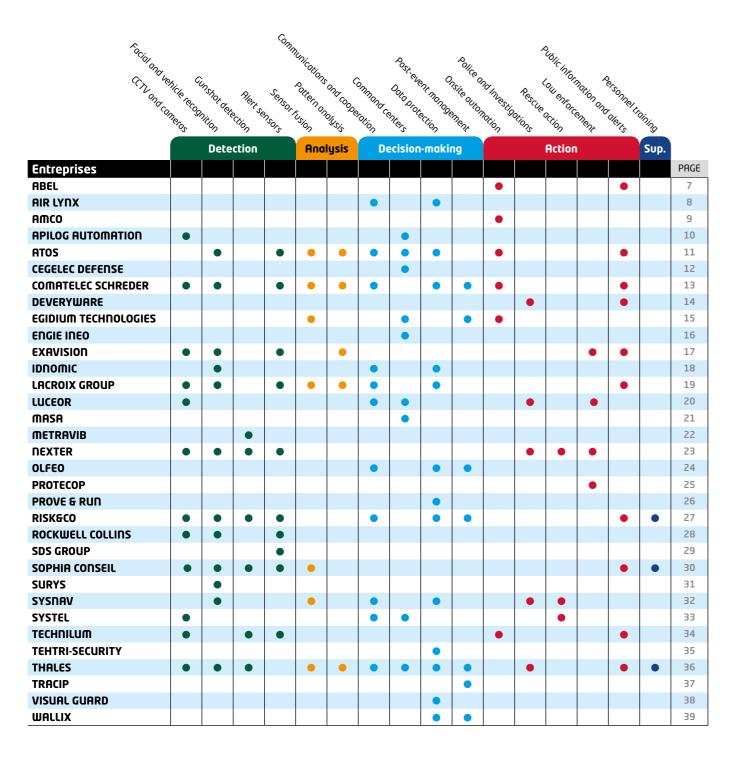


### Personnel training

The effectiveness of the operators must be constantly maintained at the highest possible level. The tasks to be carried out, which are often technically, physically, tactically and mentally difficult, can only be done by specially trained personnel who fully understand both their duties and their equipment. Training must therefore be constantly adapted based on the changes in threats and feedback.

Training must involve both the individual and the group and the units, and must ensure total control of classic situations and techniques and any equipment deployed. These training programmes may be provided in sites specifically set aside for this purpose (schools) or onsite (in situ).

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### A mastery of light

ABEL is the key partner for municipalities and public lighting professionals who wish to integrate innovative products into their projects.

ABEL develops lighting products focused on sustainable development and energy savings to offer pleasant living environments, in line with the fundamental criteria of comfort, safety and respect for the environment.

### S-Pass bollard: S as safe and Pass as passageway

We are all pedestrians. In 2015, 468 pedestrians were killed in France, and 4,000 were hospitalized for their injuries. This represents about 15% of the total number of road accident victims (Source: Association for Road Safety). Accidents occur especially when crossing pavement, often on pedestrian crossings.

In town, more than one killed pedestrian on three is on a pedestrian crossing.

From this observation came the idea of the S-Pass bollard: to illuminate pedestrian crossings differently to improve safety.

S-Pass is a high visibility LED pedestrian bollard implantable in urban, peri-urban or rural areas (out of ground height 1300 mm). Its specificity resides in the creation of a blue light marking going along the pedestrian crossing.

The visual boundary created on the ground thanks to S-Pass on the pedestrian crossing attracts drivers' attention and prompts them to slow down. The blue light point on the bollard head allows long-distance vision for the motorist approaching the pedestrian crossing.

The systematic marking of pedestrian crossings with the S-Pass bollard constitutes a low-cost, energy-saving installation with maximum efficiency to act in favor of road safety.

Passageways for persons with reduced mobility already require the installation of suitable bollards. Without heavy investment, the municipality or private owner will therefore implement safety in addition to signage, and will thus help to reduce the number of accidents and deaths on the road.

All traffic lanes with pedestrian crossings can be equipped with the S-Pass. Optional blinking top beam. Available beam colors: blue, amber, white.

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### Professional and secure 4G radio network ideal to meet the needs of Safe Cities

Effectively protecting public spaces is a challenge that modern cities face. Traditional security systems show their limitations, and most communication technologies are inefficient: poor quality images, loss of network or data, and strong dependence on public networks not designed for this purpose. Safe Cities today rhymes with better connectivity. Especially as they now enter the era of the Internet of objects.



### A global 4G secure network

AIR-LYNX offers a private and secure version of 4G LTE public networks. All the equipment and software necessary to establish all the necessary communications are combined in a single compact system, either fixed or nomadic. Fast, the system deploys in 90 seconds. Moreover, the system has the advantage of being flexible in frequencies, which allows it to be adjusted in several different bands, which ensures unmatched flexibility and adaptation to the specificities of the premises and needs. Finally, the system benefits from high security and resiliency, thanks in particular to the encryption and security mechanisms intrinsic to the LTE standard. Moreover, the user has full control over his 4G LTE network, since he is not dependent on an operator, the system being under his control.



### **Services fo security teams**

For teams that need to ensure city safety, AIR-LYNX also develops a range of classic and innovative services such as push to talk, individual calls, group calls, geolocation, data transmission, audio and video. These services are compatible with any Android device.

In particular, there are some recent innovations perfectly adapted to the needs of public safety and critical missions.

- Multicast (eMBMS)
- Interoperability with existing networks (PMR or Public)
- Easy network deployment through real-time network resource mapping

### **Ready for IOT and 5G**

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Today, AIR-LYNX is also ready for the Professional Internet of Objects, which will have a significant impact on future Safe Cities. 2017 marks the beginning of the implementation of the NB-IoT standard in its system to extend the possible use cases.

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### AMCO LES ESCAMOTABLES

ZI Montagne de l'Aspre – 20 Avenue de l'Aspre





### French manufacturer and distributor of retractable bollards and roadblocks

Thanks to its 25 years experience, AMCO LES ESCAMOTABLES offers its expertise against ram vehicles, in access control through retractable bollards and in energy distribution and parking management for a limited time.

### **Automatic retractable bollards for urban use:**

Designed to preserve pedestrian areas and public spaces, automatic retractable bollards allow access for permanent or occasional right holders.



### **Automatic Security Bollards and Roadblockers:**

In addition to the automatic urban bollards range, the High Security Range certified by crash test hire with the most stricts European and American standards in all fields where the need for security is increasing: Embassies, military bases, sensitive storage sites, strongholds, penitentiary centers...



### **Energy dispensers (Fixed and swivel retractable units):**

Designed to equip market places, festive places, food outlets, halls, industrial sites, AMCO terminals meet all your needs for energy distribution (electricity, water, RJ45, air ...)



### Park 'n shop:

The Park 'n shop terminal allows to control limited duration parking places (short-term stops, delivery areas, stop-minute ...) It detects the vehicle when it arrives at the location.

### **Mechanical retractable bollards:**

The manual mechanical bollards are recommended for applications requiring occasional retraction (eg firefighters way, the opening and closing of a place for punctual events) Semi-automatic mechanical bollards are particularly suitable for applications requiring repetitive and regular retraction for a limited number of users.

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# Our expertise at your service - Security, Control Systems, Hypervision

 $\label{eq:approx} \textbf{APILOG Automation}, \ a \ \text{subsidiary of GGC group, is an } \textbf{expert in the field of automation and safety systems integration.}$ 

A specialist in safety, automation, regulation, instrumentation control systems, **expertise and audit**, supervision and **monitoring**, as well as access control panels, we offer you scalable technical solutions.

APILOG Automation has excellent return on operational experience and a pertinent and certified choice of products.

Thanks to its high-level **technical skills**, APILOG Automation can understand your requirements, give you appropriate advice and carry out each and every step of your project:

Analyses, **vulnerability studies, safety concept** development: peripheral and perimeter protection, anti-intrusion systems, pedestrian and vehicle access management, intruder detection, **access control**, video-protection, audio and video communication systems, biometrics and visitor management.

### Automation development:

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Control cabinets and pilot systems, **PGE-PCS panels** and alarm and evacuation systems.

Site follow-up by our experts, tests, commissioning and user certification training.

In order to provide complete and optimal responses to our clients' expectations and needs, our teams can also carry out **specific development projects** thanks to our **R&D service.** 

APILOG Automation allows you to maintain your sites in operational condition (**Moc**) and in secure condition (**Msc**).

We build communication network architecture that corresponds to your needs, roll out allocated automations and centralise all data towards **a supervision or hypervision system** adapted to tomorrow's remote facilities.

Our clients appreciate APILOG Automation's human dimension, its reactivity, its flexibility and its recognised technical expertise.



# **AtoS**







### Mission systems for Homeland Security

### **About ATOS**

Atos SE (Societas Europaea) is a leader in digital transformation with circa 100,000 employees in 72 countries and pro forma annual revenue of circa €12 billion. Serving a global client base, the Group is the European leader in Big Data, Cybersecurity, Digital Workplace and provides Cloud services, Infrastructure & Data Management, Business & Platform solutions, as well as transactional services through Worldline, the European leader in the payment industry.

### **Emergency management**

Bull GEMMA is a command and control center for emergency management. It allows operators to prioritize received calls, designate intervention forces and provide end-to-end tracking with a real-time geographic information system coupled with secure mobile technology. POLYALERT is a global warning system alerting the population about risks and current dangers.

### **Protection of sensitive areas**

Bull CENTINELA secures sensitive areas. Based on facial recognition and license plate recognition technologies, Bull CENTINELA integrates sensors, cameras and automated barriers. This proven solution is dedicated to border control as well as controls at the checkpoints, to secure industrial sites, airports or any other sensitive area.

### **Secure communication**

The Hoox range is a complete solution that ensures the security of mobile communications. Employees stay productive with the highly secure Android-based Hoox smartphones that ensure the confidentiality of voice communications, mails, text messages, teleconference and data. Part of the Bull range of Atos products, Hoox is available either on-premises or as a service to ensure fast deployment and easy management.

### Information systems

Atos Codex big data solutions help organizations valorize their data and quickly identify security risks. Based on advanced data analytics and prediction models, this fast, innovative and secure information solution assists city protection.

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Surveillance et anti-intrusion périmétrique



Surveillance & Sécurité : les composants d'un système

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# Designer and integrator Systems and Solutions for the Safe City

**CEGELEC Defense** is a provider of solutions and services for the design, installation and maintenance of systems or sub-systems for the industry, infrastructures and services sectors. With a foothold in some 30 countries, **CEGELEC Defense** provides customer support at every stage of local and multi-site projects worldwide. **CEGELEC Defense** is a subsidiary of **Vinci Energies**, an international group with a 10,2 billion € turnover and a 65,000 employee global workforce.

The Safe City domain is a main strategic development area for **Vinci Energies**, this focus is demonstrated by a "Defence Club" cluster of companies bringing together their industrial capabilities and skills.

**CEGELEC Defense** activities in the protection field include the following:

- · Global integration, Multi-technical works and general services;
- Naval safety and surveillance: protection of ports infrastructures naval bases warehouses, dedicated platforms, prevention of intrusions, access control, coastal surveillance:
- Comprehensive maintenance, corrective and preventive, of air bases, ports equipment, shipyards and offshore platforms;

In this expertise of integrator and multi-technical designer, **CEGELEC Defense** is capable to rapidly build up dedicated workforces in most world areas, tailored to customers specific requirements and strongly supported by VINCI Group worldwide.





PLUS QUE VOTRE PARTENAIRE LUMIÈRE







# Providing cost-effective lighting solutions for safe, comfortable, sustainable and intelligent environments.

Founded in 1951, Comatelec Schréder is a member of the Schréder Group of 48 companies spanning 4 continents. We design and develop smart solutions that turn public and private areas into secure, comfortable, sustainable, and intelligent environments. We are your one-stop partner from design to after-sales services for all your lighting and control systems plus a whole range of other smart solutions.

To meet the challenge of delivering security and well-being to people while empowering public and private overseers to control the financial and environmental factors involved, Schréder created the SHUFFLE. Featuring up to 5 modules per column, the Shuffle is a whole lot more than an ordinary light column. Lighting and control, public address, video protection, Wifi and vehicle charging features are packed into a single product.

**LIGHTING AND CONTROL:** The Shuffle features cutting edge LED technology and a wide range of light distribution patterns aimed at multiple applications. The control unit can control all the light modules on a Shuffle and provides different patterns for each module. A light ring feature is available. In blinking mode, a Shuffle can route crowds in the right direction as well as guide emergency services to an accident faster.

**CAMERA:** To maintain security in urban areas, a camera is fitted into a 180° module with a manually adjustable vertical mini dome.

In addition to its high-quality lighting features, the Shuffle packs a compact high-end CCTV camera that provides perfect night vision, automatic brightness adjustment, resistance to temperature variations and an advanced event detection system.

**PUBLIC ADDRESS:** The Shuffle features a built-in loudspeaker system specially designed for open-air environments. The audio system can be used to broadcast public messages and to guide crowds.

**WIFI:** Two types of Wifi internet links are provided: "CAMPUS" (shopping malls, business complexes, etc.) extending an existing network or "URBAN" (city use) creating a city-wide or district-wide network. Le Wifi module is built into the unit with antennas located on top of the column.

**ELECTRIC CHARGING TERMINAL:** The Shuffle features an AC charging station. It promotes more environment-friendly mobility and helps make city air more breathable.

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# DEVERYWARE Trusted location-based solutions







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### **DEVERYWARE**

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### Deveryware, European expert in real-time geolocation services with public services and civil protection for Safe City

# The security of people in critical situations: how can they be alerted, geolocated and rescued?

A specialist since 2003 in innovative real-time geolocation services, Deveryware has developed, at the request of the European Commission, NOTICO SAFE offer within the framework of civil protection. It combines smartphone alerts from authorities to citizens in a specific geolocated zone with early warnings from citizens to authorities, taking into account emergency calls and the new generation of 112 that mixes voice, datas, the call's geolocation and even emergency calls with VOIP.

**NOTICO SAFE** makes it possible to visualize, count and instantly broadcast informations or alert notifications from authorities to citizens located in specific zones on their smartphone, in their own language while respecting privacy. The people receive alerts from authorities managing crises (flood, pollution, weather, etc.) and can receive instructions for dealing with the situation in their specific location. This open smartphone application interfaces with additional notifications from local authorities or other operators. This solution also makes it possible to address geolocalised notifications (assignments, information, alerts) to people in specific lists (employees, crisis managers, etc.).

Our personal data management has made it possible to combine organizational, technological, legal and ethical concerns in order to have an effective solution that best connects the use of smartphones in crisis situations.

This alert tool allows the real-time visualization on a map of several levels of information in a simple manner. The editor has a real-time count and map of anonymized people who have been alerted. Through this tool, the administrator disseminates, analyzes and visualizes spatiotemporal information and reduces the impact of disasters.

### A modular solution for Safe Cities

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**Triple opt in for citizens.** Citizens receive adapted information to their profiles. Choose when, where and why they are geolocalised, and receive additional information.

**Citizens select** complementary "geo-profile" information threads (weather, energy, traffic, pollution, etc.) to enrich the application on a daily basis.

**Decametric real-time geolocation** also strengthens the links between people, mobile professionals, companies, administrators and citizens.

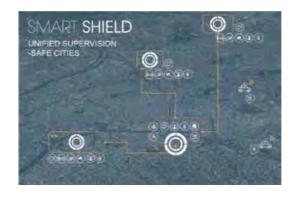
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Security in all its dimensions







### Security in all its dimensions.

# Egidium Technologies provides global 3D supervision solutions for security and safety.

Its Integrated Security Automation Platform ("ISAP") merges data from all connected security sensors and systems to provide unified situational awareness using 3D visualization.

ISAP's decision support features make it the right supervision tool for real-time security incident management within private sites, as well as across the city. Its traceability of all sensor data and operator actions make it the centerpiece for lessons learned and continuous security improvement.

ISAP's neutrality vis-à-vis security subsystems provides for homogeneous management of sites equipped with different electronic security systems. ISAP is able to interact with a central command system managing the whole city security, be it on a daily basis or only in crisis situations.

Egidium Technologies provides ISAP in packaged solutions:

- Smart Shield® for critical infrastructure and private site protection;
- Event Monitor® for major events security coordination;
- Tactic Plan® for emergency missions.

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Since its creation in 2009, Egidium customer references include Stade de France, CEA, EDF, the French Ministry of Defense, Paris Aéroports as well as major events COP21, Paris Air Show, Eurosatory.

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http://www.ogialam.commologics.com









Creator of solutions for connected cities and territories, ENGIE lneo works at the service of a changing world. With a network of 300 agencies worldwide, our teams innovate in order to help you in the energy and digital transition. They are at your side to design your transport, telecommunications and energy infrastructures, as well as your tertiary and industrial projects, and those linked to security and defense.

### **Creating a safer city**

To keep attracting new residents, business and visitors, cities must pay constant attention to providing a high quality of life and vibrant economic climate. Citizens are more mobile than ever, their capacity to get instant access to information and share it makes them also more connected and interconnected. Infrastructure that is critical to all types of social and economic activity faces a large range of vulnerabilities and threats. In this complex and interconnected world, critical decisions must be made instantly. ENGIE Ineo helps relevant authorities to decide and act quickly and effectively at any time to create a safer city.

### **Designing effective decision-making tools**

Effective security relies on authorities getting the right information at the right time, enabling them to act accordingly. ENGIE Ineo partners with its customers to understand their challenges and anticipate their needs. To respond to their environment's safety and security issues, ENGIE Ineo provides them with optimized and reliable decision-making tools.

From design to implementation, operational maintenance and adequate training, ENGIE Ineo offers tailored, cost-efficient and interoperable solutions, dedicated to protect citizens and cities.

### References:

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### **PARIS: SMART SECURITY CCTV SYSTEM**

- 17 years partnership 22 000 cameras (2016) 260 workstations
- High level authentification and availibility
- Capacity building by training and SOPs integration
- Managing large scale events (EURO 2016)

### **CONGO BRAZZAVILLE: SUPERVISION OF 11th AFRICAN GAMES 2015**

A scalable and tailored solution in very short delivery times

- 300 cameras deployed, implementation of a command and control center
- A 100 km² coverage by mesh wireless high rate technology
- Capacity building by training and SOPs integration

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### **ENGIE Ineo**

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# Since 1990, EXAVISION has been and remain a leading supplier of solutions dedicated to the protection of goods and of people in complex and sensitive environments.

EXAVISION, independent French SME, design and produce intelligent, stand-alone and bespoke optronic and video protection solutions dedicated to the Homeland security and people safety.

Our products are deployed and field proven in France and overseas. Among our wide product and solution portfolio, our safe city expertize is focused towards:

- · Tactical equipment for law enforcement, firemen and civil security,
- Sensitive infrastructure and Critical Site protection (Oil & Gas, Energy & water production, nuclear power plants, ports, airports ...),
- Border / Coastal surveillance,
- Embedded video solutions for vehicles (Police, firemen..).

Thanks to its high level of knowledge and competence in mechatronics, optronics and system integration, EXAVISION develop innovative and modular solutions providing the following functions:

- Detection and Tracking of persons and objects though the combination of cameras and radars (fixed and mobile),
- · Recognition and Identification using visible and thermal cameras,
- Analysis and Decision, through our VIGISENS Video Management Software,
- Action and Alerts with strobe lights, laser illuminators and acoustic non-lethal effectors.

# Our product range dedicated to Safe City applications:

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- End to end network based video security solutions including open protocol VMS and associated video H/W and S/W (video analytics, cybersecurity etc.),
- Portable solutions: Body worn cameras (EXAVISION has supplied the French MOI since 2012 to equip the National Police), Thermal handled devices (monocular and binoculars), Tactical lighting and dedicated optronic products for law enforcement,
- SYVAD: Global counter UAV solution integrating radar and day/night optronic turret,
- Long Range Acoustic Device (LRAD): Production of 15-30° or360° beam of sound to broadcast from few hundred meters up to few km, highly intelligible voice messages (live or pre-recorded) to alert the population,
- Crime scene analysis solution in cooperation with Forensics.

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WWW.badviolon.com



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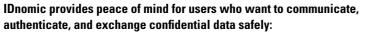
Often seen as a new industrial revolution, Industry has come full circle in the digital age when became 4.0. While this development is full of promises, it is not exempt from threats, in terms of security in particular.

It is therefore essential to integrate cybersecurity with objects as soon as they are designed. This is what is now called «Security by design».

By moving from closed-ended operation to the "open" industry 4.0 model - interconnected industrial systems, IoT, big data, cloud ... digital trust becomes, in fact, a strategic necessity.

Establishing a real «digital trust» involves being present at all stages of the digital chain: from the manufacture of physical components to the software design (without even mentioning the deployment of infrastructures).

This is all the challenge of industrial internet projects in which IDnomic, leading provider of trust services for the protection of digital identities, is committed.



- **Employees** who must have secure access to data from their multi-channel enterprise objects via any network, anywhere
- **Connected devices** which must be deployed in a secure and monitored environment in order to be used with confidence by the general public
- **Citizens** who need electronic identity and travel documents when traveling and to access secure e-government services

IDnomic is a Trusted Third Party that provides PKI (Public Key Infrastructure) to most of nationwide strategic operators and/or Fortune 100 who now would like to deploy their PKI through connected devices.







# Caroline DROBINSKI Marketing & Communication Manager info@idnomic.com • +33 1 55 64 22 00

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### GERVAIS Stéphane

Strategic Innovation Director s.gervais@lacroix.fr • 02 40 92 58 56

### LACROIX

8 impasse du Bourrelier - 44801 SAINT HERBLAIN Cedex - FRANCE

### Connected technologies for a Smarter World

Through its various business areas, LACROIX Group stands as a technology and excellence-driven industrial company. Its mission is serving a connected and sustainable world: electronic innovation, water & energy networks, traffic & street lighting management, smart cities. With 3900 employees, LACROIX Group generates €430M revenue (2016).

### **LACROIX Electronics:**

Areas of expertise: electronics design and manufacturing services for the Automotive, Home Automation, Aerospace & Defense, Industrial and Medical markets.

- Headquarters: Saint-Pierre-Montlimart (49)
- Location : France, Germany, Poland, Tunisia
- 2016 revenue: €300M
- Headcount: 3150 employees
- Customers: Key accounts which focus on their core business, start-ups which develop electronics products, companies which are not specialized in electronics.

### **LACROIX Sofrel:**

Areas of expertise: design and marketing of remote management systems for water networks (drinking water and waste water) and energy networks (heating networks, heating plants, HVAC installations...)

- Headquarters: Vern-sur-Seiche (35)
- · Location : France, Spain, Italy
- 2016 revenue: €40M
- Headcount: 150 employees
- Customers: Large private operators or local authorities (Cities, Urban communities & districts) and contractors (water networks or HVAC)

### **LACROIX City:**

Areas of expertise: design and selling of products related to city and roads. Road signage, information collecting and processing, traffic management, design planning and street lighting.

The 4 main activities are static vertical signage, dynamic signage, connected sensors and traffic regulation and Sogexi smart street lighting.

- Headquarters: Saint-Herblain (44)
- Location : Mainland France & Overseas, Spain, Cameroon
- 2016 revenue: €90M
- Headcount: 600 employees

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 Customers: Local authorities (Cities, Urban communities), infrastructure and motorway companies. . . .

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### LUCEOR

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### **High Performance Wireless IP Network** for the SafeCity

Luceor products make it easy to deploy a secure, high-speed, and resilient wireless network to connect SafeCity security devices at a lower cost: CCTV cameras, as well as all the new SmartCity sensors (intrusion detectors, alert systems, weather stations, intelligent buildings, road safety systems, etc.).

Don't bother with the cost and delay of installing a wired network. A Luceor WiMesh infrastructure is simple, fast and inexpensive to deploy: Install your equipment exactly where you want, connect it to one of our WiMesh routers and turn it on. Voice, Video and Data traffic go wireless to your control centre or your data warehouse! Your most critical applications and your numerous HD and 4K cameras now enjoy very high throughputs with no latency.

### **Fixed & Mobile Network**

A WiMesh network is the ideal complement for your wired IP infrastructure to connect remote devices. Because the environment may change and cameras may have to be moved, our WiMesh equipment makes it very simple to develop and adapt your CCTV installation to cover the zones most in need of protection.

And as a WiMesh network is also a mobile network, you can connect moving vehicles, robots, drones, tethered balloons, or police officers and stream content in real time to vour control centre without the cost of cellular services.

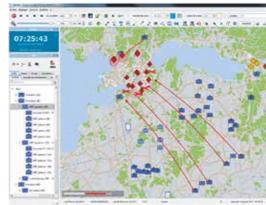
### **Broadband Transmission In Trains, Tramways and Metros**

The WiMesh network deployed in the city can thus connect high-speed transit vehicles. It is the ideal way to transmit live HD video from cameras installed on board, to connect digital signage systems or to offer quality Wi-Fi services to passengers with no packet loss even at very high speed or in tunnels and without paying operator subscriptions.

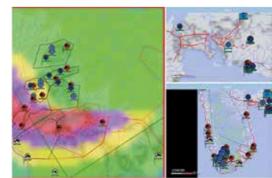
### **Temporary Events Security**

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Luceor routers also allow for the rapid deployment of 100% autonomous temporary networks to easily cover one-off events in different zones (sport events, street festivals, concerts...), whether it's for a few days – or even weeks. Because they are simple to deploy, numerous police forces use them to secure major events, such as the EURO2016, international summits or political protests. Once the event is over, Luceor equipment can be quickly installed elsewhere to secure another event.







# MASA Group ("MASA") is a global company focused on the development of Artificial

**Cutting-edge Al-based Modeling & Simulation** 

software for Defense, Public Safety, Healthcare and Games-related markets.

Intelligence-based Modeling & Simulation (M&S) software for the Defense, Homeland Security, Emergency Management, Healthcare, Serious Games and Games Development markets. A trusted developer of cutting-edge AI technology for over fifteen years, MASA has founded its success on products that combine scalability, adaptability and low cost of ownership, with a strong standards-driven approach to technology.

The MASA product range, including MASA SWORD and MASA SYNERGY is uniquely designed to simplify and optimize the implementation of Artificial Intelligence capabilities for automating and driving simulated behaviors. Such capabilities allow developers and end-users in various sectors to focus their efforts on enabling a series of cost-efficient and highly realistic applications – such as command staff training, crisis management preparedness, exercise preparation, after-action review, doctrine & equipment analysis, and corporate training.

MASA products are already in use by leading organizations worldwide, including the French Army, other major armies around the world, Ruag, CAE, Krauss-Maffei Wegmann, SAAB, SGO, Thales and Rheinmetall.

### **MASA SWORD**

SWORD is an automated, aggregated constructive simulation for efficient training and analysis, commercially available off-the shelf (COTS).

Designed to help develop and deploy complex and highly realistic training scenarios and analysis for commanding officers and crisis managers, SWORD's adaptable and open design makes it easy to be integrated into established simulations, enabling these systems to take advantage of more recent technologies such as true high-level automated aggregated simulation.

### **MASA SYNERGY**

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SYNERGY is a high-level support system designed to help public and private organizations train their senior staff and officials to react to emergencies, crises and disasters and to illustrate the decisions they are making while training.

SYNERGY is a training simulation that enables tactical and strategic high-level decisionmakers from public and private organizations to efficiently prepare emergency management scenarios, rehearse procedures and validate emergency plans. The situations simulated in SYNERGY are highly realistic, immersing the crisis-cell members in an extremely diverse range of scenarios.

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### MASA Group SA

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Brand of ACOEM







### **Celine CARASSIO (Defense Assistant)**

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# PILAR Acoustic Gunshot Detection Systems - For Stopping gun violence!

Nowadays, urban violence by the use of guns is constantly increasing. Neighbourhoods that experience continual, unaddressed gunfire are subject to a lifetime of emotional trauma. METRAVIB, the world leader in gunshot detection, affords cost-effective solutions to address the impact of gun violence and the effects they have on communities, families, and children. By reducing gun violence in the city, METRAVIB helps law enforcement by saving lives, improving community safety.

**PILAR** provides real-time and accurate **gunshot detection**, **identification and localization**.

### **Detection**

**PILAR** listens to the acoustic waves emitted by the shot and provides real-time alert to the operator. The system uses multiple collaborative acoustic sensors and can be interfaced with video surveillance (CCTV) equipment to improve security through widearea monitoring and reporting of events.

### Identification

The PIVOT remote observation turret and the PEARL video surveillance, both equipped with a day or night camera, will automatically slew-to-cue the shooter position and provide the user with real-time images of the threat. Moreover, the system will also be able to deliver the critical data for a successful actionable intelligence (investigation, prosecution and analysis) through an easy-access to historical incident events detailing the type of caliber used by the shooter, the number of shooters and the number of shots fired.

### Localization

In addition to the video, the user will have the exact position of the shooter/threat pinpointed on a map, allowing patrol officers to prepare and react with greater situational awareness.

PILAR has been designed to avoid false alarms due to echoes and ambient noise, and can therefore adapt to an urban environment.

The system serves for several applications, such as:

- VIP protection
- · Campus, Schools & Airports security,
- Public events protection,

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"Special" transport security (cash, hazardous materials, etc.).

### **METRAVIB** contributes to a safer world

### **METRAVIB** is the world leader for Gunshot Detection Systems:

- In operation in more than 20 countries (France, USA, Turkey, Italy, Singapore, Germany, etc.)
- Combat proven on theatres of operations for more than 20 years (Bosnia, Iraq, Afghanistan, Mali, Niger, Chad, Central Africa, etc.)
- A Complete range of products for both Armed Forces and Law Enforcement roles to provide improved protection for vehicles, communities, compounds and sensitive sites, helicopters, etc.









### Creating new references in Defense

Nexter, a company of KNDS, the European leader in the land defense, is committed to meeting the needs of both the French and overseas armies, by designing, developing and producing complete defense and security systems: from the VBCI 8-wheel drive, TITUS® 6-wheel drive and ARAVIS® 4-wheel drive armored vehicles to the CAESAR® self-propelled artillery system, and including the Leclerc main battle tank. The scope of its activity also extends to supplying systems and ammunition for air and naval forces.

While pursuing its international development, Nexter is fully committed in France, within the joint venture with Thales and RTD, to meeting the aims of the SCORPION program, propelling the land forces to the highest level with systems and equipment using cutting-edge technology.

Ensuring urban and transport system security, and protecting major events represent real challenges, to which Nexter is capable of providing solutions in order to meet the needs of security forces and confront new threats.

In order to respond to these new threats, Nexter has developed the TITUS®, designed to fulfil a broad spectrum of missions, from troop transport operations to combat support and logistic support missions, including security and peace-keeping missions and counter-insurgency. Protected from ballistic attacks, but also from CBRN threats (Chemical, Biological, Radiological and Nuclear), and benefitting from an exceptional level of mobility, the TITUS® is a clear asset for security forces worldwide.

The Nexter Robotics subsidiary also provides high-performance, innovative solutions for urban protection. The highly-versatile Nexter Robotics NERVA® lightweight robots are able to fulfil site surveillance and safeguarding missions, thanks to their wide range of mission kits (reconnaissance, detection and surveillance, CBRN threats detection).



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### Secure web gateway solution

Olfeo is a secure web gateway solution allowing organizations to manage Internet access and usage, while delivering a high level of security and meeting key legal requirements.

Olfeo brings a unique and innovative vision to the security market based on its multilocal approach through versions of the Olfeo solution tailored to specific countries. This innovation-focused strategy has been overwhelmingly popular and already convinced over 2000 customers.

The security market is continuously evolving and Olfeo aims to answer these new needs: mobility, SSL decryption, new attacks prevention (ie. ransomwares, crytpolockers), as well as the need to have a better understanding of SaaS applications within your organization.

Olfeo adds value on complex projects thanks to a double expertise: software vendor and Internet content analyst (producing our own URL database).

Our solution includes 5 products:

- Proxy Cache QoS and SSL decryption
- URL filtering
- Protocol filtering
- Antivirus
- Mobility Controller

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Available through multiple formats: software, appliance, virtualized, SaaS. The solution offers a single and multi-language administration console.

"Secure, Analyze, Optimize Internet usage"



# **PROTECOP**



### Personal protection expert

With 30 years of solid experience, PROTECOP has established itself as a recognized expert in the field of personal protection for crowd

control and ballistics

Equipped with the latest technology, PROTECOP develops exclusive equipments thanks to its integrated services: R&D, design department, prototype workshop, etc.

Protecop possesses its own production tool, meaning it can control its products from design to manufacture.

Recognized for its know-how, PROTECOP exports its equipments in nearly 70 countries worldwide.



### **Tailor-made ballistic solutions**

PROTECOP ballistic solutions meet the requirements of individual forces on a case-bycase basis and provide total traceability.

### Plate carrier with quick release system

The latest in the ballistic range, the plate carrier, which equips the French Police and Gendarmerie, offers a maximum mobility thanks to its weight (8 kg) and design while ensuring a maximum protection. Its Stand Alone plates stop the following ammunitions:

- 1 shot 7.62X54 RAPI B32
- 1 shot 300 WM RWS TUG

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• 2 shots 30.06 M2AP



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### **PROTECOP**

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### Proven software to secure the Internet of Things

Prove & Run's mission is to help its customers resolve the security challenges linked to the large-scale deployment of connected devices and of the Internet of Things (IoT).

The advent of the IoT creates attractive opportunities for hackers who exploit the vulnerabilities of connected systems, in particular when attacks can be performed remotely, even when developing a successful attack requires a substantial investment.

Today, smart cities deploy large connected systems that are becoming critical infrastructures for their operations, with the goal of both improving the quality of life of their citizens and reducing their expenses. This turns cities into attractive targets for hackers.

In order to be protected against this risk, connected systems need to be secure by design. To do so, security engineers can in effect rely on three pillars:

- Secure elements or hardware coprocessors for the Root of Trust, cryptographic operations and transactions;
- Trusted Execution Environments (TEEs) or secure OSs;
- Hardware- or software-based hypervisors.

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In order to resist sophisticated remote attacks targeting connected systems, the last two pillars need to be formally proven. This is what we have done at Prove & Run.

Building on this work we provide cost effective off-the-shelf formally proven software bricks that dramatically improve the level of security of connected systems:

- ProvenCore: a next-generation ultra secure OS (TEE) available for ARM® Cortex®-A and Cortex<sup>®</sup>-M processor, typically used to run security-critical applications.
- ProvenVisor: a next-generation formally proven ultra secure hypervisor available for ARM Cortex-A processors.

While ProvenCore and/or ProvenVisor can be used on their own or in combination, in most cases using of single instance of ProvenCore on a given system will be sufficient to protect against hackers with multi-million dollar budgets.

ProvenCore is also the basis of our Secure Solutions, a family of pre-integrated security applications: secure boot, OTA firmware update, VPN, firewall, etc.









### Safety Engineering and Cyber security/Cyber defence expert

Risk&Co Solutions incarnates Risk&Co's technical expertise namely in two fields (safety engineering and cyber security/cyber defence) for the detection and correction of logical and physical security breaches offering both government organisations and private companies an exhaustive coverage of all safety and security risks:

### **Safety Engineering**

Risk&Co Solutions intervenes both upstream during the risk assessment studies and security/safety master plans, and downstream assisting in operating the systems and maintaining optimal operational condition of systems and staff. Risk&Co can directly act as the main contractor for project design and deployment of protective measures (CCTV, access control, intrusion detection, fire safety systems).

### **Cyber security and Cyber defence**

Risk&Co Solutions supports its clients in securing data and critical IT infrastructures (risk analysis, safety analysis, pen test, IT protection engineering and consulting, incident response) focusing on industrial systems cybersecurity, security/safety systems (CCTV, access control ...) as well as building & city management systems.

### **Recognised as a trusted partner**

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Risk&Co Solutions is a trusted partner with experience working in delicate contexts. The company works independently from any software publisher or hardware manufacturer. Risk&Co aims at providing the most adapted solution to the stakes of its clients. Its perfect understanding of the links between all safety and security issues such as human resources, technical and organizational issues, enable Risk&Co to ensure sustainable, exploitable and maintainable solutions.

**Christophe Pagezy - Co-CEO** christophe.pagezy@provenrun.com +33 1 75 77 55 51

Prove & Run S.A.S. 77, avenue Niel, 75017 Paris, FRANCE www.provenrun.com

Philippe HUBERT - Deputy managing director phubert@riskeco.com • 01 55 24 23 22

### **Risk&Co Solutions**

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## Rockwell Collins







### PSR-500 perimeter surveillance radar system

A high-resolution, compact radar system for perimeter surveillance.

The PSR-500 enables users to track and record intrusions in all weather.

Outstanding, field-proven accuracy and range are now available with the high performance PSR-500 perimeter surveillance radar system from Rockwell Collins. The PSR-500 system features Frequency Modulated Continuous Wave (FMCW) advanced radars and combines all functionalities required for perimeter surveillance.

PSR-500 radars can effectively sense mobile targets in all weather conditions, including rain and fog, 24 hours a day. PSR-500 radars are adapted to the surveillance needs of many types of sites, thanks their range and target behavior analysis algorithms. These also give PSR-500 a very low false alarm rate.

In addition, each radar of the PSR-500 can be coupled to a camera that is controlled by radar detections, allowing multi-target, highly accurate video visualization and recording

The PSR-500 is suitable for locations such as airports, industrial and military sites, hydroelectric dam, nuclear power plant, railway station and public or private urban sites.

### **Key features**

- IP radar connectivity (connection to any IP transmission system)
- Processing hardware can be located close to the radar or inside a back office
- Low probability of intercept thanks to FMCW technology
- High accuracy for range, speed and azimuth
- Extended detection range up to 500 meters for human detection
- Multi-target capability
- Flexible interoperability (GPS synchronized)
- Connection to video management/ recording system

### **Key benefits**

- High resolution (high bandwidth)
- Rapid detection time via permanent area illumination (no scanning antenna)
- Optimized false alarm rate and detection probability
- Affordable technology
- Low radiated power poses no health risks
- Low power consumption

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- Compact radar design with SWaP-C advantages

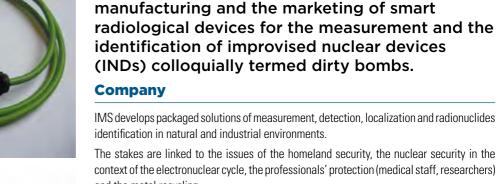
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radioprotection • www.imsrad.com **SDS Performance:** high voltage power conversion • www.sdshv.com 53 rue Bourdignon 94100 Saint-Maur-des-Fossés - France







# and the metal recycling. **Products**

The instruments designed and produced by IMS are Smart Gamma Probes and Spectrometers based on NaI or BGO detectors or even CZT crystal. They come from a CEA technology transfer.

Strong expertise in the development of complex

electronic products by the design, the

IMS offers a range of solutions which include miniature detectors, electronic interfaces and communication protocols which guarantee the functional durability of the solutions specific to the client's sector without affecting existing software developments.



© ECA Robotics - France

**SDS Group:** 

Bernard Leibovici - CEO

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IMS Innovation and Measurement Systems:

### **Key Benefits of an operational capability of detection** and identification (CODI-NR on-going solution)

The fight against nuclear terrorism in areas of commerce, leisure and transport and administrations in a context of gathering or passing people, associated with the danger of nuclear proliferation, a growing preoccupation of states.

• Ensuring the safety of sensitive sites

- An ultra-miniaturized, portable and communicating solution
- Driven by the people in charge of safety and security, allowing easy implementation
- Promptly initiate the necessary preventive and protective measures
- Objective: A device for detection and localization based on a NaI detector (TI) of a radioactive source for distances up to 15 m for a dose rate of  $\sim 1 \,\mu\text{Sv/h}$
- Integration of several communication vectors depending on the possibilities offered by the sites to be secured





Engineering & innovation







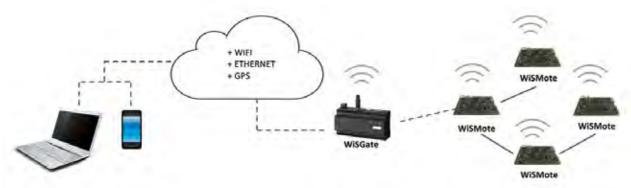
### We shape your ideas into reality

Sophia Conseil is an independent French scientific and technical engineering company for more than 10 years counting 250 employees.

Sophia Conseil successfully innovates for its associates thanks to its systems approach and its four departments: Optics & Detection, Electronics, Mechanics, and Digital.

Its expertise in innovative and severely constrained embedded systems enabled Sophia Conseil to tackle various domains such as IoT/M2M, smart & safe cities, defense, and health.

- IoT/M2M Expert: IEEE802.15.4, 6LowPAN, WiFi, GPRS, GSM, Sigfox, LoRA
- **Lightweight Cryptography** implementation tailored to ensure confidentiality, integrity, authentication of data communication.
- Smart City system: Acquisition of air quality indicators: PM2.5 & PM10, COV. Data transfer towards the cloud: GPRS/6LoWPAN/IPv6. Rise alerts (Red flashing light, Buzzer).
- Smart Parking System.
- Lux Monitor®: A wireless street-lighting control system.
- WisNet®: WiSNet A full OEM IoT Solution IPv6 based.
- WisMote: Sensor/actuator module dedicated to Wireless Sensor Networks(WSN).
- Camera design; People and vehicles detection/monitoring/tracking using image processing & analysis for control & surveillance cameras.



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### SOPHIA CONSEIL

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# **SURYS**





Engine No: Colour / Code: Engine Capacity: Category: Origin: Date of Issue:	D 304105 BS172 2.4L Car R.T. Brisco 08/01/15	1 6	
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### From science to confidence

Global reference in the field of security, SURYS offers a meticulously crafted range of optical and digital solutions to authenticate and track & trace documents and products. Carefully selected by governments, central banks and corporations, SURYS begins with science, a limitless source of fundamental and incorruptible foundations and manage the journey to confidence for SURYS clients' success.

With multiple references in the field of Identity, Banknotes, Vehicles and Brands & Products, SURYS solutions are recognized by world experts and comply with the highest security standards.

We offer the most efficient and easy to control optical security features to

- Protect your Identity documents against counterfeiting
- Easily secure your banknotes
- Facilitate people's ability to authenticate
- Fight against car trafficking
- Fight against trafficking of fakes

We have developed specific solutions for the authentication and traceability of all vehicle-related documents.

### Holocis™

Personalized optical label linking the car's engine number with the owner's registration document and license plate

### Wintag™

Holographic patch or stripe with encoded information in a data matrix so that only controllers can decode online or offline

Based on the convergence between optical and digital technologies, SURYS offers advanced solutions which are the perfect economical and reliable product identification and authentication device for a complete secure track & trace solutio

### **Corinne Murcia Giudicelli**

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# European technology leader for reliable geopositioning, robust to GPS-denied situations

SYSNAV is a young innovative French SME, originating from the Defense industry. It designs, develops and sells advanced modules and solutions for navigation, geolocation and motion capture for the most demanding environments and requirements: defense, security, safe city, autonomous vehicles, railway, airports.

Drawing on its next-gen magneto-inertial navigation technology, SYSNAV is the European technology leader for GPS-denied navigation solutions based on mass-market inertial and magnetic sensors.

Widely recognized in Europe (European Business Awards, 2016) and internationally (Innovation Award - MIT technology Review, 2014), its technology ensures ultra-available, ultra-reliable and precise data in all conditions, including the most extreme such as GPS-denied situations or the most demanding such as autonomous driving.

SYSNAV offers state-of-the-art modules and solutions for transportation vehicles, resilient geolocation solutions for first responders and civil security units within the most demanding safety standards for smart cities, large urban centers, business districts, airports, sensitive areas and major events organizations.

SYSNAV lightweight solutions can be tailored with our clients and easily implemented without the need for any additional radio infrastructure. They will empower your vehicles and ground units positioning capabilities by extending the availability and precision of their positioning information within critical areas where conventional GNSS solutions can't meet the needs











# Command and Dispatch - Risk & Crisis Management

SYSTEL has a 30 year experience developing and commercializing risk and crisis management solutions for multinational and territorial civil security agencies. The different expertise and competences acquired by the engineering team make the enterprise able to always be on top of the innovation in the risk and security management sector.

START is a sophisticated mobilisation system that provides emergency call handling, decision support, resources optimisation and incident monitoring. In order to process all types of incidents, our system includes mapping modules, radio channels management as well as mobile data terminals.

### **Command and Dispatch - START**

Designed to cope with emergency situations, this solution of innovative software applications allows Fire & Rescue Services, Police Services, Emergency and Medical services and public safety organisations to intervene on the ground in optimum conditions.

Already providing mobilisation systems to 50% of the French Fire & Rescue Services, the SYSTEL solution is also operational in 5 UK counties and one county in Switzerland.

### **Risk & Crisis Management**

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Natural, industrial or societal disasters require innovative crisis management tools. Consequently, our current risk and crisis

management developments are focused on national and territorial multi agencies.

Systel provides large scale information processing technologies (Big Data) to its customers.

These Data Centres over the decision making structure are an unevaluable help regarding situational awareness, command & Dispatch, operational and strategic management.

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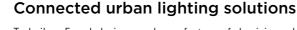












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Technilum, French designer and manufacturer of aluminium urban lighting furniture since 1971, equips private and public areas worldwide. Combining aesthetics and energetic efficiency, our lighting solutions contribute to make urban areas more friendly and safer - public lighting being universally recognized as favoring security feeling for users, as well as increasing real safety.

Beyond lighting, Technilum has also developed « Smart-in-Site », a complete offer of connected services, perfectly integrated to the lighting furniture such as video surveillance, speakers or occupancy sensors. In addition to the aesthetic gain earned by the restricted number of frames or poles needed to support the devices, it is particularly convenient for the operator to efficiently handle the whole system.

Video cameras placed regularly on the lighting poles allow a global surveillance of pedestrian, parking or circulating zones. These cameras can be associated to an impact detection system, triggering an alert in case of accident or vandalism affecting the poles. Combined with an emergency push button and speakers, the security team can thus detect in real time any incident and quickly react to ensure users security: either by communicating distantly or by sending a dedicated team on site.

Our lighting poles can also integrate dynamic screens: images and sounds can be displayed to the population, such as emergency information, safety instructions, signage system for gathering users, etc.

Thanks to its 45 years of experience, Technilum brings its expertise to advise you with the most accurate solutions, tailored to your needs and offering both aesthetics and efficiency.



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**TECHNILUM** 

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# **TATENTRIS**









### TEHTRIS Company is the editor of the awarded solution called « eGambit », a defensive cyber-weapon system

While malicious Internet intrusions and attacks are on the rise with infiltrations from all sides, **TEHTRIS** Company based near Bordeaux in France, proposes a solution that was named a winner of a Cybersecurity Product Excellence Award, to enhance IT Security in large scale infrastructures such as big cities.

**TEHTRIS** is a French company founded in 2010, specialized in cutting-edge IT security technologies. Their consultants know, understand and master the techniques and methods of attackers: hackers, business intelligence, computer warfare, etc, as well as the resources needed to counter the current threats.

The team at **TEHTRIS** has more than 15 years of experience in sensitive environments or crisis situations worldwide. They can therefore ensure efficiency, discretion, trust and above all confidentiality, for all the specific requirements or standards of your protection.

Its flagship product called eGambit, can monitor and improve IT Security against complex threats like cyber-spy or cyber-sabotage activities, and it has already helped companies in China, Brazil, USA and Europe against internal and external cyber threats. In 4 years eGambit has already caught billions of events related to security issues worldwide.

The Artificial Intelligence engine, which is embedded in eGambit, fully created by cutting-edge engineers at TEHTRIS, is already protecting many sensitive infrastructures owned by multinational companies. This innovative technology was just awarded by a recognized independent testing company, as TEHTRIS won the Award of the best solution in the category "Real Time Threat Analysis". As an example, the Artificial Intelligence of the eGambit product can detect unknown viruses or malwares as it is not based on signatures.

In 2015, TEHTRIS already won the "Label France Cybersecurity", and then an innovation prize during the « IT Innovation Forum » in 2016. eGambit is proposed to the French public sector through the central public purchasing office called UGAP.

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### **TEHTRIS**

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# THALES







### **FOR SAFER & SMARTER CITIES**

More than half the world's population already lives in cities, and the proportion is expected to reach 70% by 2050. Faced with the challenges of urban growth and an increasing need for safety and security, city authorities can benefit from the digital transformation by making better use of available data to improve coordination and boost operational efficiency.

As part of a comprehensive approach to urban security, Thales develops innovative solutions incorporating smart decision-support tools for city authorities and operators. Thales pulls together data streams from the city's various security systems and shares, analyses and correlates them within a centralised command-and-control structure. As a result, city operators have real-time access to optimised flows of relevant, prioritised information, helping them to work efficiently and significantly reduce response times if an incident occurs.

Thales solutions are used to better anticipate, investigate and respond in real time to crime, terrorist threats, industrial accidents and natural disasters, helping cities to operate more efficiently and to optimise their resources and revenue streams. Drawing on smart analytics technologies, Thales solutions exploit available data to meet the needs of 21st century citizens and make their cities more attractive.

### **Mexico City: a flagship project with impressive results**

Thales and the authorities of Mexico City have worked together on the world's most ambitious urban security programme. Sourcing data from thousands of sensors of different types (CCTV, gunshot detectors, seismic sensors, UAVs, etc.), Thales systems have helped to cut crime rates by more than 56% and achieve a six-fold reduction in response times by security services.

### Safer, smarter cities

Thales systems leverage advanced technologies and the latest innovations to make cities smarter and more efficient. Combining recognised systems integration capabilities, proven expertise in key technologies and a hands-on understanding of the needs of cities and their operational processes, Thales is a world-class player in the safe & smart cities market.

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### Digital Forensic & DNA mobile laboratories

TRACIP is the primary partner of government agencies in the field of Police, Defense and Justice in their fight against cybercrime.

Its know-how in the making of digital investigation and recovery of sensitive data laboratories enables TRACIP to provide turnkey solutions including audit, equipment, training and support to federal agencies.

From this trusted partnership has emerged, among others, the mobile laboratory concept - mobil'IT®- which responds to a growing operational need of cyber investigators.

mobil'IT® is a powerful, fully mobile and autonomous digital investigation laboratory which drastically accelerates field investigations with specialized, ergonomic and powerful equipment.

Due to its strong experience in the conception and the production of a range of mobiles laboratories, TRACIP has been awarded the exclusivity to produce and market worldwide a DNA mobile laboratory, result of the know-how of the Forensic Research Institute of the National Gendarmerie (IRCGN<sup>TM</sup>) and approved in France by the DNA National Committee (ISO CEI 17025).

The patented innovation that led to the creation of this laboratory offers investigators the opportunity to analyze DNA traces in 2 hours for the first 21 samples, directly on site, when one day is usually required, all of this with 24 markers extracted simultaneously. The analysis is even accelerated on the following analyses, as 21 profiles emerge every 30 minutes thereafter

### **Benefits of mobil'DNA:**

- Drastically accelerates the process of quantifying and identifying victims in the event of a disaster
- Allows rapid delivery of the DNA profile of a suspicious person or victim
- Significantly limits the risk of contamination when handling seals
- Important savings with a cost per analysis significantly reduced

The DNA laboratory is a proven technology, implemented by the French Gendarmerie in the handling of critical cases.

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### TRACIP

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### Manage Authorizations in Applications **20 years of Application Security Expertise**

Visual Guard was initially developed in the 90's for a major banking institution. Since then, it has constantly evolved to comply with modern security requirements. Our products are used by hundreds of major corporations world-wide.



### A Single System For All Applications

- Get a global overview of users and access rights across your entire Application portfolio.
- Automate controls and audit for all applications.
- Maintain a single security solution.

### **Enhance your applications security**

### Instantly add new security features

- Authenticate users with their Windows account
- Implement Single Sign-On (SSO)
- Secure SaaS and multi-tenant applications
- Delegate the daily administration to Managers or Clients
- Reuse existing user accounts (Facebook, Google, etc.)

### **Comply with regulations and corporate standards**

- SOX, HIPAA, ISO...
- Keep track of all users and administrators operations:
- Who did what? When? Who allowed it?
- Focus controls on a given user, operation, date or application

### .NET Security Framework

Visual Guard exposes an extended API (over 300 methods) to integrate VG Features with your applications

- Manage Users
- Manage Permissions

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• Enforce Security

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NOVALYS

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### WALLIX

250 bis rue du Faubourg St Honoré, 75008 PARIS







### A cybersecurity software vendor, specialized in privileged access management, compliance, and traceability solutions.

WALLIX have succeeded in combining the three core requirements of managing privileged users, password management, access control and traceability, into a single easy to deploy solution - The Wallix AdminBastion.

WALLIX's unique approach to security goes beyond simply blocking access. It empowers your organisation to confidently give the right people access to the right IT systems. The WALLIX Bastion gives you freedom and visibility to keep your staff, service providers and contractors working securely and effectively.







Its best of breed features include password management, web access portal, access control and comprehensive session monitoring and recording, which provide records and audit trails to demonstrate optimized compliance with appliance standards (ISO2700, PCI DSS, GDPR...)

WALLIX success is supported by a global network of certified partners and value-added resellers across MEA, CIS, PAC and North America. Today more than 400 private and public organizations trust WALLIX to secure their Information Systems.

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www.wallix.com

# Notes






GICAT is a trade association founded in 1978 with a membership of over 200 representing 330 nearly members, major groups, intermediary enterprises and SMEs. The membership covers a wide spectrum of businesses in industry, research, services and consulting for national and international military and civilian components in land and air-land security and/or defense systems.

GICAT represents the interests of the French land and airland defense and security industry with four objectives:

- Organize a dialogue between sector institutions and industry
- Provide member services that foster their growth in France and around the world
- Create an environment conducive to industrial exchanges
- Promote the industry's expertise and image

GICAT gains global exposure by attending the international trade shows EUROSATORY in France, APHS in Singapore, Expodefensa in Colombia and ShieldAfrica in Ivory Coast that are organized by its subsidiary COGES, as well as a number of defense and security trade shows outside of France.

www.gicat.com



### Produced in conjunction with CoFis

The Committee of the Industrial Sector of Security (CoFIS) was created by the Prime minister in October 2013. Its ambition is to unite the efforts of the State, of the territorial communities, of the industry, of research and of the major public and private operators, to develop efficient and worldwide renown security solutions.

The sector operates in a booming international market that covers various topics such as the protection of large public and private infrastructures, transport safety, border management, rescue services, the fight against terrorism and serious crime, crisis management or cybersecurity.

Like all government-backed sectoral committees, CoFIS aims to develop the competitiveness of our major groups and SMEs, which occupy a prominent place in the security market.

FIEEC combines 22 trade unions in the industrial and technology sectors of the electrical, electronics, digital and consumer goods industries. It represents sectors which cover more than 3,000 companies with almost 420,000 employees generating over EUR 98 billion in revenues (46% of which on export markets).

At the source and core of digital transformation, FIEEC's members include companies which supply digital security technologies and solutions (digital identity, cybersecurity, traceability, physical security/access control, video surveillance) and the companies that have these technologies and solutions in their smart offer (smart grids, smart industry, smart building, smart city, smart health, smart mobility, smart life etc.).

### FIEEC's role is to represent the profession and act in favor of:

- Industrial strategy to serve growth
- · Competitiveness to serve employment
- Innovation to serve the markets of the future

www.fieec.fr



### **GICAT and FIEEC are members of CICS**

This brochure was produced as part of the work of the Council of Industrial Trust and Security (CICS).

CICS gathers the national security industry. It intervenes throughout the security perimeter (equipment and platforms, electronic and digital systems, cybersecurity) and aims to unite all the companies in the industrial security sector.

With its members (FIEEC, FFMI, GICAN, GICAT, GIFAS, USP Technologies), this association represents more than 80% of the French security industry.

www.cofis.fr

www.cics-org.fr