Traffic & Transport Past & Present - An AITPM Perspective

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Abstract

The first AITPM Forum was held in 1982 and titled Local Area Traffic Management. Since then the AITPM held 27 more conferences on a number of topics and themes varying from traffic management, public transport, non motorised modes, ITS, government strategies and funding. Over this long period, many changes took place in all these areas. Each AITPM conference reflected the latest techniques, policies and technology of the time. This paper chronicles the historical changes in traffic & transport management and operation based on AITPM conference papers published since the first Forum in 1982 to the latest Adelaide National Conference in 2009.

Disclaimer

Any opinion and conclusions expressed in this paper are those of the author and in no way represents the official view of the AITPM.

Background

In 1965, practitioners associated with the management and operation of road traffic had come to represent a wide range of training, expertise and experience. Many of those were not eligible for membership of professional institutions, and it became clear that there was a need for a non-restrictive association to foster developments in this emerging area. In 1966 the Australian Institute of Traffic Technology was thus formed with about 60 members. Over the next decade, the Institute continued to grow mostly in NSW, reflecting the many developments in traffic engineering and associated planning and management. During the late 70th the Institute went into a hiatus and lost about 25 percent of its membership.

In order to stimulate the growth of the Institute, it was decided in 1981 to broaden its membership and focus to encourage transport and urban planners to join; to reflect this course of action the Institute’s name was changed to the Australian Institute of Traffic Planning and Management. Since that time, the AITPM has experienced continuous growth. It has now more than 500 members and corporate members, representing practitioners in government agencies, local government, private practice, academic and manufacturers.

Another major innovation was the organisation of the first Forum, in 1982 in Sydney, titled Local Area Traffic Planning, which was then followed by very successful Forums until 1987. The first National Conference was held in 1988 as a one day event with the most recent National Conferences now held over three days including targeted workshops. Since the first Forum, these conferences have developed an unrivalled reputation for bringing together traffic and transport planning and management practitioners from Federal, State and Local government, private practices and academic institutions. This reputation is also largely due to the high standards of the majority of papers presented at these conferences. This 29th National Conference keeps the AITPM tradition of providing the best transport and traffic conference in Australia.
Conferences Emphasis & Trends

Since 1982, over 500 papers have been presented at 29 AITPM forums and national conferences (see Appendix). These papers have covered a very wide number of topics and themes which could be categorised as follows:

- Roads & Traffic Planning and Operation including policy and responsibility; road planning, design and funding; traffic planning, management (LATM) and operation; and freight.
- Road Safety – Education, guidelines and enforcement.
- Vulnerable Road users including pedestrians, cyclist and persons with disabilities.
- Transport which includes policy; planning; transport & land use integration; travel demand management; and public transport (buses).
- New Technologies pertaining to traffic systems (eg signals), public transport; intelligent transport systems, and others such as new fuels, batteries and lamps.
- Other areas including public consultation, education and environmental issues.

The proportion of papers, presented at AITPM conferences between 1982 and 2009, in decades interval, for each of the above categories are summarised in Table 1. It would be fair to say that most papers presented until 1989, whilst applicable nationally were largely based on the NSW experience.

Table 1: Papers Presented at AITPM Forums & Conferences 1982-2009

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<tr>
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<td>2.1%</td>
<td>3.6%</td>
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<td><strong>TOTAL</strong></td>
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<tr>
<td>Number of Papers</td>
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<td>195</td>
<td>221</td>
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In the eighties, the emphasis of presented conference papers was on traffic (~60%). Road safety and transport topics were the subject of 14% and 15% of all papers respectively. Papers dealing with vulnerable road users and other areas such education and consultation accounted for the remaining presentations.

In the nineties, transport and road safety related topics gained momentum with about 34 and 20 percent of all presented conference papers, with traffic proportionally decreasing to 20%. Whilst the proportion of papers dealing with vulnerable road users remained static, papers on new technologies emerged. Furthermore, this decade saw the emergence of environmental papers. In the last nine conferences (2001-2009), the number of presentation on road safety related topics decreased considerably, whilst transport related topics accounted for about 50 percent of conference presentations.

A broad review of all published papers enabled me to identify the changes and emphasis which occurred over the last three decades in the different disciplines within our profession. For each forum and conference, only papers which at the time provided something new or made a valid point have been referred to in this document (about 44 percent of all papers).
Roads & Traffic Planning and Operation

In the 60’s and 70’s, traffic management was largely concerned with traffic signs, road line marking and traffic signals; so much had to be done to bring these simple facilities up to scratch that little attention was given to broader concerns. The work of those days maximised the safety gained from warning signs – advisory speed signs made a substantial contribution to safety on curves – optimised the use of regulatory sign controls – speed zoning was provided to a regular standard and enhanced guidance to motorists by direction signs. Centreline marking was extended and edge linemarking was introduced on major arterials. Traffic signals were made progressively smarter culminating in the world leader co-ordinated signal systems SCATS (Dobinson, 1987).

Priority roads conditions along all arterials followed by the introduction of major/minor system of priority to all streets in NSW, in 1981, had a major impact on road safety and improved efficiency.

By the late seventies, with increasing affluence, the provision of roads has rapidly become a major cause of concern in the residential areas of major cities and towns. Increasing car ownership and its impact on the living environment resulted in grass root pressure on politicians and agencies to improve the local streetscape and traffic management so as to provide a “good place to live”.

To address these concerns, the first one-day forum held in 1982 by the AITPM looked at Local Area Traffic Planning. This and the 1984 forum, Local Area Traffic Management in Practice, developed and promoted the concept, the procedure (Stapleton, 1984), the evaluation (Gennaoui, 1984), and practical aspects of the implementation of Local Area Traffic Management (LATM) schemes. Government policies were then adopted and refined for the progressive implementation of LATM schemes with new management techniques such as road closures, slow points, speed humps, raised platform and traffic reduction measures were permitted subject to comprehensive local area traffic studies including public consultation.

In 1987, the NSW government released their Road 2000 plan. Concerned that road funding may fail to keep up with construction of major infrastructure including the Sydney Road Orbital, the 1987 Forum “Traffic – Planning The Next Steps” was held to ensure that traffic management, that is making the most out of the existing road system, would still be a major element in catering for all road users. At that Forum, past approaches were challenged and innovative measures explored, such as the introduction of the S-lanes, to facilitate access to major collector roads during peak hours or the implementation of grade separation at major intersections.

The 1988 Conference titled Traffic management: Who pulls the Strings was not your traditional technical forum with presentation of papers and questions and answers. It consisted of a series of interviews, between David Brown a past national president of the institute, and the then NSW Minister For Transport & Roads, a media commentator, a state government engineer, a local government town planner, and a consultant. All speakers emphasised the need for better liaison and consultation between government agencies, local government, and the profession at large. The conference concluded that the profession through the AITPM should learn how to pull the strings otherwise the advantages that the community would gain from its members’ expertise would be lost and we would be frustrated by decision made by others. Truer words were never said. In most instances they are still applicable today.

By 1990, the conflict between the call for environmental capacity on roads in residential streets, and the need for high capacity arterial road networks albeit through the principle of users pay (Tollways) raised the question “Roads – To Built or not Build?”.
Day (1990) concluded that it was not a case of build or bust but rather how to move people and goods as safely, comfortably and effectively as possible, and to use the available resources and dollars wisely; Oxlad (1990) espoused similar principles. A paper on the provision and funding of Tollroads provided an insight in what was yet to come (Livingstone).

At the 1992 Conference, the use of electronic and automatic schemes to achieve tidal flows on arterial roads was explored (Amos).

At the 1995 Conference, the introduction of a 50 kmh speed limit was considered an appropriate balance between what is needed, what is manageable, and what is acceptable in urban areas (Croft, 1995). Another paper suggested that the adoption of this speed limit was going to reduce pedestrian accidents and fatalities by 12 and 27 percent respectively in Adelaide (McLean @al, 1995).

The 1999 Conference, Counting the Costs, provided the opportunity to explore the costs associated with transport delivery; cost was defined not only as a dollar value but included human life, the environment and political compromises. The role, costs and benefits of road trains for the transport of freight were highlighted by a number of speakers (Lovell, Cook 1999) as was their impact on the road network (Shearer, 1999). The provision of road infrastructure by the private sector were also discussed (O’Sullivan, Gomez, Wigan, 1999)

At the 2000 Conference, the benefits of micro simulation models such as Paramics (McKay, 2000) were presented. The use of Paramics to simulate Electronic Toll Plaza was demonstrated at the 2002 Conference (Bitzios).

A “User Guide” for diagnosing problems and developing practical and cost effective treatments solutions and priorities on un-kerbed urban arterial roads was presented at the 2001 Conference (Bowers @al). Other presentations at that conference concluded that:

- The application of a 50 km/h general urban speed limit would result in a major reduction in the number of speeding vehicles and a substantial reduction in crashes (Tziotis @al, 2001).
- Other than additional capacity, ramp metering was considered as the only demonstrated method of avoiding or delaying flow breakdown (defined as the change in traffic flow conditions from high-speed free-flow 80-100 kmh to high density forced flow conditions 30-50 kmh) along freeways (O’Brien, 2001).
- The State and local government authorities should be cognisant of the impact that the introduction of kerb lane parking restrictions (such as clearways) has on the economic viability of adjacent land uses (Holdsworth, 2001).
- The success to providing a reversible Southern Expressway in Adelaide was only achieved as a result of the use of road design and electronic technology practices as an integrated package (Mason@al, 2001).

A paper which attracted a lot of attention, possibly some controversy but well received, at the 2002 conference, promoted four-way stop signs as a low cost and effective traffic control treatment to reduce traffic accidents (Cardona @al, 2002). The 2002 conference was also told that urban design should be an important feature of all designs for major transport infrastructure such as motorways, arterial roads and transitways, and that it was possible to plan, design and build transport infrastructure which is integrated with the natural build and social fabric (Chapman, 2002). A one day workshop, also held in conjunction with the 2002 Conference, included a session dedicated to

- The impact of heavy vehicle on signalised intersections (Haldane @al, 2002).
- The monitoring heavy vehicles access to the Port of Freemantle (Peters, 2002).
- The background for a route assessment methodology for Restricted Access Vehicles that is vehicles which exceeds standard dimensions or mass limits (Campbell, 2002).
A micro-simulation model developed for the evaluation of performance of corridors carrying freight vehicles for alternative priority treatment was introduced at the 2005 Conference (Ramsay et al).

The operation of the Park Assist real time parking guidance system was introduced at the 2007 Conference noting its benefits to motorists, operators and government agencies (Cohen et al, 2007).

The advantages and disadvantages of lower cost LATM measures to tackle the problems of traffic intrusion into residential areas and speeding including 4 Way STOP signs, rubber speed cushions and rubber roundabouts were discussed at the 2008 Conference. The results showed significant reductions in speed, and in some cases volumes, through the use of these low cost measures (Lee, 2008). The successful testing and benefits of Signalised Roundabouts in New Zealand was also reported at that conference (Gottler, 2008).

The following suggestions to improve capacity in the future were presented at the 2009 conference, Traffic Beyond Tomorrow:

- Appointment of a Traffic Manager to becomes the “congestion reduction champion” within the responsible authorities and LGAs with overall responsibility of all functions of the road network including public transport, land use planning, roadworks and even refuse collection (Cotton et al, 2009).
- Identification of future road space demands and potential deficiencies based on The Liveable Arterials approach used in New Zealand which was reported to have worked well in determining the most appropriate solution taking all relevant urban sustainability factors into account. It critically allowed conflicts to be identified and provided a very good mean of making decisions on the most appropriate prioritisation of scarce road space (Rutherford et al, 2009).
- Increasing capacity of motorway should in the future involve Active Traffic Management, by using variable message signs (VMS), Motorway Incident Detection and Automatic Signalling, as demonstrated on the M42 in England (Norton, 2009)
- Potential new technologies to reduce congestions (Blake, 2009).
- Use of blue-tooth technology to measure travel time and volumes (Otterson, 2009).

Road Safety

The 1986 one day Forum, A Practical Approach to Road Safety, was in response to an ever growing concern by state and local governments with road safety. The Forum brought together planners and engineers from State agencies and Councils to discuss the practical aspects of road safety, including areas of responsibility, research and education as well as the then latest strategies to improve road safety, along both the classified and local roads. The role of research in practical road safety decision-making in relation to seat belts and child restraints usage, random breath testing and accident black spots was discussed (Vasey, 1986). The forum also included presentations on state and local government policies and guidelines for road safety, crash analysis, and road safety education. This exchange of ideas improved the way road safety was dealt with by the different stakeholders.

The third national conference, held in 1993 for the first in Queensland, was dedicated to road safety, and invited presenters to answer the question Safety on our Roads – Who’s Responsible? Who Cares? The outcome of the conference was a better understanding of road safety risks and solutions with some of the main findings and conclusions summarised below:

- Road safety cannot be delivered – it must be practiced (Camkin, 1993);
- Community involvement in road safety is a must to achieve positive outcomes. (Gennaoui 1993 & Clark 1993);
Road lighting, in many instances, could show a greater rate of return than many other traffic engineering measures and should be given serious consideration during construction and maintenance of a road (Tyllier, 1993);

Strong focus should always be maintained on road safety during road construction and not be compromised due to budget or time frame (Joy, 1993);

Road safety audits are extremely useful; however no audit should commence unless it is a part of a serious effort to improve safety and is backed by a real commitment to act upon the determination of the audit (Johnston, 1993);

The introduction of red light cameras in Queensland had resulted in the modification of community attitudes and significant reduction in violation rates not only at treated sites but also at other intersections (Lee & Lee, 1993);

The introduction of a 50 kmh speed limit as a general speed on residential streets may not lead to much speed reduction (Taylor, 1993);

Signs are the most cost effective traffic measures; their effectiveness (ie their legibility) particularly at night time is very important (Dunne, 1993);

Whilst road safety is everyone’s responsibility (McIntyre, 1993), education, enforcement (Barrett, Hannigan 1993) and engineering measures (Merry) are very critical for improved road safety.

The 1994 Conference addressed the following road safety matters:

Need and importance for local councils to be involved in Road Safety (Sheffield, 1994);

Importance of involving the whole community in Road safety (Pollachini, 1994). This could be achieved by programmes such as the Street Safe Campaign and safety near schools, and the implementation of non-english speaking background and senior citizen programs

The need to introduce a risk management approach to road safety (Viner & Schnerring, 1994)

In 1998, the benefits and future use of road safety barrier was discussed in 1998 (Fishburn, 1998), as was the use of perceptual countermeasures for speed reductions (Fildes @al, 1998).

In 1999, road safety initiatives introduced at the NSW Local Government level such as the funding of road safety officer positions were shown to be of great benefit; as a result initiatives, such road safety outside schools, and campaigns targeting specific behaviours such as drink-driven, speeding, pedestrian behaviour and occupant restraint use, were introduced (Croft, 1999).

The effectiveness of drivers training programs in improving road safety were the basis of a number of presentations at the 2000 Conference (Oats, Blanchette @al, Excell, Elliott). The conference also provided the opportunity for a historical perspective of road safety and a glimpse of future strategies (Smith, 2000a). Smith (2000b) also in a separate presentation concluded that it is over simplistic both to confuse the consequences of crashes involving heavy vehicles with their cause and to blame the industry for what happens. The development and effectiveness of the decision framework adopted in Western Australia for safety around schools using the PEECH principles of Participation, Equity, Effectiveness & efficiency, Continuity and Holism were discussed (Bordbar @al, 2000). A methodology for prioritizing, assessing and identifying roadside hazards using risk assessment techniques was also presented by Douglas @al (2000).

The success of the Safe Routes to School Program in South Australia in implementing solutions to improve safety around schools was hailed a great success at the 2002 conference (Ciroco, 2002). A call for stringent penalties such as removal of licence or mandatory impounding of vehicles was also made as possibly the only way of deterring risky behavior on our roads (Hay, 2002).
At the 2004 Conference, it was recommended that in-depth crash investigations take the perspective of the “victim” into account when determining the crash causation and not assume that the engineering solutions, even if meeting current standards, are the best that can be found (Woolley, 2004). At that conference, specific speed crash relationships were also presented together with specific opportunities to target curves and junctions in rural environment for crash reductions (McDonald, 2004) as were the benefits of the then latest technology for road marking (glass beads) (Carnaby, 2004).

A number of road safety presentations at the 2005 Conference concluded that

- Strong road safety issues associated with strip shopping centres were as a result of conflicts between high traffic volumes and high land use activities, with the conclusion that clearly issues of road safety must take priority over road capacity and efficiency (Midson, 2005).
- The use of the high-tech automated incident recording system, known as CrashCam, to improve crash analysis at black spot locations had demonstrated exciting potential to improve traffic engineering practice (Lee @al, 2005).
- Australia would not achieve the road safety target of no more than 5.6 fatalities per 100,000 population be 2010 unless road trauma reduction is made a national priority (McInerney, 2005).

The benefits of a Road Safety Partnership Project (RSPP) adopted in Queensland were presented at the 2008 conference; in essence it involved the combination of work undertaken by each key stakeholders such the local council and the state road authorities into one pilot project (Deller, 2008).

The success of a structured Road Safety Curriculum for high school students was reported on at the 2009 Conference (Haythorpe, 2009). A very humorous, but serious paper, presented at the conference took road safety professionals on a typical work journey by car to the scene of a serious crash in the near to medium future, and related how it would be safer to travel then (Hanslip @al, 2009). Recent developments and applications of a virtual reality (VR) simulation system that has been used to assess driving behaviour were demonstrated; the system integrated 3D real-time visualization software with drive simulator hardware and allowed users to interact with a virtual environment (Lorentzen @al, 2009).

Vulnerable Road users

Pedestrian and Cyclists

The 1983 Forum focused on vulnerable road users including pedestrians, cyclist and persons with disabilities. The concept of livable streets was introduced by Westerman (1983). The presentations provided a good understanding of non vehicular traffic on our streets, government initiatives and best practice of the time.

In 1994, McGregor called for local government to consider the needs of pedestrians and cyclist in the overall context of providing facilities for people. Furthermore, for successful incorporation of pedestrians and cyclists in a traffic management scheme, attention was drawn to consider early in the planning and design of scheme each mode independently (Katz & Smith, 1994).

A priority system developed for assessing priorities for walk and cycle infrastructure which took “guess work” of this decision was presented at the 2005 Conference; it was based on the assessment of key planning principles such as connectivity, safety, demand, cost effectiveness as well as opportunities (Zwart @al, 2005).
Pedestrians

At the 1989 conference, Stapleton (1989) suggested that the lot of the pedestrian has not been a happy one. LATM schemes had largely addressed the intrusion and speed of through traffic in residential streets sometime to the detriment of pedestrian safety, mobility and more importantly accessibility. Stapleton also discussed the concept of the Yellow Brick Road first introduced in Canterbury Council (NSW) and presented a number of traffic management measures which could improve the pedestrian lot in residential streets.

The 1998 conference was told that providing for pedestrians requires a strong commitment by the local council to do so through policies that constrain parking, favour public transport, improve pedestrian amenity and encourage commuters not to use cars (Adam, 1998).

The principles of the Australian Pedestrian Charter, drawn up in 1999, being accessibility, sustainability & environment, health & wellbeing, safety & personal security, and equity were promoted at the 2000 conference (Napier). Designing a system with disabled people in mind was seen as critical to ensure that public transport is really available to everyone (Kilsby, 2000).

The Safe School Bus Routes Program introduced in Queensland in 1996 which achieved positive safety improvements on bus routes through the conduct of bus routes safety reviews, and the funding of identified deficiencies was reported on at the 2001 conference (Donaghey @al, 2001).

Guidelines developed in Queensland including warrants and prioritisation of pedestrian facilities such as pedestrian refuges, zebra crossings, children’s crossing, pedestrian actuated signals and grade separation were offered for adoption at the 2002 conference (Setter @al).

The following conclusions were espoused at the 2006 conference:

- New concept in signal design for pedestrian crossings were required to take into account the large range in walking speeds and physical abilities (Daff @al, 2006).
- The use of micro-simulation models such as VISSIM, AIMSUN, PEDROUTE, LEGION, STEPS and PEDFLO could help guide and be a key input into the design process, and also support policy development (Van Paassen @al, 2006).

The benefits of pedestrian simulation in the design planning process was further explored at the 2007 conference (Rivers, 2007), as was the use of micro-simulation to determine the suitability of multiple marked foot crossing (Bitzios, 2007).

The modelling of passenger movements at the North Melbourne Station, using the VISSIM 5.1 software, to assist in the design and operation of the station formed the basis of an interesting presentation at the 2008 Conference in Perth (Laufer, 2008).

The 2009 conference attracted a number of presentations dealing with pedestrian planning and safety including:

- Fundamentals of planning and design for walking (Hughes, 2009a).
- How to improve pedestrian safety? (Hughes, 2009b).
- Provision of automatic pedestrian activation of traffic signals (Herridge-O’Brien, 2009).
- Health and other benefits of walking (Horton, 2009).

Cycling

The case of commuting cycling was well presented by Heard (1991) bringing to focus the need for separate cycle ways, provisions of secure convenient bicycle parking and changing rooms at the trip end development,
The 2001 conference was told that

- The campaigns activity by Bicycle Victoria had successfully achieved a number of safe bicycle networks and could be used elsewhere (Barber et al., 2001).
- Whilst motorcycles provide an effective but very vulnerable mode of transport, positive traffic and transport planning and physical provision to address risk reduction and gain the best from the mode has yet to be started in Australia (Wigan, 2001).

In 2004, VanPaasen concluded that cycling within our communities was not receiving a “fair go”, and therefore the profession should promote its environmental, financial, health and social benefits.

The need and benefits for on-road cycle training was promoted at the 2008 Conference (Langdon, 2008).

Options for the construction of an evidence base on which to found the future development of infrastructure and programs for increasing cycling were presented at the 2009 conference. By bringing bicycle planning to the centre of transport planning, cycling can become a realistic and safe travel option for more short trips (Lehman et al., 2009). The benefits of cycling (Van Der Dool et al., 2009), and an assessment of a number of types of bicycle lanes (Daff et al., 2009) were also presented.

**Transport for Senior and Disabled Persons**

In 2001, for the first time, a large portion of the Conference, held in the Centenary Year of the Australian Federation, included a number of presentations to improve mobility for the seniors and disabled persons which concluded:

- Adequacy of transport and mobility in rural areas is of vital importance for old people and people with disabilities and should form part of all future planning to meet the increasing demand due to the ageing of population (Harris, 2001).
- Field experiment was recommended to confirm that in-vehicle navigation for older drivers has the potential to change travel behavior through changes in travel timing, trip frequency, and choice of travelling alone or in company in the car (Rose, 2001).
- The costs of complying with the Disability Discrimination Act 1992 in relations to transport provisions is such that full compliance would take up to 20 years for treatments to parking, traffic signals, taxi ranks, bus stops, street lighting and road marking and signing and up to 30 years for trains, trams and light rail. (Robinson, 2001). However, achieving an accessible transport system need not be expensive if access issues are addressed during the planning and design stages (Acacio et al., 2002).
- The principal problem for older drivers is selecting safe gaps in conflicting traffic at intersections; to remedy this problem treatments such as improved sight distance at intersections, separate right-turn movements at traffic signals, enhanced conspicuity of traffic signals displays, and clear definition of permissible vehicle paths at intersections were promoted (Oxley et al., 2001),
- CAREFUL LISTENING AND CLEAR INSTRUCTIONS are simple measures to improve the travel experience of people with intellectual disabilities (Burgess, 2001).
- There is a need for better footpath design to accommodate motorized scooters by elderly people (Daff, 2001).

At the 2004 conference, the transport problems faced by a blind or vision impaired person were discussed with a number of strategies offered to improve their plight (Starkey et al., 2004). Sanderson (2004) stipulated that the provision of facilities for the disabled is a balance of needs as there was still disagreement within the disabled community; the conclusion was that having some facility with a few characteristics is better than having no facility at all. This statement was reinforced by Stanley at 2006 Conference.
Transport

Land Use / Transport Planning

The 1985 Forum, Town Centres: People, Transport & Traffic, was in response to an ever growing trend by local government to examine the structure and function of town centres in terms of public amenity, commercial viability and the impact and implications of transport and traffic access. Overall, the presentations provided an overview of the possible integration of all transport modes with the urban design of CBD and Town Centres.

In 1989, the NSW transport community was turned upside down; the Roads and Traffic Authority was formed incorporating the then department of Main Roads, the Department of Motor Transport and the Traffic Authority; furthermore the Ministry of Transport had a division directly responsible for the oversight of passenger transport (rail, buses & ferries). The 1989 Conference “Keeping Pace with Change” was held to assess whether these changes were for changes sake or would result in real transport improvements (roads and public transport) for the customers. The keynote address (Mant, 1989) stressed that serving the customer is not necessarily just providing greater mobility but that greater accessibility should be sought through land use/transport interface by either providing better connections between land uses, or locating land uses together in the first place. Keeping pace with change requires better funding of large project, better land use/ transport integration, and better consultation with community.

At the 1990 Conference, Waters called amongst other thing for the

- Slower release of land and where happening provide a rail service;
- Increase in residential and commercial densities in established areas (policy recently adopted in NSW as part of 2036 Metropolitan Plan);
- Introduction of bus priority measures;
- Limitation of parking in Centres well served by public transport.
- Introduction of measures to control traffic speeds on non-arterial roads but raising it along arterial roads
- Construction of addition capacity at critical locations
- Extension of peak period traffic management measures on high volumes arterials;
- Building of roads to serve new releases.

Other important lessons learnt from the 1990 conference are summarised below:

- The urban transport system is, not a collection of alternative systems but a single entity whose component parts are inter-related and operate at different levels of efficiency and effectiveness. Put another way, the urban transport System comprises several inter-related layers, ie arterial and local roads, public transport, and community transport networks, all overlaid on a particular land-use pattern (Oxlad, 1990).
- Do it Once Do It right (Dunne, 1990).
- Build where it’s going to do the most good and build it quickly (Power, 1990).

The first National conference, outside Sydney was held in Adelaide in 1991. The papers presented at this first two days event focused on the integration of the many facets of the transport system ranging from planning and design to construction and operation, and included funding considerations, community involvement and political aspects. This conference was appropriately themed “The Transport Jigsaw Making the Pieces Fit”. In his keynote address, Scrafton (1991) correctly stated that the hard bits of the jigsaw are institutional inertia, vested sectional interests, financial constraints, marginal seats, split responsibilities (State vs Local government), and reluctance to innovate.
The paper by Hadaway (1991) showed how the integration of traffic, public transport, parking, pedestrians and cyclists made Adelaide a pleasant place to live and work. Westerman (1991) expanded on his concept of liveable cities stating that the arrangement between activities and networks, the so called land use transport interaction, greatly determines the level of satisfaction which people derive from living in cities and towns.

The 1992 Conference promoted a practical approach to transport planning so that cost-effective and achievable projects emerged from the planning and design process. A number of papers highlighted the roles that planners, administrators, and elected representatives could play in Putting Transport Planning into Practice (AITPM, 1992). Approaches to ensure that transport planning is practical and achievable formed the basis of the remaining papers attempted to integrate the different aspects of transport planning. Follows are some of the main suggestions and conclusions of this conference:

- Travel demand management such as car pooling, increased fixed costs of cars, car parking restrictions and fees, and road pricing were some of the tools suggested to reduce car usage (Sanderson, 1992).
- Better planning depends on strong cooperation between all relevant agencies (O'Toole, 1992)
- Rail could still be built to provide with other forms of transport the overall integrated answer to the transport land use equation (Day, 1992).
- Local government has an important role to play in bus transport though the provision of better bus facilities such as bus-rail interchanges and by ensuring that traffic management measures in local areas are bus friendly (Abraham, 1992)

The objective of the 1994 Conference, Transport Planning and Traffic Management Tools of Trade-Off, was to examine the balances and compromises that must be addressed in planning and managing travel as our built environment develops. A number of papers promoted strategies to provide better integration of land use with transport, as well as between the different travel modes including cars, public transport, cycling and walking. The principles of an integrated approach for the transportation of dangerous goods were introduced together with tools and techniques to assess the suitability of roads for the transport of dangerous goods based traffic conditions, environmental and land use safety factors, and transport cost factors (Gennaoui & Haddad). Some of the more notable comments, findings and suggestions at that conference, are summarised below:

- If (travel) demand management is to be taken seriously then addressing the causes of the problem such as too rapid population growth or excessive population rather than the symptoms such as congestion, would appear to be a primary requirement (Wesley, 1994).
- The concept of Integrated Local Transport Management (ILTM) was described as an approach to urban management which recognised the direct relationship between land use and transport issues at the local level. It aimed to place decisions at all levels which affect the size, shape and functions of development in a land use/transport policy framework, to ensure the achievement of shared environmental, economic and social equity (Abraham, 1994). This approach requires local government to become involved in the planning for bus transport (Adam, 1994).

Waller (1995) in his presentation on the Commonwealth perspective concluded that an efficient world standard transport sector is vital to the economic and social well being of all Australians. Success could only be achieved by strong cooperation both between governments and with private sector. Transport issues which demand a national solution should receive a national solution.
The 1996 conference titled, *The Quality Balance - Livability vs Mobility*, attracted a number of papers providing suggestions for achieving both livability and mobility in residential areas. The premise that a good understanding of the difference between external mobility, such as long trips to work, and internal mobility such as shorter social and recreational trips, was seen as the basis for achieving better livability in a residential area (Kaye, 1996). It was further considered that both livability and mobility in new residential areas would be very much enhanced by the early provision of suitable public transport infrastructure (Fleming, 1996).

Transport planning in the 1990's and beyond was envisioned to become not only a dynamic challenge, but a task which would require foresight to predict needs, and commensurate user trends; to better achieve this task, a strong call was made for Local Government to be involved (Landsdell, 1998).

To celebrate the new millennium and the forthcoming Sydney Olympics, the 2000 Conference included a number of international speakers who called on government and transport planners

- To take the opportunity to meet mobility needs of our society through investment and improving the services offered. Furthermore long term planning and investment should be taken into the transport equation to offer a full mobility solution and not just relying on one mode of transport (Rat, 2000).
- To adopt a Transit Level of Service to measure the performance of a transport system; this approach was based on variables such as transit availability, frequency, walking distance to serviced area (Ryus, 2000).
- To adopt an approach that changes the focus of spending, from infrastructure provision designed to meet demand, to provisions which minimise demand; that is to delivers services in ways which minimise the transport requirements (Cathcart, 2000).
- To use GIS based software for regional transit system accessibility analysis (Freytag et al, 2000).

The 2001 Conference held in the Centenary Year of the Australian Federation included a number of presentations that attempted to take stock of the development of transport in Australia in the last century and to stimulate practitioners into better managing mobility through sustainable transport in the 2nd century of Federation. The idea of an *Accessibility Strategy* as a management tool was introduced as an alternative to the “transport plan” or the “integrated land use and transport plan”; it concentrated on what was “actionable” rather than what might have been desirable in a perfect word (Stone, 2001). Furthermore, delegates were told that seamless public transport to manage mobility could only be achieved by the provision of a number of well planned and designed transport interchanges to maximise coverage of the public transport system (Luke, 2001).

The theme of seamless mobility and how to achieve it was further expanded at the 2002 Conference (Moore). The benefit and success of the development of an overall Transport Strategy incorporating land use planning, traffic management, road safety, parking, pedestrians and cyclists and public transport for a local government area provided food for thought to local government delegates at the 2002 Conference (Spencer).

The 2003 Conference, *Transport Land Use Integration - Getting Serious*, brought together transport and land use planners whose aim to accomplish an integrated and sustainable outcome. The keynote address by Buchanan (2003) set the scene with his conclusion that “we know enough about access to towns and city centres to design and implement transport strategies that can significantly reduce the numbers of cars where that is necessary and desirable”. He added that whilst this approach would be appropriate for major generators such as airports and major town centres, it may not be achievable in the suburbs of large conurbations (Buchanan, 2003). The majority of papers presented at the conference provided directions to better integrate land use with the different transport modes such as buses (Adam et al, 2003), walking (Mason, 2003) and cycling (Sbeghen, 2003).
Following are some of the more notable conclusions of presentation at the 2003 conference:

- Integrating transport, land use and other complementary activities is essential if sustainable economic, social and environmental outcomes were to be achieved in complex urban systems. However, integration is often messy and planning processes requires iterations, negotiations and changes in direction before agreement is reached (Anson, 2003).
- There is little point for state and local government to adopt policies that embraces best practice in urban design if implementation of those policies is made so difficult by minority groups (Macquarie, 2003).
- The Federal Government should play a more direct role in changing travel behaviour and in the provision of public transport in urban areas (Holloway @al, 2003).
- Over the last few decades travel behaviour has become more diverse involving significant growth in car use outside the journey to work, growth in women’s car use and higher rates of car usage by the elderly. As a result there are many complex factors to consider in developing policy and planning responses to both reduce travel demand and more transport needs. Attempts to better consider the structure of the communities that are planned for and to understand their differential needs is essential for the success of any effort that are made to re-shape or reform our cities through transport and land use integration and better urban design (Lyth-Gollner, 2003).

At the 2004 Conference, the delegates were asked if a Fair Go was a Transport Reality or an Impossible Dream? A number of presentations in addressing this question concluded that:

- The price of a fair go is a change in our lifestyles and ways of solving problems to a more sustainable and efficient pattern. In the transport context this means switching funding priorities from the car to greener modes, focusing on strategic outcomes through the land use and transport integration, excellent public transport and best practice walking and cycling infrastructure (Nisi, 2004).
- To achieve a “Fair Go” for everyone, integrated transport planning should be achieved at the regional level (several councils combined) and it is better that it be done before land development pressures close off the low-cost options (Regan, 2004).
- A “Fair Go” in respect of urban transport and land development probably is an impossible dream; however a “fair go” is a feasible transport reality, provided transport and urban planners are prepared to lead a more informed community debate (Beard, 2004).
- By attending to the three fundamentals requirements of safety, functionality and amenity a “fair go” could be given to all who use or are affected by roads on the road network that is part of the living environment for most of the population (Brindle, 2004).
- The formulation of a High Occupancy Vehicle (HOV) policy was required to guide the planning, implementation and operation of HOV facilities (Oliver, 2004).

By 2005, notwithstanding efforts by transport and urban planners in the previous decade to reduce the car mode share, concern was raised that both road and public transport networks in large cities (eg Sydney) were becoming increasingly congested in peak periods. A number of approaches were presented to:

- Reduce congestion through the implementation of non-traditional measures such as road pricing, car sharing, car pooling, travel smart programs and teleworking (Twiney @al, 2005).
- Evaluate proposals for reallocating road space and time to introduce public transport priority (Currie @al, 2005).
- Assess the effectiveness of HOV facilities (Bauer @al, 2005).
The 2006 conference, Delivering Sustainable Transport: "it's got legs, was in response to the growing realisation that sustainable transport must be broader than public transport patronage targets and the use of more fuel efficient cars, and that changes would not be achieved by tinkering at the edges. What was needed were policies to reduce dependencies on the private car, a transportation network that provides for the efficient movement of public transport and local infrastructure that encourages more people to walk and cycle more often. A review of the papers indicated that sustainable transport appeared to have been substituted by integrated transport plans. Conclusions reached at the conference could be summarised as follows:

- Reduced congestion, improved public transport, improved the way roads and public transport work are clear messages espoused by government agencies and the community; however delivering on them is not so simple (Anderson et al., 2006).
- There is a need to take a long term strategic view when investing in public transport networks. Whilst it takes time and patience to turn the years of car use and poor public transport experiences around, it should start now (Fleming et al., 2006).
- Strong support by the local council and the provision of a safe and accessible bicycle network would result in increased bicycle use (Smithers, 2006).
- Accessibility principles offer an opportunity to better integrate urban planning with transport planning for the benefit of communities. While private cars are likely to remain the dominant mode of travel, it is important to better structure communities so that residents can access social facilities without being car dependent (Jackson, 2006).
- There is no single element or “magic bullet” to achieve modal coordination and integration. This requires good design, infrastructure, service planning, operating systems and management together with delivering consistent high standard of reliability and ease of use for passengers (Vellacott, 2006).
- Whilst parking could be used as a lever to reduce car usage, it cannot be successful without the creation of viable and acceptable travel alternatives to the car managed in a way that makes it easy for people to get out of their car (Taylor et al., 2006).
- Traditional approaches and traditional debates usually produce big plans but few changes. Behavioural changes would only be achieved if the focus is one which embraces the community as users of the system (Brown, 2006).
- The current concentration of responsibility for public transport with State Governments has limited its potential use. The Federal Government should take a more direct role in the funding of urban public transport and Local Government a more sustained involvement in public transport (Currie, 2006); this theme was expanded by Hill et al (2006).
- The basic components that must be in place for a public transport to effectively perform include a sellable product, political support, coordination of operators, marketing and meticulous attention to details (Bergmaier et al., 2006).
- Public transport, walking and cycling facilities can no longer be seen as a “community service obligation for governments to fund, but an essential part of city life and vital to a future in which the economy moves beyond its reliance on oil and other fossil fuels (McDougall, 2006).
- To achieve a substantial growth in public transport patronage, public transport should be made significantly more competitive with the car, and transport stakeholders should work together to effect the change in travel behaviour (Cliché, 2006).
By 2007, in this fast pace electronic age where boundaries are easily crossed, only small in roads have been made into developing a national approach for transport and traffic planning and operations. There were still barriers in the way of National Convergence; it was time to sort out our differences. This became the theme of the 2007 conference which was appropriately held in the national capital Canberra. The two keynote speakers explored the working arrangements for transportation engineering practices in Australia (Deegan, 2007) and Canada (Robinson, 2007). These presentations were followed by a call to develop national guidelines to undertake transport assessments which relates to the whole of Australia and New Zealand (Clark et al, 2007). Initiatives by the federal government to manage urban congestions were shown to facilitate collaborative efforts between governments (Ockwell et al, 2007).

Furthermore, the federal government was called upon to show leadership through the development of integrated transport policies in major cities (Fleming et al, 2007). A note of caution was however raised about convergence in transport with a number of transport areas where divergence would be more appropriate (Longworth, 2007). The cooperative approach between urban designers, transport planners and engineers used was hailed as the reason for a major transformation of a city centre (Canberra) through transport improvements (Walter et al, 2007). A framework for the evaluation of options to enhance the movement of freight along the east coast of Australia based on a dynamic modeling approach through an Optimisation Model was presented at the 2007 conference (Hunkin et al).

By 2008, the community appeared to be facing difficult times in traffic and transport, both in how we travel and how communities are going to operate in the future with regards to both accessibility and mobility. The theme of that year’s conference “Making Connections” – explored how traffic engineering and transport planning were making connections between people, places and goods and services. The delegates left with

- A methodology and process to allow for the provision of public transport services, in new residential releases thereby ensuring effective delivery of public transport and the opportunity to influence urban form (McGregor, 2008).
- Case studies for the use of “Barriers” to reduce congestions (Mazer, 2008).
- Case studies for the use of Variable Speed limit to improve safety along unstable section of roads with unsafe driving behavior (Han et al, 2008).
- Case studies which concludes that enforcement of High Occupancy Lanes (HOV) is required for it to be successful (Bourlotos et al, 2008).
- An examination of the many steps, travel choices and frustrations transport planners face in reconnecting Australian Cities; solutions and opportunities were also offered together with barriers to more sustainable transport modes (Wilson, 2008).

In line with the theme, Traffic Beyond Tomorrow, presentations at the 2009 conference offered a number of solutions and opportunities to improve transport and traffic conditions in the future including the following measures:

- To be effective, Transport Assessment Guidelines (TAG) needs to equally assess all modes of travel including cars, public transport, pedestrians and bicycles. Parking could also be used as a tool for managing private car travel demand (Isted et al, 2009).
- Achieving seamless integration with public transport infrastructure, best practice needs to be followed in the design of intermodal stations and interchanges, mode conversion in existing transport corridors and solving network capacity constraints in inner city areas (Devney, 2009).
- Proven and successful public transport option which could be adopted for low demand areas and low demand times at low costs; these included demand responsive services such as call-a-taxi and demand responsive bus corridor which offered higher levels of flexibility, shorter walking distances, more convenience and offer a better level of service (Stoeveken, 2009).
- Transport measures to reduce congestions that succeeded and failed in the UK, and why, and the lessons to better develop future transport solutions (Sullivan, 2009).
- Fundamental prerequisites for Transit Oriented Development (TOD) (Falconer et al., 2009) including how much parking is too much (Angrave et al., 2009), and their application in retail centres (Bright et al., 2009).

**Public Transport (Buses)**

The 1987 Forum was the first conference to bring to attention the effects that traffic devices used in LATM schemes had on buses (Fleming, 1987). The application of treatments such as pavement textures, landscaping, roads narrowing and meandering carriageways were suggested, as was the concept of “bus only” roads.

The O-Bahn Busway was hailed as a great success having achieved initial ridership projections and completed on budget (Wayte, 1991). The notion of giving the private bus sector a larger portion of the public transport task was also discussed (Crawford, 1991). This sentiment was further expressed at the 1994 Conference where a number of micro solutions such as the introduction of minibuses, and macro solutions requiring infrastructure developments such as dedicated busways (expensive) and bus lanes (cheaper) were raised (Smith, 1994).

Gosselin presentation, at the 1998 Conference, on the provision for bus rapid transits (BRT) concluded that the success of a BRT largely depended on infrastructure planning (stations, busways and bus priority measures), operational planning (service and network), system planning (passenger information, bus control and scheduling) in conjunction with land use integration; the Brisbane’s South East Busways was such an example (Gyte, 1998).

The issues (policy & infrastructure) and implications (frequency, costs, travel time) affecting the planning of bus transport were well explained at the 2002 conference; the author also concluded for an effective bus service local government should fully participate in the planning and provision of suitable infrastructure (Emerson, 2002). The one day workshop held in conjunction with the 2002 Conference also included a session on buses which covered:

- The role of Transit vehicles in the 21st century (Adam, 2002).
- The design requirements for buses to better service people in residential areas (Merritt, 2002).

**Travel Demand / Road Charging.**

The potential for the introduction of urban road pricing (URP) in Australia to reduce congestion in central areas was discussed at the 2002 conference (Luke et al., 2002) in the context of its implementation in London in 2003 (Luke et al., 2004).

The success of road pricing in improving livability in the UK, Singapore, Norway and Switzerland and suggestions for its possible introduction in Australia was the basis of a presentation at 2005 conference (van Paassen).

The pro and cons of congestion charging were presented at the 2009 Conference and like other major network projects reducing congestion; this multi-year approach requires a great deal of negotiation, deal-making and compromises, attracts protest and can make or break political careers (Mooney et al., 2009a). In order for a congestion pricing scheme to be successful, alternative modes of transport must be available in reasonable proximity to both origin and destination, and have sufficient frequency and capacity in order to be seen as a reasonable alternative (Mooney, 2009b).
Major Events

With the forthcoming 2000 Olympics in Sydney, the 1997 National Conference, held for the first time in Melbourne was aptly titled major Events Traffic & Transport Planning. A number of papers dealt with the logistics (Harris, 1997), risk (Viner, 1997) and contingency planning (Graham) of major events. Specific presentations covered the transport planning for the Sydney Olympics (Murray, Ferris 1997), and major events such as the Melbourne Grand Prix (Abraam, Zabrieszach, Currie 1997) and Gold Coast Indy car race (Eppell @al, 1997), and smaller events such as the Hurstville Street festival (Morris, 1997).

Brindle (1997) conclusion that transport professionals need to be able to translate their high level performance under the pressure of special events into everyday competence in maintaining the transport component of the urban system is still valid today. The major identified barrier was the lack of real funding and support from the political arena.

The reasons for the success of the traffic and transport management plans for the 2001 Goodwill Games in Brisbane were presented at the 2002 Conference (Turner, 2002).

How to achieve an 80% public transport mode share for event day trips at the Skilled Park Stadium in the Gold Coast (27,000 capacity) safely and efficiently whilst minimising disruption to the local community was described by Green @al at the 2008 Conference.

New Technologies

Intelligent Transport/Traffic Systems

The first papers dealing with new transport technologies were presented at the 1991 Conference in Adelaide. The term Intelligent Vehicle/Highway Systems (IVHS), used to describe the road transport systems being developed that integrate surveillance, communications, computer display and control techniques in both the highway systems and road vehicles, was for the first time described at an AITPM conference (Skene, 1991). Other papers included a discussion on the status and benefits of the Solar / Electric Car, and the concept of a Very Fast Train between Melbourne and Sydney (Travers, 1991); this project due to a number of barriers including environmental, taxation, and financing is still very much a pipedream.

The 1995 Conference, 1990’s So Far – What next, brought together transport planners and traffic engineers who reviewed the challenges to date and the technological advances expected in the future. Whilst a number of traffic and transport presentations continued the theme of previous conferences, one of the highlight was the presentation by Drane (1995) on the then recent (or in progress) developments in Intelligent Transportation Systems (ITS). These systems a number of which are currently in operation, included:

- Advanced Traffic Management Systems (ATMS) - Sophisticated traffic control of signals including ramp metering and incident management systems, eg SCATS.
- Advanced Traffic Information Systems (ATIS) - Information is provided directly to the traveler.
- Advanced Vehicle Control Systems (ATMS) - would involve vehicles controlled by computer.
- Commercial Vehicle Operations (CVO) – Use of automatic vehicle location systems.
- Advanced Public Transportation Systems (APTS) – Development of public transportation information system.
In 2000, Taylor (2000) concluded that the application of ITS technology in planning, managing and operating a transport system was imperative to make better use of existing road transport infrastructure and to improve the efficiency of road and rail transport operations.

Real-time information displays benefit both the drivers (to reach the destination safely with minimal delays) and the relevant road authority (to optimize the available road capacity). Guidelines to provide consistency for the use and operation of Variable Message Signs (VMS) for traffic management were presented at the 2002 Conference (Ram et al., 2002).

The concept of “managed lanes”, designed and operated in the context of then latest ITS technology to achieve an operational objective such as transit lane, high occupancy vehicles (HOV) lanes, truck priority lanes, was presented at the 2005 conference (Wellander).

**Signals Technology**

In step with the theme of the 1998 conference, *Moving Smarter- Challenges in Traffic and Transport*, a number of papers were based on the latest technology available at the time to respond to these challenges including the urban intersection traffic control system SCATS2 (Quail, 1998). Other papers presented technologies for tidal flow systems such as pavement lighting (Pattison, 1998), the TMS for the one lane reversible road along the Southern Expressway in Adelaide (Hanslip, 1998), and the Sydney new Traffic Management Centre (Casuscelli, 1998). The 1998 conference was also told that moving smarter could be achieved by the use of parking guidance and information system (Landers, 1998), and smart traffic control devices such as internally illuminated road studs and hidden queue warning signs (Osmers, 1998).

The 2004 Conference included a session on the latest technologies which could give a fair go to different modes of travel as follows:

- The usage of microwave for the detection of pedestrians at pedestrian actuated crossings and intersections with wide road widths to extend the pedestrian clearance phase for larger group of pedestrians and for slower pedestrians due to a disability (Baskerville, 2004).
- The usage of LED traffic signals lanterns to reduce the Greenhouse Gas burden (McIntosh, 2004).

The benefits of providing Uninterruptible Power Supply (UPS) Systems, designed to provide a minimum of four hours continuous battery back-up power to traffic control signals, if the mains power fails to minimise disruptions to the travelling public and significantly enhance road safety were espoused at the 2008 Conference (Venables et al., 2008).

**New fuels**

Natural gas was promoted in 1995 as a viable alternative fuel to petrol and diesel, and which also reduces the impact on the environment and is of general economic benefit (De Maria, 1995).

The benefits and disadvantages of fuels such as diesel and natural gas together with the fuel cell technology using methanol to generate electricity were explored at the 2000 conference (Turner et al., 2000).
Other areas

Education

At the 1995 conference the question was asked of where the experts had gone (Croft); there was a valid perception that the expertise available in the traffic and transport field was decreasing. In response, the teaching of Transport Engineering as a separate discipline was raised (Taylor, 1995).

The question was once again asked at the 2008 Conference of where are all of the Traffic Engineers? Woolridge (2008) offered a two stream program to arrest that decline.

Environment

The first paper dealing with the impact of cars on the environment was presented at the 1991 Conference in Adelaide and concluded that cities should be re-planned to reduce a reliance on the motor cars (Smith, 1991).

The call for better land use transport interaction and the assessment of their impact on the environment was made at the 1992 conference (Cooper).

A national approach to offset greenhouse emissions from road and air transport and corresponding costs was presented at the 2007 Conference (Richardson). Reducing greenhouse emissions was seen as the responsibility of major organisations and could be achieved through the adoption of Travel Plans (Giblin @al, 2007).

Consultation

Public participation in the development of LATM schemes was first raised at an AITPM Forum in 1984 by Hawley. In 1992, Hawley further concluded that the implementation of a consultative process during the planning stage ensured higher acceptance of a scheme than if consultation was only carried out just before implementation.

Whilst praising the introduction of Environmental Impact Statements for major road projects, Manidis recommended, at the 1994 Conference, that community involvement should continue after the decision to build a road is made and the predictions included in an EIS should be tested after completion of a road project.

Consultation was back on the agenda at the 1999 Conference when speakers discussed consultation strategies for major projects (Jones, 1999), the benefits of consultation (Burgess, 1999) and who should be consulted (Rungie, 1999). Rungie’s statement that consultation should be seen as a strategic component of project planning and policy making which is integral to the whole of the planning process is as valid today as then.

A paper which attracted attention at the 2000 conference concluded that public consultation would generally exposes the politicisation of technical advice; thus possibly leading to the death of professional credibility (Yeates, 2000).

Consultation does not end at the implementation of a traffic management measure, the 2005 conference was told; over time, new residents move in, existing residents move out, local knowledge is lost and issues can become active again (Lambropoulos, 2005). Councils and their traffic planners should therefore be ready to review and address any new concern.
CONCLUSIONS

The above summary whilst quite lengthy has hopefully provided an overview of the changes in techniques, policies and technology of the last 30 years in traffic & transport management and operation as presented at 29 AITPM forums and conferences. Some of the lessons learnt by the author as a result of this review are offered for consideration below:

- The major barrier for the provision of real transport and traffic infrastructure is the lack of real funding and support from the political arena.
- This exchange of ideas between road safety professionals and relevant state authorities and the involvement of the whole community have improved the way road safety is dealt with by the different stakeholders.
- Do it Once Do it right.
- Build where it's going to do the most good and build it quickly.
- Consideration of the structure of the communities planned for and understanding of their differential needs is essential for the success of any effort to re-shape or reform our cities through transport and land use integration and better urban design.

Working Towards a Better Community is the Moto of the AITPM. Quoting three National past presidents of the institute (Reid al., 2002) Traffic and Transport are fundamental parts of all our lives, and the provision of the necessary infrastructure, traffic operations and traffic management impact directly on the community, sometime adversely. At times the community is cynical about the end result and the political process to get there. AITPM is known to provide independent and objective view, and has become a forum to develop and promote technical standards and practices in the traffic and transport fields.

The profession through the AITPM should learn how to pull the strings otherwise the advantages that the community would gain from its members’ expertise would be lost and we would be frustrated by decision made by others. Truer words were never said. In most instances they are still applicable today.

To all Conference delegates and readers of this paper please grasp this opportunity to share knowledge and ideas on traffic and transport planning, safety and the environment with others. Expand your network. Make a new friend.
REFERENCES


APPENDIX

AITPM Forums


National Conferences


