



City  
**LACROIX**

CONNECTED  
TECHNOLOGIES  
FOR **SMARTER**  
**MOBILITY**

**Press kit**

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## LACROIX City innovates

### Innovation drives the Smart City

LACROIX City is a recognized technological equipment manufacturer already operating concrete smart road activities designed for communities and businesses. LACROIX City designs and selects equipment and connected technologies to guide, optimize and increase the safety of pedestrian and traffic flows with the goal of safely sharing the streets and roads, taking into account the needs of all users and operators.

Cities are changing, becoming safer and more environmentally friendly; places where it is easier to live together. The Smart City is taking shape proactively with initial practical solutions already visible. LACROIX City is a major operator in the world of smart road usage and is committed to finding solutions for infrastructure connectivity. Urban traffic, street lighting, urban development, inter-urban traffic and road signs are all fields currently undergoing rapid change and LACROIX City is contributing to this.

Our equipment, designed and manufactured in France, includes the latest digital innovations and professional expertise to create the open, interoperable ecosystems of the city of the future.

### Innovation and its applications

**NEAVIA** - NEAVIA Technologies has been supplementing the LACROIX City inter-urban traffic offering, since joining the group in September 2016, with eco-friendly systems including video, traffic detection, travel time calculation, surveillance and alerts as well as smart solutions for vehicle-to-infrastructure connectivity. The expertise of the Néavia engineers has strengthened the position of LACROIX City in ITS (Intelligent Transport Systems), equipping roads and towns with traffic regulation and management solutions that are also designed to communicate with connected and autonomous vehicles.



**Mx4** - LACROIX City has brought to market a passive safety road sign pole designed to inform road users and prioritize their safety.

If a vehicle leaves the road, the pole yields upon impact, allowing the vehicle to continue on its path without being brought to an abrupt stop. Mx4 yields instantly during a high-speed impact. However, the pole also provides a solution for a hitherto unaddressed issue: impacts from vehicles at moderate speed in a dense, shared environment.

At 50 km/h in urban applications, Mx4 does not break, absorbing most of the energy and holding the vehicle. This stops the vehicle and avoids injuring any pedestrians or cyclists in the vicinity of the accident. At 100 km/h on intercity highways, Mx4 buckles and yields under the impact so that the vehicle is not stopped abruptly on the obstacle.

Mx4, a world first for forgiving roads!

**Tegis** - The LACROIX City street lighting pole supports communities in achieving sustainable, connected lighting with its new smart management ecosystem. Tegis is used for remote control and management of street lighting systems. Simple and easy to use, remote management enables operators to control and optimize their street lighting network effectively. Open-ended and interoperable, Tegis smart management enables local governments to make their regions more attractive, control their public spending budget and future-proof their facilities.



## LACROIX City respects the environment

The LACROIX Group acts directly to bring the CSR policy of local governments, highways and cities to meaningful reality. Businesses integrating LACROIX equipment all benefit from real added value in terms of the environment. Environmental respect is also an intrinsic part of the LACROIX City identity, as it works to constantly reduce its carbon footprint, selects the least polluting technologies and shares best practices.

### The LACROIX City internal environmental approach

The three French LACROIX City industrial sites (road signage, traffic management and street lighting) are ISO 14001-certified, confirming this determination to operate a sustainable development approach.

Quality-Safety-Environment advisors work to raise team-awareness at each of the sites.

The environmental approach also operates in the product manufacturing processes. For example, signs are printed digitally, when possible, as this technology reduces the use of solvents. This is beneficial both to operators and the environment.

LACROIX City is careful to incorporate an ecological element through its ongoing actions such as extending the lifetime of its products and their related warranty above and beyond the current recommendations. All of its products are designed according to the new WEEE and RoHS2 directives to reduce waste production as well as recycling and maintenance costs. The major advantage consists in improving the performance and energy efficiency of its products. They offer a reduced carbon footprint, preserve the night-time environment and thus enable Energy Savings Certificates - or white certificates - to be obtained. This is a real asset for end customers with equipment designed in keeping with the Paris Climate agreement and the new EUP directive.



### Sustainable solutions for local governments

Live better in a cleaner, safer, more environmentally-friendly city—and we are contributing to this. The LACROIX City technological equipment manufacturer produces environment-conscious “ecosystems” reducing light pollution in cities, for example.

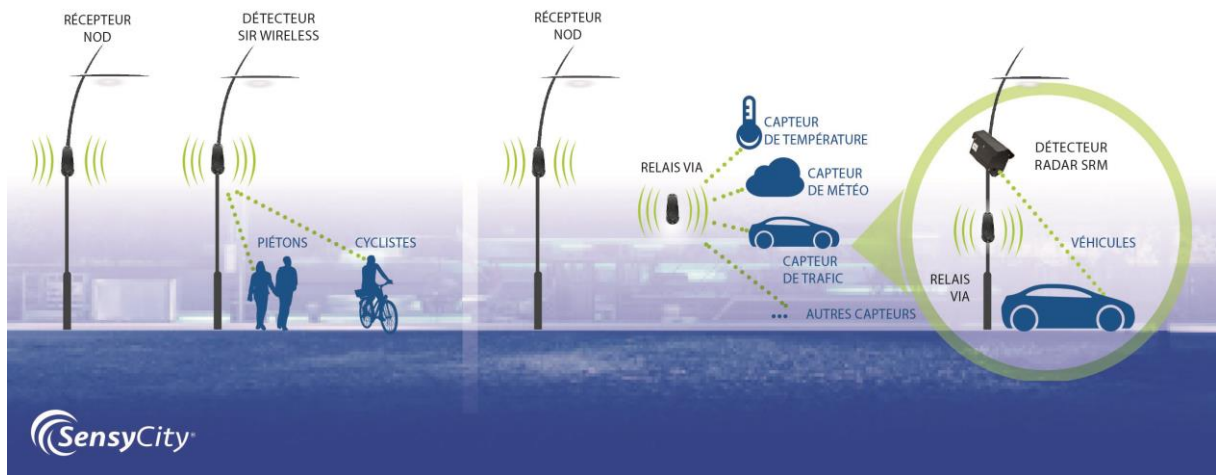
LACROIX City systems are designed to fit into cities’ environmental approaches.





**SensyCity®**, to combine pedestrian and driver safety in an environmentally-friendly way! It is the first smart detector for street lighting designed to adapt communities' urban street lighting to citizens' usage and for their safety. The SensyCity ecosystem operates using sensors that detect pedestrian, cyclist and vehicle movements and adapt street lighting according to user activity and need.

This solution ensures energy savings, citizen safety and environmental preservation, particularly by reducing light pollution. SensyCity means the right amount of light, at the right place and at the right time—saving energy and public spending.



**Ecocam** is a smart, communicating, low energy consumption Webcam designed to be powered by a small solar panel.

This webcam can monitor highways, work sites, infrastructures, forests or waterways.

It includes an optical unit with two lenses, enabling it to operate in a switchable day or night mode requiring no mechanical systems. Improved security, early warning (e.g. in case of a fire) and real environmental integration.



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## LACROIX City trains and employs workers in France

LACROIX City bases its approach on the skills of its teams, with their highly specialized expertise. Its role as a technological equipment manufacturer is established with engineers, technicians, researchers and scientists, operators and supervisors.

### Training, a “classic” area of strategic focus internalized with a dedicated center

To ensure it has operational, effective operators in specific posts, LACROIX City uses different approaches with, first and foremost, the development of an internal training center for very specific expertise. This center is in Saint Herblain (Loire-Atlantique), close to universities and schools with which it can work.

### Staff autonomy

Secondly, digitalization of the assembly process makes the assembly workstations very **intuitive**, allowing employees with no specific training to be immediately operational in the LACROIX Sogexi plant at Chères (Rhône).

The switch to digital in the production centers, particularly in terms of the workstations, helps employees and replaces trainers for newly hired staff. Learning the job is autonomous, for the purposes of efficiency and to save time.

### A French network

Clear objectives for this technological equipment manufacturer: instill a feeling of belonging and pride in its employees and help them to grow in the LACROIX City network (Nice, Lyon, Nantes).

### Integration

LACROIX encourages the integration of men and women at City. To this end, the group has developed partnerships with employment centers for people with disabilities, such as SOLACT in Villefranche sur Saône, or partnerships with temporary employment agencies. People are the focus of the LACROIX City strategy.



## LACROIX City takes action in the world

LACROIX City operates an international network to develop its ecosystems and dedicated equipment for the Smart City.

Well-established on its domestic market, LACROIX City also relies on its agencies, plants and research centers close to its customers, as in Spain, Morocco, Cameroon, Mayotte, New-Caledonia and Réunion. This international network supports the permanent growth of the Group outside France.

**LACROIX City in Casablanca.** The creation of the 2<sup>nd</sup> streetcar line in Casablanca will connect difficult-to-access areas of the city. LACROIX City is responsible for equipping 36 intersections with lights. This second project is scheduled after the work carried out for the first streetcar line, with which LACROIX was also involved.

Ensuring a smoother traffic flow in Casablanca is the role of LACROIX City as a Smart City operator that guides, optimizes and secures the flow of vehicles with the goal of safely sharing the road with other users.



**LACROIX City in Bamako.** The capital of Mali selected LACROIX City to set up smart management and street lighting solutions and connection equipment. The LACROIX Sogexi smart lighting management system will generate major energy savings and considerably facilitate maintenance of the installations. It is thus part of a real sustainable development approach.





## LACROIX City, the activity of a medium-sized French company

The LACROIX Group, a family-run, medium-sized company, designs and industrializes innovative connected equipment and technologies to enable its customers to make the world smarter and more responsible and to help them better understand electronic innovation and flows of data, people, water and energy.

It has three industrial fields of activity with diverse but complementary areas of expertise to connect historically separate business worlds, create convergences and strengthen its resources:

- **LACROIX City**, the French leader in smart, inter-operable equipment for smart road solutions, aims to guide, optimize and increase the safety of pedestrian and traffic flows for greater efficiency. The "Smart Mobility" concept.
- **LACROIX Sofrel**, the French leader in remote control and remote management equipment for infrastructure, water and energy networks. The "Smart Environment" concept.
- **LACROIX Electronics**, the European electronic equipment manufacturer that designs, industrializes and manufactures the electronic functions of its clients' products. The "Smart Industries" concept.

Changes in society are accompanied by disruptive technologies such as mobile Internet, advanced robotics, renewable energy and autonomous vehicles of which LACROIX has a thorough understanding. They have been integrated into the Group's "Connected technologies" culture and contribute to its identity as a connected equipment manufacturer.

Markets evolve and require different adapted products or services. The teams at LACROIX are attuned to society, both in France and worldwide, and are positioned on these key markets. The COP 21 and the COP 22 applications, the signals perceived at the CES in Las Vegas and the safety needs of people and property are all world movements that, on the face of things, do not affect LACROIX and yet the teams listen to, analyze and integrate these slow but inevitable changes in the design of the products of tomorrow. This means speaking the same language as the local governments and manufacturers, the language of tomorrow, to respond to the expectations of a society in the grip of swift-moving change. The various activities of the LACROIX Group have established their tools and active monitoring resources and share their visions during meetings specifically focusing on innovation. Although each of the teams is specialized, cross-disciplinary cooperation is organized to foster understanding and anticipation of change.

The Group has its head office in Nantes and is present in France, Tunisia, Germany, Poland, Spain and Italy. It achieves a turnover of €430M. It is directed by Vincent Bedouin. 70% of the shares are held by the family and 30% are traded on Compartment C of Euronext.



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## LACROIX and its partners

LACROIX City focuses all its activity on reinventing the city of tomorrow, the Smart City. To this end, the company is a key operator in the world of the smart road and works with the elected representatives, the leaders of local governments, start-ups, clusters, schools and research centers to invent the conditions for the mobility of the future with them.

- Collaboration with research laboratories: **PAVIC**

LACROIX is a founding member of PAVIC, the platform for the development of a smart connected city, which is a collaborative project based in Angers. The aim of PAVIC is to develop an experimentation platform and facilitate the performance of experiments contributing to building the smart, connected city.



Through PAVIC, the group responded to a request from the parents association of Saint-Martin school in Angers, following an accident involving a pedestrian, to make the area around the school safer. It involved replacing the standard static signaling system with a set of connected safety solutions. LACROIX City therefore set up a mobile pedestrian sign, a second pedestrian crosswalk as well as an illuminated marked crosswalk and enlarged the crossing area. Every morning, pedestrians (parents and children), cars and bicycles swarm around this school located at a dangerous intersections with poor visibility.

The LACROIX Group thus offered to trial various solutions under a collaborative approach with the road network stakeholders and members of the PAVIC association in order to meet users' needs. A real dynamic is taking shape around LACROIX and PAVIC for optimal deployment of a Smart City trial, focusing on the precise, concrete challenges of a community.

- **The city of Agen**



The city of Agen is running trials of smart lighting with the support of LACROIX City.

Several pilot sites have been selected according to the type of road, including Jayan park in Agen, where 18 light sources have been installed. During this trial program, a substantial amount of data is being analyzed to establish which smart solution is best adapted to the city with a reading of consumption, photometric and traffic data.

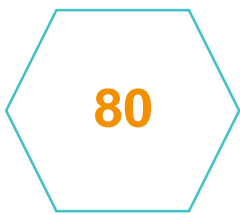
Various tests are conducted according to the sites: completely switching off the lights during a scheduled period of time, reducing light intensity, and using different types of motion detection.

The Agen urban area is a certified "*territoire à énergie positive pour la croissance verte*" (*positive energy for green growth region*) as it is committed to reducing its energy needs with regard to buildings, inhabitants, transport and leisure thanks to LACROIX City. Reducing street lighting is the priority area.



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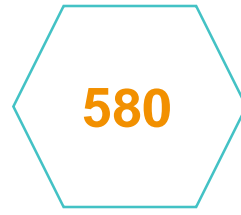
### LACROIX City in figures



years of existence



in turnover



employees



public and private clients

- **15%** of turnover generated internationally
- **6** industrial production sites in Europe
- **6** international and overseas subsidiaries
- **30** distributors worldwide
- **5** R&D centers
- **4.6%** of turnover reinvested in R&D/year

