

# Innovating Toll & Toll Enforcement



# EFKON Company Profile

## EFKON – innovating toll and toll enforcement

EFKON GmbH is a leading provider of electronic toll- and toll enforcement solutions, with particular focus on Multi-Lane Free-Flow (MLFF) applications. Our extensive expertise in all major tolling and enforcement technologies enables us to build smarter, safer, and more efficient solutions that meet the needs of our clients. Our commitment to innovation and customer satisfaction has made us a trusted partner for governments and transportation agencies, as well as private sector operators around the world. Our track record of successful international reference projects demonstrates our capabilities and commitment to deliver reliable turn-key solutions.

EFKON's headquarters are in Raaba/Graz, Austria, with worldwide subsidiaries located in Belgium, Ireland, Malaysia, and India. EFKON Group employs more than 700 experienced people worldwide.

## Member of the STRABAG Group

EFKON GmbH is a member of STRABAG SE, one of Europe's leading construction groups. With its global presence, STRABAG enables us to deliver cutting-edge tolling solutions around the world. STRABAG has bundled related business services into the operative sub-division "Strabag Intelligent Infrastructure Solutions" covering multiple fields of ITS and road safety. Via the resulting synergies and broad range of services we aim to maximize overall utility for our customers.

1 EFKON toll and toll enforcement solutions



2



2 Key Components

# Advanced Technologies and Key Components

EFKON's solutions are based on own key components and technologies for vehicle detection, image capture, classification, and data processing.

EFKON key components are continually improved to assure long term availability and maturity of solutions, while keeping the edge in advanced technology.

## Our portfolio comprises:

- DSRC transceivers microwave 5,8 GHz
- DSRC transceivers active Infrared
- DSRC active Infrared on-board units
- Video/ANPR camera sensor units
- Laser- or camera-based detection and classification technology
- DSRC and ANPR roof units for mobile enforcement vehicles
- Hand-held tablets with DSRC- and camera technology for manual enforcement
- MLFF toll back-office solution



# Excellent Solutions for Toll & Toll Enforcement

All EFKON toll- and toll enforcement applications are realized as free flow services, without stopping or slowing down vehicles. EFKON specializes in the supply of roadside systems and toll back-office solutions for Multi Lane Free Flow (MLFF) toll- and toll enforcement services.

EFKON provides reliable, continuously improved solutions. Based on our extensive experience, technological advancements, and client feedback, our systems are designed to ensure exceptional availability, capture rates, and usability. As we are committed to climate and environmental protection, we deliver sustainable and energy efficient systems.

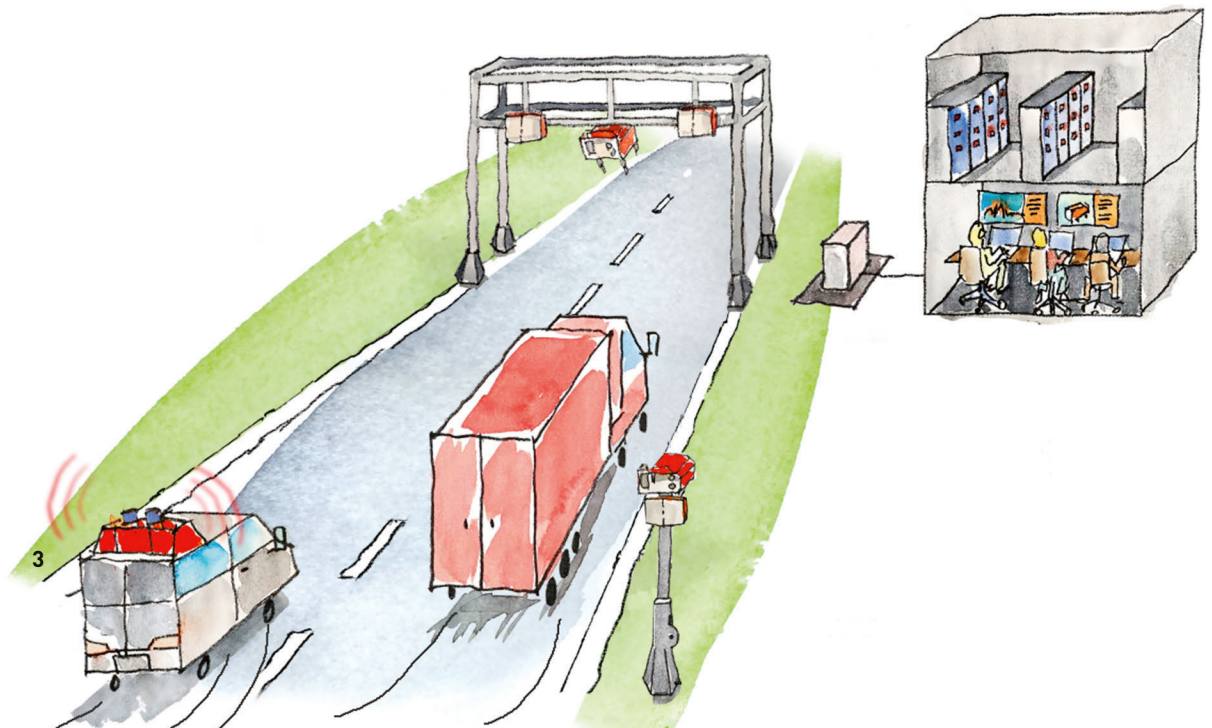
EFKON offers highly adaptable and customizable platforms and solutions to fulfil our customers specific requirements and specifications. As a full-service supplier, we provide services for all project phases including design, implementation, roll-out, long-term technical operation and maintenance.

## SOLUTIONS:

- Stationary MLFF tolling solutions.
- Stationary MLFF toll enforcement solutions
- Toll enforcement vehicle systems
- Flexible toll enforcement systems
- Vignette enforcement solutions
- MLFF toll back-office solution

## TECHNOLOGIES:

- DSRC-based tolling
- Video-based tolling
- Vehicle detection & classification



# International Reference Projects



## Tolling solution for the „AutoPASS” system in Norway

- Implementation, installation, and technical operation of more than 100 charging points (250 lanes)
- Redundant roadside systems for high availability
- Tolling sensor AVT100 and DSRC transceiver as key components of the roadside solution
- EFKON's technical back-office application for data collection, KPI and quality management, key/certificate-, system monitoring-, and configuration management
- Technical operation services, including helpdesk, monitoring, and maintenance



## Tolling solution for the “Touch & Go” system in Malaysia

- Supply of roadside equipment for Infrared-based electronic tolling in Malaysia
- Supply of enhanced Infrared on-board units with display, user interface, and contact-less smart card reading capability (licensed local production in Malaysia)
- Supply of Infrared modules for factory fitting into vehicles
- Hundreds of lanes and millions of in-vehicle units deployed since 1999



## Enforcement solution for the “Viapass” truck tolling scheme in Belgium

- Supply of the entire enforcement system for the GNSS based tolling scheme
- More than 250 lanes with related sub-systems
  - Stationary enforcement
  - Flexible enforcement systems
  - Mobile enforcement vehicle systems
  - Enforcement back-office application
- Technical operation services (helpdesk, monitoring, maintenance)



## Vignette enforcement for ASFINAG car tolling system in Austria

- Automatic sticker - and digital vignette enforcement for ASFINAG, Austria
- Portable high-resolution sensor for mounting on existing highway infrastructures
- Flexible tripod solution for digital vignette enforcement
  - support of random control scenarios in manned operation



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