Executive Summary

ITS European Congress
Helsinki 2014

Congress Report

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The Congress headline was “ITS in your pocket – proven solutions driving user services”. This slogan was chosen to emphasise easy access by end-users to reliable deployed solutions that solve real problems and deliver value for money. The Congress was organised around six key topics:

- New mobility apps for consumers and businesses – making use of Open Data
- Smart transactions (ticketing, infrastructure use, insurance, travel, parking, etc)
- Multimodal network operation at city, region, national and international level
- Productivity for transport systems including logistics and public transport
- Towards zero emissions
- From connected to automated vehicles

The European Programme Committee (EPC) co-chaired by Didier Gorteman (ERTICO – ITS Europe) and Sampo Hietanen (ITS Finland) appointed a rapporteur for each topic tasked with capturing the key messages and outcomes from the Congress. The Finland Host organisations also appointed 2 rapporteurs to reflect on Congress proceedings from the national point of view. The topics were addressed by a wide range of different types of sessions, over 110 in total – Executive, Special Interest, Technical, Scientific, Commercial, Interactive, and Host. Over 250 papers were presented roughly divided among the topics as follows – Topic 1: 50 papers; Topic 2: 35 papers; Topic 3: 30 papers; Topic 4: 60 papers, Topic 5: 30 papers, Topic 6: 50 papers.
There were three Plenary Sessions where high-level industry executives, public officials and international experts shared their perspectives and rich experience on ITS topics encompassing policy, strategic, economic, technical, organisational and societal aspects. Helsinki also saw live demonstrations of ITS systems complemented by a wide-ranging technical Exhibition and five stakeholder workshops.

This Report summarises the Congress proceedings. The first part focuses mostly on the three Plenary Sessions, Technical, Scientific and Commercial paper sessions, and the Special Interest sessions; the second part reports on the eight Executive Sessions. The final part is the Joint Statement agreed by the Ministerial Round Table. My profound thanks to the team of hardworking rapporteurs and to Executive Session moderators plus Krista Huhtala-Jenks, Eric Louette, Roger Pagny, Maria De Rycke and Emily Taylor who also contributed:

- New mobility apps for consumers & businesses: Per-Olof Svensk
- Smart transactions (ticketing, insurance, travel etc): Yvonne Hübner
- Multimodal network operation: Risto Kulmala
- Productivity for transport systems: Marije de Vreeze
- Towards zero emissions: Martin Boehm
- From connected to automated vehicles: Kees Wevers
- Host perspective: Anna Schirokoff
- Host perspective: Jukka Lintusaari

PROFESSOR ERIC SAMPSON
CHIEF RAPPORTEUR
ERTICO, BRUSSELS July 2014
Summary of findings and challenges

The Helsinki Congress was a popular success with over 2500 attendees from 65 different countries coming together for discussion, debate and networking. Reflecting the headline slogan “ITS in your Pocket – proven solutions driving user services” there were three key messages from papers and sessions.

First, the strong focus on deployment rather than trials or research. Second the extensive user involvement in all parts of the ITS service value chain has changed and expanded the role of users from being just receivers of services to being actuators, content providers and service integrators by compiling their own personalised service portfolio from the app stores. And third, while Big Data and Open Data are key and fast-moving initiatives neither will provide effortless solutions to problems.

Business cases for the use of open data will not be possible without frameworks and standards which are adopted by all member states of the EU. There is still much debate on who owns data and who should pay, and how much, for use. New entrants into the mobility supply chain are pressing for the opening-up of data resources where availability is currently limited. However some member states are uncomfortable with this derestricted world, despite the Digital Agenda for Europe and the European Transport Policy, which both promote Open Data, and seek to apply conditions on data provision for unspecified policy requirements. This is creating a paradox – the best way to achieve a deregulated environment may well be agreement on some form of institutional framework.

The need for clear thinking on standards and regulation was demonstrated by a paper which discussed the uptake of electric two-wheelers in China. Legislation was initially an enabler at the growing phase but then became a barrier to the uptake of electric two-wheelers when drivers became unsure about whether or not new standards were going to be implemented and enforced.

The following section gives some examples of consensus among delegates as well as some cases where the way forward is less clear or even unknown. The final pages report the outcome of discussions on key topics at the eight Executive Sessions.

In many ways Helsinki represented a tipping point – the occasion when it became clear that there had been a major shift of emphasis and attitudes. Congresses have passed through a series of changes. Initially they were driven by research and what might be possible one day; then they were driven by suppliers offering good, but for the most part single function, solutions. However the users had bigger, more complex, problems and they needed bigger, integrated, solutions which began to appear as a result of a number of small but vital trends:

• Everything started to become instrumented and digital
• Everything and everyone started to be interconnected
• Open Data began transforming transport markets
• The huge increase in smartphone/tablet ownership has meant permanently connected travellers
• Consequently everything is becoming intelligent
These trends built the framework for the major shift seen in Helsinki. We have changed from an ITS market essentially planned and managed by what suppliers wanted to offer to one where products and services are driven by what users want. As Minister Virkkunen succinctly put it: “push has become pull and the customer is King”.

Like all Congresses Helsinki had many different ‘threads’ of activity:

- The high policy level where we had Plenary and Executive sessions plus the Ministerial Round Table. This lively and wide-ranging discussion agreed a significant statement on partnerships to develop Mobility as a Service.
- We had over 40 Special Interest sessions taking selected topics into great detail
- Over 250 Technical, Scientific and Commercial Papers were presented in over 50 sessions. For the first time papers on actions aimed at generating or improving a specific product or device were organised into three streams staged in their own Commercial Theatre in the Exhibition Hall to emphasise the practical market links.
- We had a number of Technical Visits and Demonstrations of proven iMobility services and a hands-on demo, the eco-driving iMobility Challenge, which was also an excellent example of using gamification and social media strategies to engage drivers.
- The Exhibition showed the products of more than 60 companies. Some were very large and global in their scope; others were tiny because we wanted to encourage the small innovators, the start-ups.
- Over 30 Ancillary events – a growing example of people using the convergence of their professional colleagues on a European or World Congress to organise meetings and workshops within the Congress framework.

There were two other very visible ‘threads’. Helsinki had a Congress ‘first’ – the “ITS in your pocket App Contest 2014” which was organised by ITS Finland in collaboration with ERTICO - ITS Europe and a range of partners and sponsors. The competition received more than 50 entries from more than twenty countries. An international jury had the difficult but pleasant task of testing all the apps then judging them.
The winners of the different categories were:

"Sustainable urban mobility" category: PleaseCycle: Stravel, UK – for encouraging and motivating people to travel by bicycle and other sustainable travelling options.

"Boost the use of multimodal transport" category: Calender42, Netherlands – for seamlessly integrating real-time up-to-date travel information in users’ daily life.

"Out-of-the-box innovations" category: Ajelo, Finland – for proposing a solution for organising on-demand shared-ride services

There was a special award to OTRIP, France for “putting shared journeys at the forefront of the user experience and ultimately changing how people plan and travel with friends”

In previous congresses we have recognised the authors of the best papers submitted under the Technical and Scientific headings. Here again the judges had a difficult time as the overall quality was so strong. Eventually they agreed that they could not separate the highest scoring papers so two awards were made in each category.

**Best Technical Papers:**

E-MOSION: Elderly Friendly Mobility Services for Indoor and Outdoor Scenarios:
Laura Niittylä, and Mika Varjola, Mattersoft Ltd, Finland

Transferability and implementation issues of open access data for applications-based traveller information
Birendra Shrestha, Nick Houssell, Mike McDonald, University of Southampton, UK; Ivo Cré, Polis Belgium; Rob McDonald, Peter Brett Associates, UK; Simon Beasley, Reading Borough Council, UK.

**Best Scientific Papers:**

Solving new urban freight distribution problems involving modular electric vehicles
Wassila Aggoune-Mtalaa, Djamel Khadraoui Public Research Centre Henri Tudor, Luxembourg; Zineb Habbas, LCOMS, Lorraine University, France

User interaction with remote access to range-related information in Battery EVs
Thomas Franke, Maria Trantow, Madlen Günther, Josef F. Krems, Chemnitz University of Technology, Germany; Roman Vilimek, Andreas Keinath, BMW Group, Germany

The Helsinki slogan referred to “proven solutions” and there were many examples visible in sessions and the exhibition. A few were:

- Higher system capacity coupled to improved safety
- Better public transport
- Better network management
- Seamless journeys
- Reduced environmental impact
- More efficient logistics
- Reduced congestion
- Better user information

It was clear from discussions that there is still work to finish before we have proven solutions for some problems as they are the very complex ones such as Smarter cities with transport, energy, water and waste systems working together; connected vehicles and infrastructure; and Mobility rather than transport.
Two sessions and Stakeholder Workshops addressed important areas of people resources – training and retaining younger experts and Women in ITS and the new problem of refreshing the skills of a workforce likely to retire at 70 not 60. The ITS industry experiences the same issue as many other technology-focused professions: a shortage of women or fresh graduates attracted to a career in intelligent transport systems. This is worrying as it might mean that the needs of women are overlooked in product design, so the services produced might not suit women’s needs. And it is surely a waste of resource if a high percentage of trained engineers and technicians are not available for whatever reasons but especially where there has been a maternity break in their career. The “Women in ITS” session explored both sets of problems and some possible solutions.

The field of connected systems was very popular last year in Dublin and Tokyo and as expected it featured strongly in Helsinki beginning with a multi-national Executive Session. There were examples from the full range of technologies – driver operating independently, driver advice, driver assistance, partial automation, high automation. Special Sessions and Technical papers discussed the possibilities for full automation or autonomous vehicles: the ones with no driver intervention at all. This topic is moving rapidly worldwide. We will see some new developments at the World Congress in Detroit in September 2014 and the subject will feature prominently in 2015 when the World Congress returns to Europe, specifically Bordeaux.

The phrase “Mobility as a Service” was heard frequently. This is a key concept as it is a further step towards seamless transport. It envisages a world where we don’t necessarily own our own vehicles – two-wheeled, four-wheeled – and we don’t necessarily have monthly or yearly contracts with transport operators or service providers. Instead we purchase a commodity called ‘mobility’ as and when and how we need it depending on our location, preferences, specific requirements, time budgets, money budgets etc. The Ministerial Round Table discussions and Joint Statement record the progress we have made in this difficult but key area and point towards the next top level discussions in Bordeaux 2015. An intriguing point came up at the MRT – generating the extensive connectivity that this concept requires may require relaxation of EU Competition Policy.

The Helsinki slogan was manifestly true and we really did see ITS in our pockets – a range of user services like any other mature consumer product: readily available, effective, efficient, affordable, reliable. And as always with an ITS Congress we were given a glimpse of what is coming very soon for example:

- Intelligent lighting in rural areas that cuts costs without cutting safety
- Using social media and crowd-sourcing for real-time information
- Highly personalised information markets
- ‘Smart recharging’ of electric vehicles and using them as part of a ‘smart grid’
- Personal travel ‘shoppers’ and ‘tutors’
- And the Cinderella subject – multi-modal ITS for logistics to cut costs, cut delivery times, cut emissions on road, rail sea and air

A number of topics that were lively and productive will be developed for the Bordeaux 2015 World Congress where the headline is Towards Intelligent Mobility – better use of space. The Bordeaux subject framework is:

- Space technologies and services for ITS
- Multimodal transport for people and goods
- Solutions for sustainable mobility
- Open Data and Big Data
- ITS deployment challenges
- ITS enabling changes to cities and regions
- Automated roads, management and driving
TOWARDS INTELLIGENT MOBILITY
Better use of space

22nd ITS World Congress
Bordeaux, France - 5 to 9 October

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