Is ITS dead?

In each issue of Smart Highways, our editorial board member Lee Woodcock from Atkins will make a proposal about issue facing the ITS industry and we will speak to various experts on the subject to get their thoughts

WORDS BY **PAUL HUTTON**

Is ITS dead? That question, for someone who has been involved in the sector for many years, could be considered career suicide," says Lee, but he suggests that ITS as a sector has had a challenging few years, and argues this was in part of its own making, "we have struggled for too long to explain the benefits and outcomes that ITS can deliver," he says.

ITS is everywhere but, asks Lee Woodcock of Atkins, does the driver see the benefits?

"That said we are now seeing some growth return and technology is key to some solutions eg Smart Motorways," he says, but is this recognised across the board? "It still feels", says Lee, "that we haven't learnt the lessons from the past and we run the risk as a sector of not fully realising our potential."

Lee Woodcock insists he is passionate about ITS, but that it needs to punch its weight, be recognised for the value it can add

but that it needs to change. He argues that there needs to be a stronger connection between the role of technology as an enabler across the modes of transport and a focus on the customer experience underpinned by a discipline of formal behavioural change techniques.

There is an opportunity ahead of the ITS sector in the context of Intelligent Mobility, and whilst Intelligent Mobility is not ITS, ITS does have a key role to play.

So, with that in mind, we spoke to three other leading industry experts, consultant George Hazel, Stephen Hart of TSB and Natalia de Estevan-Ubeda at TfL.

Q Is ITS dead?

Natalia I don't think ITS is dead but I do think it has definitely changed, so much so that I am not sure the name reflects what is happening anymore in an industry that is embracing technology and innovation in very different ways. Take the case of apps for instance. Apps that are used for finding your way, looking at a timetable, travel disruption etc – are those apps "ITS" – most of us are calling this "connected mobility", "intelligent mobility" etc… but we are effectively utilising Intelligent Transport Systems, or are we not? What is happening in my view is that the world, the ITS world, as we know it, is expanding, reaching out and tapping into completely different industries, data sources and applications. So for me, it is not a matter of pronouncing ITS dead or alive, but a time to consider if a rebranding is timely to keep up with developments and stay current and forward looking.

George This is a time of unprecedented opportunity for ITS so the response to the question is a definite " No"! Why is this? Global trends are moving transport services from the traditional operationally based to model to the world of mobility based on user focused, seamless and valued services and products. This is a model based on retailing principles and is bringing new players into transport and mobility. One of the key trends is the demand for personalized services so in the future we will all have one mobility account, shaped to our personal needs and values delivered through smart mobility. The management of this emerging system needs an understanding of retailing methods – choice models and incentivisation, gamification, co-design, back office systems and personal profiling. It also needs an understanding of data management and secure payments.

This is a world of retailers and data managers like Google and they are moving into this area at speed. Uber is just the start! Telco companies and energy companies are also entering the smart mobility market. Telco companies see mobility as part of the supply of lifestyle services and energy companies see mobility systems as an extension of smart grids. ICT companies see vehicles as an internet of moving things all connected and talking to each other, including the people and goods being moved. This is the new world of mobility. It is a disruptive model with many sectors colliding and the next few years will be exciting and messy.

The spectrum of smart mobility spans four main areas – smart vehicles, smart networks, smart goods and people travelling on the

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networks and the new emerging sector of mobility management. The latter is the key area which will shape the system and generate most of the money. In this new world ITS has a major role to play.

Stephen I need to qualify from the outset that I think there are excellent companies in the UK that offer solutions to traffic management in their own right and offer extraordinary technical and innovative solutions. The confusion falls under this overarching function of ITS (Intelligent Transport Systems), which is ill defined, or brand or value isn't clear…

Q What are your thoughts on ITS as part of enabling policy outcomes?

Natalia Policy responsive ITS or technology and comms interventions are one of the ways to reach our outcomes. The public sector is facing some challenges not only keeping up with innovation and, in some cases anticipating how new technologies may impact the business and the services offered. There is a fantastic opportunity to innovate from within, but only if we can adapt the way we deliver.

George This new world of mobility is being driven by the private sector and it will be difficult for the public sector to keep pace with developments. There is a question, therefore, as to what policy outcomes are driving the systems, who is forming them and how are they being delivered.

The key thing at this stage is for ITS providers to be aware of what's happening and to start building relationships with the key players in the private and public sectors. ITS has potentially two opportunities in this emerging market – firstly as the provider of smart networks that link into smart vehicles and users and secondly to be part of the mobility management providers at the core. It is the latter opportunity that is more difficult, non-traditional but more important in terms of being at the heart of the system.

Stephen The difficulty with this overarching function is it is not clear what the product is, if you are buying ITS what is it you are actually buying? Unlike the automotive sector for example. Some in the ITS industry would say that ITS is radar, sensors, traffic management, APNR, V2X, V2R, V2I, managed motorways and so forth, but if I wanted to buy an APNR system for example, I wouldn't go to an ITS shop or showroom I would go to ANPR camera provider wouldn't I, and even then I may never come across the term ITS or even know that some may say I'm buying ITS. Another example is that ITS would argue that Sat Navs are ITS, ok fine, but I'm sure the likes of TomTom saw a market and developed Sat Navs, not an ITS product – furthermore the messages of what ITS is varies within it depending on the level of participation, or passion that you may have within the industry.

Q ITS has often struggled to articulate the benefits it delivers, what do you think needs to change?

George In terms of articulating the benefits from ITS the industry needs to build its case on meeting the personalised lifestyle needs of users - both personal and businesses. We will need mobility systems that meet these needs and ITS is part of that so we need to show that ITS systems deliver these needs.

Natalia Well it depends what we mean by that. As with anything, the key is in defining and scoping. When we cannot articulate what ITS is then of course being specific about its benefits is going to be a challenge. However, when we frame it and scope it then it is a different matter. I would argue the question mark is perhaps not in the benefit measurement but in our ability through the years to define and scope ITS.

Stephen ITS in my mind has always struggled in identity – portraying its 'brand value' - to the bystander it is not clear what ITS is unless you are

NATALIA DE ESTEVAN-UBEDA is the Head of International ITS Policy and Strategy in Transport for London. Natalia is one of the High Level Advisors to the European Commission on the deployment of ITS. Before taking her current position, she has been the Head of Technology in TfL leading the Cooperative ITS programme with responsibilities spanning over Traffic Technology, Systems Software and Business Intelligence. Natalia has worked extensively on ITS investment appraisal supporting policy development in Brussels. Her background is on applied research. Natalia has sponsored large-scale technology infrastructure upgrade projects and emerging ITS technology trials in TfL. Natalia is currently leading the Automation agenda, advising senior decision makers on developments and opportunities.

part of the sector, so it's a very closed and narrow community – one could almost associate it with a 'cottage industry', which could well be an issue, so to say is ITS dead is hard to clarify as not knowing what ITS is, how can you say is it dead? This is may be why policy struggles with ITS, the question has to be "what is the problem that ITS is trying to fix?" ITS offers many technical solutions and flexibility in its adaptation, but suffers with too many individual technologies and businesses pushing the ITS button onto a market that in many cases hasn't got the resource, clue or funds to see the benefit, hence the frustrations with them but also policy and regulation in that they can't see it, or get it! so it goes in the too difficult box!

Q What do you see to be the biggest opportunity ahead for the ITS sector?

Stephen The opportunity for this function is to think about the language it uses and the customers it tries to engage, for example intelligent mobility requires a number of converging industries to collaborate in the integration of a number of components into an intelligent system, ITS is a number of individual components usually bolted to infrastructure and relies on back office to make sense of the information that they provide, in many ways fragmented, and the difficulty here is calling this a system, yes, there are a number of components in a road network, but it's a stretch to call it a system, or intelligent as systems generally are inter-connected or integrated so providing intelligence within those systems, so saying Intelligent mobility is ITS is not strictly true as the intelligence bit seems to be missing, the question back has to be – what is ITS? The biggest opportunity for ITS going forward is to take stock of its capability, supply chains and to develop what can only be described as a value chain and capability analysis, to establish a market framework that gives greater visibility and clarity into the industry, to define its aims, scope and offerings

into a language that is understood not only by the ITS businesses, but to reach out to customers that can visualise the market and products to meet their requirements. I think ITS in the UK would benefit by showing how it adds value to GDP, number of employees etc, a real business case, and showcasing cost effectiveness and value to how systems within it provide solutions not only to traffic management but to other modes and sectors. It could also act as a broker into industries that are considering these types of technologies, such as rail, Intelligent mobility in automotive – intelligent cars, shipping and so on, create the economies of scale in developing a supply chains that can offer cost effective components.

Natalia In my view, there are good opportunities ahead involving cross-industry technology applications, social media and Big Data and crowd sourcing and arising from the Internet of Things (IoT).

George The single most important thing the ITS industry can do is to make sure they understand this new mobility market and the key players that are driving this market. Look at what Google are doing. Look at the strategies of all the global telco companies – all moving towards the provision of lifestyle

services, including mobility. Once you understand how this market will work, and understand that it is very different from the systems we know now, then partnerships and new business models can be developed.

Q What single thing can the ITS sector change about itself to overcome the issues of the past?

Stephen As mentioned at the beginning this about ITS as an overarching function, not the strong capabilities of the UK industries that provide world class technologies. This I feel is about making visible capability to customers that seek solutions, rather than tech push. What is for sure, in the future the UK will need some very clever stuff to unlock pinch points and limitations in network capacity. Fragmentation needs to be overcome to create greater traffic flows and ways to balance the national traffic and modal networks needs focus.

Natalia We need to move faster with times and developments. This industry is risking a feeling of

stagnation if we are not careful. There is also an issue with the branding and the meaning behind ITS which needs to be considered, again, not necessarily to be discarded, but better defined, encompassing a more diverse supply chain in addition to the traditional suppliers.

Q Do end users (ie. drivers and passengers) need to clearly see the ITS that is being used, or do they just need to benefit from it?

Natalia My answer to this is "it depends" – there may be times when telling the users about something may not lead to any benefits, for instance, updating the user community on software changes to a system interacting with road infrastructure may be pointless, however, informing them of the changes they may experience as a result may be a good thing. In some other cases, sharing innovative technology interventions maybe desirable to share a sense of excitement and the fact that we are ahead of times, forward thinkers etc... Huge consideration needs to be given to the outcome of any communication in terms of customer perception , possible behavioural changes and associated impacts.

Q Is this a particularly British issue, or something you think is applicable around the world?

Natalia My experience is that this is a wider issue around the world.

George This is happening and it is global. It is exciting, disruptive and threatening with huge implications for the ITS industry. But it also holds immense opportunities for ITS.

Stephen The opportunity for ITS in the UK is to demonstrate clarity and capability of the SMEs and supply chains in this area, but also to inject intelligence into dumb

DR GEORGE HAZEL OBE is a fellow of the Chartered Institution of Highways and Transportation. He has extensive experience in all aspects of transport and communications, both urban and rural. He has specific expertise from around the world in strategic planning and policy development, the integration of transport with other related areas, the prioritisation of projects with respect to economic, environmental and social objectives and innovative funding of transport infrastructure. He has studied all forms of transport policy in many countries, both the successful and the unsuccessful and has gained a detailed insight into the key issues and influences. He has worked in the public, private and academic sectors at a senior level

systems through the integration of components through Smart inter-faces and seek to marry capabilities from other sectors to meet the UK's future challenges in how it moves people and goods more intelligently in a way that strengthens and sustains economic growth through transport intelligence.

LEE'S SUMMARY

I think for me the views of George, Stephen and Natalia reinforce that ITS is not dead and has the potential for an exciting future ahead of it, but it does need to change if it is going to realise its potential.

We have a fantastic capability in the UK to realise this potential but it's going to require change, we are going to have to grasp emerging technology trends, maximise the data sets available to us, but focus on creating new solutions through collaborations that deliver value to customers, to people and maybe in doing so ITS will be able to articulate more effectively its proposition and benefits it delivers!

Please feel free to join the debate at http://angles.atkinsglobal.com/. opinion/is-its-dead-long-live-its **Email** lee.woodcock@atkinsglobal.com

STEPHEN HART is a specialist in innovation and technology, currently the Innovation Platform Leader in Integrated, Smart and Connected Transport at the Technology Strategy Board. He was previously the Marine industry lead and successfully launched the first ever CR&D competition for the UK Maritime and Marine sector. Prior to this he was the Innovation Platform Leader for Intelligent Transport Systems and Services, technical advisor to the Department for Transport in environmental policy and Head of Technology Programmes for the Energy Saving Trust. He has successful delivered large scale public and private sector projects. These include the first Land Rover Freelander Diesel, Mini Tbi, Rover 800 wiring systems and the UK's first all electric delivery van whilst working with the Department for Transport on the Low Carbon Vehicle Research & Development Programme.