

**GETTING DOWN TO BUSINESS :
PARTNERSHIP FOR A MORE INNOVATIVE TRANSPORT SYSTEM**

SUMMARY

Background

Following the Expert Sessions and the Decision Makers Day, senior representatives from business and international professional organisations discussed how they can work together to foster innovation. The session highlighted collaborative efforts and avenues to make innovation happen, including in emerging and developing countries.

The Panel

These short conclusions were prepared by the Secretariat of the International Transport Forum. The Secretariat is very grateful for the rich input to the discussions from the speakers listed below but takes full responsibility for the views expressed here.

Moderator

- Nik Gowing, International Broadcaster

Key Note Speeches

- John Micklethwait, Editor in Chief, the Economist
- Wolfgang Mayrhuber, Chairman and CEO, Deutsch Lufthansa AG

Panelists

- Scott Belcher, President & CEO, ITS America
- Peter Frise, CEO, Auto 21
- Angela Gittens, Director General, Airports Council International
- Janusz Lacny, President, International Road Transport Union
- Jean-Pierre Loubinoux, Director General, International Union of Railways
- John Lyras, Chairman, Shipping Policy Committee, International Chamber of Shipping
- Henri Molleron, Director Environment, Colas
- Hans Rat, Secretary General, International Association of Public Transport
- Jean-Marie Woehrling, Secretary General, Commission Centrale pour la Navigation du Rhin

Conclusions

Innovation in management is what counts

Much of the technology we need to meet the transport challenges of the future already exists but only a fraction is deployed. As John Micklethwait said, “gadgets aren’t fundamental to innovation but changes in management and production processes are.” Our biggest challenge is in removing the obstacles to deploying innovation, “throwing out the ballast” as Bertrand Picard put it in the Opening Session. A seminal example of process innovation being more important than product innovation was the overtaking of Detroit as the centre for automobile manufacturing by the Japanese lean production revolution.

Demographic and geographic challenges

In the developing world something similar may be emerging now with “frugal innovation”. Tata’s Nano may turn out to be the world’s most innovative car because of its price tag, \$3000. Bharti Airtel has developed an outsourcing and infrastructure sharing model that allows it to sell mobile phone services in India at extraordinarily low prices. Microsoft’s Beijing research facility is close to overtaking its Redmond campus in terms of scientists employed. Such changes will make globalisation harder to defend, but trade will continue to make all of the world’s people better off, if we have the flexibility to respond. Detroit fought back with its own lean production to the benefit of all its customers. Products invented in Beijing will be of benefit to all the world’s consumers. The rate at which the world’s airline business grows is largely dependent on how far barriers to a more global market come down and especially how rapidly Open Skies agreements develop in Asia.

Developing countries also have some advantages beyond low labour costs and young, rapidly growing and increasingly well educated populations. Greenfield development of underground rail systems for major metropolises have the advantage of being able to provide larger capacity and higher efficiency than incrementally developed systems that are a century old. Middle tier developing countries are playing a very important role in transferring knowledge and technology to less developed countries. Where markets are thin and incomes lowest, however, there will be a continuing need for government intervention, including from development assistance and international finance institutions.

Doing more with less

John Micklethwait stressed that innovation will be needed to enable government, like business, to do “much, much more with much, much less”. The era of “small government” of the last two decades actually saw government spending as a share of GDP grow. The initial response to the financial crisis was for government to take an even stronger role in the economy through regulation and stimulus spending. This was temporarily of benefit for the transport sector. \$30 billion was earmarked for roads and bridges in the US in and a \$60 billion infrastructure bank established. However, the bank’s funding has now been cut to \$4 billion. Government spending to rescue banks and defend currencies over the last two years now makes the priority reducing government debt by cutting future spending. Most governments will be

shedding labour and cutting waste, and transport projects are a prime target. This is not entirely bad in so far as it eliminates “bridges to nowhere and murky PPPs” (public private partnerships) as John Micklethwait put it. It might also result in much wider use of road tolling, although this should not be used as a new form of taxation; used properly, congestion tolling is an essential tool for optimising the use of transport infrastructure and reducing congestion in an environment where investment is constrained.

All transport sectors and all transport operators have the responsibility to optimise the use of infrastructure and technology to maximise efficiency. In the road sector much could be done to increase the average load factor of trucks, for example through electronic kilometre charges to provide price signals incentivising consolidation and the use of IT systems to match loads. On some routes, authorisation of higher capacity, modular truck systems could reduce the number of trucks required. The emphasis needs to be on “better rather than more transport” and especially better utilisation of the motorway networks. Innovation in supply chain management also has much to contribute to more effective freight transportation.

The greatest inefficiencies arise at intermodal interfaces but there is much potential for improvement, as the prize awarded by the Forum for innovative design of passenger interchanges illustrates. The research community can have a powerful influence. MIT recently made all of its transit data freely available to transit developers, resulting in the development of a free traveller information system. ITS America organised a web based “congestion challenge” won by an IT ride share enhancement platform now being deployed by the Federal Government. New York City ran a smart-phone “application challenge” resulting in a system for identifying potholes to fill and an information system for bus arrivals similar to the Seoul Bus App presented at the Forum by the Korean student Juwan Yoo.

Innovation in governance

Industry is naturally conservative, and not only in the transport sector, and always driven by a minority. This applies critically to management and decision making, including in government. 80% of the market for construction of infrastructure – roads, airports, etc. – is maintenance not pure investment. This is where both innovation and funding are most needed. Intervention usually comes too late, when it costs twice what it needs to. Henri Molleron observed “the problem applies equally to roads in the US and Madagascar” and noted that railways frequently slide into decline through neglect of maintenance, revealed in spreading speed restrictions, currently for example in France. The UK suffered an extreme case of neglect but “is now climbing out of the hole” with innovative contracting that makes construction companies responsible for maintaining the quality of the infrastructure not just initial construction. Colas for example is responsible for the maintenance of the entire road network of the city of Portsmouth, with major cost savings.

There is always risk in innovation, as illustrated by some notable UK PPP failures, but this should not simply result in a phobia towards innovation. The lessons learned by the UK’s pioneering efforts are valuable for the whole world, so long as they *are* learned, and the Forum has a valuable role in spreading

the knowledge. Doing more for less will only be possible by adopting new management approaches and more innovative approaches in government at local, national and international levels.

Angela Gittens noted that “innovation often comes from crisis”. The recent chaos provoked by the eruption of the Eyjafjöll volcano has certainly accelerated debate on achieving a Single European Sky, which could save aircraft thousands of kilometres of unnecessary detours and thousands of litres of kerosene each year. As Wolfgang Mayrhuber pointed out “this is the single biggest thing we could do to reduce the carbon footprint of aviation, cutting CO2 emissions 12% immediately”. Europe currently has 47 air traffic control centres and “as soon as a plane is one metre off the ground it is no longer in a *single European space*”.

Regulation, partnerships and co-operation

Regulation is an important tool in encouraging more rapid uptake of innovative technologies, when designed well, as has been seen with the use of emissions standards and the subsequent reduction of air pollution from vehicle fleets. Ambitious long term CO2 emission and fuel economy standards for cars are a key part of achieving greenhouse gas mitigation targets. “Change will come from regulation, but we need realistic regulations” said John Lyras.

An emissions trading system for aviation could make a useful contribution to cutting CO2 emissions, but only if regional systems can be designed to function in an integrated fashion or are replaced with a global system. Economic instruments for aviation also need to take into account the aviation charges paid by airlines that cover airport infrastructure costs and equate to around a euro per litre of jet fuel. Emissions and fuel economy are improving rapidly. On average current planes consume 4.3 litres of kerosene per passenger per 100 km flown. New planes consume only 3 litres and Wolfgang Mayrhuber foresees the arrival of the “2 litre plane”. Government intervention might best focus on creating the conditions for accelerated turnover of the fleet. Again the technology is available, the challenge is to get it deployed. Materials science is only in its infancy in developing new stronger, light weight materials for aircraft. There has been a major revolution in “taking equipment that doesn’t need to fly off planes”, with literally tons of instrumentation being relocated to the ground monitoring planes at a distance, and there is more of this to come. Mr Mayrhuber concluded that we need to be careful not to waste these improvements by “goofing up on the ground” and imposing detours as a result of slot restrictions and airport infrastructure constraints.

Improved partnership, including PPPs, and international co-operation are essential to maximise the impact of spending limited resources, to share research costs and to share best practice. Partnerships across modes are crucial to producing a better complementarity between modes, centred on better communications offering a more fluid transport system. And within modes competition is a vital driver of innovation. Antitrust authorities and sectoral regulators will have a critical role in ensuring that competition thrives in a constrained economy.

Decoupling transport demand and economic growth

Quite a bit of the final round of discussion at the Forum focussed on how much mobility we actually need and how correlated economic growth and mobility really are. Data from some countries suggest that there has been a decoupling. The IT revolution has made virtual mobility for services a reality, with potential savings in passenger and freight kilometres. Not so long ago paper documents were transported extensively worldwide. Now thousands of pages can be sent electronically, millions of kilometres in a second. Falls in travel recorded recently in the US are, however, correlated mainly with rising unemployment and high gasoline prices. Elsewhere where levelling off of car travel has been observed some may be accounted for by a switch to high-speed rail and aviation. At the global level there remains a huge potential for growth in mobility. As Wolfgang Mayrhofer recalled, the demonstrations that began in Leipzig in September 1989 and resulted in the fall of the Berlin wall were “protests against missing mobility, lack of access to goods and services and constraints on the ability to see the world”. Such mobility is a basic desire and billions of people are not yet able to fulfil that desire. Absorbing this currently “constrained” transport demand will require every transport innovation available and much more integrated approaches to land use management.

Transport and society

Society as a whole needs to change its approach to understanding transport issues. Being mobile does not necessarily mean having two cars for every household. Innovating requires taking a fresh look at the issues. The younger generations are already driving change. Many urban young have grown up much less car dependent and much more reliant on public transport than their parents, seeing the car as something to hire or share when needed rather than owned and used habitually regardless of trip purpose. As Bertrand Piccard said in the opening session, “society needs to get rid of its prejudices and be ready to do things differently.” The 2011 Forum on Transport and Society will offer an excellent opportunity to explore how that change may develop and what policy makers can do to foster more sustainable mobility.