



## **A note of the “Passing the Baton” session at Highways UK 25 November 2015**

**The session was organised by the ITS (UK) Young Professionals Interest Group, a forum for the younger Members of ITS (UK) which functions both as a focus for them and as a contributor to strategy and policy for the whole of ITS (UK) on behalf of its future leaders.**

**Chair: Mara Makoni, Mouchel, Chair of the ITS (UK) Young Professionals IG**  
**Panellists: Steven Norris, President of ITS (UK)**  
**Joanna Scott, Atkins**  
**Susan Claris, Arup**  
**Meghann Downing, Highways England**

Mara welcomed the panellists and the audience and opened the debate by posing the question “How do we engage young people in the Intelligent Transport Systems (ITS) industry?”

Steven outlined the changes he had seen over a long career in transport both as a politician and in the private sector, and used them to make some points about the types of knowledge that needs to be passed on to new entrants into the sector.

When he first became interested in the ITS field while a transport minister, technology only appeared as an addendum to any policy paper. This contrasts with now, when technology is central to any policy or strategy across all modes. Technology now drives the changes and improvements in transport. The pace of change is blistering, which makes the sector an exciting place to work, and ITS professionals should know that their efforts benefit the whole of society. But it is important to learn fully the lessons of the last twenty years and avoid remaking any of the mistakes. To be blunt, do not get too impressed by how clever you are, and maintain your focus on the outcomes of your efforts. What are you doing to improve the quality of people’s lives? Having a great idea does not make you great, but putting it into practice may well do so - and that will take effort and commitment. ITS professionals should always keep in mind the benefit to the wider public, and always keep an open mind – not an empty one – never saying no until you are really sure.

Take your decisions based on all the experience you have gathered, including that which was uncomfortable and tempting to forget. Keep your mind open to changing technology and also to how the wider world changes. Making fifty year economic forecasts, as recently in the work of the airport commission, is a nonsense and you should not be afraid to say so. A good example is road charging. The received wisdom for thirty years or more has been that it is impossible- first technically impossible, and then for the last fifteen year, politically impossible. Who could have known then that fuel duty would start falling off a cliff and a desperate need for other revenue emerge? Road cannot stay as a utility free at the point of use for much longer, and the political situation is changing accordingly. The world always evolves and you need to stay with it.

Susan agreed that we are seeing big changes in the bigger picture of what transport does and how it functions. Transport used to be driven by derived demand, but that approach now misses the trick. Transport can shape communities and lives down to small details of individual employment or

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education opportunities. We should no longer talk about “transport” but instead about access to employment, to sporting events, underpinning regeneration, and so on. These concepts are what matters. We as workers in the transport sector need to translate what we say into outcomes to make our sector sound like a good future career. And yes, as Steven said, the only constant is change. Transport in the sense of bicycles, cars, lorries, trains etc has not changed that much for many years, and we still picture the future of transport as “hover cars” just like our predecessors did in the 1920s. But the context of transport changes significantly. Just one example is the rapid lengthening of life expectancy, which has created a whole new set of transport needs and expectations as people expect to be mobile in their 80s and 90s.

Jo Scott focused on the opportunities in transport and assured the audience that yes, they are genuine, there is a lot of work to be done, and we need to fill our skills gap in the industry with young professionals. We need brave people who take risks. This can be challenging when you are at the start of your career but Jo’s advice to young professionals is to question and be brave, to speak up, even be a bit loud. The risk is worth it since when the opportunities come up at a senior level then the person who has demonstrated that they can think independently by challenging received wisdom and practice may well be the one who is offered them.

What is the point in being brave if you get knocked back? It is that you learn something each time that happens. So you get better even if you temporarily regret what you did. There are no good or bad experiences or questions as long as you learn from each one. And you can accelerate your learning curve by taking initiatives and risks.

To quote Professor Neville Rees, an ITS pioneer: “If you are not making mistakes you are not doing enough.”

Meghann Downing concurred that the highways industry is an interesting place at the moment. She recommended getting a professional qualification such as Chartered Engineer status. This requires following a particular, fairly rigid path for good reason, since it ends in an internationally understood and recognised qualification.

Information is now becoming as important as structures and working in this new setting needs a different skills set. For those working with information rather than structures or technology there is not the same clear path to qualification and recognition, although this may change in the future.

Talking specifically about Highways England, the new set up brings new ways of working and here too working with information is an important specialism. This creates new opportunities for young professionals. HE needs a more extensive breadth of skills than ever before and young entrants are an important part of this.

Data of good quality and timeliness is key to the new ITS. For example airports are very good on data on how people move through airports, and Transport for London has high quality data on its public transport passengers thanks to its Oyster smartcard ticketing system. But on roads this is problematic – data collection which is taken for granted by travellers at airports and on public transport tends to be seen as unwarranted surveillance by both commercial and private drivers. How do we tackle this perception? The UK is probably the most supervised nation on earth, whether via camera technology or the tracking of mobile phone and internet activity. The perception of privacy is changing, as is the perception of power held by state and by private companies. Citizens see the advantages of this to be great enough to make it acceptable. It is curious how drivers as a group go against the trend of acceptance, and it could be that they are just behind the curve and that in the future, ANPR and other forms of data collection of private vehicle movements will become as acceptable to the public as for instance camera surveillance at airports and the collection of smart card ticketing data.

Another piece of advice to young ITS practitioners is to always keep an open mind about issues which you may be able to deal with. If you take the time to reflect, even an unfamiliar issue may be solvable using skills and knowledge you already have, or can access easily.

The rapid rise of transport apps was quoted as the sort of opportunity which young professionals are often very good at creating and using. Having an enquiring mind, not having developed habits of thought and of decision making, and a desire to make improvements are not exclusive traits of younger workers, but they are often present in new entrants.

Diversity in the ITS workplace should also include a diversity of disciplines and specialism. Disciplines such as anthropology can be very helpful in many transport teams. A real-life example of bringing anthropology tools to bear on promoting cycling was quoted. When using this approach to discover what barriers exist to stop people taking up cycling, none of the “standard” reasons came up. The sample made only happy associations with cycling: freedom, childhood, fun and so on. The main barrier was found to be the unwelcoming and exclusive attitude of bike shop staff to novice cyclists. Again, using a slightly radical approach, the solution was to send bike shop staff to make purchases in the beauty and perfumery hall of the local department store, which achieved a significant change in their attitude to novice customers. This example shows the pitfall of interpreting negative expressions as meaning simply on “I don’t like change” instead of using robust methodology to discover what really lies behind the negativity. This is nearly always something much more concrete than being resistant to changes.

Diversity in the ITS workplace needs to deliver a range of ages. Each generation sees things differently and to solve big problems we need all these different perspectives brought to bear. The new generation of ITS professionals have no experience of a world without advanced IT and are naturally able to simply accept that the technology is there and that it works. This frees us up to think about outcomes and benefits. A good example is autonomous vehicles, where the technology is by no means the biggest challenge – this is more about insurance, liability, cyber security, legislation and so on. Another is the possibility of ceasing to provide information to drivers via Variable Message Signs and traffic radio, and instead provide more targeted information via satnav services as the Dutch highways authority is trialling with TomTom. This is a sticky concept for those who have long experience of working with fixed and dynamic signage, particularly relying on their legal status. It is more comfortable for those who have always received all their important information via a hand held device.

In the ITS sector we need to remember that not only transport experts are needed to solve the issues we work on. One participant noted that the good advice they wish they had received at the start of their career was to give up worrying about the technology and instead worry about making sure they worked with the right people in the right collaborative frameworks. Projects rely as much on their internal social strength as on anything else in order to be successful, meaning that the right management approach is essential.

Transport strategy should be about access and use, not about ownership. The point is that citizens need to be mobile, they do not particularly need to own the means of their mobility. Transport should be a service to work best and ownership is not fundamental to mobility. We know that urbanisation is an accelerating trend and it seems perverse not to look closely at how we can free up the share of urban space which is taken up by parked vehicles. Decoupling mobility from vehicle ownership is promising in this regard.

Public health should also be an important and openly acknowledged driver of transport policy. Walking has almost astonishing physical and mental health benefits and is overall better for health than the same amount of time spent in a gym. This is not an easy message to sell in our society and a multi-disciplinary, diverse team has a better chance of coming up with a communications strategy which works. The key is to tailor the message and accept the viewpoint of the person you are communicating with. Current transport strategy relies too much on forcing things on people and bears no relation to what we know is good customer care practice in other sectors.

Customer insight is important. It can help you make the case for changing something which management thinks works well enough. The highways industry is getting better at this.

The session ended with a round of short statements about what the panellists thought was most important in their professional lives:

Steven Norris – never saying no straight away, always exploring all suggestions and keeping an open mind

Susan Claris – never being frightened of asking a “stupid” question – you are probably not the only one who does not understand. Grasping all opportunities – what is the worst that can happen?

Jo Scott – building an organisation and creating a culture where people could speak up and ask questions and make suggestions. Helping prepare people for future challenges.

Meghann Downing - having ended up by accident in a very interesting area of work, wanting to communicate the conviction that transport is an absorbing field of work.

To sum up: We really need more young people in the ITS sector and should welcome them with open arms.