CITIES, MOBILITY AND ACCESSIBILITY

A SUMMARY OF THE 4TH INTERNATIONAL CONFERENCE ON FUTURE URBAN TRANSPORT

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Written by Pia Carlson, Reportagebörsen
Translation by Roger Tanner, Ordväxlingen
Design & layout: Node AB

Speaking at the 4th International Conference on Future Urban Transport, Leif Johanson, President, AB Volvo, and CEO, Volvo Group, highlighted the need for researchers, urban planners, politicians and industry to pull together. "Only through combined efforts can we create sustainable transport solutions for the world's big cities."

This was the first time that all parties had gathered for a single conference. Researchers were present from universities and from the seven Centers of Excellence, CoEs, funded worldwide by the Volvo Research and Educational Foundations, VREF. Also present were politicians, representatives of automotive industry and urban planners – in all, 200 delegates from 100 cities.

This year's theme was Access and Mobility for the Cities of Tomorrow. Several speakers underscored the importance of co-operation and dialogue for achieving that vision.

"Only through combined efforts can we create sustainable transport solutions for the world's big cities."

All parties need to co-operate in order to meet the great challenges confronting the world's cities as regards climate change, land demand, traffic congestion and air pollution. This was one of the major lessons driven home by several speakers.

"The complex problems we are facing call for a holistic view and for the parties to listen to each other," said Bengt Kasemo, Chairman of VREF's Scientific Council. "Today I find there is more reciprocal humility than there used to be."

Communication is a matter of interplay between the researchers' analyses and the politicians' visions and decision-making. Out of the decisions the urban planners have to create a structure making it possible for everyone – pedestrians, cyclists, moped riders, private motorists, and drivers of buses, HGVs, HSTs and underground trains – to move around in the city. To this end, vehicles and rolling stock are needed which are safe, environmentally friendly and efficient. For creating them there has to be co-operation between procurement officers, buyer, researchers and planners. In addition, an economic system is needed with stable and durable financial mechanisms. Without economic investments, the urban transport and mobility of today and tomorrow will be an impossibility.

Communication is also needed in order to adapt the transport of tomorrow to the needs of all residents, as was pointed out, for example, by Professor Geetam Tiwari of Sustainable Transport in Less Motorized Countries, Research and Training, New Delhi. For it is the individual person's access to the city's possibilities that must be provided for.

ACCESSIBILITY AND NECESSITY

This conference of delegates from all over the world made it abundantly clear that many of the problems are common to the transport situation of all city regions. On the other hand there is no single passenger or goods transport solution that will suit every city. Each one will have to find a solution geared to the local context. The solutions will have to be adapted to the preconditions. Decisions overcoming traffic congestion and pollution in metropolitan cities like London and Paris are not necessarily the best option for New Delhi, Nairobi or Bogotá, the reason being that infrastructure and political and economic conditions are totally different.

The importance of local conditions was brought out extra clearly in the research done by Geetam Tiwari and her team in New Delhi, the capital of India. A new metro under construction there is scheduled for completion in 2021. In common with other metropolitan cities, New Delhi suffers from traffic jams, air pollution and accidents, and the problems keep growing. But will the metro solve the communication problems of the city's 14 million or so inhabitants? No doubt it will for the well-educated middle class, but hardly, Professor Geetam Tiwari pointed out, for the poor majority.

Her studies show that the poor city-dwellers living near the metro derive no benefit from its rapid transit throughout the length and breadth of the huge city, the reason being that they only travel short distances within the neighbourhood. Most of them (77%) walk, go by rickshaw, catch a bus or go by bicycle. Those living and working in the illegal settlements alongside the metro have been relocated and suffered a deterioration in their quality of life. Those who formerly made a living as rickshaw drivers or by cooking food and making tea and coffee for bus passengers now find themselves living further away from their jobs, from the land they cultivate, and also from schools and medical care. Things have above all worsened for women and children. The buses which used to go every five minutes now go only once an hour. The new metro is no option for these people. They cannot even afford the fare. Geetam Tiwari concludes that for the majority of residents, a rethink is needed on the part of politicians and planners. They need to take a holistic view of the inhabitants' needs and to take account of the differences in their economic circumstances. If, she maintains, the decision-makers had taken a holistic view and consulted the inhabitants, a different solution to transport and traffic problems would have been arrived at.

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BRT IN AFRICAN CITIES

The need for a holistic view is confirmed by experience in several quarters of the world. Another example comes from the Bus Rapid Transit (BRT) project in two African cities, Dar-es-Salaam and Cape Town. BRT is a modern transportation system for cities and countries, but it takes more than investment in a fast, uniform and modern system to give people safe transportation. African experience shows that all the parties involved must be committed to the scheme and have a say in the process of change. Dr David Mfinanga of the African Centre of Excellence in Public and Non-Motorised Transport reported a similar conclusion being reached in other countries where BRT has been introduced, such as Colombia (Bogotá), Mexico (Mexico City) and Chile (Santiago).

Above all, as experience from the South American and African continents testifies, plenty of time has to be allowed for negotiations.

The foremost aim of BRT is to introduce a more uniform system with more modern buses, fixed fares but also greater professionalism among drivers, and to reduce the number of road accidents. But there are many obstacles. Urban passenger transport today is dominated by private minibuses owned by small rival bus companies.

As a result of this competition, fares fluctuate from day to day, according to demand. Added to which, the drivers race each other, with all the accident hazards this implies.

The biggest obstacles are common to both cities. Getting local firms to fall in line with a formalised, regulated system is not easy. Small undertakings have a tradition of independence and are geared for survival in the fierce competition for passengers, and they distrust the regulatory authorities. Within BRT they are expected to conform to a regulated system together with their former rivals.

Cape Town in 2000 adopted a Taxi Recapitalisation programme to create new business structures and formalise the operations of minibus businesses, partly with the aim of rejuvenating the vehicle fleet. But several years later three-quarters of the buses were still ancient and decrepit. The Cape Town project did not pick up speed again until 2006, following Cape Town’s selection as the venue for the 2010 FIFA World Cup. This made all the parties involved realise the necessity of replacing the old buses with new ones, not least for safety reasons. Accidents make bad publicity.

URBAN PLANNING AND TRANSPORT

It is today's decision-makers who have to point the way to a solution of urban transport problems. Whether based in China, Göteborg or London, they are all up against much the same problems: urban growth is compounding traffic problems and environmental impact is also on the increase. Their task is to strike a balance between short-term solutions and necessary decisions for overcoming the present-day emergency, and they must look ahead in order to achieve the society they have promised the people. One big challenge is that of ensuring that people will be able to move about in cities.

To present-day decision-makers, urban planning is a key factor in coping with urban transportation. One major concern is with improving availability and at the same time making both goods and passenger transport more environmentally friendly. In many of the world's big cities, the decision-makers' priorities include changing people's behaviour and inducing them to choose public transport rather than private motorism, so as to reduce congestion but also in order to reduce carbon dioxide emissions. The creation of new High Speed Transport (HST) services for the suburbs gives residents an alternative to using their own cars. On arrival in the city, travellers are encouraged to go by tram, bus or metro. In the City of Göteborg, which hosted this year's FUT Conference, the vision, presented by Municipal Council Chairwoman Anneli Hultén, is for 40 per cent to travel by public transport. As an inducement, all schoolchildren and senior citizens travel free of charge. Another tendency in several of the world's big cities is that of encouraging more people to use bicycles for the short-haul journeys making up the bulk of passenger transportation there. Some city centres have bicycle rental or free bicycle lending systems.

Several of the decision-makers at the conference declared cycling to be good for residents' health and the urban environment.

Kulveer Ranger, Director of Transport Policy, Greater London Authority, was among those highlighting cycling as a sustainable form of transport in cities. He showed a picture of his boss, Mayor Boris Johnson, riding his racing bike to occasions of every kind, including those requiring a tail coat. If, he argued, we train a young generation to cycle and walk in the city, this will pay dividends in the future.

"Safety barriers put up by the last Mayor to segregate cyclists from pedestrians and motorists are now being removed"

The Mayor wants a balance between road users of all kinds. For this reason the safety barriers put up by the last Mayor to segregate cyclists from pedestrians and motorists are now being removed. The present Mayor shares with his predecessor the aim of creating a sustainable society, but there are some differences between their visions. The consequences of their decisions also embody one of the effects of democracy: new political decisions can make urban planning jerky, with one incumbent tearing up decisions made by his predecessor. One model for avoiding such situations and achieving a smoother flow may be to look for broad consensus solutions on future transport plans within a region. Quite simply, as one of the speakers put it, politicians can meet across party boundaries in a shared vision of the future.

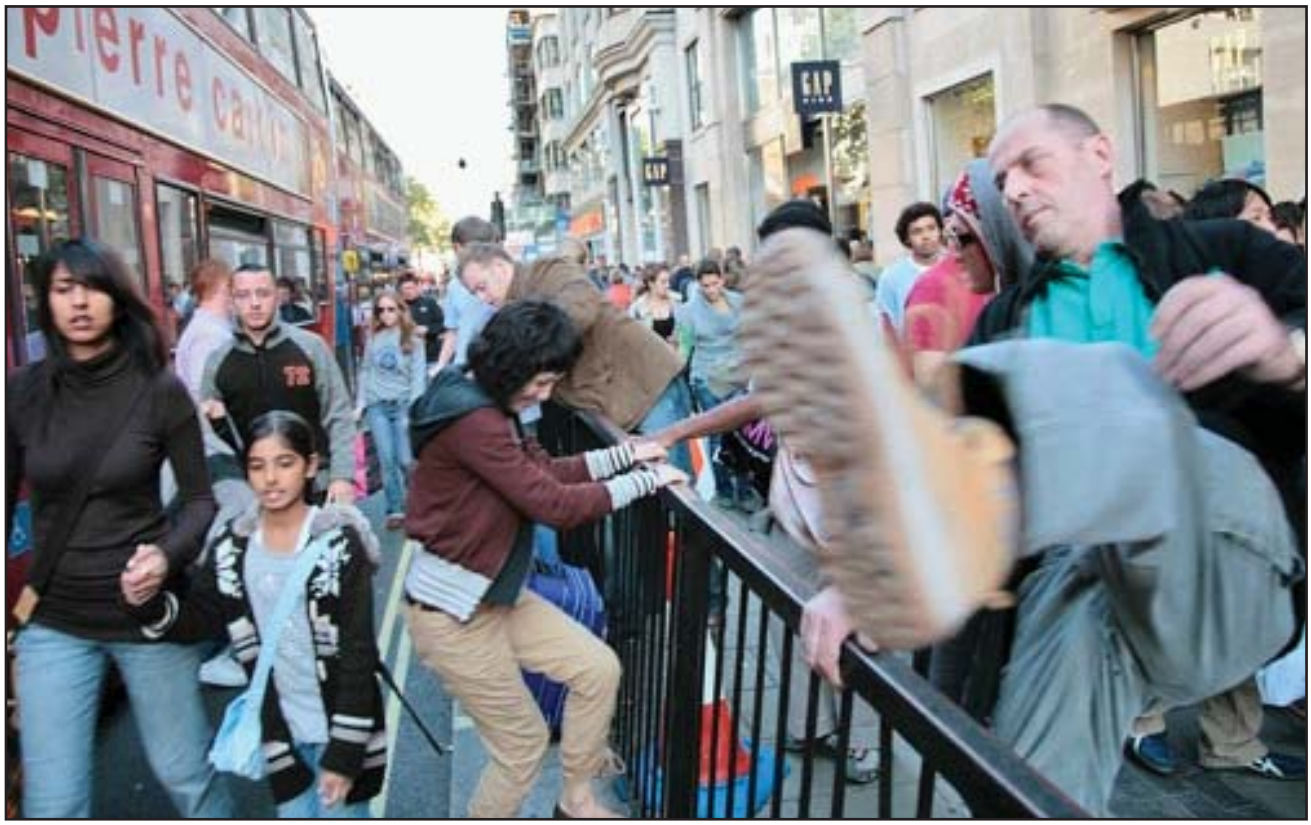
In the Chinese city of Changsha, the politicians are testing a new way of responding to social change. Instead of, as previously, simply adjusting to the changes and solving acute problems, they have opted for a proactive approach, Wang Kouzhu, Deputy Mayor, the Changsha Municipal People's Government, reported. Parallel to China's growing affluence, more and more people are buying cars, which means growing traffic congestion and polluted air. At the same time the trend is for the number of cyclists to diminish. The authorities have now decided to steer traffic development by means of distinct guidelines for the future, for more sustainable choices, with more mass transit, and to retain the large numbers of cyclists. To ensure the implementation of this policy, all the departments involved in traffic planning are working together. This co-operation enhances the prospects of giving effect to the decisions and creating a more environmentally friendly, less accident-ridden city.

THE IMPORTANCE OF COOPERATION

Several speakers at the conference emphases the importance of co-operation between the city's different agencies. Politicians' aims need to be understood and accepted by the urban planners so that the latter can come up with the best solution. One perpetual question, therefore, is: which alternative corresponds best to the city's demands for accessibility and an environmentally friendly solution? The answer can depend among other things on how one analyses traffic flows in the city. A study from the university of Lyon shows complex challenges to demand innovative thinking. Professor Yves Crozet, Lyon University, asked whether building new motorways was the right response to access road congestion during rush hours. Perhaps the decision-makers would have replied unblinkingly in the affirmative if they had only looked at the rush-hour tailbacks. Instead, together with the planners, they superimposed the map of mass transit routes on the road map, thereby discovering that public transport was lacking where the congestion was greatest. Creating new public transport routes, perhaps in the form of a metro, might then seem to be the obvious solution, but metro construction is not necessarily the answer if the aim is for poor citizens also to be served by the swift communications. Assistant Professor Lisa Schweitzer of the University of Southern California, Los Angeles, has studied the surroundings of the subway stations on the Blue Line in Los Angeles. The intention was for the new stretch of subway to generate more jobs, more shops and a growth of services and cultural amenities alongside, thereby improving the lot of the many unemployed members of the population. Schweitzer set out to investigate whether the subway had succeeded in making the inhabitants of the poorest districts participants in the rest of the city. In the course of the project she photographed the subway stations and their immediate surroundings 19 years after the subway had been constructed. Her pictures show desolate, exposed stations, unprotected and close to busy roads. The surroundings mainly consist of dilapidated tenement blocks and vacant lots. By contrast she presents photographs from Blue Line stations in the prosperous districts of Los Angeles. Here, where land values are high, the stations are pleasant and surrounded by flourishing shops, restaurants and cinemas. She concludes that the subway alone does not spell equality for the urban poor. They are still unemployed and have as few shops to go to as before. The lesson to be learned is that the construction of a metro must be linked with more cogent initiatives concerning services, amusements, workplaces and shops in order for the job market to blossom and the neighbourhood to become attractive and pleasant. That kind of development will not come about by itself.

The same conclusion applies to other places. Development costs money. Ulrika Francke, CEO, Tyréns, Sweden, said that a metro line was only the first step in creating the new, environmentally friendly Hammarby Sjöstad neighbourhood in Stockholm. Without a long-term, determined commitment to services round about the stations along the route, the former industrial estate could hardly have been transformed into today's attractive residential neighbourhood with its high land prices.

When creating new suburbs, it is important to do so with good quality at every step. This is also an economical proposition, because it pays, Ulrika Francke said, with both buildings and land appreciating in value.



Example of a distressed street in London.

These conclusions may be self-evident to an individual country, and land use policies are therefore being based on this knowledge. But not even good policies are always enough. They also have to be translated into practice, otherwise they remain mere good intentions. An Australian example, quoted by Carey Curtis of Curtin University, Perth, Western Australia, and Nicholas Low of the Australasian Centre for the Governance and Management of Urban Transport, reveals a great gap between the policies existing for land use in the surroundings of railway stations and reality.

Australia has a national policy, Land Use Transport Integration (LUTI), concerned with creating a good balance between housing, shops and other amenities in the surroundings of the country's train stations. The policy document describes how paths are to be designed in order for pedestrians to mingle safely with other forms of transport, especially in the vicinity of railway stations in the sparsely populated country. But the policy is not being translated into reality. A case study by the two speakers has shown that communities remain isolated, despite the policy being firmly established in the guiding documents at national, regional and local levels. In 20 years, very few of the 69 stations and their surroundings have been developed in the desired direction towards a differentiated mix of land uses. In their ongoing research, Nicholas Low and his colleagues will be looking for an answer. What are the obstacles to change?

One major problem shared by the world's cities is that of how new knowledge about planning for a sustainable society is to be disseminated and used in practice. Best practices and solutions to complicated problems do not spread automatically, whether between neighbouring cities or neighbouring countries, or between researchers and practitioners. Besides, there are many obstacles in the way, as mentioned in the above example from Australia. There are local structures which at first sight seem incomprehensible and are opposed to change of any kind. These obstacles cannot be neutralised or circumvented until they have been made visible. The next question is how to counteract the old order of things and bring about change.

This problem became supremely relevant to newly qualified urban planners from the University of Nairobi when they obtained jobs. The task was to create new urban plans where none had existed for perhaps something like 30 years. The aim was to create a sustainable society. But the new urban planners were not equipped to deal with the difficulties in the form of ancient traditions, a long history of colonial ownership, many private landowners and so forth when they started their practical work. The challenges appeared insuperable.

Between them, the Center for Sustainable Urban Development, Columba University, NYC, and the Department of Urban and Regional Planning (DURP), Nairobi University, created a new model of co-operation. Through combined efforts they formulated a new, sustainable urban plan together with the local decision-makers in Ruiru, a suburb of Nairobi. Instead of a hierarchic model in which the researchers come out to say what change is to be made, they opted for the reverse.

"Long-term involvement of local universities together with urban planners can help places with severe urbanisation challenges"

While still only students, the future planners went round asking residents and local government in part of the city to name their biggest environmental problem, and then they started looking for solutions, Professor Jacqueline Klopp, Center for Sustainable Urban Development, recalled, describing the successful method.

The biggest problem was a rubbish dump from which toxic substances were seeping into the drinking water. The city had failed to find a new location, because the big landowners (coffee plantations(refused to sell land for it. It took time, but in the end the students found a solution: the dump was relocated and the residents got clean water.

The conclusion drawn from this project is that long-term involvement of local universities together with urban planners can help places with severe urbanisation challenges to move towards necessary sustainable urban planning policies.

Dr John Ward and Phil Wright of Omega Centre, UCL, employed other means of communication between the parties involved to canvass experience with a view to wiser decision-making. They asked the key stakeholders to describe their experiences of work on the Channel Tunnel Rail Link. This, contrary to academic tradition, is a pre-hypothesis research model using an open discovery approach with narratives from selected stakeholders who were either affected by or involved in the tunnel project. Instead of the researcher setting the agenda, the narrative is governed by the interviewee's own interest, the aim being to create a broader view of the project, so as to better understand in future how to avoid obstacles and problems in projects of this magnitude. The themes emerging from the narratives were analysed with the aid of a data analysis program. The themes ("filters") crystallising out in this particular instance included political will, use of public money and leadership. Among other lessons, it was deduced that, following several years' inertia, a breakthrough for the project came in 1990-91 when the plans became linked with a broader transport vision for the entire region. Another conclusion was that the positions and visions of the politicians made an important difference to the interviewees' attitude towards the project.

SOLUTIONS FOR THE FUTURE

Access was among the main topics of the conference. Increased access in the city can mean making better use of the potential of modern technology for greater logistical efficiency. This can be achieved, for example, by creating hubs on the outskirts of cities. Volvo's Leif Johansson and Ingvar Nilsson, CEO of Schenker North, both had a certain amount to say on this subject. Nilsson described how they had succeeded in reducing the number of transport operations by 75 per cent through better logistics. Loads for one city are reloaded and co-ordinated so as to reduce the number of journeys into the city centre. In the case of Svenska Mässan (the Swedish Exhibition and Congress Centre), located in the centre of Göteborg, co-ordination had the effect of cutting deliveries per week from 400 to 20.

Fewer journeys to the city centre means less tailbacks. This is also of benefit to private motorists and public transport passengers, speeding up their progress through the city.

Use of modern technology, such as being able to see timetables from one's mobile or such-like, means a lot to public transport passengers, but no one is made happy by standing waiting for a bus and then having two turn up at once. Buses must be efficient and dependable in order for residents to choose them.

Professor Carlos F. Daganzo of the Berkeley Center for Future Urban Transport spoke of increased communication between drivers as a means of preventing buses arriving too close together. The drivers can see from a computer system where and how many minutes away the previous bus is, and they can adjust their speed to their colleagues, thereby maintaining a steady distance. In this way buses can arrive at regular intervals just as passengers want them to, which makes them an attractive option.

Arriving quickly and conveniently comes high up on the urban dweller's wants list. In a survey by Veiolia Transport AB, 90,000 residents of 16 cities were asked what kind of transport system they wanted. The answers show that people want above all to reduce their travelling time, Cyrille de Peloux, Veolia, reported. At present the city residents consulted are spending an average of 2 hours travelling between work and home. Most of them would like to halve this to 1 hour, so as to have more leisure and sleeping time.

Today's technical possibilities are mind-blowing, regardless of whether we are talking about creating modern cars, buses or high-speed trains. They are comfortable, smart and tidy and use any number and variety of fuels and technologies. During the week of the congress, Volvo launched new hybrid buses for Göteborg and London. These are powered by electric and diesel engines which can be used separately or together and provide silent-running, environmentally friendly journeys. Even though we are now thought to have reached Peak Oil, Ulf Svahn, CEO, Swedish Petroleum Institute and Swedish Representative of Europia, prophesied that petrol and diesel would continue to dominate the fuel market for some time yet. However, a number of other technically feasible power systems are up and coming.

On the subject of future technology, there is, as Paul Gustavsson, Vice President Business Development, Volvo Car Corporation, pointed out, no silver bullet to solve all our problems. Volvo are therefore committed to four different main tracks where the powering of cars is concerned. But, Paul Gustavsson emphasised, even though Volvo have noted that consumers want eco-cars, national and local government incentives are needed in order for people to buy them.

Dwindling oil reserves, but also demands for a reduction of carbon dioxide emissions in the transport sector, are making other modes of transport more attractive. Perhaps, then, the future lies with the train, as Bombardier Transportation's CEO Andre Navarri argued when launching his slogan "The climate is right for change - The climate is right for trains."

Trains are fast and carry a lot of people, but the heaviest argument is that they are responsible for only 1 per cent of carbon dioxide emissions. This is as good an argument as any, but where are the high-speed trains to get their electricity from? Nuclear or renewables? That question was not discussed.

The industry's presentation of its technical possibilities also triggered a lot of questions from the audience. Foremost among them were delegates from India, China and Africa. Why are HSTs so important? The main thing, one person argued, is getting there in the first place, a comment clearly indicating that there are some differences in the transport problems of the world's cities. To some, speed is what matters most. People have to travel long distances to get to work. But in other places, where perhaps transport is entirely lacking, the most important thing is to create them and, not least, to create economically attractive alternatives.

Another person asked: "Can't you make an effort to produce cheaper buses (for cheaper fares) to suit less affluent countries?" Someone else added: "Because we can't afford to buy modern buses, since people can't afford the fares, we're having to go on using the old ones, which are dangerous and dirty." The speakers asked how the new, modern products that were being presented fitted in with a changing world. André Navarri, Bombardier Transportation replied that interest in trains was running particularly high in India and the African countries, and so it was an oversimplification to say that the new modern technologies were of no interest to economically disadvantaged countries. Special green bus corridors for public transport are not at all unrealistic in present-day cities, whether in countries with limited economic resources or in affluent ones. They already existed in Bogotá, the capital of Colombia, Jan-Erik Sundgren riposted on Volvo's behalf.

The question time clearly showed the complex challenges already waiting to be dealt with. It is not enough for the products to be modern, with every possible technical refinement. They have to be modern in the right way to suit the environment where they are in demand. And they must be economically advantageous.

In addition to demands for effective communication between all interests in industry, planners, researchers and decision-makers, the entire process of creating a sustainable future transport system stands or falls by the availability of economic resources. When it comes to creating sustainable solutions for the environment and a new architecture in urban planning, it is often objected that there is no money. True, there are good ideas, but there are no resources for putting them into effect. Procurement of public funding is one possible difficulty, because the need for public resources begs a number of questions. Is the cost of a new road or tunnel to be met out of taxation revenue or by means of user charges? Is a new bridge to be financed with road tolls? To those with private investors taking part in the project, the danger is that they will want to call the tune. Ought, then, the local authority to modify its decisions in order to attract the private investors' contributions and thus depart from the decision preferred by the residents, so as to be able to mount the project at all?

"Is the cost of a new road or tunnel to be met out of taxation revenue or by means of user charges? Is a new bridge to be financed with road tolls?"

Or should they refrain from the project altogether? There are many problems. To help decision-makers work out the best funding model for an impending project, there now exists a computerised support tool. During the FUT Conference, Professor Tony May, Leeds University, described the Distillate website. Decision-makers can put questions to it and access research on their topic, as well as examples of case studies from which they can derive inspiration in the matter of funding arrangements.
True, this research is based on the UK context, but, Tony May continued, the knowledge base can probably be used everywhere.

A SHIFT OF MINDSETS

Many of the challenges are common to all the world's cities. The visions and solutions can also be the same. In the great majority of cases the good results mean that the decision represented an attempt to create holistic solutions and to factor in every conceivable aspect. For it is not enough for Volvo to build hybrid cars or buses. There also have to be underpinning systems and structures in the form of urban planning, ticket systems favouring public transport travel, environmentally friendly vehicles and more besides.

In order to achieve a holistic solution there has to be communication with all the parties involved – researchers, planners, politicians, industry – in a common endeavour to capture residents' needs for smooth travel through the city. Every decision must start by identifying the main mobility targets which are specific to the place, the situation and the context, as distinct from what is generic and international, can apply to many places and is thus transposable between different places, situations and players. The need is to think in terms of mobility and accessibility, not in terms of transport needs.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