MULTI-MODAL TRAVELLER INFORMATION

EU Traffic and Travel Information Workshop

Nick Illsley

21st June 2010
Why Transport Direct?

- Connecting People to Places
  - I am here and I want to go there

- Removing Barriers
  - One Stop Shop

- Offering Choice
  - All modes and mix of modes

- Imparting Intelligence
  - Challenging the habit, giving reasons to support personal choice

- Enabling Citizens
  - Impartial, independent, the traveller’s friend

- Addressed Market Failure
Key Transport Direct Influences

- 4 main areas of influence
  - Users
    - Unfamiliar Journeys
    - Joined up and Intuitive
  - Industry Stakeholders
    - Impartial
    - Build on Existing Sources
  - Political Stakeholders
    - e-Services to Citizens
    - Mobility and Inclusion
  - Technology
    - Comprehensive v Easy to Use v Fast
Joining-up the modes ......

- **Transport Direct joins up the Modes**
  - Rail
  - Bus
  - Coach
  - Light Rail
  - Car
  - Ferry
  - Air
  - Walking
  - Cycling

- **Building on Individual Systems**
...and location-based travel planning

- The complexity of life requires awareness of location and the ability to travel between places
  - Where I live
  - Where I work
  - Where I shop
  - Where my children go to school
  - Where I get healthcare
  - Where my family and friends live
  - Where I go for leisure

- Where we are is inevitably a compromise, and mobility is the key to reducing hassle!
Locational Information

- Selecting Origins and Destinations
  - Not a timetable look up service - Select from over 30 million
    - Address
    - Postcode
    - Place
    - Public Transport Location
    - Amenity
    - Attraction/Event
  - Data Gathering and Maintenance
    - 330,000 bus stops, at 1 metre accuracy, unique name and number
    - Over 1 trillion O & D Pairs
    - Over 100 billion public transport Pairs, 99% Accuracy = 1 billion wrong

- Data Quality Matters – Bad Data = Wrong Answer
Format & Exchange Standards

- NPTG – definition of place with city/town/suburb hierarchy
- NaPTAN – definition of potential access node to public transport, bus stop, railway station, airport etc, location, name, reference number, link to place
- TransXChange – establishing mechanisms to share and exchange data between transport operators / authorities
- JourneyWeb - a communications protocol to support a federal system of electronic journey planners
- RTIG - Real Time Information Group Standards e.g. SIRI
- Consistent with Transmodel, EU Adoption
- Global Standards – Google Transit
- Fit with other standards, GIS, Communications, Internet etc
Outcomes of the Service

- 3 million users first year
- 18 million users 2008
- Now over 25 million per annum
- Strong growth in Digital TV, Mobile and Third Party
- Satisfaction – 93%
- Feedbacks fell from 1 per 1,500 sessions to 1 per 5,000 sessions
- 20%+ Change of Intention
- 46% Change journey made before
- 1% to ticketing
- Around half of users via third parties
Our Users

- Three types of planner
  - Active – all options, compute best answer
  - Passive – choice but likes recommendation
  - Constrained – limited by factor e.g. time, accessibility, cost etc
- For self 84%, for others 16%
- Business 32%, Commuting 16%, Leisure 37%, Other 15%
- 22% over 100 miles, 53% 10-100, 18% under 10
- 71% new journey, 27% made previously
- Door to Door 63%, Train 16%, Maps 14%
The Golden Triangle

- Golden Triangle
  - Location-based
  - Planned Journey including expected congestion etc
  - Real-time updates and potential re-working
- Enabled by technology
Current Position

- **Rapid Growth in Data**
  - Planned
  - Real time
  - Some Predictive

- **Rapid Growth in Channels and Devices**
  - Mobile Phones
  - PDAs
  - WiFi
  - Twitter

- **Mostly via Big Systems some Personalisation**
  - i Phone Gadgets
  - Social Network Widgets
  - But have the systems transformed with the market?
Some Challenges

**Satnavs**
- Fantastic development from start-up innovators
- Simple UI, trusted by users
- What happens when as a commodity they divert traffic
- Can we build in rules, routing and restrictions
- Is this the start of vehicle and infrastructure communication

**Demand and Content**
- When it snowed in UK, 16 times normal demand crashed systems
- User wanted generic travel information, they were offered detailed data on individual services
- Personalisation of mass service is difficult as is depth and coverage of personalised services

**Modal/Intermodal/International**
- Most development has been single mode
- Intermodal issues around capacity and commercial issues
- Do we design for optimisation at long or short distance?
Some Thoughts?

- Twitter has broken news stories but no one believes them to be true until reported by the BBC.
- Many people are part of social networks and user generated content, but only the minority are active creators, most are followers/observers.
- User generated content could add subjective, qualitative information to enhance the objective, quantitative information from main systems.
- Some items are becoming global (climate change) others very localised (community broadcasting) and personal (facebook etc).
Data, data everywhere

- Everything is becoming a sensor
- Great opportunity for economic filling of data gaps
- Web 2.0, mobile phone tracking, vehicle tracking, CCTV, loops, sensors.............

**BUT**
- Can we identify what is useful?
- Can we assess quality?
- Can we merge and mash and interpret?
- What do we archive, what do we throw away?
- Do we charge or give away?
- What can users have access to and amend?
Efficiency and Re-use

- Create Data Once – Use Many Times
  - Local Authorities
  - Transport Operators
  - Performance Measurement
  - Real-time Systems
  - Journey Planning Systems
  - Third Parties and Data Mashing
  - Data Accuracy therefore Crucial

- Exploit Back Office Value
  - Open interfaces and common protocols
  - Engage with wider public and private sectors
  - National virtual dataset
  - World class not just world first delivery
Public and Private Sector Roles

- Need to set some general guidelines that foster joint working and maximise efficiency and effectiveness:

- Public Sector
  - Standards
  - Collation and audit of data
  - Spine of core data
  - Addressing market failure

- Private Sector
  - Customer facing services
  - Customer care
  - Revenue generation

- Individuals
  - Personalisation
  - Innovation

- Not fixed but general areas of expertise and interest
Hard for Central Government?

- National Level
  - Global Issues
  - Climate Change
  - International Competitiveness
  - Exports and Imports
  - 24x7x365

- Driven by Governments and Groupings e.g. EU
  - Airports and Slots
  - Low Cost Airline Growth
  - Relative Subsidies and Costs

- Broad Policy Objectives
  - Road Pricing
  - Taxation

- Data and Knowledge Important?

- Individual Decisions
  - Millions of Choices
  - Modal Decisions
  - Accessibility
  - Personal Mobility

- Driven by Local Authority, Operators and Culture
  - Local Policy
  - Commercial Activity
  - Town Centre Policy
  - Peer Group Pressure

- Detailed and Minor Factors
  - Car Ownership
  - Subsidised Travel

- Information and ITS Important?

- How hard at EU Level!

Individuals are still the target audience!
The Goal?

- Many Hundreds of Data Sources
- Common Data Architecture and Standards
- Efficient and Effective Processing of Data to Knowledge and Information
- Open and Published Interfaces
- Many Hundreds of Channels and Services
- Appropriate Rules and Governance
- Build on existing, federate together, work cross borders, relate to user preference, integrate with wider information services
To Sum Up

- It’s all about location, the glue that links disparate systems and objects and defines requirements
- Moves from how we travel to why
- Data matters but there is so much of it, bad data leads to wrong answer
- Quality flags are harder to spot and increasingly have to be earned by peer recognition
- Need help to assess what is useful amongst the noise
- Provide the spine and let innovators and users personalise
- A well-informed traveller makes better decisions and saves time, money and emissions
- What a fabulous time of great opportunity!