



**kapsch** >>>  
challenging limits

Kapsch TrafficCom

# **1<sup>st</sup> Institutional Investors' Day.**

*Peter Ummenhofer: Solution Portfolio.*

*January 11, 2017*

## ***Agenda.***

1. Solution Portfolio.

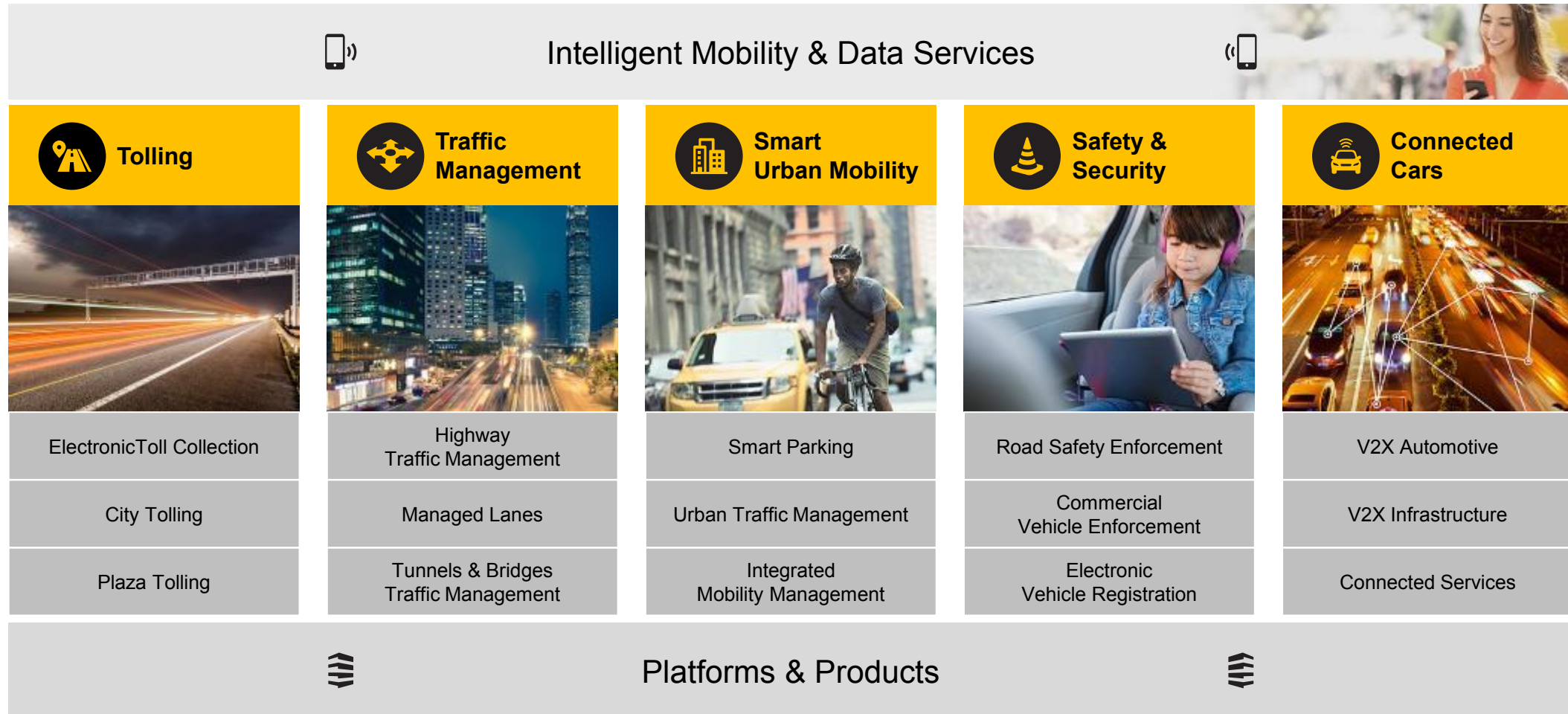
---

2. Solution Center  
“Intelligent Mobility Services”.



***Solution Portfolio.***

# Our portfolio.



# Tolling solutions.



## Highlights

- > Pioneer in ETC solutions (start of activities in the mid 80s)
- > #1 ETC Solutions Provider globally<sup>1</sup>
- > Core technologies and products produced in-house
- > Multi-technology approach



## What we do

- > ETC solution provider
- > Offering:

- In-vehicle Products
- Field Equipment
- Back Office
- System Integration
- Technical & Commercial Operations
- Project Financing

# Applications.



## Multi-Lane Free-Flow Tolling



- > All type of roads: mainly highways, expressways and other main roads
- > All type of vehicles: e.g. HGVs, all vehicles
- > DSRC\* and/or ANPR; Managed lanes



## Satellite Tolling



- > All type of roads from highways to rural roads
- > All type of vehicles: e.g. HGVs, all vehicles
- > GNSS, GSM, GPRS



## Mobile Tolling



- > All types of roads: mainly highways, expressways and other main roads
- > All types of vehicles: e.g. HGVs, light vehicles
- > Adding smartphones as a new tolling product apart from DSRC\* and/or ANPR; Video correlation



## eVignette



- > All type of roads, mainly on high category roads, highways
- > Light vehicles
- > ANPR



## City Tolling



- > Urban areas
- > All type of vehicles
- > ANPR, DSRC\*, GNSS, but mainly ANPR based



## Plaza Tolling



- > Concessions toll roads, high category roads, bridges and tunnels
- > All type of vehicles
- > DSRC\* and/or ANPR

# Traffic management solutions.



## Highlights

- > DYNAC® = world-class ATMS solution
- > 35y+ experience in design, build & maintenance of mission critical automation applications
- > Impressive references
- > V2X enabled



## What we do

- > ATMS solution provider
- > Offering:

---

Back Office DYNAC®

---

Field Equipment (3rd party)

---

System Integration

---

Technical Operation



# Applications.



## Highway Traffic Management



- > Network management
- > Section management
- > Node and object management
- > Traffic information



## Managed Lanes



- > Managed lane systems
- > High occupancy tolling
- > Peak-hour pricing, toll adjusted to average speed or capacity



## Tunnel & Bridges Traffic Management



- > Multi domain SCADA as umbrella system
- > System surveillance
- > Emergency response plans
- > Reversible lanes
- > IDS pre-integration



# Smart urban mobility solutions.



## Highlights

- > Modern urban traffic management suite
- > Impressive urban references
- > Pioneer in Smart Parking



## What we do

- > Vendor of selected urban mobility solutions
- > Offering:

Back Offices (EcoTrafIX, Streetline)

Traffic Light Controllers

Parking Sensors

System Integration

Technical Operations

# Applications.



## Smart Parking



- > Smartphone based user guidance\*
- > Parking availability inference via data analytics and IoT
- > City parking management and enforcement apps

\* enabled by Streetline



## Urban Traffic Management



- > EcoTrafIX™ traffic management software for city
- > Advanced event management tools
- > Data Analysis and Data Mart



## Integrated Mobility Management



- > Integrated Corridor Management
- > Integrated Mobility Platforms

# Streetline™ – smart parking.

How it works.



# Streetline™ – smart parking.

Building blocks.



Streetline Hybrid Smart Parking Platform



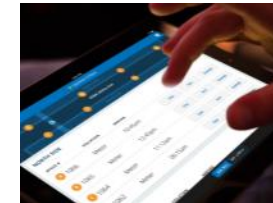
Streetline street-level sensors



Streetline Camera



Streetline ParkingData (APIs & SDK)



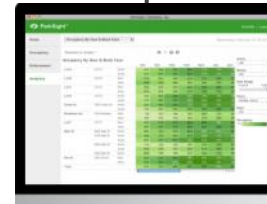
Streetline Guided Enforcement



Parker™ Real-time parking guidance app



ParkEdge™ – Off Street Management



ParkSight Analytics™



ParkerMap – Merchant Web Tool

# Streetline™ – smart parking.

Key reference.



**USA**

Smart  
Parking for  
Los Angeles

## Los Angeles, CA – Sensor Based Scalability

- > LA Express Park™
- > Installation of 7,000+ spaces throughout downtown, Hollywood and Venice
- > Parker
- > Guided Enforcement
- > Parking Status API
- > Demand-Based Pricing
- > ParkEdge
- > Client Services Analytics
- > Guidance of drivers to open parking spaces
- > Informing drivers about policy and pricing for each block



**Innovative parking management strategy**



**2008 - Present**



**Real-Time Parking Data**



**Weekday Turnover:  
+ 59% (car/space/hour)**



**Higher Capture Rate:  
-27% of time limit violations**

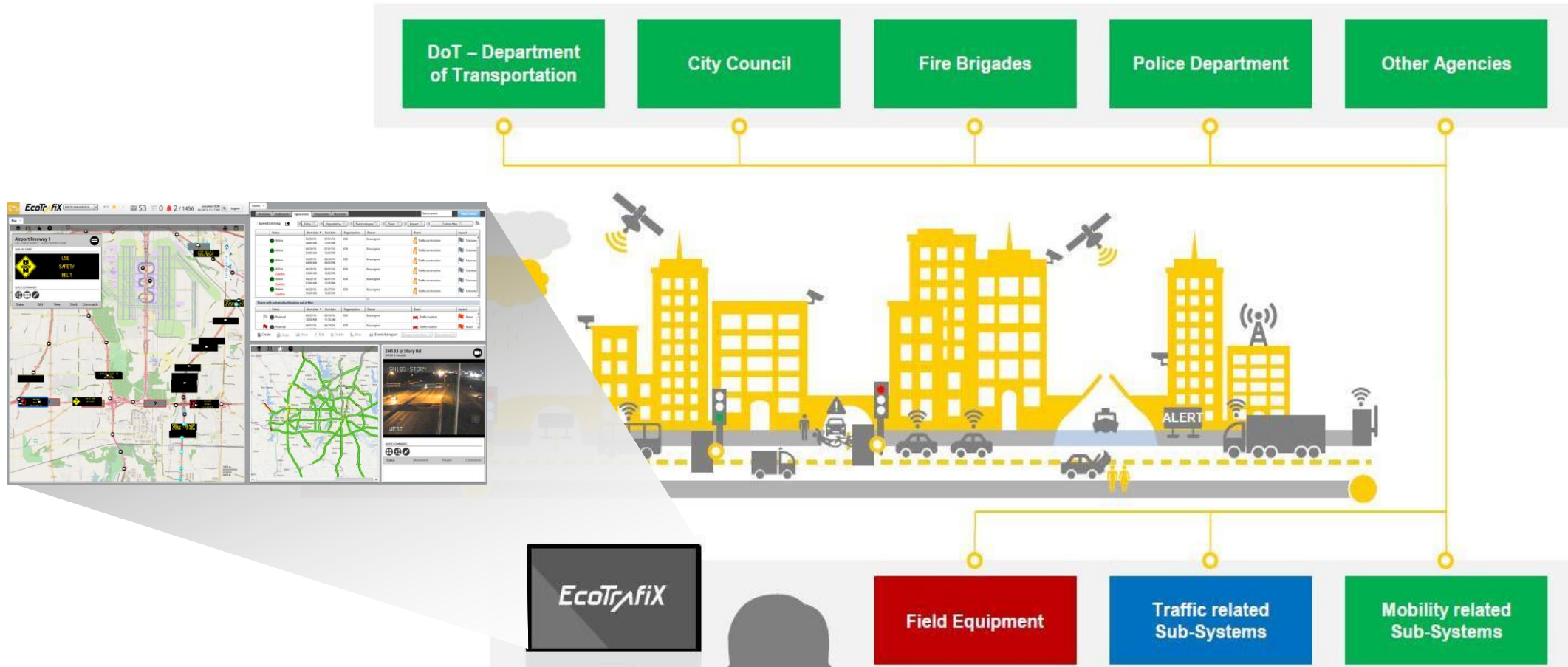


**Enforcement efficiency:  
+87% traffic citation revenue**



# EcoTrafIX™ – urban traffic management.

How it works.



# EcoTrafIX™ – urban traffic management.

Building blocks.



**(2/1293) Traffic construction**  
Dallas-Fort Worth Area, US 75 Southbound(TxDOT Dallas) inW...

**Affected lanes**

**Quick commands**

**Description**  
Traffic - Traffic construction: Due to blocked At Dallas-Fort Worth Area, US 75 Southbound(TxDOT Dallas) at Walnut Hill Ln(8.2). Affected Lanes: Lane 1 (closed), lane 2 (closed), lane 4 (closed)

**Owned by**  
You (sysadmin) (TxDOT Dallas)

**Created by**  
sysadmin (TxDOT Dallas)

**Start**  
10/00/14 10:33 PM

**End**  
10/00/14 10:33 PM

**STATUS**   **Devices**   **Plans**

**J75N260**

**PLANS**

**J75N260**  
Major Incident between Quailyn-Renner exit and Plano Pkwy exit

**RICHARDSON ACTIONS (1 TASKS)**  
Launch immediately after the beginning of the plan

Activate Flex Group 19 and monitor...

**PLANO ACTIONS (1 TASKS)**  
Launch immediately after the beginning of the plan

Activate Flex Group #19 and monitor...

**TXDOT ACTIONS (1 TASKS)**  
Launch immediately after the beginning of the plan

DMS\_HOV75NB@Midpark

**EcoTrafIX™ Suite**

**EcoTrafIX™ Controller**

**EcoTrafIX™ Software Suite**

**Services**

## Urban Traffic Management

**EcoTrafIX™ Command**

**EcoTrafIX™ Expert**

**EcoTrafIX™ Mobility**

# EcoTrafIX™ – urban traffic management.

Key reference.



**USA**

The  
US-75 ICM  
Project,  
Dallas,  
Texas.

## US-75 Integrated Corridor Management, Dallas, Texas

- > Comprehensive EcoTrafIX™ solution for global corridor-wide transportation operations
- > Multi-agency collaboration
- > Multi-modal traveler information
- > Set-up a shared and collaborative map-based system
- > Implementation of global and multi-modal traffic improvement strategies
- > Increasing the corridor throughput
- > Improving the travel time reliability and incident management



**3% Improvement in Travel Time Reliability**



**740,000 Person-Hours of Travel Time Savings p.a.**



**28-mile US-75 corridor from downtown Dallas, north to SH 121**



**12 surrounding cities within the Dallas-Fort Worth region**



**10-Year Net Benefit of \$264M (or Benefit-Cost Ratio of 20:1)**



**More than 220,000 passenger per day**





# Safety and security solutions.



## Highlights

- > Portfolio of selected enforcement solutions
- > Market leader in South Africa in Road Safety Enforcement
- > High performance solutions for commercial vehicle enforcement



## What we do

- > Vendor of selected safety & security solutions
- > Offering:
  - Enforcement Back Office
  - Enforcement Field Equipment
  - Back Office
  - System Integration
  - Technical & Commercial Operations



# Applications.



## Road Safety Enforcement



- > Facilitating the enforcement of motoring and traffic laws



## Commercial Vehicle Enforcement



- > Credential & safety enforcement
- > Ensuring carrier compliance with laws and regulations



## Weigh-in-Motion



- > High-speed weight measurement
- > Vehicle preselection for checkpoints
- > Bridge protection
- > Traffic statistics solutions and/or Enforcement



## Electronic Vehicle Registration



- > Centralized management of vehicle registration data
- > Automated monitoring for registration compliance

# Connected cars solutions.



## Highlights

- > Forerunner in V2X technology
- > Participant in V2X “light-house” projects (e.g. European Corridor Project, Platooning Trails)
- > Very active in standardization (e.g. ETSI)
- > Member of the Car-2-Car Communication Consortium



## What we do

- > Envisioned vendor of V2X In-Vehicle equipment to the Automotive Industry
- > Vendor of V2X infrastructure solutions
- > Envisioned vendor of selected connected cars services
- > Offering:

In-vehicle Products

RF-Field Products

V2X-enabled ATMS Back Office

# Applications.



## V2X Automotive / In-Vehicle Products



- > Evaluation Kit EVK-3300 for automotive entry up to A-prototype
- > ITS G5 / WAVE communication stack



## V2X Infrastructure / Roadside Products



- > Roadside unit for pilot projects:
  - V2X enabled traffic management on highways
  - Urban V2X infrastructure for smart city solutions
- > ITS G5 / WAVE communication stack



## Connected Car Services



- > Envisioned services for the automotive industry (e.g. tolling, parking etc.)

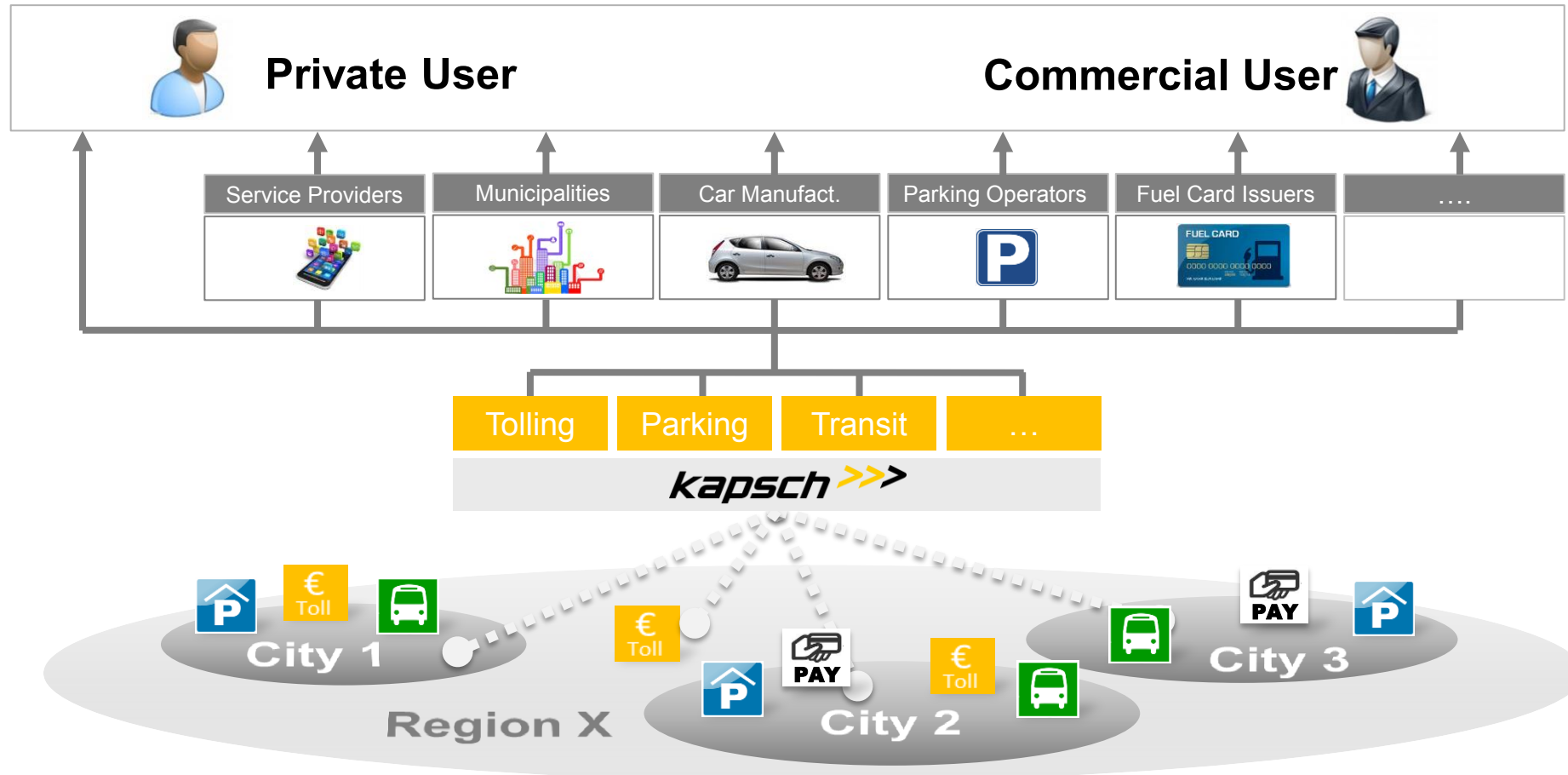


***Solution Center:  
Intelligent Mobility Services.***

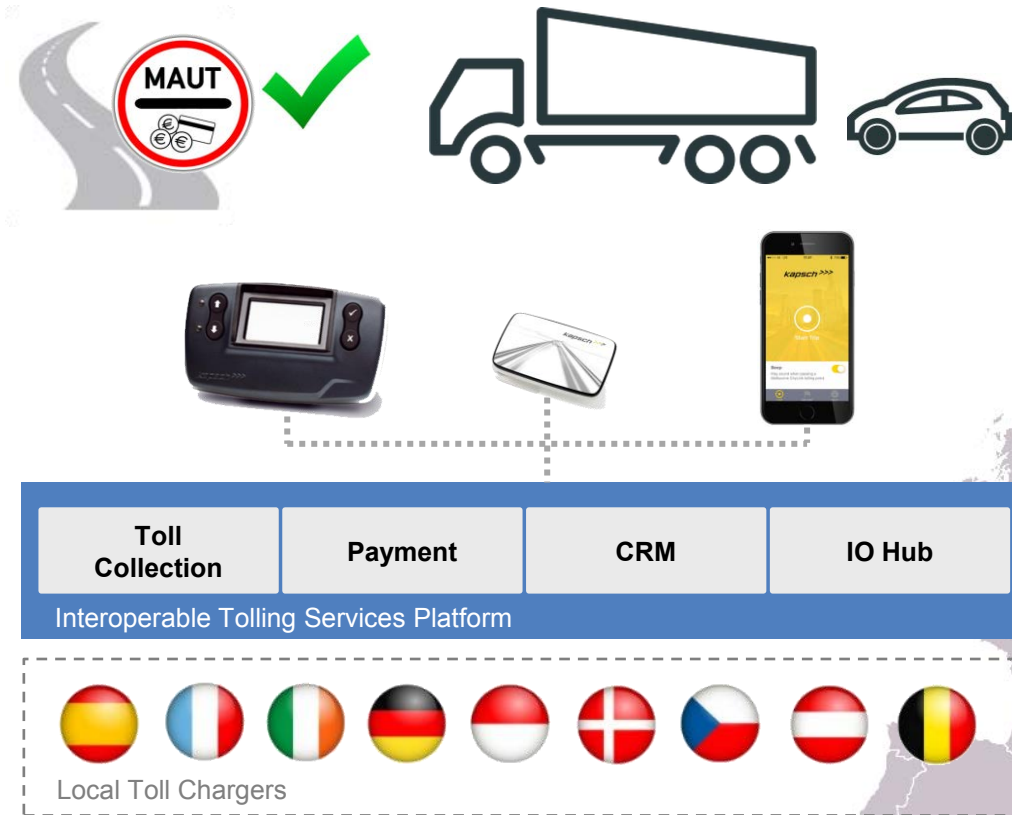
# Solution Center IMS: Overview.

<b>Mission</b>	<ul style="list-style-type: none"><li>&gt; Establish IMS services business (Strategy 2020)</li><li>&gt; Leverage on new mobility trends (e.g. connected cars, multi-modal mobility)</li></ul>
<b>Day 1 Portfolio</b>	<ul style="list-style-type: none"><li>&gt; Tolling services<ul style="list-style-type: none"><li>▪ Connected vehicle services</li></ul></li><li>&gt; Multi-modal mobility services<ul style="list-style-type: none"><li>▪ Commercial vehicle services</li></ul></li></ul>
<b>Organization</b>	<ul style="list-style-type: none"><li>&gt; Dedicated division (“Solution Center”)</li><li>&gt; 2 start ups functioning as “launch pads” (tolltickets, FluidTime)</li></ul>
<b>Responsibilities</b>	<ul style="list-style-type: none"><li>&gt; Service portfolio strategy</li><li>&gt; Services definition &amp; go-to-market planning</li><li>&gt; Marketing &amp; business development</li><li>&gt; Portfolio sourcing &amp; development</li><li>&gt; Partner management</li><li>&gt; Services operations</li></ul>

# Strategy: Enable intelligent mobility services.



# Tolling services.



## Facts & Figures

- Headquarter: Rosenheim, Germany
- Founded in 2007
- Ownership: 65% Kapsch TrafficCom, 35% CEO
- 20 employees

## Portfolio and business model

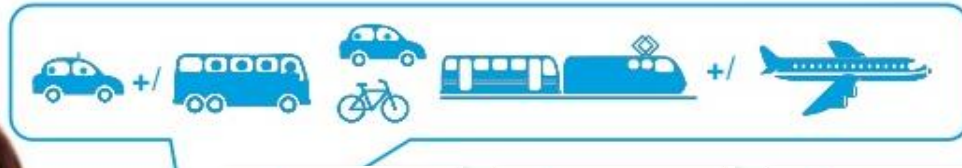
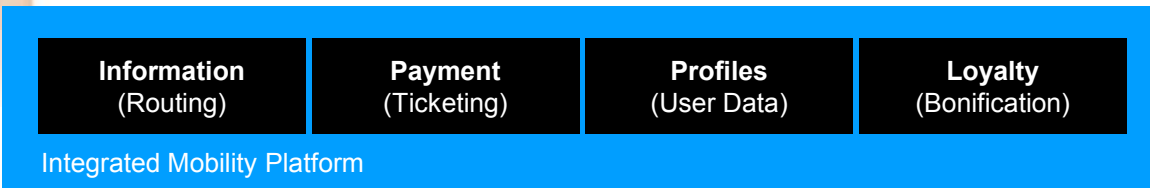
- Tolling services for private users (vignettes and distance tolls) in Europe
- White labelled toll services for fuel card issuers and other HGV services providers in Europe

## References

- Trafineo (BP, ENI, Statoil)
- DKV
- OMV



# Multi-modal mobility services.

Enabling Smart Mobility.   
Fluidtime

## Facts & Figures

- Headquarter: Vienna, Austria
- Ownership: 75% Kapsch TrafficCom, 25% CEO
- 20 employees

## Portfolio and business model

- Integrated Mobility platforms
- System provision, integration and technical operation
- White-labeled multi-modal mobility services (planned)

## References & Awards

- SMILE (Vienna)
- Qando (Vienna, Linz, Salzburg, Klagenfurt, Graz)
- Bonvoyage (Horizon 2020; Bilbao, Oslo, Rome)
- UITP Award (Category: Customer Experience)
- Staatspreis Mobilität (Austria)



***Thank you  
for your attention.***

**Peter Ummenhofer**

Executive VP "Solution Center IMS"

**Kapsch TrafficCom**

Kapsch TrafficCom AG

Am Europlatz 2

1120 Vienna, Austria

P +43 50 811 2500

[Peter.ummehofer@kapsch.net](mailto:Peter.ummehofer@kapsch.net)

[www.kapsch.net](http://www.kapsch.net)

**Please Note:**

The content of this presentation is the intellectual property of Kapsch AG and all rights are reserved with respect to the copying, reproduction, alteration, utilization, disclosure or transfer of such content to third parties. The foregoing is strictly prohibited without the prior written authorization of Kapsch AG. Product and company names may be registered brand names or protected trademarks of third parties and are only used herein for the sake of clarification and to the advantage of the respective legal owner without the intention of infringing proprietary rights.