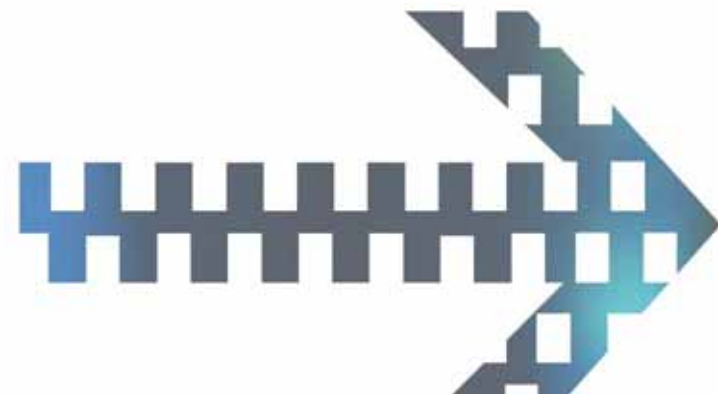




UTMC: beyond plumbing

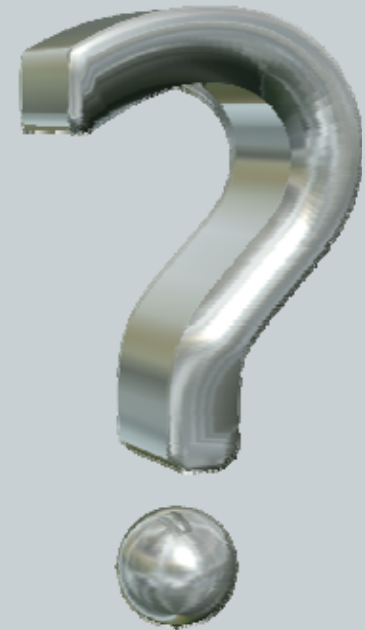
Dr Fraser Macdonald
UTMC Conference 2008
4th December 2008



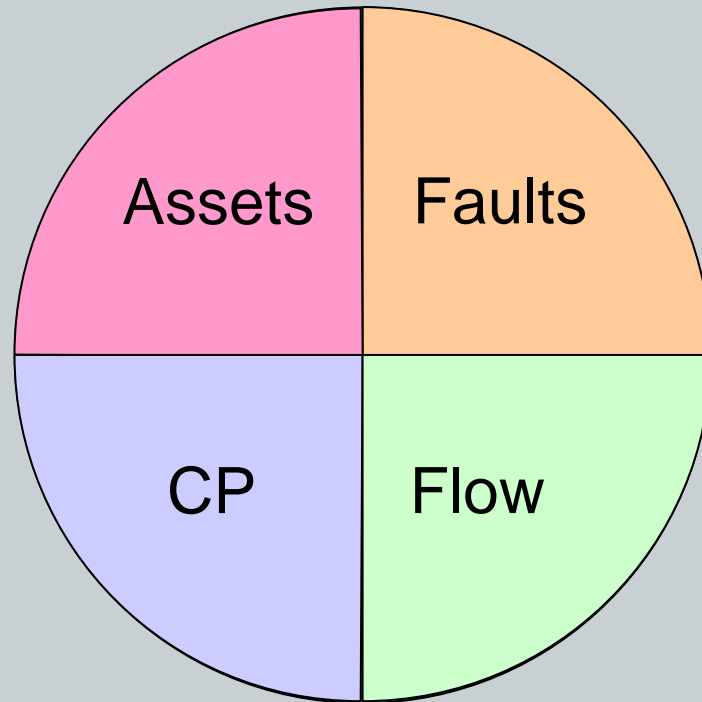
- UTMC has provided a level of interoperability between ITS applications
- Data is passed to the Common Database
 - as part of true supplier/consumer relationships
 - because it must be A Good Thing
- Your Common Database now contains all sort of interesting and useful *goodies*...



- Consider real world problems that you need to solve
- Are there other stakeholders you can bring on board – look for mutual benefits
- Things to do with your data:
 - Analyse your data
 - React to your data
 - Share access to your data
 - Publish your data
 - Fuse your data



Analyse your data:
are you performing? →



*These are not
new, but your
Common
Database provides
a single source of
data for all
systems*

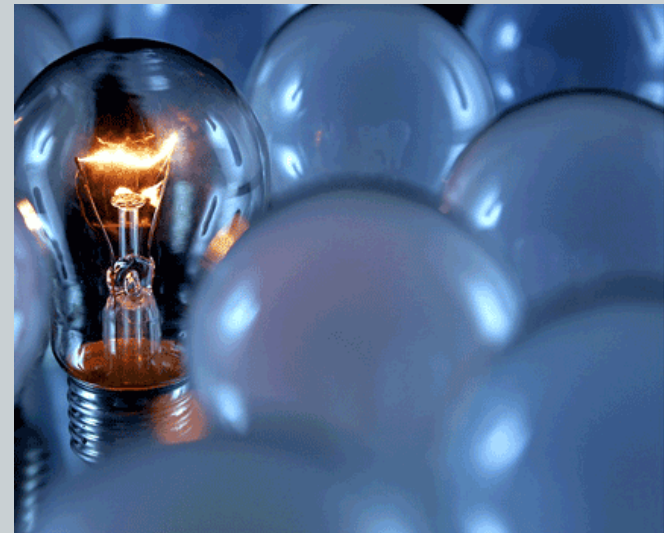
React to your data: strategy management



- Automated responses to situations on the network
- Scenario detection
 - Rule-based, on network and equipment data
 - Persistence, discounting transitory events
- Responses
 - Automatic or semi-automatic
 - Timed or while situation remains in place
 - Invoke commands on equipment or inform stakeholders

React to your data: strategy management →

- Response cleardown
 - Unwind when a set of responses (partially) fails
 - Restore equipment to previous state
- Building useful strategies
 - Build and test mode
 - Microsimulation of response effect prior to implementation
 - Learning systems



Share access to your data: fault management

- Use of the Common Database as a fault management system
- Can be a repository for fault data
 - Both connected and non-connected systems
- Provide your maintenance contractor(s) with direct access
 - Speed fault assignment
 - Improve data capture
 - Share asset data
 - Share inspection data

Publish your data: inform the public








- Your common Database contains a wealth of data that the public should know about
- How can we make this information available?
 - Web
 - Mobile device
 - SMS
- Example: Leeds City Council
 - <http://www.leadstravel.info>

The screenshot displays the Leeds Travel Info website interface. At the top, the Leeds City Council logo is on the left, and the site title "Leeds Travel Info" with the subtitle "Realtime travel information for Leeds" is in the center. On the right, there are links for "Create your personal travel profile" and a "Registered members login" form with fields for "email address" and "password" and a "Submit" button.

Below the header is a navigation menu with links: Home, Travel news, Car parking, Bus, CCTV, Mobile, Links, Help, and RSS. The main content area is divided into several sections:

- Plan a journey:** A section with the text "Get door-to-door directions by public transport and car with Transport Direct". It includes input fields for "From:", "To:", "Date:" (set to 15 Jan 2008), and "Time:" (set to 11:55), followed by a "Go" button.
- Latest Travel News:** A section titled "Latest Travel News" with the text "No news at this time".
- AccuWeather.com:** A weather widget for Leeds, United Kingdom, showing "Rain 6°C" and "RealFeel®: 6°C Winds: NE at 12 kph".
- Map:** A large map of Leeds showing traffic conditions. The map is titled "Select Area:" and "Timescale:" (set to "Next 3 hours"). It includes controls for "Full Extent", "Map", "Satellite", and "Hybrid" views. A prominent red warning box on the map reads: "A64 YORK ROAD ACCIDENT A64 West Yo Road closed eastbound Flyover junction in Leed serious accident. Severity: HIGH". The map also shows various road numbers (A61, A58, A643, A6110) and landmarks like the University of Leeds and Hunslet Business Park.

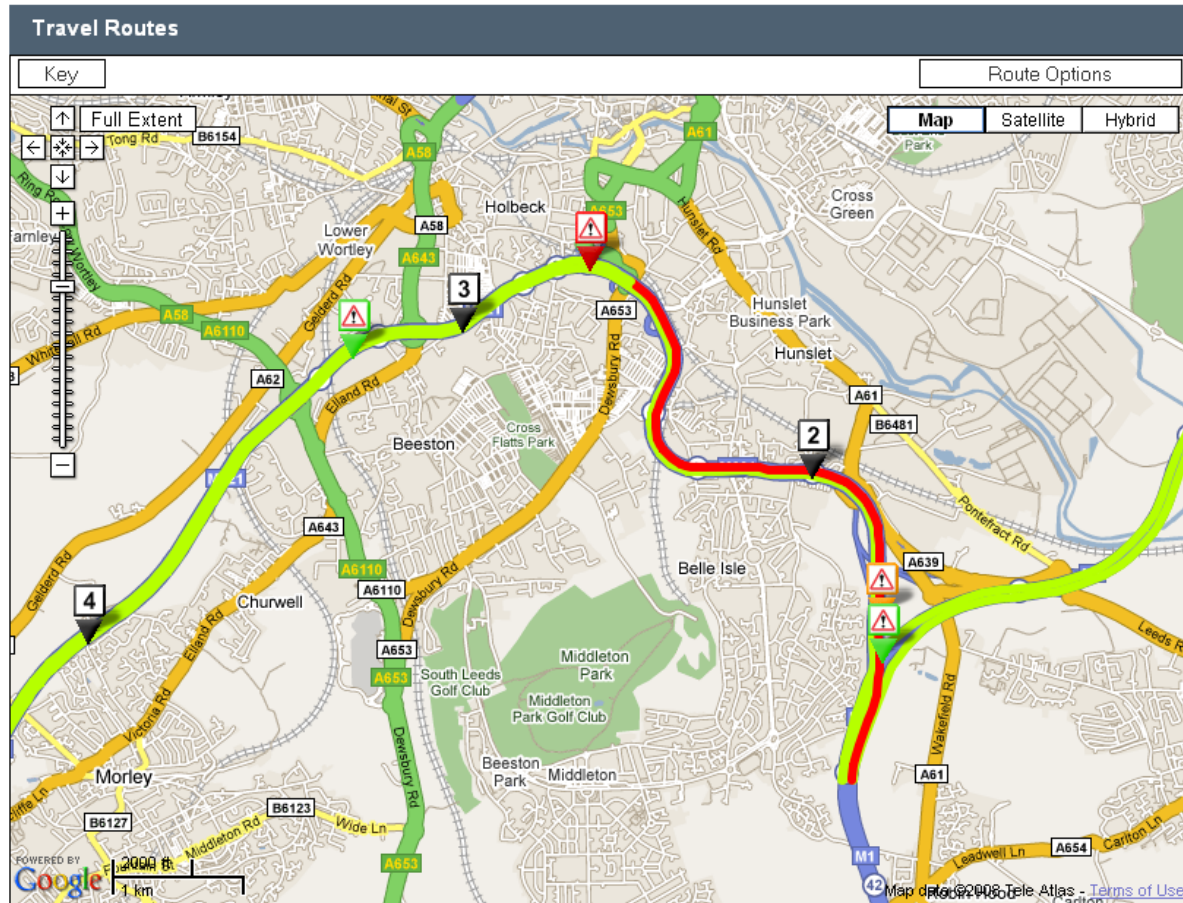
At the bottom of the map area, there is a "Options [Mouseover]" button and a scale bar showing 2000 ft and 1 km.

<p> Leeds CITY COUNCIL</p> <p>Select</p> <ul style="list-style-type: none">NewsflashTrafficCar ParksCCTVBusMapHelpAbout Us	<p> Leeds CITY COUNCIL</p> <p>Car Parks</p> <p>Woodhouse Lane</p> <p>Name: Woodhouse Lane Free Spaces: 320 Capacity: 1200 Full(%): 73% Trend: Emptying Last Updated: 24/12/07 09:59 Opening Hours: Monday-Saturday 07:00-21:00, Sunday</p>	<p> Leeds CITY COUNCIL</p> <p>CCTV</p> <p>IRR 6b Knowlethorpe</p>  <p>96 IRV 65 Knowlethorpe This image is the property of Leeds City Council.</p>	<p> Leeds CITY COUNCIL</p> <p>Traffic</p> <p>A1 Incident Start:23-08-2007 13:02 End:01-07-2008 23:59 ROAD CLOSURE A1 West Yorkshire - Exit slip road closed southbound at the A58 junction in Wetherby, because of roadworks.</p>
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- Pull-based service providing
 - Event, incident and accident data on your selected road
 - Real-time car park space occupancy information
 - Travel news
- Push-based service
 - Utilise user profiles
 - Configure your favourite routes

Fusion of data: journey times

- Many potential sources of journey time data
- Multiple sources can provide comprehensive network coverage
- Sources can be combined, with “confidence” to provide an integrated view of journey time
- Aggregated journey time could be utilised...
 - to alert operators to abnormal network conditions
 - to generate alerts to the travelling public



- Think beyond simple data exchange
 - Are you making the best use of the data you have?
- Blend data to answer new (and old) questions
- Consider live and historic data
- Identify new stakeholders, internal and external
- What other data can you add to the mix?

