"No Transport White Elephants"

Mobility planning for mega-events ▪ Philippe Bovy, Professor emeritus of transport at the Swiss Federal Institute of Technology at Lausanne and long-standing transport consultant to the International Olympic Committee (IOC), speaks about new, sustainable strategies for mastering the extreme traffic loads generated by the world's largest sports events.

Professor Bovy, the cities hosting the Olympic Summer Games have to reckon with 1.2 to 1.8 million journeys per day, many more than before and after the event. How much of this extra volume can be shouldered by purely temporary measures?

The scale of the biggest and most diversified sports event in the world is indeed gigantic: Hosting more than 300 competitions in 28 different sports in parallel within only 16 days, this mega-event has to handle a flow of four to nine million ticketed spectators, an unknown number of non-ticketed visitors, plus 120,000 to 150,000 accredited workforce, volunteers and logistical support. Not to count the 16,000 athletes and team officials, 5,000 to 6,000 Olympic Family members, 20,000 to 23,000 accredited media and more than 10,000 non-accredited media representatives. On the bottom line, however, the 1.2 to 1.8 million Games-related journeys per day are, by far, not totally additional traffic – for a substantial part they "replace" normal traffic, which in large cities is usually 18 to 25 percent lower due to holidays in the summer season when the Olympics take place than in average conditions. Also, more than 100,000 hotel and other accommodation rooms are booked for the event and they generate substitution traffic. Still, the traffic loads generated by the Summer Olympics are truly extraordinary and can only be handled by cities with high-performance public transport systems. Experience shows that about half of the success of Olympic Games transport depends on an accelerated expansion of public transport infrastructure to be operational for the Games and about a quarter on integrated multi-mode transport management and centralized traffic command, control and communication systems. The last quarter depends on the authorities inducing bold changes in traffic modal split to better master car traffic, as done in Beijing 2008 or Vancouver 2010.

Does a city that invests in durable upgrades of transport systems not run the risk of producing so-called White Elephants, i.e. build up capacities that will be useless after the event?

In 30 years of Olympic experience, I have seen quite a few sports venues turned

Austrian railway engines in EURO-2008 design; traffic sign for Olympia 2010 in Vancouver: "With bold changes in traffic modal split we can better master car traffic during mega-events"

Bus transport for the Olympics 2000 in Sydney: "The spectators' choice of transport was to shift from a usual 85 percent event attendance by car to 100 percent by public transport"

White Elephants, but I have never seen real Transport White Elephants. The reason is quite simple. The Games are attributed to Cities after a tough two-year world competition. Successful host cities develop a vision, not only of their proposed mega-event, but also of their long-term development as boosted by the Games. In this context, the Olympic Transport Plan plays a key role and constitutes a major factor for accelerated development and faster infrastructure upgrading. In many cities, the unique chance that lies in the momentum brought by the Games is the actual re-activation of long-needed projects that had been shelved for political or economic reasons. In Rio de Janeiro, the transport development program for the 2016 Olympics corresponds to the 2025 Transport Plan, except that its implementation has been compacted to six years thanks to increased guaranteed federal, state and city financing. Due to the city's continuing fast growth, there is absolutely no risk of producing a Transport White Elephant.

Does this imply that the car manufacturers' justification of their expensive investment in racing, namely the important insights that experiences gained under extreme conditions can bring to the development of series-produced cars, applies analogously to transport systems?

Yes, maybe this comparison is quite valid. Indeed, during the Games, the transport systems have to meet extreme requirements in terms of load, reliability, flexibility, safety and security. The Games are an excellent large-scale field trial – and at the same time a tremendous opportunity to test innovative policies. But one has to keep in mind that these tests are taking place with the entire world watching. And the transport systems' performance is monitored even before the opening ceremony because most media representatives are in town getting ready for the big event, with ample time to scrutinize transport.

Some time ago you called the mobility concept for the Summer Games 2000 in Sydney the beginning of a new era. What was so innovative about it?

Coming four years after the Atlanta 1996 Games, which were partly hampered by transport mismanagement, the planners for Sydney 2000 developed two new objectives: The Games in Sydney were to have the lowest possible environmental impact in all domains, including transport; and the spectators' choice of transport mode was to shift from a usual 85 percent event access by car to 100 percent by public transport. The second objective called, among other things, for a spectacular, temporary and drastic change in the travel behavior of mega-event goers. To achieve this change, Sydney 2000 transport organizers developed a Games concept that was strongly public-transport oriented. At the same time they heavily restricted "last kilometer" car access to all competition venues. In this concept, the key element is obviously a quasi total abolishment of public parking facilities at competition venues – combined with drastic enforcement made attractive by event tickets allowing free 24-hour public transport. This policy was supported by a very intensive, two-year public information campaign.

Which role do modern traffic management systems, such as used during the FIFA World Cup 2006 in Germany, play in the strategies of the hosts of mega-events?

The insights gained in Sydney have had an influence on the transport and traffic management measures introduced for subsequent Olympic Games and for other mega-events like the FIFA World Cup in Germany or the EURO 2008 in Austria and Germany. In both countries, parking around the stadiums was highly restricted and public transport was boosted to its maximum, not only at the urban scale, but also on the level of national and international rail systems. For the EURO 2008, more than 6,000 supplementary »

Subway system map, passenger attendant for the 2008 Olympics in Beijing: "During the Olympic Summer Games, authorities enforced a reduction of private car traffic by 50 percent"

trains were made available and ticket holders enjoyed 36 hours of free transport in both countries' rail networks and on all host city urban transport systems. The share of public transport had never been so high for access to a soccer event. These two events also marked the beginning of another phenomenon: a growing number of non-ticketed spectators (NTS), i.e. visitors and fans holding no event ticket but wishing to enjoy the host city's festive sports ambiance at live sites and fan plazas. Often the number of NTS is a multiple of actual stadium capacity, reaching 4 to 6 times its attendance. Transport and traffic planners and operators have to cope with this new, almost spontaneous additional travel demand. In this highly dynamic domain, only systematic in-depth monitoring and analysis of the live experiences during past mega-events will help ensure further improvements in mobility management for future similar events.

Even though the requirements specified for the aspirants for mega-events such as Soccer World Cups or Summer or Winter Olympics look similar at first view, the mobility issues are quite different for these types of events, aren't they?
That's true, while the Olympics are "multi-sports" events in one host city, soccer championships are "one-sport" events in multiple cities. Consequently the most critical organizational parameters such as accommodation and transport, particularly air transport, have little operational resemblance. The biggest logistical difference is the fact that even if the Summer Olympics have more than 300 competition events in 16 days, the program schedule is known well in advance. For soccer mega-events, the schedule of the teams playing in the different host cities is known only for the first round of group matches. The knock-out phase, on the other hand, unfolds in an unpredictable way. For the EURO 2004 final in Lisbon, for example, nobody expected Greece to play Portugal. Consequently an air bridge for thousands of Greek spectators had to be organized at four days' notice to handle the situation.

In this sense: Which particularities did the mobility concepts of recent mega-events such as Beijing 2008 and Vancouver 2010 present? And what is the focus during the current FIFA World Cup in South Africa?
Although Beijing 2008 and Vancouver 2010 Games took place in totally different situations, they had had one point in common: for both events, the respective organizers were able to decrease individual car traffic during the Games by a significant percentage, Beijing by about 50 percent and Vancouver by about 25 percent. But the traffic reduction methods used were not the same. In Beijing, traffic reduction was compulsory, with the odd-even license plate scheme allowing only odd-even days of vehicle use. The traffic reduction for Vancouver's city center, in contrast, was a voluntary scheme steered by a successful citizen behavior change campaign. For the FIFA World Cup in South Africa the issues presented above such as traffic reduction are only of secondary importance. In such a vast country, the main issue is provision of reliable accessibility to airports and management of air travel between the airports of the nine hosting cities and the rather dispersed areas where secure quality accommodation for teams, spectators, sponsors and fans is provided. This is a totally different but also quite tough logistical challenge.

Professor Bovy, thank you very much for the interview. «

Personal background

In more than 20 countries yet, Professor Philippe Bovy has been involved in development projects for traffic management systems and transport planning. Since 1980, the Swiss citizen focuses on planning and developing transport systems for mega-events and supports the IOC since 1996 as transport consultant. His responsibilities included for example monitoring the development of the Olympic transport systems for Sydney, Salt Lake City, Athens, Turin, Beijing, London and Sochi. His current roles include that of member of the evaluation commission for applicant and candidate cities for the 2012, 2014 and 2016 Olympic Games. For his updated "Olympic and Mega Event Transport Bibliography 1997-2010" as well as information on the content of the numerous conferences, seminars and postgraduate courses directed by him, please go to www.mobility-bovy.ch.