TRANSPORT RESEARCH ARENA

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A conference at the crossroads of research and its implementation

From Paris with Transport…

With the support of the French Ministry in charge of Transport and the French Ministry in charge of Research, IFSTTAR’s teams have organised the Transport Research Arena 2014 conference, which took place from April 14 to 17. That was a great challenge that we had been committed to since 2010… Three and a half years of hard work were worth the results and we have been able to exceed our initial targets. 2900 participants and more than 650 presented papers made TRA2014 a resounding success! The very high attendance levels of the different sessions as well as of the exhibition, joint conferences and associated events organised during TRA2014 all demonstrate the great overall interest in the event. The success of TRA2014 also heightens our visibility and reinforces the legitimacy of IFSTTAR as a leading transport research actor on the European and international scene. Our own researchers’ participation in a large number of sessions is also a sure sign of the scientific excellence of their work. The success of TRA2014 demonstrates as well our institute’s ability and capacity to organise a conference of this size, while following a strict financial framework and achieving a balanced budget. Thanks to the work of our researchers and administrative staff, TRA2014 has contributed to the cross-fertilisation between all surface transport modes and between different transport research areas. Moreover researchers and practitioners presenting and discussing their innovative projects and their needs contributed to making Europe one of the world leaders in the transport industry. Their innovation will enhance European companies’ competitiveness and thus create jobs. This booklet is a good opportunity for us to highlight the remarkable work of IFSTTAR’s teams who organise international seminars throughout the year: while varying in size and scope, they all contribute to developing the influence and the worldwide reputation of our institute. It is very significant for us that we received numerous congratulations from all our partners and from TRA member organisations, among which the European Commission. We take the opportunity of this special issue to congratulate, once again, our teams for the work they’ve accomplished!

More than 2800 participants have set feet on the four level floors of CNIT dedicated to TRA2014, which is a more than +100% increase over the 2012 edition. This is one of IFSTTAR’s first achievements. Among these, 400 only came to visit the exhibition, what confirms the interest of these 2000 msq dedicated to innovation. 62 scientific and technical sessions and 43 invited sessions were built around the presentation of over 650 papers. Moreover, 160 on-going projects presentations or “application posters” have encountered great success among the participants.
2014 was the year for TRA to underline that all aspects of transport research place citizens at the centre of economic development. Indeed, transport research highlights the actual existence and development of innovative solutions that serve citizens’ sustainable mobility. The joint presence of decision makers, research and academia representatives and of those who implement research, will help turn these solutions, and more generally sustainable mobility, into reality in a very near future.

The 2014 edition of TRA has enabled the conference to become the arena bringing together different audiences along the patterns, skills, and tools dimensions:

- On the multimodal aspect: road, rail, inland waterways or sea
- On the aspect of skills: be it research, production, use or strategy
- On the aspect of the transportation components: infrastructure, services or vehicles.

From a strategic point of view, the French transport research community was able to steer the conference to success. General satisfaction, as audited during the event itself, was very high. As regards future solutions and innovative research in transportation, 5 priority challenges have emerged such as job creation, mobility, freight, infrastructure and innovation.

**Scientific mainstream**

4 main areas of development have also been identified: multimodal mobility and changing ways of life, maintenance and adaptation of transport infrastructure networks, new sources of energy for all modes of land and sea transport; a more intelligent and innovative urban transport.

TRA2014 confirmed the current scientific direction of the transport research as it emerged at other conferences such as the annual meeting of the American Transportation Research Board this year, for example. One of the lessons of this edition is that there is a real demand from policy makers, especially at the local level, to engage constructively with the scientific community as a whole. They are aware of the needs of the users in their constituency while researchers can deliver innovative solutions and accompany them in translating these needs into research programmes. Policy makers and researchers need to interact for the benefit of users, citizens and as such of the economy as a whole.

Another lesson learnt from TRA2014 is that public as well as private political and economic decision makers, academia/research and all involved in implementing research actually have converging interests and that TRA is the privileged arena for this dialogue.

**What’s next?**

TRA has become a must in the European transport research community over the years

Interest in TRA is growing. The first edition in 2006 in Gothenburg, Sweden, was attended by about 1,000 participants and was solely dedicated to the road sector... Since then, each organiser has enriched the biennial conference and each new edition has added a new stone to this common building! TRA2008 in Ljubljana, Slovenia, brought even more participants and offered very varied sessions. TRA2010 in Brussels, Belgium, pioneered an exhibition complementing the sessions. TRA2012 in Athens, Greece, allowed the conference to become truly multimodal as ERRAC and WATERBORNE, the European Technology Platforms on railway and maritime research respectively, joined the club of TRA member organisations.

TRA2014 has not only confirmed it is a multimodal event but also doubled the number of participants to 2900. TRA2014 has also increased the number of exhibitors and has managed to bring together policy makers, representatives of the research community and of those who use research results.

**Promising perspectives for the next editions**

Finally, as evidence of renewed interest in the conference, Poland and Austria have volunteered to organise TRA2016 and TRA2018 respectively, which the Management Committee has endorsed. Tentative applications for the organisation of TRA2020 have also been received. New bodies have expressed interest in becoming members of the Management Committee. These next steps are now in the hands of the Management Committee of TRA2016!

It is evidence that this is a living and evolving conference. Even if 2014 was only its 5th incarnation, TRA does not need to fight for its place among the world’s major transport related conferences anymore. TRA is undeniably a conference to follow and the date for its next edition should already be marked! Warsaw, Poland, April 18-21, 2016.
Corinne Blanquart, what is your assessment of TRA2014?

C.B.: The TRA2014 was a major event for SPLOTT (IFSTTAR Laboratory: Productive Systems, Logistics, Transport Organisation and Labour), as regards scientific issues as well as cooperations development.

Many sessions were indeed devoted to freight. I will focus on the one on freight efficiency in Europe. In order to address the need for reducing pollution generated by goods’ transport in Europe, the challenge today is to coordinate stakeholders so that they can implement the many technical solutions that already exist. In this regard, research needs to focus on the effective dissemination of existing innovations.

The session dedicated to rail freight gave a thorough overview of current issues such as long trains and the rapid development of high-value cargo on the British network. The latter can feed the debates in the framework of Railenium IRT, since they were also present at TRA2014. The need for greater data harmonisation between countries was also highlighted, in the urban freight and urban logistics area. This is indeed a key issue in our field.

Was TRA2014 the place, were your thematic priorities well addressed?

C.B.: Yes, absolutely. Urban freight data is indeed one of the major objectives of the METROFREIGHT project. Researchers from SPLOTT were able to take advantage of TRA2014 to organise the “METROFREIGHT day”, a one day event dedicated to this project and bringing all partners together. In fact, a visit to Paris logistics sites and a special session at TRA2014 were organised and were very much appreciated. The first results of the program were presented, followed by a roundtable bringing together institutional partners of METROFREIGHT (Ile-de-France Regional Council and the City of Paris) as well as American and Korean researchers. On this same issue, a more official partnership was discussed with Professor Hugo Yoshizaki from the University of Sao Paulo.

Anything specific on rail freight?

C.B.: Yes, indeed. The session on rail freight has been an excellent opportunity to interact with researchers from the University of Newcastle/Newrail on infrastructure sharing between mixed traffic (freight and passengers). A more in-depth dialogue about the use of data related to freight traffic on the network is already under preparation on this issue with the French Ministry in charge of Transport (MEDDE).

In short, TRA2014 allowed, in my mind, for positives results and opened many perspectives.
Jean-Luc di Paola-Galloni, Valeo’s Vice-President of Sustainability and External Affairs, talks about his company’s interest for participating in TRA2014.

How involved have you been in TRA2014?

J-L d.P-G: First, as a Vice-President of the European Road Transport Advisory Council (ERTRAC). As a member of TRA2014 Management Committee, I contributed to the program setting. I also acted as a moderator for a strategic session organised by ERTRAC on the co-evolution of fuels and powertrains for the competitiveness of the automotive industry. Finally, I co-led a “guests” session on the theme of weight reduction in future vehicles.

Did other members of Valeo participate?

J-L d.P-G: Guillaume Devauchelle, our Vice-President for Innovation and Scientific Development, spoke on the subject of vehicle decarbonisation, and Patrice Reilhac, Innovation & Collaborative Research Director for our Comfort & Driving Assistance Business Group, talked about Vehicle Automation and Connectivity. Three colleagues from the Thermal Systems Business Group made a presentation on thermo-electric generators. Ten or so colleagues from Valeo’s R&D and Marketing attended various sessions as part of the audience.

What positive impacts does Valeo get from participating in TRA2014?

J-L d.P-G: TRA2014 allowed us to meet many professionals in automotive research, to present research projects, and to discover latest developments in this sector. Regarding the latter, a real plus is that slides related to all the presentations can be viewed immediately on-site by all participants. TRA2014 was also the opportunity to discuss the European Program FP7’s assessment and the launch of the next one (Horizon 2020) with representatives of the European Commission and French government.

>> GEORGES SMYRNAKIS

And the winner is…

Georges Smyrnakis, WEGEMT(1) General Secretary and Coordinator of the Visions-TRA competitions, tells us that the best student projects were awarded for all surface transport modes (road, rail and waterborne) during the TRA2014.

What are the Visions-TRA Awards?

G. S.: A consortium of 10 partners from the industry and the academia, organised these competitions at the request of the European Commission. One was for students, the other for senior researchers. Concerning the student competition, our goal was to stimulate their interest in the field of sustainable surface transport. We promoted it throughout universities on industrial, mid-term topics. Some 104 students (pursuing a Bachelor Degree or higher) participated, submitting 51 projects from 18 EU countries and 34 universities. They had four months to perfect their visionary ideas (between September 2013 and January 2014).

What about the winners?

G. S.: We were surprised by the quality and the diversity of the entries, in such a short time period. Three students were awarded a prize in each transport mode. They were all invited to the TRA2014 to receive their prize during an Oscar-like ceremony. First prizes were awarded to a Belgian team who submitted meta-materials for lightweight vibro-acoustic car insulation, an Italian team for a new composite material named Self Pre-stressed Concrete destined for rail infrastructures, and a German team for a green offshore crew tender concept for marine energy. Based upon our experience in marine transport, quite a lot of student projects could become reality in a few years. Some students will certainly make their way into the industry because of their creations.

Will it take place again?

G. S.: The European Commission has already announced a call for tender for organising the next Visions-TRA during the TRA2016. It will surely continue, and I hope our consortium will be chosen.

(1) The Western European Graduate Education in Marine Technology is a European Association of 40 Universities in 17 countries aimed at increasing the knowledge of marine technology and related sciences.
IFSTTAR: TRA2014, COMMUNICATION REVISITED: FROM THE WELCOMING OF PARTICIPANTS TO SOCIAL NETWORKS

As chair of the Organising Committee of TRA2014, many of IFSTTAR’s staff were involved in the planning and implementation of the conference. Very diverse skills were needed: the Direction for European and International Affairs, the Scientific Direction, the Finance Department, the Communication Department as well as the Public Tender Department and the Accounting Department. Collaboration has been the key to TRA2014 shared success. In addition, the Institute was accompanied by two specialised and very professional service providers. TeamWork was responsible for general logistics and signalisation activities, as well as all that related to the exhibition, among other tasks. Agence Publics was, in turn, responsible for the communication strategy and the scenography. They have supported the Organising Committee in their approach, by reinforcing certain choices, and by discouraging others. This 2014 edition thus marks a turning point for communication: a fresh website, lively communities on the social networks, renewed contacts with the press, and a real expertise in hosting participants and exhibition development.

http://www.teamwork.fr/en/

>> CAROL CHAIZE
TRA2014 allowed us to make many contacts

Carol Chaize, Sales Purchasing Advisor for 6D Solutions, a SMB that creates materials for strengthening bituminous concrete, evokes her first time at a TRA meeting.

In what way did 6D Solutions participate in the TRA2014?

C.C.: As the sponsor of Women Issues In Transportation (WIIT), an American research group coming from the TRB(1) interested in the woman’s place in the highly masculine transport sector. 6D Solutions was present at their booth. As far as I am concerned, I don’t feel any difference with my male colleagues, but I understand that it is sometimes difficult for women to find their niche, especially on building sites. Thanks to this stand, I was able to meet a lot of people.

Who did you meet?

C.C.: With Daniel Doligez, the General Manager at 6D Solutions, we were able to exchange with many partners: public works companies, consultancies, contractors, project managers, IFSTTAR researchers, etc. I have made around 20 new contacts. Among those, for example, a person working for the City Hall’s Highway Department department in a large South American city. I also had some interesting discussions with academics leading research projects in the field of road safety in European and North American countries. I also met someone from the Communication Department of a capital in Eastern Europe.

So, you are very active internationally?

C.C.: Yes. 6D Solutions is a SMB comprising seven people, but we already are present in about 30 countries. I personally deal with 17 French departments, but I am also in charge of six countries in Europe and South America. The new contacts made at the TRA2014 will possibly lead to markets for 6D Solutions. That is the reason why we are already thinking of participating in the TRA2016, which will take place in Poland.
WHAT DOES THE TRA OFFER?

Robert Skinner: Aside from Europe having a single meeting with various European transport agencies and research institutes, having European centralization for exchanging information is highly valuable to organisations outside Europe. Before, it was impossible for us to interact with all European countries. Thanks to the European Commission’s involvement, TRA has now a bright future. The TRA and TRB meetings are especially effective places for meeting with colleagues, and are complementary: we use shared technologies, have shared problems and a fairly common culture. They are similar in content; both are multimodal. A symposium sponsored by the EC, the US Dept. of Transportation, and TRB on implementing research results was coordinated with TRA2014. It gathered about 50 transportation researchers, research managers, and agency officials, Europeans and American alike. An area in which the TRB can learn from the TRA, is motor vehicle manufacturers – they are more involved in TRA than in TRB.

WHAT IS YOUR OPINION ABOUT TRA’S ORGANISATION, AS OPPOSED TO TRB’S?

R. S.: TRB is organized a bit like a professional society, with many standing committees that organize sessions at the Annual Meeting and conferences during the year. Each year, it assembles 12,000 people (1,500 foreigners), compared to 4,000 participants at TRA. Both are very complicated to organise, but TRB has the advantage of the standing committees with their professional networks, and is always held in the same place. We don’t have to start over each year. TRA, though, moves around each time without permanent staff: that’s a big challenge.

(1) The TRB is one of the 6 major divisions of the National Research Council, whose mission is to provide leadership in transportation innovation and progress through research and information exchange.

(2) The Forum of European National Highway Research Laboratories comprises over 30 national research and technical institutes from across Europe.
>> GEORGES GIANNOPoulos

TRA2014 WAS PROBABLY THE BEST TRA CONFERENCE SO FAR

Professor G. A. Giannopoulos, Director of the Hellenic Institute of Transport and Chairman of the ECTRI (European Conference of Transport Research Institutes), and of the ETRA (European Transport Research Alliance) was responsible for the evaluation of the TRA2014 Conference. He is very optimistic about this conference becoming one of the major transportation conferences in Europe.

WHAT ARE THE MAIN CONCLUSIONS OF THE TRA2014?

G. G.: It was a great success, both in terms of participation (the most ever with 2,735 persons), and as regards the overall organisation and the scientific program. Most people who answered our evaluation questionnaires (two on-site questionnaire surveys with real-time interview and a post-conference questionnaire) found something of interest to their everyday work in the program and an opportunity to interact with researchers, representatives of organisations administering research programs and actors from the industry. The most appreciated added value compared to other conferences was the combination of academic and end-user perspectives, the variety of sessions and content, the broad scope and various modes covered, and the international participation. The TRA is neither perceived as a purely scientific conference, nor as an end-users’ dedicated one and this mix of interests is one of its strong points.

WHAT ABOUT THE SCIENTIFIC PROGRAM?

G. G.: As in all such conferences, there was a variety of quality and “quantity” (numbers of session participants) across the sessions. To improve the quality, and consequently the quantity, we have to work more on the paper evaluation process and perhaps to reduce the number and variety of the sessions. However, I must stress that participants were especially satisfied with the scientific and technical sessions (58%), and quite satisfied with the plenary (53%) and strategic sessions (47%). One thing that could be further advisable would be to have a smaller number of invited sessions (there were some 45 of them in TRA2014).

DOES THE TRA ALREADY HAVE A WORLDWIDE OUTREACH?

G. G.: Yes, but still not sufficiently large. In fact, we will need to improve participation from people outside of Europe, especially from Asia, South America or third-world countries. European participants were about 70% of the total, and most of the non-Europeans were from Australia and the U.S.

WAS THE INDUSTRY’S PARTICIPATION HIGH?

G. G.: Not as high as expected. But thanks to initiatives made for the first time to increase it (a partnering event, the Outreach Marketplace, etc.), there was an improvement over previous TRAs and we should continue to get better results. Almost half of the participants came from education and research organisations. From the representatives of the other sectors, some 27% were from the Transport “industry” and among those, Transport operators, forwarders, logistics companies and equipment manufacturers were about 20%. I would like to see this figure increase.