Worker and Work Zone Safety
Striking a Balance

Presented by Neil Reed, Kapsch TrafficCom North America
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Discussion Topics

- Who is Kapsch?
- The Work Zone Challenge
- The “Old” Ways
- Where We’ve Come
- Where We Need to Go
Kapsch TrafficCom is Part of the Kapsch Group.

- Kapsch is a globally operating technology group.
- Headquartered in Vienna, Austria – founded in 1892.
- Presence in 40 countries on all continents.
- ~$1.2 billion of revenues with 5,266 employees in 4 future markets:

  - Intelligent Transportation Systems (ITS) conducted by Kapsch TrafficCom
  - Railway & Public Operator Telecommunications conducted by Kapsch CarrierCom
  - Information & Communication Technology (ICT) conducted by Kapsch BusinessCom
  - Smart Energy conducted by Kapsch Smart Energy
Kapsch TrafficCom (KTC) at a Glance.

- KTC is a provider of Intelligent Transportation Systems (ITS).
- **Headquartered** in Vienna, Austria – founded in 1991.
- Presence in 33 countries on all continents.
- $670 million of revenues with more than 3,000 employees.
- Transdyn was acquired by Kapsch TrafficCom IVHS Inc. on January 15, 2014

Core business in Electronic Toll Collection (ETC) for All Electronic Tolling (AET) traffic.

End-to-End Solutions as a One-stop Shop (Components - Design & Build - Operations).

References in 44 countries on all continents with 20 ETC AET systems.

Listed on Vienna Stock Exchange since 2007 with free float at 38.1%.
Customer Segments and Market Drivers.

Operator/Authority-related ITS
- Governments | authorities | concessionaires

Vehicle-related ITS
- Car makers and their suppliers

User-related ITS
- Information service providers

Industry-related ITS
- Industry and insurance companies

Market Drivers
1. Funding for infrastructure projects.
2. Reducing congestion.
3. Increasing traffic safety & security.
4. Enhancing vehicle & fleet productivity.
5. Increasing comfort expectations of travelers.

V2V - Vehicle-to-Vehicle  
V2I - Vehicle-to-Infrastructure
Who is Transdyn/Kapsch?

Decades of experience integrating solutions for Bridges, Tunnels, and Tollways including...

- Tampa-Hillsborough Expressway Authority – Reversible Express Lanes
  - Reversible Lane ITS/ATMS (“DYNAC™”)
  - Interface between DYNAC™ and reversible roadway ETC gantry.
- I495/I95 Express Lanes (Northern Virginia/National Capital Region)
  - Provide ATMS including C2C interfaces between DYNAC™ and ETC BOS (Back Office System) and ETC DPS (Dynamic Pricing System)
  - Manage Dynamic Pricing Messaging (Toll$) on DMS
  - Manage LUMS (Lane Use Management System)
- LBJ/NTE (Texas)
  - Provide ATMS including interfaces between DYNAC™ and ETC BOS and ETC DPS
  - Manage Dynamic Pricing Messaging (Toll$) on DMS
- Lincoln & Holland Tunnels, MTA Bridges and Tunnels, Baltimore Harbor Tunnels, Delaware Memorial Bridge, Downtown/Midtown Tunnels, Boston Central Artery/Tunnel, et. al.

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Who is Transdyn/Kapsch?
The Work Zone Challenge

Maintain safety of workers in work zones while minimizing disruption to traffic!

Motorists
- More Cars
- Accidents
- Frustration
- Aging Roads/Infrastructure
- Lost Time
- $$$

Agency
- Road Repairs
- Construction
- MOT
- Equipment Maintenance
- Weather
- Schedule
- $$$
The “Old” Ways
Where We’ve Come

- Education
  - Media
  - Safety training

- Engineering
  - Infrastructure & Technology
  - Work Zone Management
  - MOT

- Enforcement
  - Electronic signs (speed and message)
  - Fines
Work Zone Safety

- Goal is No Lane Closures for Maintenance
  - No MOT
  - No Technicians on Roadway
  - Walkway Accessed via Bucket Truck on Shoulder
- All Equipment Accessed via Gantry Walkway
  - No in-pavement trigger or classification loops
  - Quick release Devices – Service from Gantry
  - Brackets with Memory – Retains Position
  - All Tools are Tethered
Gantry Solution in the Field – Walkable Gantry
Gantry Solution in the Field – Retractable Arms
Where We’ve Come

Efforts have had a positive and measurable impact!

- Over Last 30 Years, Roadway Work Zone Fatalities have declined nearly 24%. ¹
  - Nationally 1982 – 43,945, 2012 – 33,561
- Roadways are safer…in particular Toll Roads: “Tollroads are 36% safer than free roads…” per IBTTA study. ²
  - Data sources: 39 Tollroads, 30 Toll Bridges, and 6 Toll Tunnels across 20 states
- Motorists and Workers are more aware
- Education, Engineering, and Enforcement are all contributing to safer roads and work zones.

¹ Per Fatality Analysis Reporting System (FARS) maintained by National Highway Traffic Safety Administration (NHSTA)
² “Toll vs Nontoll: Toll Facilities are safer” by Jeff Campbell IBTTA journal TOLLWAYS 2008
Where We Need to Go

Continue to improve work zone safety by...

- applying best practices from tolling and ITS experience
- utilizing technology to monitor and control work zones and surrounding areas, such as:
  - walkable gantries
  - side-mounted equipment (cameras, Microwave Vehicle Detectors)
- deploying assets that minimize worker exposure to live traffic for installation and maintenance
- improve roadway design to reduce maintenance frequency
- expand education about work zone safety
  - through commercial trucking associations
  - work with customers on public outreach and driver education programs
- capture and communicate lessons learned within the industry
Questions