Road User Charging & Tolling Around the World

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SUSAN BUSE
Tolling Trends in North America

Susan Buse
Background

• United States:
  – over 100 operational toll facilities, mostly roads with bridges primarily along the borders and in major ports such as New York and San Francisco
  – many more projects under construction or consideration
  – some states evaluate every new project as potentially tolled

• Canada:
  – about 20 pay-as-you-go routes, mostly bridges or tunnels, many along the Canada-U.S. border
  – only two tolled roads (the 407 in Ontario and the Cobequid Pass in Nova Scotia)
  – New projects are being considered in Vancouver and Toronto
Principal Drivers of Tolling Growth

• Regional population growth and roadway congestion continuing
• Federal and state/provincial funding sources have not kept up with needs
• Counties and cities are finding their own answers to solving the problem
• Operational demands increasing on existing toll facilities
Primary Trends

• HOV to HOT lane conversions and networks of managed lanes in the US are growing rapidly
• AET conversions had been slowing down, recent resurgence and more under study
• Traditional P3 concessions have nearly stopped but availability payment structures and managed lane facilities continue to attract private interest in both US and Canada
• Barriers to interstate tolling starting to crumble
Operating and Planned Managed Lane Projects in the U.S.
Potential Express Lane Networks

By 2020

By 2025
Managed/HOT Lanes Opening per Year

*Figure includes only initial opening year of facilities in US. Some facilities that initially opened as an HOV conversion have later had expansions open as new capacity. Current as of 10/15/14 (projects anticipated to open by end of 2014 are included)
AET Conversions per Year

*Figure includes only toll road, bridge, and tunnel AET facilities (not managed/HOT lanes) in US. Current as of 10/15/14 (projects anticipated to open by end of 2014 are included)
P3 Projects Opening Per Year

*Data based on TIFIA project records; Figure includes all toll facilities in US and Puerto Rico. Current as of 10/15/14 (projects anticipated to open by end of 2014 are included)
U.S. States with Potential New Toll Roads or Extensions
U.S. States with Potential New or Reconstructed Toll Bridges or Tunnels
U.S. States with Potential New Tolled Managed Lanes
Fertile Ground for New Tolling Initiatives

- Potential Toll Roads
- Potential Toll Bridges and Express Lanes
- Potential Toll Roads and Express Lanes

Potential New Projects:
- All 3 Types

VANCOUVER
TORONTO
Potential Growth in Toll Road Mileage

- Traditional Toll Roads
- Express Toll Lanes
- Interstate Conversions

Graph showing growth in toll road mileage from 2014 to 2030.
Thank You

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NEIL TOLMIE
The Tolling of Existing Roads -
The South African Experience
Overview

- Introduction
- Legal Stipulations
- Toll Road Financing
- Public Opinion
- General Matters
- Conclusion
Introduction

- The tolling of existing roads is a challenging concept
- In South Africa various new and existing roads have been tolled
- Toll Roads were introduced in 1984
- Grown from an initial 27 kms to 3 120 kms
- 1 832kms Agency Funded and 1 288kms Concessioned
- Toll Roads = 15% of the Primary Road Network (21 403 kms)

CAN EXISTING ROADS BE TOLLED?
Legal Stipulations

Tolling was enacted in 1983

Two crucial stipulations which gained public support for the tolling of new and existing roads

These are:

- Tolls collected can only be spent on toll roads

- The requirement that all toll roads must have an alternative route. (Economic sustainability and competing routes?)
Toll Road Financing

The Period Mid 1980s to Mid 1990s

Two funding models adopted:

• The Loan Supportable by Revenue (LSR) model
  – Capital redemption and interest payment grace period: 8 to 10 years
  – Funding shortfall covered by interest free National Road Fund (NRF) loans – toll roads were “subsidised”
  – This allowed lower tolls to be levied

• Public Private Partnerships
  – In 1986/7 the first PPPs were introduced and subsequently cancelled due to legislative non compliance
Toll Road Financing - Continued

The Period Mid 1990’s to Date

Four policy changes introduced:

(1) A change to LSR Model
   - No NRF loans (self-funding)
   - Thus higher tolls required - mitigated by four factors.
     • The Motorway Bonus Factor (safety and convenience factor)
       - Studies indicated: Perceived Benefit increased by 70% (LV) and 30% (HV)
     • Upgrading of portions of the road pre-tolling
     • Known traffic volumes - reduces project risk - lower toll tariffs
     • The introduction of various discount structures
The Period Mid 1990’s to Date
Four policy changes introduced:

(2) The re-introduction of Public Private Partnerships (PPPs)
   • During 1998 /2000 three 30 year PPPs awarded - performing successfully
   • To date no further PPPs awarded - lack of political support for Government Policy

(3) Unsolicited Bid Policy
   • Three proposals received - two placed on open tender but not awarded due to political resistance
The Period Mid 1990’s to Date
Four policy changes introduced:

(4) Open Road Tolling
- In 2010 SANRAL embarked on the first urban open road tolling project - 185kms of existing urban freeways
- Opening delayed for a number of years - court cases
- Finally opened in December 2013
- The future of the project? - many users are still resisting payment
Generally there are five mechanisms that can be used to limit adverse public opinion to tolling:

1. Alternative routes
2. Major upgrading of the existing road
3. Toll tariffs/discounts – early disclosure
4. Alternative modes of transport - choices
5. An informed public
General Matters

• Toll tariffs annually adjusted with published consumer price index
• Light and heavy vehicle tariff ratios changed from 1:2 to 1:4 in the mid 1990’s
Conclusion

- Existing roads can be tolled
- Create a fair and robust legal framework
- Develop an equitable financing model
- Extensive upgrades of the existing road required – value for money!
- Keep the public informed - public opinion matters!!
- There is no fairer alternative - the user pays
- Despite the difficulties, tolling has on balance been successful in South Africa
Mexico

Moving to National Interoperability

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Interoperability Goal

Enhance and Simplify road user experience
• More than 7,500Km of Federal Toll Roads
• More than 77 Federal Highways and 44 Federal Bridges

Mexican Toll Network

- >7,500Km of Federal Toll Roads
- >77 Federal Highways and 44 Federal Bridges

Fuente: Casetas - Red de Cuota Federal SCT 2012
* Multiprotocolo o Uniprotocolo
ETC Service Providers

Telepeaje Chihuahua (Gob. Chihuahua)

Quickpass (ISOLUX)

ICA

ID Mexico y PASE (I+D)

Televía (OHL)

IAVE (TEDISA)

IBI Group (GDL-COL)

Cise (ATL-MAR)

Viapas (PINFRA)

ETC lanes

TAGS

8 Service Providers
ETC in Mexico

- >2.5 million customers
- 250 million ETC transactions in 2013
- 15% increase per year

- ETC on average represents:
  - 20% of toll payment
  - 40% of revenue
  - 20% of users are post-pay
  - 80% are prepaid
Federal Norms for Tolling and ITS

• On June 27 of 2013, norm established for communications protocols for tolling antennas and tolling transponders.

• The norm standardizes that tolling antennas must read 6C (air interface communications at 902-928 MHz, 2400-2483.5 MHz & 5725-5850 MHz) and TDM (Time-Division Multiplexing).

• The norm standardizes that tolling transponders must exchange electronic information utilizing 6C (air interface communications at 902-928 MHz, 2400-2483.5 MHz & 5725-5850 MHz) and TDM (Time-Division Multiplexing).

ISO 18006B (Although not mentioned in the norm, continue use, but stop selling beginning of 2015)
Technical Interoperability Approach

- Phase 1 – August 2014 – IAVE (Capufe) and IAVE (I+D) to mutually accept each others tags in their roadways.
- Phase 2 – September 2014 – Televia (OHL) and Viapass (Pinfra) will join the interoperability scheme.

Discontinue Use:
- ISO 10374 ATA (Replace all tags in use by end of 2014)
- ISO 18006B (Continue use, but stop selling beginning of 2015)

New Norm:
- ISO 18000 6C
- TMD (ie IAG)
Data Interoperability Approach

**Phase 1: Service Provider Agreement**
- Peer to Peer
- Transaction Transfer
- Active Tag List

**Phase 2: Central Server**
- Active Tag List
- Transaction List
- Adjustment List
- Reconciliation List
- Configuration List

**Phase 3: Clearing House**
- Central Reconciliation of Lists
- Due Payments between ETC Providers

November 2014 | 2015 | 2015
Crossing Borders

- The SCT (Mexico) and USDOT (USA) in preliminary discussions for a bi-national interoperability scheme.
- Goal would be to include Mexico in the 2016 USA National Interoperability.
THANK YOU
RICARDO PINTO PINHEIRO
ROAD USER CHARGING & TOLLING AROUND THE WORLD

A GLIMPSE OF SOUTH AMERICA

International Bridge, Tunnel and Turnpike Association
IBTTA Global Summit

October, 19 - 21
Prague, Czech Republic
A BRIEF OVERVIEW ON THE STATE-OF-THE-ART OF ELECTRONIC TOLL COLLECTION IN FIVE SOUTHERN AMERICAN COUNTRIES

COLOMBIA
PERU
CHILE
BRAZIL
ARGENTINA
Highway concessions in Argentina started in 1990, with the decision to turn over to private entities the operation of 18 federal highways.

A special mention must be made to the highway accesses to the City of Buenos Aires, with a daily traffic volume exceeding 1,000,000 vehicles.

<table>
<thead>
<tr>
<th>PRESENT SITUATION</th>
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<tbody>
<tr>
<td>PAVED NETWORK</td>
</tr>
<tr>
<td>CONCEDED NETWORK</td>
</tr>
<tr>
<td>CONCESSIONAIRES</td>
</tr>
<tr>
<td>CONCESSIONAIRES W/ETC</td>
</tr>
<tr>
<td>ETC FREQUENCY</td>
</tr>
<tr>
<td>TAGS IN OPERATION</td>
</tr>
<tr>
<td>FREE FLOW or VMT</td>
</tr>
</tbody>
</table>
CHILE

Chile was the first country in South America to have a National ITS Architecture, completed in August 2003.

A focus must be cast on the City of Santiago free flow multi lane system, largest urban system in the world, comprising five highways and one tunnel, with a total length of 190 km and an investment exceeding US$1.5 billion.

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<tr>
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<tr>
<td>FREE FLOW</td>
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<td>VMT</td>
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</tbody>
</table>
The Ministry of Transport and Communications of Peru has disclosed a plan to implement 12 new concessions in 4,740 km of highways, with a US$ 3 billion investment.
Colombia has announced what is probably the most ambitious highway concession program in South America: intervention in 5,700 km, with 35 new concessions by 2018.

**PRESENT SITUATION**

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
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<tr>
<td>PAVED NETWORK</td>
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<td>4,000 km</td>
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<td>CONCESSIONAIRES</td>
<td>26</td>
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<tr>
<td>CONCESSIONAIRES W/ETC</td>
<td>7</td>
</tr>
<tr>
<td>ETC FREQUENCY</td>
<td>915 MHz</td>
</tr>
<tr>
<td>TAGS IN OPERATION</td>
<td>100,000</td>
</tr>
<tr>
<td>FREE FLOW or VMT</td>
<td>No</td>
</tr>
</tbody>
</table>
At this moment the electronic toll collection system in Brazil is in a migration process from 5.8 GHz to 915 MHz. This process should be completed by August, 2017.

### PRESENT SITUATION

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<tbody>
<tr>
<td><strong>PAVED NETWORK</strong></td>
<td>200,000 km</td>
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<td><strong>CONCEDED NETWORK</strong></td>
<td>16,300 km</td>
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<td><strong>CONCESSIONAIRES</strong></td>
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<tr>
<td><strong>CONCESSIONAIRES W/ETC</strong></td>
<td>48</td>
</tr>
</tbody>
</table>

5 concessionaires are in process of installation.

| **ETC FREQUENCY**   | 5.8 GHz / 915 MHz              |
| **TAGS IN OPERATION** | 4,200,000 / 900,000          |
| **FREE FLOW**       | No                             |
| **VMT**             | Yes                            |

Limited segments in 4 concessionaires. (“point – to – point”)
ETC started in Brazil 20 years ago, in 1994.

Four service providers are in operation:
- Customer’s account administration
- Tag suppliers
- Customer service

VMT – 3 segments are in operation in the State of São Paulo since 2012. A 4th segment started last month.

- **SP-340** 24 km, 60,000 users
- **SP-75** 63 km, 4,100 users
- **SP-360** 3 km, 400 users
- **SP-332** operation started Sept. 15th

Free Flow
- Always a tempting proposition
- But toll evasion responsibility is not yet regulated
Utilizing the data collected from these five countries, a preliminary information about South America is:

- Conceded highways are found practically all over the continent.
- Electronic toll collection, with different modalities and communication protocols, is a common practice.
- With the exception of Chile, free flow is still a promise for the future.
- VMT is practically inexistent, with only four short deployments in Brazil.
Thank you

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GLOBAL UPDATE SESSION
A GLIMPSE ON SOUTH AMERICA

International Bridge, Tunnel and Turnpike Association
IBTTA Global Summit

October, 19 - 21
Prague, Czech Republic
MLFF Operation: From Quantity to Quality

October 2014
01/ Overview
ASCENDI GROUP

Holding company acting in transport infrastructure concessions and O&M business worldwide
ASCENDI GROUP in the World

Around $1 Bi assets under management

Over 3,000 km of motorways and roads, including 1,400 km operated solely by Ascendi

Participation in the capital of 16 Concessionaires

Sustained activity in Portugal, Spain, Mexico, Brazil and Mozambique
Asset Management
PORTUGAL 78% of concessioned Assets

10 road and 1 railway concessions
1.600 km

7 motorways  | 1400km  | Under Ascendi’s single Brand

Bridges – River Tejo Crossing  | 19,5km  | Major Shareholder

Light Metro  | 20km

Motorway  | 178km

Motorway  | 37km
INTERNATIONAL 22% of concessioned Assets

- Mexico | Vera Cruz
  - 60km | 50%

- Brazil | Sao Paulo
  - 415km | 50%

- Mozambique | Tete
  - 700km | 40%

- Spain
  - 75km | 50%

- Spain
  - 71.5km | 15%

5 road concessions 1.400 km
03/ Services | Toll Collection

03.1/ Experience
03.2/ Systems
03.3/ Operations
03.4/ References
03.5/ Facts and Figures
03.6/ Innovations
Experience

Significant experience and know-how in all toll collection systems

AET (MLFF)

Toll collection systems enabling Traffic free flow

Traditional Toll Collection

Open or closed system, manual and electronic

LARGEST EUROPEAN PRIVATE OPERATOR OF AET SYSTEMS FOR ALL TYPES OF VEHICLES
Experience

**AET**

- 150 Million annual transactions
- 950 M€ of collection services backlog
- 5 systems in full operation
- 128 collecting points

Pioneer in AET (MLFF)

**Traditional Tolling**

- Manual and automatic lanes
- Electronic Free Flow Single Lanes
- 69 toll plazas

15 years know-how

---

**Shareholding of 20% in Via Verde**

- (Portuguese TAG issuer)

- >3.5 Million TAGs issued
- 65% of Portuguese cars equipped with TAGs
- 300M ETC transactions
# Systems

## Architecture

### ROAD SIDE EQUIPMENT (RSE)

- **AET**
  - ETC (DSRC technology)
  - VTC (ALPR technology)
  - 128 Tolling Points

- **Traditional**
  - Open or close configuration
  - Manual and Automatic lanes
  - Electronic (SLFF)
  - 69 Toll Plazas

### OPERATIONAL BACK-OFFICE (OBO)

- Integrates all tolling operations
  - Prepared for technologies from different vendors (DSRC, RFID)
  - Transaction validation
  - Second level OCR
  - Image review
  - Trip aggregation engine
  - Toll charge calculation
  - Mobile enforcement BO

### COMMERCIAL BACK-OFFICE (CBO)

- Integrates all tolling operations
  - Account Management
  - Contact and Walk-in centre
  - CRM
  - Billing and notice issuing
  - Dunning management
  - Payment processing
  - External Interface (links)
Systems

AET | Main Features (Portugal)

**DIMENSION**
- Largest European private operator of a multi-vehicle category AET (MLFF);

**FEASIBILITY**
- High speed motorways – DSRC technology;
- More than 99,99% system availability;
- 99,80% of vehicles detection (no speed restriction);
- Disaster Recovery System for OBO and CBO;

**OPERATIONAL FLEXIBILITY**
- Electronic Tolling using OBU identification; or
- Video Tolling, using ALPR in association with OCR engine;

**TRANSACTION AGGREGATION**
- Unitary transactions of a journey aggregated into a single transaction, where:
  - Customer able to check travelled journey;
  - Optimized transaction costs;
# Operations

<table>
<thead>
<tr>
<th>PROCESS &amp; TOLLING TECHNOLOGY</th>
<th>RECEIVABLES</th>
<th>TOLL OPERATIONS</th>
<th>CONTRACTS MANAGEMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Systems Monitoring</td>
<td>Receivables Management</td>
<td>Traditional Tolls</td>
<td>Financials</td>
</tr>
<tr>
<td>Process Optimization</td>
<td>Invoicing/Notification</td>
<td>Customer Service (call-center/front-desk/net)</td>
<td>Revenue Assurance</td>
</tr>
<tr>
<td>Project &amp; Technical Sup.</td>
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<td>Image Review</td>
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<td>Document Management</td>
<td>Reporting</td>
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<td></td>
<td>24/24h Remote Technical Supervision</td>
<td>Quality Assurance</td>
<td>Contracts Management</td>
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<td></td>
<td>Mobile Enforcement</td>
<td></td>
</tr>
</tbody>
</table>

All AET operations as service provider to Portuguese Road Agency
## Operations

### AET | Payment Methods (Portugal)

### NATIONAL VEHICLES

**Direct Collection (without surcharges):**
- Fully Electronic payment through OBU Issuer (debit card)
- Pre-payment with client identification
- Anonymous pre-payment admitted

**Post Payment Collection (with surcharges):**
- Anonymous post-payment using license plate - available for payment at Post Offices and Payshop network

### FOREIGN VEHICLES

- Interoperability with Spain (vehicles OBU equipped)
- “Easy-Toll” system (automatic registration at the borders, using credit card account)
- Electronic Vignette (casual user)

### ENFORCED COLLECTION

- Enforced Collection for non payment (with fines – fiscal offense)
- Mobile Enforcement
Facts and Figures

700K Transactions processed daily

Transaction mode: 80% ETC, 11% VTC, 9% Manual

5.2M km (aggregate distance travelled by all users) charged per day

1.7M customer accounts managed

Invoices/notifications: 42.5k processed per business day
Facts and Figures

Effectiveness Vs Efficiency

Call Center

Documents inflow

Manual photo validation

2012 2014

2012 2014
Facts and Figures

Effectiveness Vs Efficiency

Toll revenues

2012 2014

Toll costs

2012 2014

FTE`s

2012 2014
Facts and Figures

Effectiveness Vs Efficiency

Cost per Transaction

---

2012 2014
Innovations

Process harmonization and business optimization

Tolling as a service

Support for independent and different business models

Ascendi’s System not dependent upon the Road Side Equipment vendors and technologies

Different technologies already used (DSRC, ALPR, Traditional) from different vendors, all integrated

DEVELOPMENT OF AN INDUSTRY SOLUTION SUPPORTING THE CORE PROCESSES OF TOLL COLLECTION
**Innovations**

<table>
<thead>
<tr>
<th>Flexibility through Different Charging Schemes</th>
<th>Stability and technical strength of SAP software</th>
<th>Scalable Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional, SLFF, AET, open or closed systems</td>
<td>Multi-company, natural integration with external entities</td>
<td>No limitation in sizing</td>
</tr>
</tbody>
</table>

**DEVELOPMENT OF AN INDUSTRY SOLUTION SUPPORTING THE CORE PROCESSES OF TOLL COLLECTION**
04/ Recognitions
Recognitions


Klaus Schwab, World Economic Forum
Recognitions

Technological | AET

- **Best New Business Application (Commercial Back Office System)**
  2011

- **Best technological and business value projects (MLFF Project)**
  2011

- **Best technological and business value projects (Embedded Technology for Mobile Brigades)**
  2013

Quality Management

- International Organization for Standardization (ISO) quality management certification for all Ascendi branded companies

Human Resources

- Recognition for applying some of the best human resource management practices
05/ Ascendi’s Added Value
05/ Ascendi’s Added Value

Toll Collection Projects
Applying Expertise Intelligently

Project Management – Coordination – Quality Assurance
Ascendi

Context
- Business Model
- General Design and Requirements
- Procurement

Suppliers
- Detail Design
- Installation
- Commissioning

RSE
- kapsch
- Q FREE
- MultiToll

OBO
- accenture
- Q FREE

CBO
- accenture
- SAP
Thank You!

www.ascendi-group.com
ZOLTÁN VARGA
We are on the right track!

Introduction of HU-GO, the Hungarian distance based electronic toll system
by Zoltán Varga, general manager of Toll Service PLC

October 2014, Prague
Hungary

- 35,919 mi²
- 9.9 million inhabitants
- Capital: Budapest

Road network:
Highways: 704.55 mi
Motorways: 127.13 mi
First class roads: 1,347.95 mi
Second class roads: 2,894.99 mi
Other roads: 14,285.36 mi

All together: 20,602.73 mi
Tolling history of Hungary – 1999-2006

- Toll plazas
- Concessioners
- Demolish of toll plazas
- Standardized toll system for Hungary
- Time based vignette
Tolling history of Hungary – 2006-2013

- 2006 SMS purchase
- 2008 No physical vignette, only AET
- 2011 e-business
Tolling history of Hungary – 2013-2014

• 2013 HU-GO
• Distance based AET
Toll road network until 1st July 2013

- 1 039,55 mi long toll domain
- 9 highways
- 42 main road sections
- 5,37% of the Hungarian road network is tolled
Toll road network - 2013

• 4,039.53 mi long toll domain

• 2,243 tolled road sections

• 20.87% of the Hungarian road network is tolled
HU-GO toll declaration modes

- **Self-declaration!**
- **Route ticket:** recommended for ad-hoc users
- **No registration**
- **On board unit:** recommended to frequent users
  - 22 audited Toll Declaration Operators (TDO)
Nationality split of paid tolls

<table>
<thead>
<tr>
<th>Nationality</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>HR</td>
<td>57%</td>
</tr>
<tr>
<td>SLO</td>
<td>17%</td>
</tr>
<tr>
<td>TR</td>
<td>5%</td>
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<tr>
<td>RU</td>
<td>4%</td>
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<tr>
<td>BG</td>
<td>3%</td>
</tr>
<tr>
<td>SK</td>
<td>2%</td>
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<tr>
<td>B</td>
<td>2%</td>
</tr>
<tr>
<td>UA</td>
<td>2%</td>
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<tr>
<td>CZ</td>
<td>2%</td>
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<tr>
<td>SLO</td>
<td>1%</td>
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<tr>
<td>HR</td>
<td>1%</td>
</tr>
<tr>
<td>OTHER</td>
<td>1%</td>
</tr>
<tr>
<td>OTH</td>
<td>5%</td>
</tr>
</tbody>
</table>
Registered users, vehicles and OBUs

Vehicles: 147,436; OBUs: 80,262; Customers: 41,625

250 customers, 5,000 vehicles are in post-paid scheme
Toll income

92% of the Hungarian users and 26% of the foreign user are using OBUs

OBU vs. Route ticket: 25% - 75% at start, 60% - 40% now

Million USD

Paid by OBU

319.70

377.01

7/1/20... 8/1/20... 9/1/20... 10/1/20... 11/1/20... 12/1/20... 1/1/20... 2/1/20... 3/1/20... 4/1/20... 5/1/20... 6/1/20... 7/1/20...
Enforcement

- Without stopping
- Continuous (0-24) inspection
- With the help of fixed gantries and mobile vehicles
- Supplying real-time data towards the central system
- Continuous online connection with the central system
Mobile enforcement support vehicles

- 45 mobile units (currently)
- Currently ~500 check points countrywide
- 7/24 inspection in 3 shifts
- Flexible, random appearance anywhere on the tolled sections
Fixed toll enforcement gantries

- 74 stationary cross sections (101 gantries)
- 47 along main routes
- 27 along expressways
- 24-hour operation
- License plate recognition on the front and the back, overview picture
- Side camera picture to determine the number of axles of the vehicle category (see photo)
Fixed toll enforcement gantries
• Commenced by the Hungarian Police
• Unauthorized road usage
• Administration of penalty
• On the spot activity, foreigners
• Without stopping, objective responsibility
• Range of penalties 140 000-165 000 HUF (600-700 USD)
• A short video will demonstrate the applied enforcement and data server technology
THE SYSTEM
HU-GO innovations

Route ticket
- Flexible purchase solutions
- Flexible route planning solutions
- No need for registration
- Online access

On Board Unit platform
- Already installed GPS trackers can be used
- No need to pre-finance the OBUs by the state
- Open platform for all GPS based fleet management providers

Enforcement with ANPR
- 98.5% on ANPR and category recognition
- Supporting road safety, traffic and transportation management, violation management, vehicle control and crime prevention
Facts & figures

- 100 million USD one time investment – 14,3% of the annual toll revenue
- 2,5 month of implementation – 2,5 month return of investment
- 45 million USD annual operational cost – 6,5% of the annual toll revenue
- Monthly average sales volume of route tickets: 645 500 pieces
- Monthly average number toll declarations of route section (total): 31 500 000 pieces
- Monthly average vehicle checks done by enforcement support: 2 600 000 cases
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