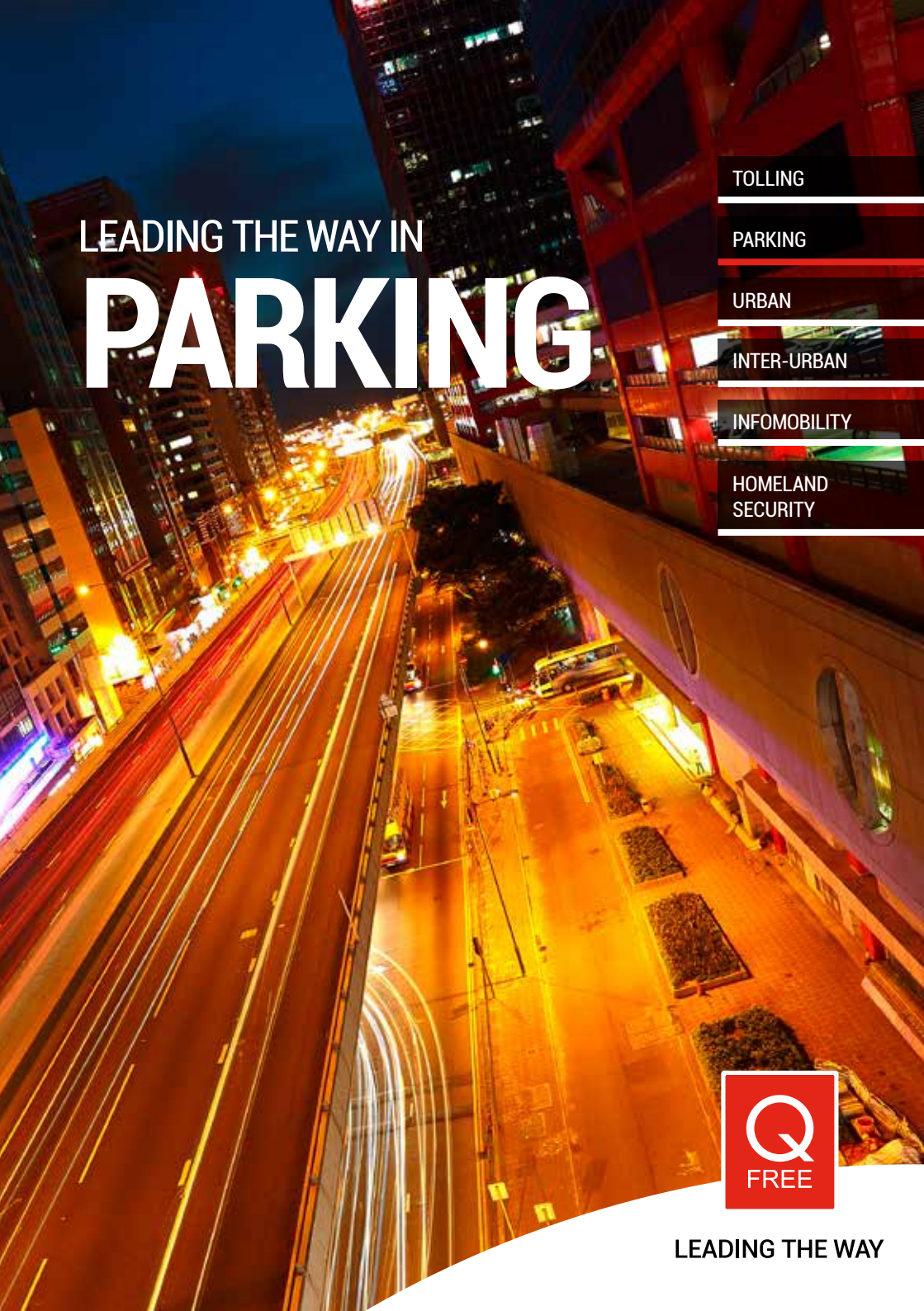
LEADING THE WAY IN
PARKING
TOLLING
PARKING
URBAN
INTER-URBAN
INFOMOBILITY
HOMELAND SECURITY
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PARKING MANAGEMENT

Up to a third of all traffic in urban areas is generated by vehicles looking for somewhere to park. The need to address parking-related congestion and pollution has given rise to sophisticated Car Park Management Systems (CPMS). These provide accurate real-time information on the locations and availability of parking, and can have a very positive effect on congestion, pollution and overall quality of life.

Q-Free's CPMS are state of the art. They use technology which can remove the need for barriers, as well as cashless payments systems to maximize customer convenience and choice. They can be supplied as standalone systems or combined with other local traffic management and access control systems to provide a holistic urban traffic and parking management capability.

Parking guidance system, The Globe, Sweden

TECHNOLOGY

Car park management systems

Q-Free's CPMS control all aspects of parking management — real-time operations; back office applications such as payment services, account handling and enforcement; interfacing with the internet and other external resources; and integration with other traffic management systems.

Automatic Licence Plate Recognition (ALPR) technology provides a positive vehicle identification capability at entrances and exits, and enables both traditional with-barrier as well as barrier-free parking. This minimizes delays for customers entering or exiting parking facilities.Highly accurate ALPR images provide positive identification of vehicles and/or account holders, and are highly resistant to revenue leakage.

Q-Free's CPMS support a range of payment solutions. Both account and non-account customers can pre- or post-pay online, or pay at the parking facility. Within parking schemes, ALPR and state-of-the-art touchscreen parking meters enable ticketless and cashless payment once positive identification of a vehicle and its owner has been achieved. During rush hours and other busy periods, grace periods for post-payment online are possible. Cash payment solutions are also offered.

Should enforcement be necessary, the high-quality images captured by Q-Free's ALPR systems are legally actionable and citations can be generated automatically by the CPMS.

Parking operators can take on responsibility for all aspects of their schemes' operation, including data and account handling. However, Q-Free also offers its CPMS as a cloud-based software solution priced at a monthly cost per site. This enables Q-Free customers to manage their capital/operating expenditures and to take advantage of Q-Free's expertise in image interpretation.

Parking guidance systems

Parking Guidance Systems (PGS) combine sensor, processing and communications technologies to provide highly visible real-time information on parking availability.

Vision-based technology is used to monitor the areas in and around parking facilities. Within parking facilities, overhead ultrasonic technology is used to determine individual space occupancy and availability. For on-street parking schemes, in-ground sensors using ultra-sideband radar are deployed. Sensors can be linked wirelessly and provide accurate coverage of very high numbers of individual spaces.

LED-based variable message signs provide constantly updated statuses at key decision-making points: on-street; at garage entrances; and on each parking level. Multi-colored LEDs integrated into the overhead sensors show whether individual spaces are free, occupied or reserved. Q-Free offers both hard-wired and wireless PGS, maximizing deployment flexibility.

As well as communicating parking availability and precise location via on-street and in-facility displays, Q-Free's PGS can also push information out via the internet and smart device applications.

Car park management system, The Globe, Sweden

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