



EasyWay

DATEX II User Forum 20/21 March 2012 - Stockholm

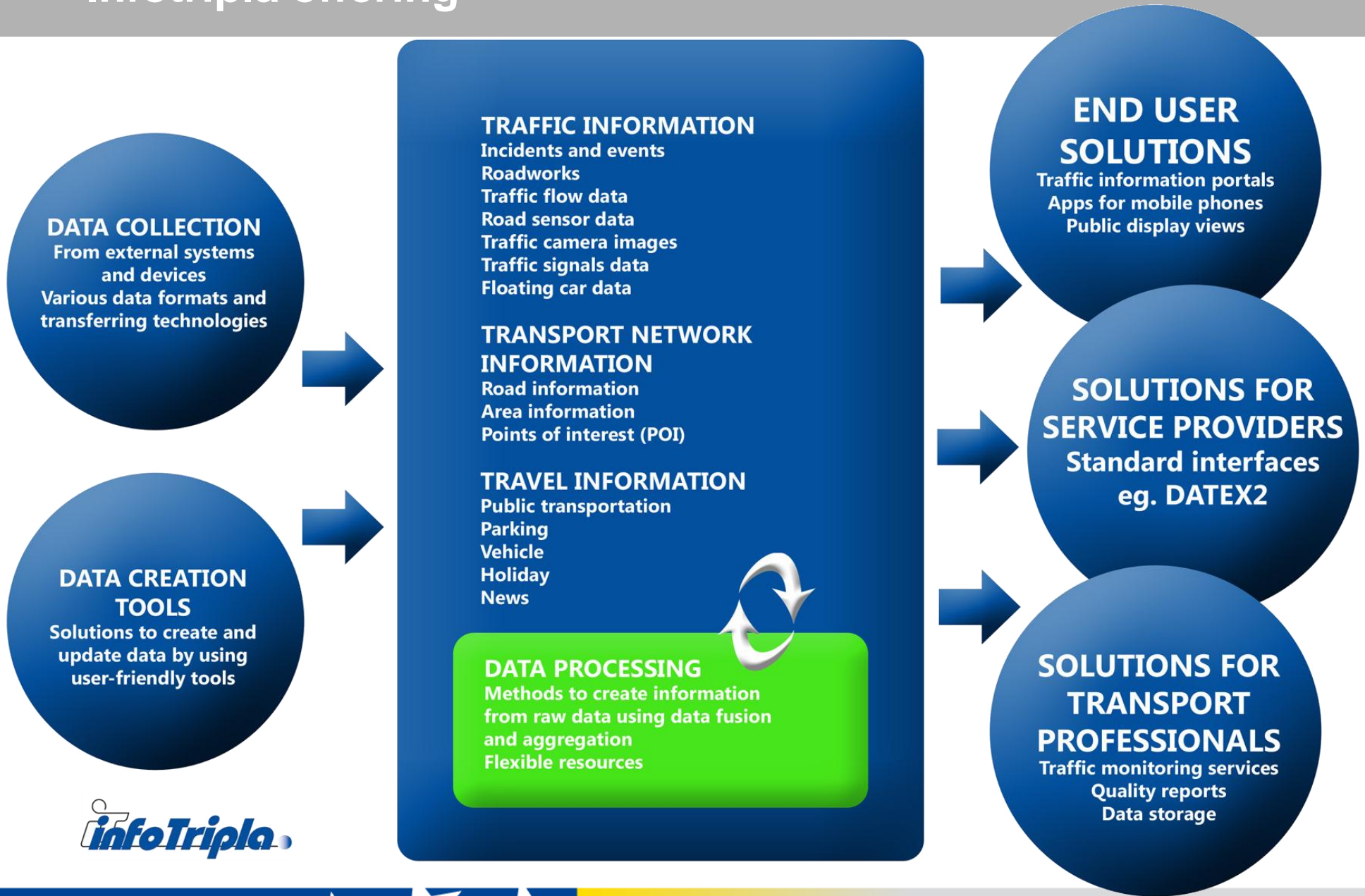
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**Finnish DATEX II Node
Implementation**

- **privately owned**
- **long history in providing traffic information services**
- **active and acknowledged actor in Finnish ITS field**
- **located at Tampere, Finland**
- www.infotripla.fi
- www.datex2.fi



Infotripla offering





DATEX 2 INTERFACES

UNPLANNED EVENTS

Type: Event
Update frequency: 2 minutes
Estimated payload size: 500 K bytes

ROAD CONDITIONS

Type: Event
Update frequency: 2 minutes
Estimated payload size: 50 K bytes

CURRENT ROADWORKS

Type: Event
Update frequency: 2 minutes
Estimated payload size: 1 M bytes

FUTURE ROADWORKS

Type: Event
Update frequency: 12 hours
Estimated payload size: 200 K bytes

TRAFFIC FLOW

Type: Traffic Data
Update frequency: 2 minutes
Estimated payload size: 5 M bytes



Challenge: offer traffic information service

- **Use well established standard**
- **Benefit from DATEX II continuous development**
 - release schedules
 - compatibility
 - Software tool support
 - available documentation
 - robustness
- **international acceptance**
- **promote DATEX II**
 - more acceptance, more potential customers for us

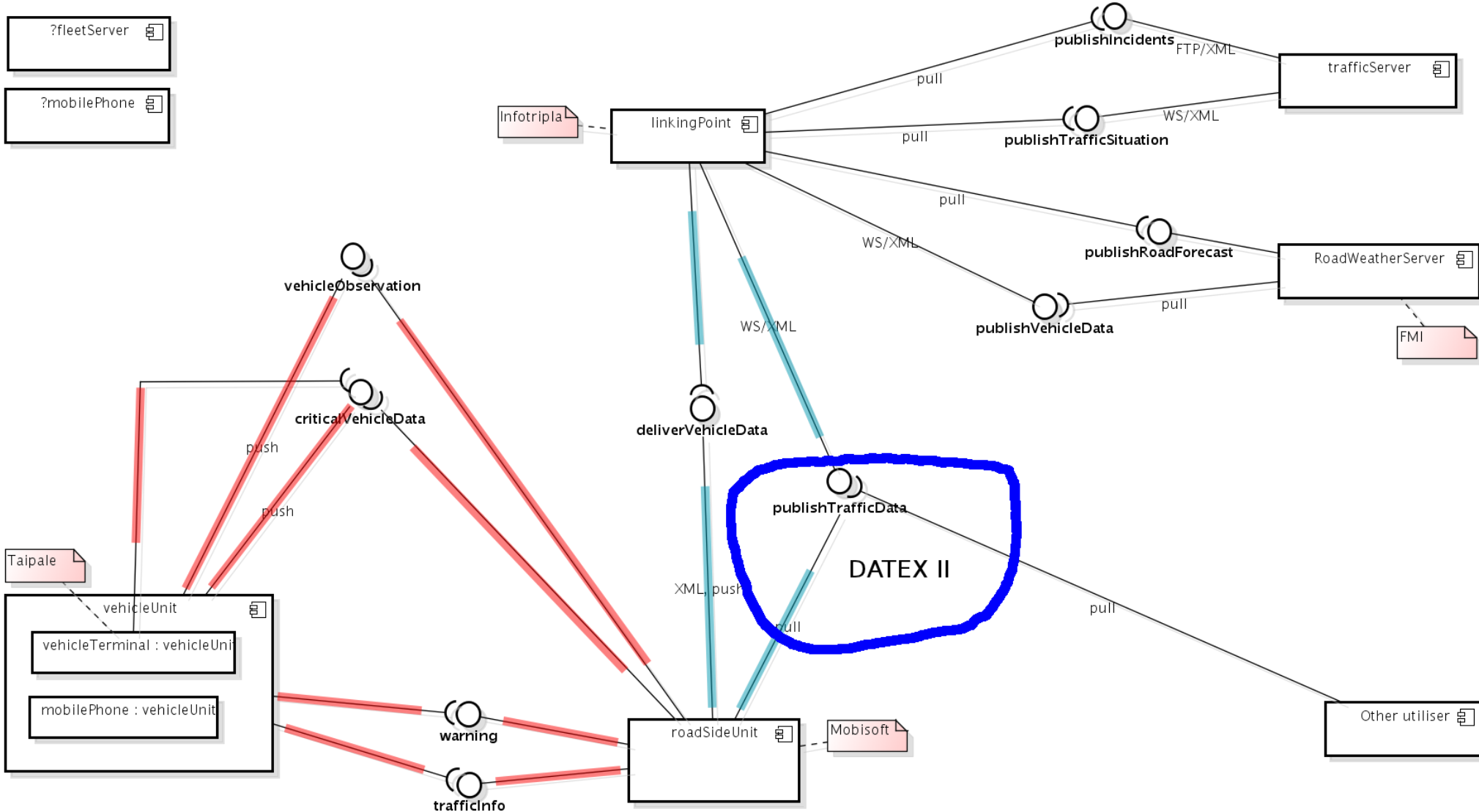


Evolution of our service

- **Start developing DATEX II service at CELTIC project WiSafeCar**
- **Use DATEX II interface in the project**
- **Utilise existing data input feeds and processing knowledge**
- **Understand the commercial need**
 - snapshot view
 - combine many raw data sources into one feed
 - establish a service
 - quality requirements
 - availability requirements
 - documentation (DATEX II doc, feed doc)
 - customer service
- **Establish the service**

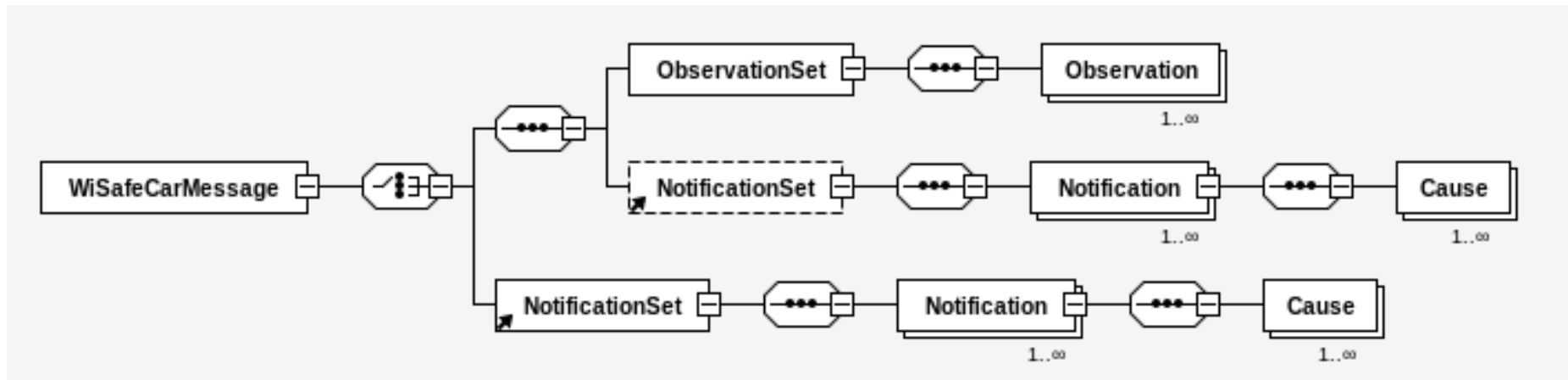
WiSafeCar communication architecture

cmp



WiSafeCar FCD data (location, speed, bearing)

- Instrumented vehicles provide xFCD information
- Observations
 - non-critical
 - temperature measurements etc.
- Notifications
 - alerts, critical information



- **Conversion service of FTA data**
 - Snapshot view
 - roadworks and incidents
- **DATEX II 2.0rc2**
 - No extensions necessary
- **Location referencing follows FTA conventions**
 - Uses Alert-C table version 1.7 (most recent)
 - Linear ref: two points and two offsets
- **Commercial utilisers**
- **Several new utiliser agreement negotiations currently in progress**

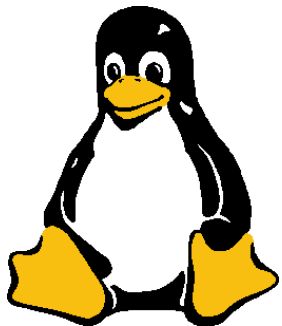


Service provisioning challenge

- **Manage resources**
 - human
 - computation, technology, tools
 - partners
- **Keep up with changes in information input feeds**
 - vital for business
 - sometimes quite challenging
 - format, method, version management
- **Manage changes for utilisers**
 - stability is a must
 - customer satisfaction

Technical implementation details

- **basic access authentication**
- **Apache Axis2/Java (web service)**
- **Apache Tomcat 7**
- **database: PostgreSQL and PostGIS (spatial extension for GIS processing)**
- **Java implementation for content creation**
 - eclipse IDE
 - XMLBeans (xsd -> java classes)
 - subversion version control



- **add more information sources**
 - FTA frost heave (roads that are suffering from freezing and melting)
 - enhance existing data with „own“ data
 - ongoing r&d concerning FCD, FMD and crowdsourcing
- **migrate to DATEX II 2.0**
- **keep own up-to-date -situation of Finnish road network**
 - incidents, fluency, road weather warnings
 - for main roads first
 - refine this data to commercial use for utilisers
- **provide documentation for www.datex2.eu**

- **Wanted: xFCID data from vehicles**
 - low overhead
 - flexible and extensible
 - with coordinate/direction/speed/time information
- **DATEX II**
 - „Various DATEX II location referencing methods in a nutshell“
 - keep up the good work!



Implementation references

- **Digitraffic -service (for FTA)**
- www.oulunliikenne.fi for city of Oulu
- **Google Transit -data processing for city of Oulu**
- **City of Tampere, statistical data processing for traffic light and traffic measurement data**
- **Traffic fluency information (gathering, showing) based on virtual loops**
- **Data collection from local Taxi operator's data, data refinement**
- **DATEX II conversion service from FTA data**

The screenshot shows a web browser window with the URL www.oulunliikenne.fi/liikennekartta;jsessionid=CFD5C05D78754D93A2F700AFF77120E3. The page title is "Oulun seudun liikennetieto". The map displays Oulu, Finland, with various road types and traffic information. A green route is highlighted, and a red route is also visible. A legend on the right side of the map includes the following items:

- Pysäköinti
- Tiesääasemat
- Kelikamerat
- LAM-asemat
- Liikennetiedotteet
- Sujuvuustiedot

The map also shows various landmarks and streets, including Toppilansaari, Hietasaari, Koskikeskus, Myllytulli, Raksila, and Oulun yliopistollinen sairaala. The map interface includes a search bar, a zoom control, and a map style selector (Kartta/Satelliitti).



The screenshot shows the website 'WWW. OULUN LIIKENNE.FI OULUN SEUDUN LIIKENNETIETO'. It features a navigation menu with categories like 'Etsiä', 'Autoliikenne', 'Joukkoliikenne', 'Kävely ja pyöräily', 'Omaliikenne', and 'Muut palvelut'. The main content area includes 'Liikennetiedotteet' (Traffic notices), 'Liikennekartta' (Traffic map), 'Sää' (Weather) for Oulu, and a 'Huolettomasti perille' (Get there safely) section. A 'Mobiiliversion löydät osoitteesta: m.oulunliikenne.fi' link is also present. Below the website screenshot, there are images of a tablet and two smartphones displaying the mobile application interface.



- **source: FTA XML format**
- **output is Google Transit -data**
 - result is seen, when visiting the city in <http://maps.google.com>
 - plan a route
 - select public transport
- **data generated automatically every day**
- **updated (approximately) bi-weekly by Google**
- **same public transport data is used in <http://oulunliikenne.fi> -service**

