

Intelligent parking solutions on the go

With more than thirty years of experience, Q-Free ASA, is leading the way in Intelligent Transport Systems (ITS). The Norway-based company is on a mission to create intelligent solutions for efficient, safe, and environmentally friendly transportation based on innovative technology and open platforms. According to Kristina Bergstad, Vice President Service Line Parking, and Renate Vogel, Commercial Product Manager Parking at Q-Free, the company's parking solutions also help to solve America's growing parking problem.



From the start, Q-Free has focused on creating opportunities through solving significant challenges related to traffic and mobility. In the mid-80s, the company created the world's first full-speed, nonstop Electronic Toll Collection system to minimise operational costs and maximise funds for building new infrastructure. Since then, it has leveraged its experience in toll collection to create a future oriented company that delivers complete ITS which contribute to solving the tremendous traffic challenges today's society is facing.

In 2016, commuters in Los Angeles alone lost 170 hours due to traffic, resulting in a cost of \$345 per driver in wasted time, fuel and increased emissions. At any time, 30% of vehicles

on surface streets of major cities are looking for parking, adding not only to congestion but also to emissions. Ms. Vogel says: "Through innovative solutions, we aim to reduce this waste of resources and allow people to spend their time and money on valuable and meaningful experiences rather than being stuck in traffic."

While a range of new players is entering the ITS ecosystem and the industry is expanding at an accelerating pace, Q-Free is working on many exciting projects with both new and more traditional partners with the ambition of forging a significant position within this evolving ecosystem. "One example is our upcoming launch of a new ground-

breaking Narrow Band Internet of Things (NB-IoT) outdoor sensor," highlights Ms. Bergstad. "Apart from being robust with a long battery lifetime and extremely high detection accuracy, its dual detection makes this disruptive technology. The sensor has been successfully tested in collaboration with one of the world's largest telecom companies, Telenor, and will get a modernised user interface with data stored in the public cloud. This data can be used for predictive analysis on occupancy, revenue and other functionalities and consequently change the way operators and consumers plan their parking operations."

Q-Free's vision of changing the movements of life reflects how- through innovative technology and open platforms- the company aims to create efficient, safe and environmentally friendly transportation that instead of entrapping people in traffic, brings convenience and control back to their journeys and movements within their cities and regions.

Ms. Bergstad explains: "Over the years, Q-Free has acquired a number of companies across the globe that are leaders in a variety of ITS fields. The combined wealth of industry experience and knowledge from these acquisitions forms our complete ITS portfolio with five service lines. With a broad range of technologies and a global presence, we are thinking beyond the traditional industry silos and boundaries and work smarter and more closely with many different stakeholders. We are strongly focused on building flexible systems and solutions of modular building blocks

that can communicate, integrate and evolve according to customer needs." Growing investment in Smart Cities and trends such as electrification and self-driving vehicles speed up adoption of ITS around the world. While it's still early days for this industry, Q-Free is developing future fit hardware and software solutions that will continue to add more value for customers, operators and end users. Ms. Vogel comments: "Our change of strategy within parking is moving us from a solely hardware focus to a solution focus, where we, through a combination of hardware and software, create new focus areas in the collaboration."

According to a recent article by USA Today, American drivers devote an average of 17 hours a year searching for available parking on streets, garages, or lots and spend more than \$20 billion a year in garage fees, parking tickets and wasted fuel searching for a spot. Addressing this issue, Q-Free provides several parking solutions. The Parking Guidance Solution (PGS), a product of the worldwide development and deployment of ITS in cities, reduces parking space search times by providing information on where space is available.



Combining traffic monitoring, communication, processing and information dissemination technologies to give drivers dynamic, real-time information about parking availability within controlled areas, the PGS uses a combination of sensors in and around car parking facilities and information provision systems such as on-street and in-facility displays, the internet and smart device applications.

"In the end, all Q-Free's parking solutions have the same objective: to create the most efficient use of parking spaces while increasing stakeholder convenience. Both our parking guidance and NB-IoT sensor systems provide real-time space inventory information which allows drivers and operators to obtain parking information efficiently and easily find available parking," Ms. Vogel concludes.

Q-Free continues to thrive as a technology leader and as a disruptor in many new areas, looking ahead and understanding the trends and markets that will shape the ITS business in the future. Q-Free aspires to be ready today for tomorrow and its vision reflects just that.



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