Efficient traffic flow

Collecting traffic data for real-time action, future planning, and simulations

TRAFFIC AND
URBAN MOBILITY

AXIS COMMUNICATIONS

Data drives sustainable traffic

As urban populations grow and mobility needs increase, optimizing traffic flow becomes essential for building smarter, greener cities. Addressing these challenges calls for innovative technologies that can gather, analyze, and respond to data. Axis cameras, equipped with deep-learning analytics, transform into smart sensors that collect data alongside transmitting video. The data can be used to inform immediate actions and provide long-term data for urban planning and simulations.

Traffic planners can analyze data from Axis cameras to identify the causes of recurring queues, track accident hotspots over a year, or understand how closing the city center to vehicles impacts traffic flow. Data on vehicle types, average speeds, and traffic density offers valuable insights for optimizing road layouts and traffic flow. Creating an efficient traffic flow reduces congestion and lowers air pollution. As data collection enables smarter urban planning, it prepares cities for a future that balances mobility needs with environmental responsibility.

Optimizing traffic flow in real time

Data is the foundation for creating a more efficient traffic flow. By collecting and analyzing traffic data in real time, cities can gain insights into where congestion is forming, where accidents occur, and what actions can be taken immediately to improve flow. This approach allows for dynamic traffic adjustments, either automatically by traffic management systems or traffic operators, easing bottlenecks and improving operational efficiency across the entire road network.

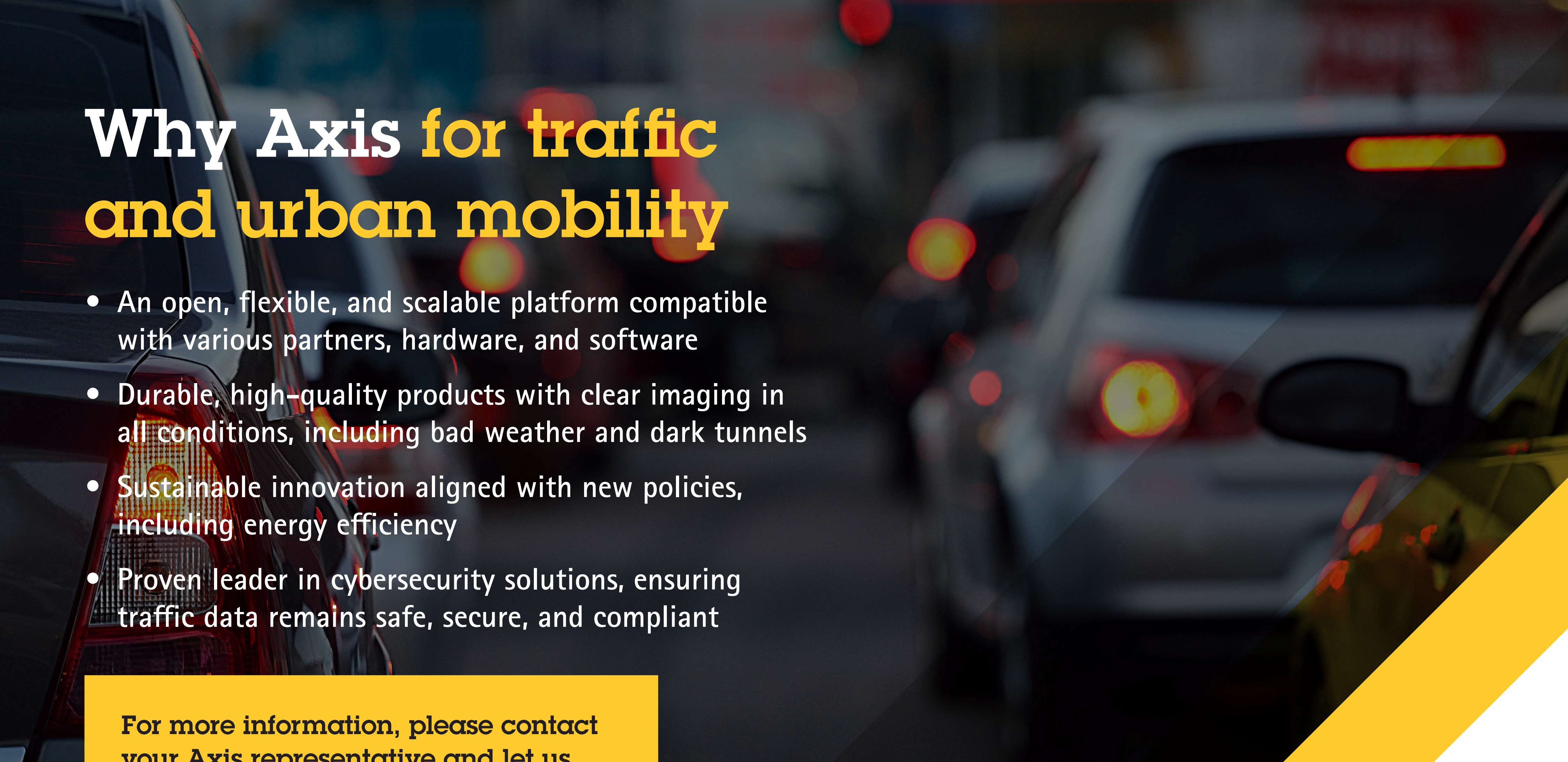
Measuring traffic flow in real time helps manage congestion and lower emissions at critical points like intersections, where adaptive traffic signals can reduce wait times. Cameras and sensors monitor traffic patterns, allowing quick responses to accidents, such as rerouting traffic. Parking also plays a key role – up to 30% of city traffic can be caused by drivers searching for parking spaces. Real-time parking data can guide drivers directly to available spots, cutting gridlock, lowering emissions, and enhancing the driving experience.

AXIS Q1686-DLE Radar-Video Fusion Camera offers next-level detection and visualization

Data for future planning and simulations

The same data collected for immediate action can enable cities to make business intelligent decisions for the future. When collecting data over time, patterns like accident-prone spots or congestion points emerge, guiding better traffic planning. Axis cameras as sensors provide rich data for simulations like digital twins – digital replicas of cities – that allow urban planners to test changes, such as adding parking or public transport. By seeing the results in simulations, urban planners can make informed decisions on infrastructure changes. In fact, those cities that use digital twins save money by doing these simulations before they rebuild roads.

If traffic improves, with a better flow of vehicles, public transport, and scooters, so does air quality. Using data is an invaluable tool to not only solve today's traffic challenges, but also lay the groundwork for sustainable, efficient mobility in the future.



Why Axis for traffic and urban mobility

- An open, flexible, and scalable platform compatible with various partners, hardware, and software
- Durable, high-quality products with clear imaging in all conditions, including bad weather and dark tunnels
- Sustainable innovation aligned with new policies, including energy efficiency
- Proven leader in cybersecurity solutions, ensuring traffic data remains safe, secure, and compliant

For more information, please contact your Axis representative and let us know how we can support your needs.

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