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**Sustainable Mobility Assessment & Renewal Technology for Capital  
Improvements of Transportation Infrastructure (SMARTCITI)**

**PROCEEDINGS**

**WEDNESDAY JUNE 29, 2005**

**9:30 - 10:30 AM**

**SESSION 2: Sustainable Mobility: Goals,  
Opportunities & Challenges**

**Emerging Trends and Vision for Achieving Sustainable Mobility**

***North American Perspective***

*Iris Weinshall, Commissioner, New York City Department of Transportation*

*Wayne Tanda, General Manager, Los Angeles Department of Transportation*

***The City of Los Angeles***

**Wayne TANDA** explained that the City of Los Angeles has a population of about 4 million people. The political jurisdiction of the county of Los Angeles has a population of 10 million and resides in the Southern California region with 14 million people.

The growth of the region is anticipated to continue in the next 20 years with a further 6 million people.

Los Angeles is known for many things: it is the entertainment capital of the world.

Los Angeles is the gateway for commerce, especially commerce coming from the East. Los Angeles international airport is the 5<sup>th</sup> biggest in the world and 6<sup>th</sup> biggest in terms of cargo. Bigger than that are the ports. 40% of their container cargo coming in the US pass through these ports and then go through the urbanised areas. The primary means to move the cargo is the facility called the Alameda Corridor that will be presented by John DOHERTY on 1 July.

Most of all, the city of Los Angeles is proud of its diversity: every race, creed, colour, every culture, every sexual preference is represented.

Los Angeles has its own challenges that may be different from the Latin American ones. The new Mayor Antonio VILLARAIGOSA has defined them as follows:

- to fight crime,
- to promote a better educational system and
- to relieve traffic congestion in the most congested area in the US two decades running.

### *Sustainable Mobility*

When preparing his presentation regarding sustainable mobility, Wayne TANDA found out that everyone has a different definition for it. So he made up his own:

He felt that sustainable mobility is *“meeting the public’s expectations for the safe and efficient movement of people and goods while meeting society’s agendas for the environment and our economy”*.

Meeting the public’s expectations for mobility in Los Angeles would be very different than it would be in a mid western state. Because the most congested period in this state could be the ideal day in Los Angeles.

Los Angeles’s statistics say that each motorist wastes 94 hours each year due to excessive traffic congestion. Besides, in LA, congestion can be found on the freeways - in particular during week-ends and holiday periods.

Indicators of success could be that conditions don’t deteriorate. Another could be that conditions actually improve, it may be statistical. The third would be that conditions achieve quantifiable goals.

Quantifiable goals have just been released now by FHWA (Federal Highway Administration) through the United States Department Of Transportation. He participates in a group that works on those metrics and it is something that could be introduced professionally.

### *Strategies*

Wayne TANDA, then, listed strategies that are relevant and concern how:

- **To build more capacity intelligently**

- ⇒ **Passenger rails:** Los Angeles has the 2<sup>nd</sup> most extensive railway system for passengers in the US. “Metrolink” is the commuter rail; there is a subway, whose expansion had to be stopped because of problems with methane gas. They have plenty of light rail lines and several under construction or in the process of being planned. They are looking at high speed rail to connect Northern California to Southern California. There is a study looking at high speed rail within Southern California, that will use the only operational magnetic levitation system.
- ⇒ Building more capacity includes **Bus Rapid Transit Ways**. The first called the “Bus Rapid Transit Orange Line” will be completed this summer in the valley area of Los Angeles and will serve 1.2 million people. This particular line follows a former railway and has 13 stations. It does present a number of issues related to safety of automobiles.

- ⇒ **Building more capacity for freight** was illustrated by the Alameda Corridor project which connects the port of Los Angeles to the south of downtown. Downtown is the terminus of the intercontinental railway. 10 miles of the Corridor are placed in the mid quarter trench – 30 feet wide and 50 feet deep-

The Alameda Corridor is a series of bridges, underpasses, overpasses and street improvements that separate freight rail, passengers and street traffic. By consolidating four railroad branch lines serving the ports of Los Angeles and Long Beach, the Alameda Corridor eliminates more than 200 at-grade crossings where rail and street traffic conflict, thereby easing traffic congestion and significantly reducing air and noise pollution from idling trains, trucks and cars.

The project stretches through eight cities along a 20-mile route. The centerpiece is the Mid-Corridor Trench, a below-ground trainway running parallel to Alameda Street for 10 miles.

It cuts in half the amount of time it would take freight to reach intercontinental terminus lines.

- ⇒ He insisted on the fact that they would like to continue providing selected improvements in **highway capacity**. There are a few places they are looking at seriously to make some investments: for instance a public-private tunnel toll road connecting the metro area in Los Angeles with the Palmdale area, part of the Los Angeles airport system. This project is estimated at \$ 3 billion, that could be entirely financed with tolls.

- **To provide better operations**

- ⇒ **through regulatory actions:**

California air quality standards are more stringent than the national ones. However, they have not reached the target for either one, in all area. But if you ask a “Angelino” (Los Angeles citizen), they would say that air quality has improved. Air quality is much better than it was. There are about 2, 000 transit vehicles in immediate Los Angeles area that are alternative fuel cell vehicles. The use of hybrid vehicles is very much encouraged. Free parking are provided as an incentive to purchase those vehicles.

- ⇒ **through technology:**

**The automobile traffic surveillance control system** in LA is old news. It was put in place for the 1984 Olympics. It has however got bigger and better. 3, 000 of the 44, 000 traffic signals are tied now into ATCS (Adaptive Traffic Control System) and it saves about 25 million hours of delay.

**The Transit Priority System (TPS)** has been developed into a system using a mixed flow use versus a separate bus way. LA DOT is able to reduce the travel time by 25 % using the bus rapid transit in mixed flow use using the TPS. The software program is available through FHWA.

**Real-time traffic information** has been used for a long time. It can be accessed on a website.

The national initiative called V.I.I. - **Vehicle Infrastructure Integration**<sup>1</sup> - is in approach which will take them to the next level.

In fact, NACTO has been invited to be on the executive team as well as the working group.

The initiative is about having cars talk to cars and cars talk to their systems through dedicated short waves radios.

L.A. is very anxious to be considered as the national site for a pilot to be conducted. Because of the tremendous congestion Los Angeles has and because of the extensive infrastructure system, LA would be an ideal site.

L.A. would be able to provide real time information for a motorist to plan around, for emergency vehicles to navigate a system more efficiently, for goods delivery to be able to know what would be the best route in order to make their deliveries. The initiative involves an executive team composed of 14 automobile manufacturers, 10 states, groups such as NACTO, etc.

**Rubberized asphalt** is another area. This has been tested in Southern California almost two decades ago. In Los Angeles, 500 miles have been resurfaced with rubberized asphalt. That is equal to recycling 1.1 million used tyres. It is good for environment, for tax payers and for residential areas because of the decrease of noise levels.

**Variable pricing** has been used in two areas: State Route 91- Orange County and Interstate 15 – San Diego County. The first one costs between 1 and 6,5 \$ per trip depending on the level of congestion. The second one presents different pricing schedule. 4 years ago, 90% of the people in these areas supported this approach even though they were not able to use them.

A study on **Transit Priority Lanes** was initiated. The city is currently reflecting in terms of dedicating right of way for public transit that would provide such a great system that more people would take public transit over cars. But so far, the dedicated areas don't work because the travel time saving is not significant enough to get people to make the move.

There are programs that deal with **Incident management**:

**For special event management**: there is a specialised group called the Traffic Action Team that deals with 400 most significant events in Los Angeles.

Under **crash avoidance**, L.A. DOT started a program that is now 14 months old. The goal is to reduce crashes through safety, educational awareness and through enforcement. The objective is to reduce by 10% the number of fatal injuries -700 people die every year on LA county road ways- and the number of injuries - 50 000 people injured every year on the same facilities-.

- **To provide smart growth.**

This is measured by how many trips do not occur. Last year, they counted 3 million trips that do not occur because of the new developments along the Public Transit right of ways.

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<sup>1</sup> Building on work previously done in the Intelligent Vehicle Initiative, the Vehicle Infrastructure Integration initiative will work toward deployment of advanced vehicle-vehicle and vehicle-infrastructure communications that could keep vehicles from leaving the road and enhance their safe movement through intersections.

In conclusion, **Wayne TANDA** insisted on the need:

- to work on metrics and how success is going to be measured.
- to share what is working around the world
- to get an insight on how it was managed

**Jorgen LINDER** thanked Wayne TANDA and remarked that there was no time left for questions and answers.

### ***Latin American Perspective***

**Patricia RUIZ** expressed her enthusiasm at participating in an assembly composed of both policy-makers and high level technicians.

She pinpointed that new prospects are currently arising for cities that are oriented towards more integration, taking into consideration cities' identities and sizes. This fact reinforces the process of improvement of local governments' policies.

It is quite a challenge to attempt at synthesising mobility policies in Latin American cities, bearing in mind the diversities of all local governments.

She remarked that it would take more time than the time given to do so. But she tried to provide a brief summary:

#### *What are the main transportation challenges faced by Latin American cities ?*

The necessity to develop public transportation arises from three issues experienced by South American cities:

- congested traffic
- pollution in the urban environment (air, noise, intempesive parking, wild signalisation ) and the related disruptions
- traffic accidents

They are furthermore faced with the increasing price of petrol which oblige them to be creative.

In general, Latin American cities are very much concerned by public transportation issues and very careful about finding appropriate solutions. Administrations are in the process of creating entities specialised in the planning and development of urban transports. Interesting initiatives are aiming at improving the efficiency and quality of public transportation.

**Patricia RUIZ** quoted for intance the Bus Rapid Transit project and those carried out in Curitiba, Sao Paulo, Quito, Bogota as well as new projects in Santiago, Lima, Cali and Medellin. These initiatives should be supported on a technical point of view and should be clearly backed by a clear policy by those who manage public policies. This is an essential role that IMPACTS network has fulfilled with great success.

The management of transportation in big cities is difficult because of the great complexity of Latin America.

Here are some main characteristics about Latin American cities that make the process a complex one:

- the fast increase of the demand and main axis
- the permanent movement of suburban areas that should integrate into reduced spaces leads to a process of internal migrations, within the metropolitan areas.

- the deterioration of the current transport services ( an outdated technology, an obsolete fleet of vehicles) together with huge financial problems and reduction in profitability prospects (linked to the real impossibility to have rates compatible with costs).

Let's not forget that a great number of Latin American countries are characterized by an absolute disparity in resources due to a limited redistribution of wealth and a slow fight against poverty at the benefit of competitiveness and productivity of local systems. Therefore, the expression "glocal" has all its meaning when it comes to deal with transports and mobility in general.

Budget restraints are clearly prejudicial to investment and to the development of transport capacity. As public works must answer an increasing demand, they suffer the absence of adequate and large-scale financing mechanisms. Besides, they are experiencing an operational disorganization of the existing transport systems on administrative and financial levels. Businesses do not seem to take into consideration urban, interurban and inter regional (even international) transport in a long term perspective.

Another element that is affecting coordination and planning is the lack of a clear legal framework. Local standards should be restructured towards integration. It is also necessary to share legal experiences that would enable to provide clear objectives to city mobility policies. It would be useful to get rid of what is obsolete in order to rebuild the system.

However, Latin American Cities are aware of the consequences of an inappropriate transport system on the environment. Accidents, pollution, noise, the damaging of historical and natural heritage are a heavy cost to society.

Therefore, adequate analysing tools should be looked into in order to draw up plans that correspond to the reality of cities without forgetting the integration process.

### *Transport planning in Latin America*

A sustainable mobility policy should take into consideration the environment and the surrounding space, building infrastructure that improve the safety of pedestrians, that promote alternative modes of transports like cycling. New modes of transportation should be thought about and integrated. The pedestrian mobility plan should meet standards of a modern city that is designed for the user as a citizen.

People with reduced mobility:

The transport planning should bear in mind the basic rights of individuals (men, women, children, disabled people, underprivileged but also the elderly, the students, etc).

This should be done in a prospect of participative and democratic policy with the citizens. The subject of democracy is a complex one in Latin America but it is essential that it should be tackled.

As far as the environment is concerned, new strategies exist that involve economic tools to manage environment through transport. An integrated and standardised network is needed not only to monitor air quality but also the level of DB authorized in metropolitan areas where traffic and congestion are most heavy.

Another issue that requires a wide awareness campaign aimed at citizens is the fair management of public space and parking policy. In most Latin American cities, public space is not rationalised, it is privatised. Inter- institutional alliances should be created because this phenomenon does not depend on local governments. A direct relation with the state governments should be established. It concerns the participation of private businesses, of

the police administration and other bodies dealing with the traffic regulation. In Latin American cities, this participation varies considerably from one city to another.

The management of interconnected business activities - land, air and maritime trade- must rely on an appropriate infrastructure.

This is why the Mayor of Quito, Paco MONCAY, could not attend IMPACTS conference because, after years of battle, he is signing on 30 June 2005 the convention for the building of Quito new airport. This is one of the biggest challenges for the city that will foster great changes in transport and business areas. She insisted on the fact that the example of Los Angeles should be followed in order to integrate this process. American cities are aware that the development of local governments should take place in a perspective involving the support of national economies as a top priority.

In Latin America, there is a great diversity in terms of cities' dimensions and local governments. The cities she talked about are quite small compared to big south american cities. The concept of City-region should be taken into consideration to tackle mobility issues.

The best way to make investments in those fields is to consider these inter connexions between cities, which private businesses know well. Regulation policies and planning should also be integrated in that manner. Technical solutions that are acceptable at an economic and ecological level should be examined in that prospect and one of the benefits of IMPACTS network is to provide those technical tools by world-wide experts.

The future of transport businesses should also be a main concern.

The monitoring of the environment quality, the development of economical tools for management and integration, technological integration in any transport system for parking management, air and environment monitoring, traffic regulation and signalling management are essential points to be looked at in city mobility policies.

With the decentralization of services and information, technological innovations should be resorted to after discussions. These solutions are minor investments that each city should consider according to their reality and urgent needs.

**Patricia RUIZ** also mentioned the necessity to create a mobility observatory for Latin America that would gather data on past, current and future conditions. Cities should be able to rely on precise data that could be regularly updated.

She said that a Latin American web portal was now available and that it would give access to cities' information as soon as the participation of cities is structured enough. This concerns expensive and difficult tasks that should be discussed

She concluded that Latin American prospects and intentions are being well figured out. Further and better work is still needed. For months, Latin American cities have deepened their reflection on mobility at a local level and it is starting to be fruitful.

She pinpointed the fact that she has learned that nothing is cheap and that nothing can be achieved overnight.

**Jorgen LINDER** introduced Claude DARGENT who presents the plans of the city of Paris to reduce speed and congestion.

**Claude DARGENT** said that synthetizing the European trends - as far as mobility is concerned - is quite impossible because European cities find themselves in quite different situations. These situations can be appreciated thanks to several indicators: in terms of

density, they vary from 1 to 6 between Amsterdam that has 33 residents/km<sup>2</sup> and Paris that has 205.

They also vary in terms of transport modes. Everywhere, cars constitute a minority but the modal share of the different transport modes is very different.

Therefore, **Claude DARGENT** will focus on the Parisian experience. In Paris, the transport issue is at the core of the city policy that has been engaged since 2001. Besides, the decision makers are convinced that the car is not the most pertinent transport mode for the city centre for space reason and for ecological reasons. Therefore, other solutions have to be found.

He explained that Paris is a small city of 105 km<sup>2</sup> within the Ile de France region. It has 2 million inhabitants and the region 11 millions.

Then, he showed the recent trends in motorized trips: traffic is decreasing in Paris, between Paris and its suburbs but there is an increase of the traffic from suburbs to suburbs.

61% of the trips are performed by public transport. On the contrary, for the trips from suburbs to suburbs, most of the trips are made by car.

There are three main operators in Paris and the Ile de France region:

- the RATP which operates the subway, the tramway and the buses
- the SNCF which operates the trains
- OPTILE which operates some of the buses

He showed then the last motorways that are built in the Ile-de-France Region: they are motorways built to bypass Paris so that motorists are dissuaded to enter the capital.

#### *What are the objectives of the mobility policy?*

The Mobility Plan aims at ecological goals (air quality, noise, safety, etc.) and in a more general way targets a decrease in car traffic at the benefit of the other transport modes.

#### *The first results of this policy*

**Claude DARGENT** first focused on the achievements: the building of a tramway will be tackled later during the conference. The Mobilien network is a bus network consisting in the most busy lines which have been equipped so that buses are more comfortable, more rapid and frequent. This leads to build reserved lines which are intended for buses, bicycles and taxis. These lines are taken from the general traffic ways and allow buses to drive faster.

This represents an essential point of the policy since 2001.

Another element concerns the waiting time which is provided at bus stop to allow people to decide whether they will wait for the bus or not.

Besides, other complementary measures have been taken like the development of district minibuses in residential areas which are not easily accessible by long buses. There is a project concerning regular links on the Seine river. And there is a Bicycle Master Plan. Indeed, Paris is currently increasing the number of cycle lanes. This presupposes the development of cycle parks and cycle rent structures.

Paris is facing an important increase of the number of powered two wheelers (PTW), which is a great concern, in particular regarding pollution. The first measure aimed at avoiding that PTW park on the pavements through building parking space meant for them. Besides, together with the users' associations, Paris has drawn up a charter to harmonise the behaviours of users.

Another priority is the accessibility for disabled people with the adjustment of sidewalks, of buses. A system of shuttles has been set up to transport disabled people on demand from their home to their destination point.

Besides, regarding freight transport, delivery points have been created. The municipality has encouraged the development of electric tricycles for small freight deliveries. Electric trucks are favoured. Water and rail freight transport is also part of the agenda.

Environmentally-developed areas are created: a number of Parisian ways are redefined in order to diminish pollution.

#### *The aims of a special environmental scheme*

- Redefining shared public space to benefit buses and slower forms of traffic while maintaining car traffic
- increasing **plant life**
- reducing sources of **localised pollution**
- strengthen **the local way of life**
- preserving and highlighting the **quality of the urban landscape and the architectural and urban heritage.**

The development of green areas is also favoured where the speed is limited to 30 km/h. The objectives of green areas are:

- to deal with through-traffic
- to increase plant life in the area
- to encourage slow-moving traffic
- to develop local life and business

The last element he pointed out is Paris parking policy: the idea was clearly to give residential parking the priority by limiting the parking fee to 0.5 €/day, which incites the citizens to leave their car. A system of rotational parking rate has also been implemented.

The importance of tourist development has led to the setting up of a Parking Pass (fixed one day parking fee) for coaches introduced in June 2003 and a new riverboat shuttle service to encourage the use of the Seine.

**Claude DARGENT** explained that this voluntary policy has been engaged because the Mayor is concerned with Public Health issue. Indeed, the consequences of automobile pollutant on health are not precisely known. Studies have shown that pollution due to today's vehicles emissions entail a shortening of life expectancy in Paris.

### **10:45 AM - 12:15 PM      SESSION 3: Seattle's Transportation Vision: Challenges and Opportunities**

**Grace CRUNICAN**, Director, Seattle Department of Transportation  
**Greg BALDWIN**, Zimmer Gunsul Frasca Partnership

**Grace CRUNICAN** proposed a round of applause for the translators and for Patricia GILLESPIE-SMITH who has organised the conference.

## *The City of Seattle*

When looking at Seattle topography, stunning surroundings can be seen but also physical obstacles, which become obvious when you climb the hills. In some cases, these obstacles created opportunities and in other cases, they created challenges.

Seattle is about as far in the north west from major metropolitan area you can get in the continent of United States. Approximately 150 years ago, this location attracted many settlers looking for the goldrush, fishing, etc.

As transportation director of Seattle, she explained that they are trying to take advantages of both the institutions they have like Nordstroms and their leadership.

Seattle is approximately a 80 square mile city. Contrary to other large cities, Seattle has limits to its own growth because it is constrained by waters and hills.

Nevertheless, the Metropolitan area has 3.4 million inhabitants and it is growing. It is projected to grow by 100 000 over the next 20 years. Few US cities can boast of this kind of opportunity in their Downtowns.

Currently, there are 22 000 people living downtown and 250 000 people working downtown.

There are a lot of activities across the city.

**Grace CRUNICAN** focused her comments on the Central city: it is the area where more than 11 billion \$ investments in transportation infrastructure are expected over the next 10 years.

This area captures the city's transportation vision because it is the heart of the region and the other transportation projects feed this region.

They expect that the city in 2016 will be very different in terms of transportation infrastructure from what it is today.

One of the geographical drawbacks is the vulnerability to earthquakes: the city is on the Seattle fault line and the most recent earthquake happened in 2001. It had a dramatic effect on millions of dollars of real estate, public assets. A two mile seawall had to be replaced and a 2.4 mile viaduc has moved 4 times since the earthquake.

They rely on a floating bridge to the East that must be closed whenever the wind reaches 50 mile/hour.

They are aware that the circulation in some parts of the city is less than ideal. In the centre city alone, they have 9 different grid systems. These systems do not coexist peacefully, they often are abrupt and stop in the middle of the flow and confuse the drivers.

The municipality is working on it at the moment, trying to address each congestion spot.

As the result of these conflicting grids, the choked points sometimes define Seattle: they get listed on the top of the traffic snarl report of the country.

She, then, provided an overview of the projects Seattle is expecting to complete in the next 10 years and some of the tools used inside the department to change the way that the agency thinks about things. It is important to change the template of directions that employees have.

The most important project is the **Alaskan Way Viaduct**: it carries 110 000 vehicles/day, representing 25% of their through-traffic.

The Viaduct was built in the 1950s.

Current structures cannot withstand further earthquakes. Gribbles (sea termites) and teredos are eating the seawall .

Weight restrictions and inspections are required.

The seawall and the viaduct are going to be replaced by a tunnel. Recently, they secured a 2 billion \$ replacement funding for the Viaduct from the legislator. This is only about half of

what it will cost. They will be working with the Congress, the Region and the local governments to replace the additional 2.1 to 2.4 billion \$. They are talking to constituents before the construction begins. They want to identify their concerns and priorities.

Another project is **Sound Transit**, it is a regional transportation provider.

Sound Transit provides commuter services from Tacoma, which is 30 miles to the South to Everett which is 20 miles to the North. They are working on a 15 mile light rail line from the airport to downtown. It is expected to open in 2009. It runs through the city's most diverse areas and therefore information material goes out in 12 different languages, they hire staff to go and work with the communities to make sure everyone along the corridor knows what's going on.

This light rail line will extend North probably by the year 2015 or so.

The next project is **the Monorail** which recently completed a bid for its 14 mile Green Line which runs from West Seattle neighborhood up to North. This elevated motor transportation will be placed in city streets right of way so that the City will be playing a critical role in its success as a construction project.

North of downtown is an industrial section which is quickly transforming into a thriving business community and residential community. Over the next 10 years, they expect another 10 000 housing units and 20 000 jobs in the South Lake Union area. They are addressing some of the transportation needs through a street car which is about a 2.5 miles of tracks that cover 1.3 miles because it's double-tracked in some places. More than half of the funds for the street car comes from the private sector.

**The Interstate 90** is the longest Interstate Highway and serves major northern cities such as Seattle, Chicago, Cleveland, Buffalo, Albany, and Boston. It has a lot of truck activities going on. They are currently working with their partners on the other side of the lake to put in high capacity transit as a critical component in taking the existing right of way, reconfiguring it slightly to accommodate high capacity transit. There are discussions within the region whether to go for a light rail or a bus rapid transit. The conclusions will be reached soon.

**SR 520 Bridge** is the other floating bridge mentioned before. It is the one which has to be closed when the wind keeps blowing. It was built in the 1960s. It is also vulnerable to earthquakes so a replacement project is taking place.

The Mayor of Seattle has espoused a new policy of no new traffic lanes coming into the City. So for the two last projects, they are working hard to provide transit ways and not roadways as a solution.

After this review of the main projects, she listed a few tools:

- The first tool is the fact that Seattle has really **a Mayor with a transportation priority**, with an amazing grasp of the details and the vision. He has also shown a great courage continuing to move forward with progressive policy when others would have pay attention to the elections coming up.
- **Funding:** Because voters know the role transportation plays in the economy, they also understand they need to pay for a quality of service level. After 40 years of non-investment, they are now coming to a point where the citizens are paying a 5 cents gas tax increase. So Motor Vehicle Excise Tax is put in place as well as a regional Nickel Package and State Transportation Funding Package.

- The Seattle Department of Transportation has a **planning department**, which means a lot in terms connecting “the head with the body”. Every 10 years, the city updates its comprehensive plan. In between, it has put together a comparable Transportation Strategic Plan, which implements the transportation components. It is updated each 5 years and provides the necessary tool to connect between the people who do the transportation work and the city’s vision for itself.
- They have a ferry terminal with a limited bus access, a waterfront street car that only runs along the waterfront. They have commuters in long distance train services. They also have a current monorail system that was built in 1962 and it only connects the Seattle centre with downtown development. All of these modes have a purpose but they would be a much greater asset to the Region if there was **interconnection** in modal hubs, and that is what they are currently doing thanks to the planners. She mentioned Westlake Center, King Station and Colman Dock as examples. The success of these hubs is planned for the convenience of the commuters. Commuters are willing to split their modes and make some mode shifts if it is easy and convenient. Already, they are developing a smartpass which will allow all modes of transportation to use the card. The various jurisdictions are the State Ferry System, one is the Monorail and one is Sound Transit. There are three county transit systems that are involved plus the city street car. All these systems have agreed to an interchangeable smart card, which takes a good deal of government politics to overcome.
- In anticipation of all these constructions, the **Central City Construction Coordination program** has been created (the 4 Cs) in order to eliminate the surprises to the users of the system. They will be working with the downtown business owners, with the downtown residents. In addition, they will be working with the city departments and the 4Cs coordinator will be responsible for the contacts with the business community.
- They are **overhauling the Street Permit System** which backs up the right of way management in downtown. As an example, they have changed their rate structures on their right of way management.
- **Technology** is going to play a huge role. The traffic management system will ultimately be able to control various signals and to react to congested areas. It will play a main role in the construction of the major projects by giving flexibility and agility they do not have today. There are about 20 cameras that are available to the public on the web today. There will be another 20 by the end of the year. Seattle is the United States most wired and webbed up city. People use the web to determine their traffic pattern and they are expected to use it at a micro level within the city of Seattle within the next couple of years.
- There is also a lot of **emergency response** going on in the city. They worry first about life, safety and then about restoring critical services and getting transportation systems functioning.
- They are also going to invest capital to improve their existing right of way. There are several choke points outside the downtown that keep people trapped inside and keep them from coming in. They try to eliminate these choke points so that transit and other vehicles have greater access to the central city.
- They are also investing a lot of energy in **improving service routes**. The creation of the Transit Plan has been done. The Mayor wants Seattle to become a 24 hour city.

They have not been able to hit the 24 hour city service levels all around but they have a plan of headways every 15 minutes to all of their urban villages for 18 hours/day, 7 days a week.

- They have been intensifying their **Bike Safety Program** and their bike routing. They are lacking a real bike system and that will represent their future effort.

All of these tools would not be complete without the mention of the policies that are pushing them.

She pointed out some of their main challenges: over the past 3 years, there has been a 20% reduction in their maintenance budget. In contrast, every year, a 7 million dollar increase in an ageing backlog of maintenance facilities. Several of the projects mentioned earlier are the results of deferred maintenance. They have to find more resources for maintenance.

She also mentioned that the tax payers in Seattle are engaged in a political process. It is also a drawback in so far as it is difficult for them to come up against negative response from the DOT.

As a result, they are constantly faced with challenges of having to revisit decisions. For instance, they have had three votes on the Monorail. They are likely to have another vote on the tax package she evoked above. One of the reasons why the ferries are in trouble is because after having a tax in place for a number of years, the citizens of the state voted to take it away and it really damaged the metropolitan area.

In the next few years, they are targeting to become the N°1 downtown real estate spot in the country. The central city is really thriving; they have a vacancy rate of storefront activities of 4%. This is a sign of good health largely stemming from the diverse economy and from the ability to embrace the livability which drives them to the sustainability issues and the functional maintenance of their business and economy.

She introduced **Greg BALDWIN** who has been working for Zimmer Gunsul Frasca for 30 years. He has designed numerous buildings and transportation projects throughout the world. Some of the US cities that he nurtured along, in addition to Seattle, are San Francisco, Portland, Washington DC, Denver, Chicago and many others. He has received the international and national recognition and the president award for design excellence for the light rail line in Portland. He received his bachelor of art and his master in architecture and master in urban design from Harvard. He has postgraduate studies in design as a fellow at the American Academy in Rome.

#### **Greg BALDWIN, Zimmer Gunsul Frasca Partnership**

**Greg BALDWIN** thanked Grace CRUNICAN. He explained that he is an architect and urban designer designing from labs to bridges and office buildings to light rail vehicles. He emphasized that the quality of design is very much limited by the client, not only by their aspirations but also by their behavior. He would like to tackle the behavior of clients in transportation and how it affects design, specifically as it relates to Seattle because there is a very important change in behavior that is under way.

This is a story about options : being a filter or being a catalyst. DOT are the custodians of streets, simply by definition. You plan, you design, you entitle, you finance, you build and you maintain streets. There is no other public agency in cities that have this scope of responsibility. Yet this diversity of responsibility is more often disaggregated than synthesized. In transportation agencies, there are often silos : transportation engineers are in one place the transportation planners in another, the maintenance people somewhere else and so on.

Their activities are not consistently complementary. Frequently, municipal transportation agencies are simply the filter to the initiatives of others.

However, this is about what it takes to make and sustain a very good street, about Seattle and the challenges that are imposed on streets and as a consequence, the action of Seattle DOT is the pursue of new strategies.

All great cities are distinguished by more and more great streets that establish standards of excellence, of aspiration, of achievement.

The characteristics of great streets are fourfold and they are quite universal :

- they accommodate and balance diversities of modes and activities without permitting one to compromise the other
- they present proper behaviour for all modes : the buses are not too smelly and noisy and pedestrians are respectful
- those who use the streets assume a collective responsibility for maintaining the streets and its welfare
- the design of the streets ensures the physical and social quality of the place so that it pleases those who use it

He provided some examples of streets that he thinks are great streets :

- ***the Corso in Rome*** : for more than 2000 years, it has been the pathway to the north but is also the backbone of the city. It's not very wide, the sidewalks are narrow. It is always accommodated with lots of modes and activities, horseraces, pedestrians, cars. They got rid of cars at one point but anyway there is always a sense of balance of what makes it succesful.
- ***5th Avenue in New York*** was so successful that it sucked the activities from Hudson and East River into the heart of the city. It is the place where things are programmed and happened. It's also the place where the private sector has assumed the responsibility consistently for making it successful.
- ***Market Street in San Francisco*** : not unlike the Corso it is the backbone to the city . With the addition of trolleys on the street, the development of the street reinforces it being a healthy backbone of the city.
- ***State Street in Chicago*** : it is really a child of the private sector. When Daniel Bernham decided to redesign the street, in a Beaux-Arts way at the turn of century, it works. It was certainly the greatest retail street in the world and yet it became something less when it became a transit street because somehow the responsibility shifted from the merchants along the street to a transit agency. The issue was how to get those who had activities along the street to reinvest in the street.
- ***16th Street in Denver*** : it was historically a large retail street in the heart of the city. It is probably the most carefully crafted street in north America that has been built and rebuilt in the last 20 or 30 years. The construction had again a devastating effect on the street and yet the private sector through the Denver partnership insisted in making it a healthy and active street and gradually, it became better and better.

*In Seattle, there are obviously three main challenges:*

- the first one was mentioned by Grace CRUNICAN : it has *an hourglass figure* with everything coming to this very narrow neck in the center.

- Historically the city has had a *questionable behavior* : the city has been very effective in informing people but not so effective in being informed by people.
- *Institutional organisation* : leadership in transportation experience has been erratic over time. But there is a change of foot. Seattle DOT has started rejecting the role of the filter and has in place assumed the responsibility of the catalyst.

Three principles are guiding Seattle DOT to redefine its role:

- The first is « pick your spots », when looking at Portland DOT, it was the first public entity that was a partner to 6 private sector interests in developing a vision for abandoning railyards and the consequence has been a redevelopment in urban community next to downtown.
- The second principle is to expand the best aspirations of others. In San Francisco, what was done with the the embarcadere before and after it fell down, was to provide a catalyst to bring people together who are not inclined to do so to build with less capacity and more accessibility and provide access to the waterfront.
- The third is to leverage the quality that distinguish you from other government entities, take advantage of the fact that you are an agency that plans, designs, manages and builds and that maintains.

Seattle DOT is focusing on the following question : how can one be the best partner that any development, any community or any other agency can have and to be so in a way that it exceeds expectations ?

Three answers can be brought to these questions:

- first, by establishing an integrated interdisciplinary staff that is not large but very comprehensive in its scope.
- second, by identifying the city projects whose promise you can expand and whose success you can secure
- third, by taking care of everyday business, efficiently, quietly and completely and create collaborative solutions that embrace bested interests, commitive support, bring funding, sustain and build community.

According to **Greg BALDWIN**, Seattle DOT is becoming a catalyst.

He took four examples to illustrate this fact :

- ***The Alaskan Way Viaduct*** : the city wanted to find the way to make the city heart better and stronger instead of focusing on congestion and traffic issues. Therefore, they developed a city center access vision that looked in a comprehensive way to integrate the regional system with surface, transit improvements and pedestrian improvements. They also looked at how to construct the viaduct so that its impact would be less offensive. Finally, they worked hard to be an active participant in the process of how to connect downtown and its districts more effectively to the waterfront, how to build things along the waterfront that really make people want to come to downtown.

- **Aurora Mercer Streets** : a couple of streets north of downtown one that connect I5 with I 99, both are divisive in the neighborhood through which they pass. The notion on Aurora was how can a better way be found to get accross the top? how is it possible to skin it down, how is it possible to make the interchange less obtrusive ? Mercer carries a lot of traffic but it is right at the base of South Lake Union, an area with small streets, lesser scale, an area that certainly should not be challenged by the movement of traffic. The redesign takes care of these aspects.
- **The Streetcar** in Seattle is really a derivative of initiatives elsewhere : Portland, San Francisco and other cities. It assumes that it can have a profound impact on the redevelopment of the communities through which it passes. It will need to have in Seattle a very special interface with the trolley system because of the hills. It is in fact a very simple system, but one that has been carefully designed in every details.
- **Kingstreet station** : it started with the renovation a few years ago of union station which was a deactivated station with deactivated railyards behind. The city, metro and transportation agency were able to create a lead over a bus tunnel, a bus operating area and a deck upon which a million of square feet development could occur. The Seattle engineering department was simply a filter, a critic of what was going on, not a very enthusiastic promoter. Now, Seattle DOT is working in the area of Kingstreet station and doing some interesting things with the other players who are not yet together. The placement of the monorail in this environment is absolutely critical. They know that other areas along the waterfront will develop in the future and so connections through this area need to be made. They recognise that this is a place of arrival not only for transportation. So they are reflecting on the way to develop it more like the westside highway in New York which accommodates a lot of traffic but other kinds of activities.
- **Activities on Brooklyn on the University District**: it is an area that Sound Transit is going through developing some subway stations where a large corporation is talking about developing a corporate campus. If there is a tunnel going under the street with possibly a station and there is the campus above, is it possible for the first time in history to allow the subsurface use of the street in a way that the application of construction and design can be encouraged so that the public benefits, both to save money and to reduce construction disruption, are met. It is the beginning of the process and it is worthwhile.

#### *How is Seattle DOT doing addressing the criteria for great streets?*

The city strategy is all about balance between modes. Regarding behavior, when looking at the challenges of designers when they designed the Alakan Way Viaduct, you can see that they are really influencing the behaviour of this piece of infrastructure in every positive way. The encouragement provided by other intitutions and private sectors in the Kingstreet area shows that they cannot do it all and need stewardship of others.

Finally, about design quality, it is too early to tell but **Greg BALDWIN** feels encouraged by the quality of the works.

Seattle may not have very many, very good or great streets but in the context of unique configuration, a unique civic culture and a new institutional approach, new opportunities have emerged.

He concluded by saying that the critical scrutiny, the invitation that has been initiated by Grace CRUNICAN and the Mayor of Seattle is unusual but seems fundamental to the reinforcement of an aspiration to stimulate and support a broader and most sophisticated civic contribution that one expects from most city traffic bureaux.

**Grace CRUNICAN** pointed out that when she arrived, she appointed a specialist in construction, a specialist in architecture and a specialist in planning. All three persons are very involved in their discipline all over the world or in the United States. She got a contract with each of them and brought them to Seattle each quarter to run through their portfolio of projects and plans and they make critics to her. They give honest comments and help improve their vision on a regular basis.

## **12:15 - 12:45 PM KEY NOTE ADDRESS**

*Creating Policies to Ensure Sustainable Transportation Investments and the Emergence of the "Mega Project."*

**George SCHOENER**, Deputy Assistant Secretary for Policy, U.S. Department of Transportation

**Grace CRUNICAN** introduces **George SCHOENER**, who has been involved in the Metropolitan Planning Program at the DOT for many years. He has been dealing with 300 metropolitan areas in the US. He is a graduate from the University of Minnesota with a bachelor's degree in civil engineering and a master in civil engineering.

**George SCHOENER** said that he had the pleasure of representing Secretary Mineta, a former transportation Mayor, who is clearly the best transportation secretary he had the pleasure to work for. As a former Mayor, he is concerned about what is done for the cities in the US.

He looked into two basic questions:

1/ How to address the growing transportation problem in the US in a sustainable way? And more particularly regarding the impact of the growth in international trade in the transportation infrastructure?

2/ How to provide a sustainable revenue source to more efficiently operate, manage and build the infrastructure necessary to provide sustainable mobility?

He remarked that his trip to Asia was an eye-opener. Because they put the emphasis on infrastructures and technology to address transportation issues. 20 million containers go through the port of Honk-Kong, each year and surprisingly, there are not a lot of people moving around but a lot of containers. They have figured out how to maximise efficiency of a port. Besides, there is a huge commitment on a part of the government and on the part of the private sector in building the necessary infrastructure to meet the growing demand.

*1/How are the cities going to address the growing transportation problem in the US in a sustainable way? And more particularly regarding the impact of the growth in international trade in the transportation infrastructure?*

Back in the 1970s, the international trade accounted for 13% of the US gross domestic product. Today, it accounts for 30%.

As a result of this, the number of megaprojects has evolved. They deal with all modes of transportation. Some of these are the Seattle Alaskan Viaduct, the LA Longbeach area, the Alameda corridor, etc.

In terms of national transportation policy in the US, until then, the focus was put on local decision making and solving problems. The whole philosophy of the federal programs has

been to collect the resources and give them back to the States and Metropolitan areas and let them decide how to spend that money.

Now they are dealing with projects with national and regional impacts, they are trying to rethink the national transportation policy. The legislation that is currently before Congress begins to address the need to look at those megaprojects from a national perspective. A program that will be included in the final legislation is a program that provides funding at a national level for these megaprojects;

The Department of Transportation's structure is very compartmentalized: there is a rail agency, a highway agency, a transit agency, a maritime agency and an aviation agency! **George SCHOENER** explained that his job is to try to bring them together to deal with these new multimodal megaprojects.

It is a challenge because on the one hand, they are trying to encourage the national decision making empowerment but on the other hand, they are recognizing projects which have a national significance and impact.

## *2/ How to provide a sustainable revenue source to more efficiently operate, manage and build the infrastructure necessary to provide sustainable mobility?*

In the US, back in 1956, they established a funding mechanism to build the interstate highway system. The mechanism may not be the one needed as they move forward to build, maintain and operate the systems of today.

They basically collect a gasoline tax at a national level that goes in a big trustfund and that money is divided between the 50 states to figure out how to solve their problems.

There is not enough money in the States of Washington and California to deal with all the projects. California has got monumental transportation problems just to maintain their own highways & transit system.

When thinking about the competing policies going on at a national level, there is an energy bill moving its way through Congress encouraging more conservation, more fuel efficient vehicle's alternative fuels.

Over time, the contribution of that fund just by nature will be dropping.

Therefore, it is needed to rethink what could be done in terms of financing infrastructure.

What is happening currently without the federal or national government is quite encouraging: Miguel d'ESCOTO will talk about the Chicago Skyway and its public/private partnership. In Texas, Macquarie and other investment firms are coming in and are saying to the State of Texas " we can help you build new facilities without tapping into your traditional revenue sources". In Delaware, New Jersey, it is also happening with private investors.

The federal level is trying to encourage more of variable pricing programs.

Right now, on the existing interstate highway system, existing lanes cannot be tolled. It is prohibited in the law but is currently tried to be removed.

Related to that, they encourage high occupancy vehicle lanes to be used as high occupancy toll lanes as well. The State of Washington in the Seattle area is looking to maximise the use of these facilities in order to manage traffic and generate additional revenues.

One of the concerns is to make sure to get a good return on investments. Because it is quite disturbing to see the diminishing of return in terms of economic as well as the non-economic environment related as well.

He concluded by saying that these concerns regarding megaprojects are the Secretary 's top priorities over the next 2 or 3 years.

**Grace CRUNICAN** thanked him and remarked that in the US, the interstate system is the major corridor for entrance and access for many of the cities. And the policies the cities must deal with, are mainly established in Washington DC. She asked him where the administration is heading regarding the interstate toll.

**George SCHOENER** answered that the financing of the interstate highway system came from the federal gasoline tax that has been collected since 1956. There are those who say it has already been built with public resources so it is not possible to put additional tolls or price the existing ones. It might be an argument but they are facing monumental problems in the metropolitan areas with traffic congestion. So they proposed in their legislation to the Congress to eliminate this current restriction on tolling or pricing and there is some resistance. The primary resistance is coming from the trucking community though they experience a great deal of congestion. They have had a lot of conversations with their organisations.

**Miguel D'ESCOTO** asked a question about the relationship between the homeland security department and transportation department.

Sometimes, **Georges SCHOENER** explained that safety and efficiency are pushing at each other but in most cases, you can provide both of them at the same time with the implication of technology. Fortunately, this department changed its leadership just recently and the number 2 person happens to be Michael JACKSON who used to be the Deputy Secretary of Transportation in the first Bush administration. So there is a great relationship between both departments with more coordination and efficiency.

## **2:00 - 3:30 PM                      SESSION 4: Methods & Practices for Achieving Sustainable Mobility in the 21<sup>st</sup> Century**

### **Building Large Infrastructure Projects in Built-Out Environments**

*Moderator: **AI FOXX**, Director, Baltimore Department of Transportation*

*Boston's "Big Dig" The Tunneling of a Major Interstate through Boston's Center City:*

***Jim GILLOOLY**, Boston Department of Transportation*

**Jim GILLOOLY** presented the Project Description of the Central Artery/Third Harbor Tunnel, which is in its final stage of construction and remains the largest and most complex highway and tunnel project in the nation's history.

He showed a route representing interstate 90 coming to Seattle. The shortcoming of that road is that it does not reach the airport. Then, he showed a picture of the downtown area.

The Elevated Central Artery was designed for 75,000 vehicles per day when opened in 1959. It carried 190,000 by the early 1990s. If nothing was done, traffic jams were projected to last 16 hours a day by 2010.

*The project's two major components:*

- Replacing the six-lane elevated highway with an eight-to-ten-lane underground expressway directly beneath the existing road, culminating at its northern limit in a 14-lane, two-bridge crossing of the Charles River. After the underground highway opened to traffic, the crumbling elevated bridge was demolished and in its place will be open space and modest development.
- The extension of I-90 (the Massachusetts Turnpike) from its former terminus south of

downtown Boston through a tunnel beneath South Boston and Boston Harbor to Logan Airport. The first link in this new connection - the four-lane Ted Williams Tunnel under the harbor - was finished in December 1995.

The project planned 161 lane miles, with a 7.5 mile corridor, half in tunnels. The new I-93 Central Artery – would carry 245,000 ADT by 2010 and the extension of I-90 over to Ted Williams Tunnel – would carry 98,000 ADT by 2010.

### *The Mobility challenges of the project*

The mobility goals were to ensure:

- roadway traffic works
- public transit continues to work
- pedestrians were well-served
- a better access
- tour buses and trolleys

The mobility challenges :

- Building tunnel under operating elevated highway
- Having transit lines and commuter rail hubs crisscross project work zones
- High volume pedestrian corridors
- Construction adjacent to homes, parks and businesses
- Tourists flock to areas adjacent to CAT corridor

He showed the North and South Station areas, 2 commuter rail hubs. Right about this location, there is an underground rapid transit line known as the Blue Line and another transit line known as the Red Line. All these transit activities would be taking place while building a tunnel underneath this elevated roadway.

He presented another overview of the neighborhood known as the North end with houses very near the construction and subject to vibrations.

A quick little profile showed this audience that as the tunnel will be built underground, it would go both underneath the Red Line transit and over the Blue line.

Some of the mobility challenges are the following: there will be 16 million cubic yards of dirt removed, 541,000 truckloads, 3.8 million cubic yards of concrete, 26,000 linear feet of slurry walls up to 120 feet deep, 150 cranes wide at peak construction and 29 miles of utilities moved.

Besides, this means 5,000 construction workers at peak, 118 separate construction contracts, \$3,000,000 work per day at peak, and multiples impact zones simultaneously.

One of the biggest challenges is a subway system that is 100 years-old and the extension of the I90 will be placed across its roof just by a few feet.

Issues like that require careful planning to take place, innovative engineering, comprehensive coordination, lots of public outreach. One of their main concerns was to be constantly dealing with the public working with the business associations.

The commuter rail came to the South Station and they had to go under tracks where thousands of commuters would come to the city each day. One of the engineering solutions was to literally freeze the ground solid so that big sections of tunnels could be one after another jacked into the ground. The jacks would push the tunnel box deeper under the tracks.

Another challenge was to take that Red Line and make sure that people could get to work on those trains. This was a solution that involved these piles being drilled alongside the Red line

in the sections of tunnels being lowered onto these piles a few feet above the roof of a tunnel that was never built to support another tunnel crossing. That was all accomplished by building a giant boatyard, building sections of tunnels that were floated out.

They were able to keep an active highway carrying 190 000 vehicles elevated above ground and still use operated traffic at street level and still build tunnels underneath all of that.

### *Strategies*

- City and State Agreement : this was a state project with federal funding. The Mayor of Boston, Thomas Menino entered a 60 page agreement in which the State would pay the City to have dedicated personnel to look after them as they build the project. That was a key point because most cities do not have the necessary resources to put such a focused effort on a project.

- The city created a Central Artery Team, a dedicated group of individuals both in the transportation department as well as in 12 other city agencies.

- Traffic Alerts and Advisories

- Experimentation

- Intelligent Transportation Systems

There was freedom to innovate: they created the rules as they went along and saw the needs for new rules.

They had lots of partners in this project: the Federal Highway Administration and, on a daily basis, they worked with the state agencies, the Massachusetts Turnpike Authority which owns the existing I 90, the Mass Highway department who was the original owner but would ultimately cede ownership of the project to the Turnpike, Massport who owns property on both sides of the harbor and the MBTA.

*The Tripartite planning* is certainly one of the most successful elements of the project:

- They had an **Artery Business Committee**. They brought to the table traffic engineers that would double check the plans of both the city and the state, come to a comfortable level and negotiate for changes but also served the very strong advocacy. When times would get tough with the press, they would step forward and set the records straight that the plans were solid.

- They had a **North End/Waterfront Citizens Advisory Committee**. They had a dedicated staff to meet this committee as often as requested.

- They developed an ongoing relationship with the **Tourism Industry** because they had to relocate the tour trolleys.

Instead of people going to each agency separately, they would review plans as a city. They would have 10 agencies sign off before they would issue a permit. It prevents issues like big delays in the project.

Residents could not sleep at night because there was too much noise. Traffic could not tolerate losing two lanes during the day. In the Central Artery Team, they would negotiate internally with city department and come up with an approach that would work for everybody.

### *Managing the contract boundaries*

There were about a hundred construction contracts taking place and therefore 20 or 30 could take place simultaneously in some part of the corridor. They learned early that when you have got a contract that is going to build one of the section of the tunnel for 4 years, you can never predict the future even when you have a traffic management plan figured out in advance. You have to be able to adjust it. So they use a system where everytime the roadway would change by a contract, they would have to have another signed off.

### *Public Information Plan*

Public information outreach was critical: the neighborhood was always claiming for information. Sometimes, you had to stop a contractor because it was too disruptive. Sometimes, they had to go and negotiate with the neighborhood to be patient and let some night time work take place because it could avoid two weeks of disruption. The media would always seek information, there were a lot of press conferences to keep people up to date on exactly what the next change would entail for them. Lots of good printed materials would be very helpful to feed out the information.

They had field representation to make sure that the plans that were agreed upon were the plans implemented.

They used decking so that the tunnelling would be hardly visible to the motorists going by. They used a comprehensive set of uniformed types of construction barriers.

*ITS* was a powerful aid to them.

They set up an interoperation center monitoring construction and the video images would go from one center to another to make sure they knew what was happening.

*Slurry walls* go deep into the ground (possibly 120 feet into the ground) and the excavation to build the walls were very wide (3.5 feet)

They had a *comprehensive system of detailed management*. A lot of police was needed to direct traffic for the safety of the public.

They paid special attention to let the pedestrians find their way through the construction via a set of signs.

### *The results*

At the peak of construction in 1997, they had headlines in the Boston Globe about office space and its premium.

The town activities continued.

People were coming by boat to the citywaterfront.

Now, the traffic is active below ground in tunnels, the ribbons have been cut.

He showed the place where they used to have an elevated highway. Now, they have new parks, new constructions and tranquility above.

### ***Redevelopment of the Whitehall Terminal in Lower Manhattan***

***Iris WEINSHALL, Commissioner, New York City Department of Transportation***

**Iris WEINSHALL** remarked that, last July, she attended the Democratic National Convention in Boston. And it was impossible to know that there was a construction project of that magnitude going on.

She presented New York City's efforts to build two new major transportation hubs while maintaining service on the Staten Island Ferry. Over the past few years, they have rebuilt both terminals for the Staten Island Ferry – basically at the same time – and they faced some major hurdles through the process.

These projects were years in the making and were extremely complex due to:

- The need to keep service running while the projects were active;
- the connections to both bus and subway services;
- the fact that they were building over major highway and subway facilities,
- that they ran into undocumented subsurface conditions;
- additionally, construction was complicated by two of the most bitter winters in recent memory;
- and lastly, right at the beginning of their efforts, New York City experienced 9/11 - which brought many activities in Lower Manhattan to a halt for some time, and this project was no exception.

### *Staten Island Ferry Service*

She delivered a few words about the Ferry before getting into the construction process:

As those who have visited New York City know, the Staten Island ferry is one of the greatest tourist attractions in the world. Each ride promises breathtaking views of Lower Manhattan, Ellis Island and the Statue of Liberty – and the ride is free!

This is a service that carried people to safety during September 11th and its aftermath, shuttled people home during the Blackout two summers ago, and maybe most importantly, this is an operation that the people of Staten Island can rely on as part of their daily routine, since they have an excellent on-time record. And this year marks the 100th year of service for the ferry operation.

So it's something they are very proud of, and something very important to the 65,000 people who use it each day.

### *The partners*

Like any large scale project in New York City, many agencies participated in the planning and implementation of these projects, which, when completed, will cost over \$350 million dollars total (for both terminals). That translates into about \$425 million Euro's.

New York City DOT was the client agency planning and working on the design, and New York City's Economic Development Corporation which oversaw the construction of the projects. Many other entities were involved. Other clients for the project were the Metropolitan Transportation Authority, which has subway and bus service to both terminals, as well as the Parks Department which is responsible for some land around the St. George Terminal, and Battery Park near Whitehall and other nearby projects.

### *The task*

The task at hand was

- to build a completely new Whitehall Terminal in Lower Manhattan
- to completely renovate the St. George Terminal on Staten Island.

The planning started over fifteen years ago for these projects and construction began four years ago. With the construction nearing completion they are proud of their new transportation hubs, and she was pleased to give details of their experience which was not easy, but certainly well worth it.

### *Whitehall Ferry Terminal*

She showed a picture of the temporary Whitehall Ferry terminal prior to the reconstruction.

15 years ago, a fire destroyed the original structure of the Whitehall Ferry Terminal in Manhattan. In its place, the City erected a utilitarian temporary structure until a new terminal could be built. No one thought they would have to use that temporary terminal for fifteen years. It was built with few amenities, was located over the FDR drive on Manhattan's East Side, was not very attractive, and was poorly integrated with the nearby transit facilities which include three subway lines and several bus lines.

### *St George Ferry Terminal*

Then, she discussed St. George on Staten Island which is quite different than Whitehall. The St. George Ferry Terminal serves as an anchor for the St. George Neighborhood that surrounds it, and while it hadn't been damaged by fire it was an old 60's white brick building that had really deteriorated over the years and was in very poor condition prior to rehabilitation. Like Whitehall, St. George is also a transit hub linking subway and bus service to the rest of Staten Island.

Because the building is so important to the Community there was a lot of elected official involvement in the design as an economic development project. Much more so than for the Whitehall Terminal. The terminal upgrade is part of a master plan for the area which includes a minor league ball park, which has been built, and a museum which is still in the planning phase

She organized her overview of these projects into four categories:

- First, the goals of the projects;
- then the issues which made these projects so complex;
- then review the final schedules of the projects with the original plan;
- lastly, details of the costs for these projects.

### *The goals of the project*

An important goal of both projects was to smooth the connection to other modes of transit, such as the subway and bus stops. For the Whitehall project in Lower Manhattan, they needed to create more of an integrated transit Hub.

In order to do this they:

- Upgraded connections to two subway stations;
- enhanced the bus drop-off/pick-up area;
- created a new vehicular/taxi drop-off area;
- expanded the pedestrian plaza in front of the terminal;
- improved access to private ferry landing next to the building.

The New building is fully air-conditioned and includes:

- A grand waiting room that was expanded by 12,000 square feet with waterfront views;
- 7,000 square feet of new concession space;

- and there are five new escalators and an ADA accessible interior elevator

### *The goals of the St. George Ferry Terminal on Staten Island*

In addition to improving access for the residents of Staten Island, the hope is to encourage more people to come to Staten Island and stay awhile, especially the tourists who take the free ride over. So, the terminal design included a welcoming ceremonial arch as well as amenities they did not include on the Whitehall side such as space for an upscale restaurant where you can sit by the water. The terminal is also steps away from a newly built minor league baseball park used by the Staten Island Yankees.

The difference in the new terminal is a welcome relief. The new space is open, bright, and airy, and has:

- Waterfront views
- A raised roof with large glass windows
- The waiting area was increased by 20,000 square feet.

### *Using innovative technology*

Another goal for both the Whitehall and St. George projects was to use innovative technology for both of the terminals. These are Photovoltaic solar panels, which are capable of saving energy needed to operate the Whitehall facility.

At St. George, a living roof with an innovative irrigation system that captures and recycles rainwater was created. The living roof will also conserve energy within the terminal as well as provide extra greenery to the area.

### *The challenges*

Those challenges are organised into Six areas:

- Keeping the terminals in active service;
- the major engineering challenges faced at Whitehall in particular;
- St. George was in much worse condition than expected;
- funding came from a variety of sources with many special requirements;
- they had over 40 different entities requiring review and approval;
- 9/11 happened at the beginning of the construction. But after the design so while constructing, they had to reconsider their security designs.

The biggest challenge and issue that guided how they approached the construction of both terminals was the fact that they had to be kept open and operational for the duration of construction. That meant they had to plan safe passage for 65,000 people around two construction sites each day and maintain active connections to bus and subway lines. As shown on a slide, people are exiting the building on the side to avoid the construction going on in the interior.

In addition to the phasing, at Whitehall the subsurface conditions were also a major challenge. The Whitehall terminal is essentially a bridge built over three underground subway lines, water, as well as a major highway – as this slide illustrates.

At St. George, once construction started, they realized that the building was in far worse shape than originally anticipated. Systems and equipment they thought they would rehabilitate had to be replaced – like much of the electric work and underground piping. In addition, there was also excessive hazardous material discovered as work proceeded.

Another complexity of these projects was the various funding sources. These projects cost over \$300 million dollars and they had eleven different funding sources including a \$158 million dollar Transportation Infrastructure Finance and Innovation Act (TIFIA) Loan from the Federal Government.

Another complexity were the various City, State and Federal reviews and approvals they had to go through to complete the projects

Another major challenge was *keeping to their planned schedules*.

Whitehall for many reasons was significantly further behind schedule than St. George.

The reasons were:

- Two record-breaking cold winters;
- Site inaccessibility due to 9/11;
- Undocumented site conditions – such as major gas and electric lines, transit infrastructure;
- Logistics of maintaining full-service ferry operations took more time than anticipated;
- Building the facility as three separate phases;
- Additional scope: repairs to gallows towers, dredging, Transit Authority work
- And new security measures required after 9/11

In addition to delaying the project, they are also the major reasons for cost increases.

Despite tremendous odds, the St. George Ferry Terminal was close to the original planned schedule. This despite significant scope changes along the way.

Additional scope included:

- electrical upgrades;
- site repairs;
- security upgrades;
- work on the ferry fuel pier.

### *The cost of the projects*

Whitehall had fewer scope changes than St. George but more cost increases due to unforeseen delays and undocumented conditions. They originally anticipated spending \$146 million and their current final estimate is \$216 million. The cost increase was due to many of the reasons already discussed related to delays and scope changes – in particular at Whitehall they have spent additional millions on security.

What happened at St. George is that projects costs were driven up less by delays but more by scope changes once construction started. The original cost estimate was \$106 million and the current final estimate will be just short of \$140 million.

Construction is now essentially complete on both terminals.

As she mentioned earlier, the ferry is a critical transportation link for the 450,000 plus residents of the smallest borough of New York City, Staten Island, etc. Not to mention the scores of tourists that ride the ferry each year, as well as other folks who need to visit Staten Island for one reason or another.

In addition to the new terminals they have made other significant changes in the Staten Island Ferry in the last few years.

They also purchased 3 new boats for the system to replace three others that were nearly 40 years old.

For the first time in years, they have increased service for the Staten Island Ferry, adding more boats during the week and particularly on weekends.

Just a year ago, they hired a new Chief Operating Officer who is here today.

Lastly, they have taken on the task of implementing a safety management system. This system is not required for vessels that do not go into international ocean waters but they decided it was necessary and have been working to implement it.

She thanked the audience for the opportunity to share their experience building these two magnificent facilities. She hoped that everyone will come to New York City soon to see them in person and take the free ride on one of their new ferries.

Answering Miguel d'ESCOTO, she explained that the sources came from the homeland security grants and a good portion of it came from New York DOT's capital.

### ***The Future Tram and METEOR Subway Line as Part of Sustainable Mobility in Paris***

***Claude DARGENT, President, Transport Committee, Municipal Council, Paris***

**Claude DARGENT** pointed out that his presentation will deal with two projects: the first one is a project linked to the subway which has been realised in the 1990s whose name is METEOR and the second regarding the South ring road tramway, which is being under construction.

#### ***METEOR***

METEOR is an additional metro line, linking the south east of Paris (Gare de Lyon) to the north west (St Lazare).

This line was at that time an extremely modern project for several reasons:

- it is automatised without any driver
- the platforms are separated from the tracks by a wall with gates opening when the metro is in the station. This was an important innovation, which prevents accidents and which stop people from going down the tracks.
- a total accessibility for disabled people.
- an announcement to inform people when approaching the next station.

This project cost a lot of money; it absorbed a great part of the investments of the Ile-de-France Region in the 1990s.

This project will not be renewed as it concerns only Paris central area. Indeed, the most urgent mobility issues to be dealt with currently regard outer trips from suburbs to suburbs.

However, the METEOR innovations can serve for other metro lines but this will be progressively carried out in the future years.

#### ***Le Tramway des Maréchaux Sud***

The last tramline in Paris was established in the 1930s.

The 1<sup>st</sup> tram line "le Tramway des Maréchaux" is being built in the south of Paris and in the end, it should go all around the city.

They are building a 7.9 km line with 17 stations. The tramway service will serve 167 000 inhabitants and 89 000 jobs, 100 000 passengers per day are expected. Its commercial speed will be 20 km/h. The frequency will be a tramway every 4 minutes at peak hours. There will be a service from 5:00 a.m. to 12:30 p.m.

The tramway will be connected with 5 metro lines, 2 RER lines and 37 bus lines.

### *The principles of the Urban project*

Indeed, it is not only considered as a mobility project but as an urban redevelopment project. Through this tramway, the city is looking at redeveloping the neighborhood districts which, for most of them, are composed of social housing.

- it is an environment friendly project with the conservation of row plantations, turf platform, stations with trees...
- it allows a refinement of local environment through larger pavement, pedestrian arteries and enhanced and protected crossings
- it provides continuity in cycle ways
- it is organised to favour the delivery of goods for business
- it favours user friendly intermodality

### *Financing the project*

The project cost € 214.11 M provided by:

The city of Paris	49.30 M€
The Ile-de-France Region	81.32 M€
The State	50.76 M€
The RATP	32.73 M€

The tramway will be located in the middle of the current boulevard, with two roadways on each side. In certain areas, the tramway will be located on the sides of the boulevard for technical reasons.

This illustrates perfectly Paris policy which is to rebalance space between private vehicle and public transport.

It is expected to entail a decrease in car traffic on the boulevard by 20/25%.

It is a catenary tramway with overhead contact line pole.

The tramway trains will be built by Alstom; they will be 45 m long, 2.65 m wide and able to accommodate 304 passengers.

The research started in 2002 and the work should end by the autumn 2006.

As the construction works are quite disruptive for the neighboring population, an important information campaign has been launched using communication staff and material.

The work has been divided between the City of Paris and the RATP, which is the operator: The city of Paris is in charge of planning and manages the planing operations. The RATP is in charge of the transport system.

The tramway speed of 20km/h can be guaranteed in so far as there will be a right-of-way at intersections.

Answering Iris WEINSHALL on finance issues, **Claude DARGENT** precised that the problem in Paris concerns the organisation of transport. Indeed, in Paris, there is a complex administrative division. In order to solve this complexity, an alliance of transports of Ile de

France region (STIF) had been set up and covered the RATP and the SNCF. Since the 1<sup>st</sup> July 2005, there has been a transfer of competences from the State to the Region so that the transport issues in Paris are dealt with by local Authorities as it is the case in all other French urban areas.

The STIF has a year budget of 3.8 billion euros.

Its resources: 2/3 are generated by a tax paid by companies (“versement transport”), and by public grants (by State, Region, “Departements”). It also collects half of the fines distributed in the Ile de France Region (80 million euros in 2003).

### ***The Bus Rapid Transit Project***

***Hidalgo NUNEZ, Director Quito Metropolitan Transport***

After thanking the audience for their participation and the municipality of Quito, he introduced the City of Quito:

Quito is the capital of the Republic of Ecuador, it is located North West of Latin America, it is 2850 m above the sea level and has a population of 1 390 000 people. 80% of the population live in urban areas. The growth rate is 2.6%.

He showed a map of the city and indicated the central city, the metropolitan district area, the suburbs, the location of the future airport. The extension of the central city is of 45 km.

#### *The general demand for transportation*

There are about 1 800 000 trips a day by bus. The integrated system is made up of “Trole” and “Ecovia” which is in operation and covers 270,000 passengers a day which is approximately 17% of the total demand.

The growth of population is 2.6 and the automotive park is 5.4%. This implies a park of private vehicles and buses of 250,000 vehicles.

The past 3 years, there has been an increase of the motor park of 30, 000 additional vehicles per year.

For 2005, Quito should have 4 times its offer for the road which is impossible so they are concentrating on improving the demands thanks to other mechanisms.

#### *Who are the actors?*

The most important actors are obviously the citizens.

The other actors are the transport operators who are concentrated on 150 routes, run 2,800 buses, there are also school buses and tour buses which amount to 3,000 vehicles and the “inter-parrochial” (between parishes) to 643 buses.

Public transport represents 18% of the total.

Besides, taxis represent 58% of the transport vehicles and the total of vehicles is 15 000.

#### *The organisation*

In the urban areas, there are cooperatives or companies and 1 municipal operator. In the neighbouring municipalities, there are only cooperatives and companies. The total number of operators in the Metropolitan District of Quito is 52 (urban areas) and 21 (neighbouring municipalities).

They have a daily competition with regards to the demand on the roads.

In order to improve the situation, the Mayor of Quito, Mayor MONCAYO, formulated the Quito Master Plan for transportation as a framework guiding the municipality and defining the participation of the private sector in the development of the transportation system of Quito. It is a guide for the next 20 years and it contains the strategies and a set of programs and projects dealing with the 4 components of the transportation system: public transportation, traffic, road-works and regulation frameworks.

5 keywords govern and guide this policy:

- equity and solidarity ensuring that the benefits made through improving the transportation system be distributed in an equal manner among the population especially keeping in mind the most vulnerable users,

- the modernisation and improvement of the quality of public transportation: for this the Master Plan has foreseen the implementation of the “Metrobus Q” system which is formed by transport of large capacity operating with modern and ecological buses on special roads which gives them the right of way.

- one of the fundamental aspect of the policy is the citizens’ participation which should be incorporated in the consensus search of solutions to transportation problems.

The mechanisms used by the municipality have been the neighbourhood councils that have reflected on the requirements and the needs for mobilization to establish the plans that should be used in the Master Plan.

Workshops have also been developed in areas for transportation using the companies in the process of planning and implementation of projects. These plans were presented to professional schools, production chambers, chambers of commerce, transportation and small industries and public forums.

- Of course, the environmental aspect is essential: he explained that as Quito is 2080 m above sea level, it put some limits to the internal combustion engines and make them less efficient. So the air quality has to be an objective in the planning of transportation system in Quito.

The Municipality created a Corporation of vehicle revision of proper functioning, a corporation ‘Life for Quito’ which protects the health of Quito’s inhabitants and which planned the reforestation of 3 million trees in the Metropolitan district and the redevelopment of parks and green areas. More details on air quality will be provided with the presentation of Ing. OVIEDO from CORPAIRE.

- The private sector will be in charge of the provision of the transport services. The Municipal Government will govern, plan, regulate the System of Transport.

### *The context of dialogue with the example of the Metrobus Q*

The “Metrobus Q” is the planning of an integrated network of transportation services structured in corridors of large capacity with modern systems of charging for the fares and centralised compensation with a modern system of records and centralised operational control.

**Mr Hidalgo NUNEZ** showed a diagram about the structure of these corridors: the 1<sup>st</sup> one is a trolley bus which departs from the southern part of the city. The next one is the 6<sup>th</sup> December corridor which will be operational soon and covers approximately 30 % of today’s demand for public transportation – an important participation of the private sector made it possible - and then the passengers’ Central north and south, the extension of the North eastern corridor from El Recreo to the Southern passenger centre and then, the Western corridor north and south.

Beyond the corridors in the central part of the city, there are five Metropolitan corridors that will have a rationalised transport service structure with direct connections between the central city with the nearby valleys.

The process for the Metrobus Q system uses the traditional planning system of the Municipality. Some of the systems are already implemented such as the Central trolley bus corridor (since 1995).

The project was conceived without the participation of the private sector. It was an operation imposed by the Municipality that excluded the historical operators of transportation.

The investments were exclusively done by the central Government and the municipalities.

The results have been positive for some but there was a social opposition from the older bus drivers or owners that felt they were being stolen.

Moreover, there was a difference in tariffs which made the conventional buses go to conflict with the trolebus because the latter charged more at that time.

There was also a low or no participation of the citizens in that project.

There was car parking restrictions along this corridor.

Anyway, this project generated positive changes, including a new way of service rendering. It improved the quality of the urban image and proved that Quito was able to modernize its transportation system.

#### *Another example : Implementation of the North oriental corridor of 6<sup>th</sup> December Avenue.*

There was a partial participation of the operators defined by the project and the responsibility of investors was engaged for mobile equipment, one company only was constituted which was a restrictive condition from the Municipality.

#### *The results*

There was truly no investment made for the buses, there was a deficit because the infrastructure constructed was not used for almost two years; this loss of money was assumed by the City as the consequence of a lack of dialogue between the stakeholders. Besides, public opinion was not in favour of this project because there were a lot of problems during the construction, there was a relocation of the demand and a lot of businesses located in the concerned area became troublesome and this created a lack of credibility between the city and the transport operators.

The municipality reacted quickly to try to find a solution: the project was therefore reformulated with the collaboration of the transport operators. To curb the deficit, there was adjustment of the infrastructure with provisional operation of Trolebuses; this was an emergency operation. Legal instruments were needed for the process of delegation: the municipality structured and formalised the contract for servicing which was the first time it was established.

This allowed to break for the first time the tense relationships between the bus owners and the controlling entity of the Municipality.

This was a very important step forward in the process of implementing the "Metrobus Q".

A fragile private organisation derived from the internal problem of commercial participation between different partners.

There has been severe lack of compliance with the contract parties and there has been a limitation in the improvement of the quality of services.

There still are problems with the system of charging, collection of the fees and the records of operations that would be needed for a high quality service.

And consequently, this situation brought a financial risk.

### *North Oriental Ecovia*

It was important to continue with the line of conduct adopted by Mayor Paco MONCAYO who had a policy of permanent dialogue.

Without this, he would not have been able to go ahead with the process of relocation of more than 10 000 public sales on the side walks, it would have not been possible to recuperate trash dumps, which is particularly delicate a problem that requires a good consultation of the citizens.

The transport system could not be the exception. So with the North Oriental Ecovia, the dialogue was evident in the process of restructuring and redefining the project.

A permanent technical committee was set up to follow up the process as well as special committee to deal the financial, technical and legal aspects.

### *The new Central North Corridor*

The objectives tried to define a strategical alliance of winning players to satisfy each party (transport operators, citizens, municipality) and to improve the service of transportation (frequency, travelling time, comfort, safety...)

The third objective was to reduce air pollution through the increase of the speed, the reduction of congestion and the use of EURO3 vehicles.

The fourth objective concerned the improving of the economy of transport operators using the economies of scales through associations, decreasing the energy consumption, eliminating traffic jams and using a centralised organisation.

For this programme, investments will be shared:

The municipality has already spent 13.7 millions US\$ on the roadways, rails, 1.8 million US \$ on bus stops, 2.6 million US \$ on terminals which makes a final cost of 1.3 million US \$ per km.

This is a relatively accessible cost for other similar Latin American cities that have space restrictions.

The operators had the commitment to invest in articulated buses (16 million \$) which had been given the right of way.

Investments in outsourcing have also been foreseen which would be regulated through a mercantile trust that go to 6. 5 million\$ related with the system of collection, record of operation and the systems of communication and safety.

As for the participation mechanisms, workshops have been set up to review the project, for the chronogramme and the verification of the investments and financial economic models that will be used for the project.

Information forums were organised with transport organisation, professional schools, suppliers of goods and service associated with transport and with community organisation.

This information effort took about one year and a half and is still going on.

This means permanent work with 746 companies that belong to 19 different operators. They have constituted 3 main operating companies of the 19 and 2 have expressed their interest of continuing to be private operators so for the Central north corridor, there are 3 operators representing 97% of the transport operations in the past.

The main achievement of this process is that there has been a favorable public opinion, and that citizens and nearby businesses have been taken into consideration.

An agreement on the mechanism of dialogue has been reached: even if it is a public transportation project, it will be translated into a business project, it is a system of production where the individual and collective interests have to agree.

An agreement on the level of services to be provided and the level of investments was reached.

An agreement about taking out the old buses was reached but entailed difficulty: 168 old buses will be removed gradually.

### *Conclusions*

Here are basic conditions for a dialogue to be constructive:

- need for political support for the process. In the case of Quito, the Mayor played an essential role.
- need for sustainable technical proposals from the operators and technicians who can come out with new ideas.
- need for total transparency in the definition of the rights by all participants. This is the most sensitive aspect.

The result of all these considerations is that a project of social transport is technically feasible.

**3:30 - 4:30 PM**

### **ROUNDTABLE DISCUSSIONS**

**Challenges and Opportunities towards Implementing Sustainable Mobility - European, Latin American and U.S. Examples of Challenges to Implementing Sustainable Mobility Initiatives**

*Moderator: **Andrea d'AMATO**, IMPACTS Advisor, former Chief of Environmental services, & Commissioner of Transportation, Boston*

**Andrea d'AMATO** introduced the session. She reminded Wayne TANDA's definition of sustainable mobility:

*"Meeting the public's expectations for the safe and efficient movement of people and goods while meeting society's agendas for the environment and our economy".*

She made an attempt at summarizing the essential points developed in the presentations.

Cities have come to a common language and a similar vision consisting in better listening to the constituents they are serving. As there is a rebirth of cities, the expectations and demands for a better quality of life are higher. Besides, cities are getting a lot more information about the health issues.

Cities also are trying to better look at how land use can affect transportation and to better manage it so that it is more efficient and safer.

She pinpointed the relevant remark of Patricia RUIZ who focused on the importance of talking to the different users that are not often engaged in the process (elderly people, school children, etc.).

She also remarked that she has been attending IMPACTS conferences for 8 years and she felt surprised to see how cities have grown in their vision.

They used to talk about challenges of interagency and interregional cooperation. All of the examples of the day showed that they are reaching across and are understanding better the interest of other stakeholders.

There are also a lot of efforts made into putting together intermodal facilities.

She realized that there are various methods used by cities to face the mobility challenges and the financing issues. A new era is there regarding the integration of green building technology in the facility design.

She also noticed real efforts to humanize the urban environment with transportation networks with the use of trees, “context-sensitive” design.

She introduced the three speakers that will summarize the different continents’ perspectives regarding the challenges and opportunities towards implementing change:

### ***European Perspective***

**Julio GARCIA RAMON**, *Head Transport project, Barcelona*

**Julio GARCIA RAMON** explained that he has to synthesize the common points of view of European Cities regarding transport systems. He added that he will also summarize the evolution of transport systems in South American cities for those who are not familiar with this subject.

First, he explained that there are more and more common points between North American and European cities. In the past, there used to be more differences between both.

Most European cities are more concentrated than American ones. According to him, it is difficult to figure out what the boundaries of an American city precisely are. In Europe, this is much clearer. Buildings are more compact and outside the city centre, it is obviously the countryside. On the contrary, American cities are designed for traffic. European cities have been founded on historical aspects that did not include mobility perspectives, they rely on dense areas where it was not necessary to be able to move from one destination to another. He remarked that, like his colleague from Los Angeles, he defines mobility as the necessity of movement for people as well as for goods, apart from transport considerations.

#### *The evolution of transport in Europe :*

He remembered that in the 70s and 80s, the focus was put on the transport offer: bridges, tunnels were built, road ways were widened. The priority was, then, to increase transport capacity. Parking on the street was forbidden in order to leave more space for vehicles like it is the case in New England or in Boston.

In the 90s, this policy was revised because policy-makers became aware that it would greatly damage their cities. They realised that transport was not the only essential element, the aesthetic quality was another one. Therefore, they came to the conclusion that cities should not be designed according to private vehicles but that cities should be adapted to vehicles. The emergence of new technologies enabled cities to have an influence over the demand and over the users’ information. The television, the radio, GPS systems and the internet are useful tools to inform users about the traffic conditions. All these elements contributed to change the situation.

Another concern emerged : the quality of life. In most European cities, the space intended for vehicles has been decreased, side-walks have been enlarged and bus and cycle lanes have been built.

As far as the change in mentalities is concerned, how can administration induce a more rational use of transport modes? A more rational use means, here, the decrease in the private transport share at the benefit of public transport.

European cities apply different methods to answer this dilemma:

- parking restriction in the town centers (like in Barcelona)
- road-pricing policies including tolls

- policies improving the traffic like the re-development of trams that were once abandoned.

Urban design is also essential when it comes to preserving cities and their architecture. More and more pedestrian areas are created in pleasant places where people are able to move without any disruption. The objective is to design urban zones citizens can fully enjoy. For that purpose, urban furniture is also an important element.

### *Road pricing systems*

Road pricing systems are linked to the cost and use of vehicles. In Europe, when assessing the cost of automobile, one only takes the petrol price into consideration because most of the costs associated to owning a vehicle are not considered as direct costs. There lies the problem: indeed, when choosing a transport mode, people do not bear in mind the insurance, the depreciation or the taxes. They consider that the more kilometers they drive, the less the costs are important. Still, nobody would think to let their TV set on all day long in order to diminish the costs!

Consequently, the problem should be expressed in a different way : actual and direct costs entailed by the use of car should be clearly assessed. The road-pricing systems set up in London and soon in Stockholm illustrate this fact. In Spain, they are paving the way towards this solution. But this can only occur with a change in the car use. Congested highways like the one described by Wayne TANDA can only be made possible because costs are too cheap. When the offer is superior to the demand, the price increases. Therefore, it would be necessary to have a road-pricing system that would increase the cost and correct this malfunctioning.

### *Freight Transport*

Another issue is freight transport, that has been, most of the time, left away from the debates. European cities are currently changing their view about the importance of freight transport. In Latin American cities as in Southern Europe cities, urban freight transport is managed in a very undisciplined manner. Cities should pay greater attention to this issue because the more the quality of life increases, the more the volume of freight transport increases as it has been recently the case in Spain.

### *Consensus with citizens*

When transport measures are being taken, it is essential to establish a consensus with citizens. Otherwise, those measures might be unsuccessful. Cities should define a methodology in order to create a real dialogue with citizens to find out what are the reasons for possible protests so that a solution may be brought. Barcelona municipality has concluded a pact with their citizens before implementing measures. This explains why the media have never criticized the local government. This method has been successful and serves as an example for numerous European cities.

### ***Latin America Perspective:***

**Mario ZEPEDA**, *Director General of Transport planning, Federal Government of Mexico City*

**Mario ZEPEDA** remarked that the sessions have been worthy of interest.

According to him, it would be risky to express a "latin-American vision".

Indeed, it is a continent with very mixed situations. However, he is able to mention some of the common concerns. There has been a presentation by Quito and during last IMPACTS conference in Quito, representatives from Sao Paulo, Brasilia, Quito, Colombia, Cali, Medellin, Buenos Aires, Mexico and Guadalajara have shown what the differences between

the cities are. The size of the city is an essential element. Cities like Sao Paulo or Mexico are facing issues similar to Los Angeles'. On the other hand, much smaller Latin American cities may experience similar problems to North American or European cities'.

It seemed obvious to him that combining mobility and quality of life is a huge challenge, as it was expressed by Julio GARCIA RAMON.

He told that when he was born in November 1949, the city of Mexico had 3 million inhabitants. Today, there are 20 millions people living in Mexico and 3 million cars are registered with the Federal District. He wondered if any of the participants has experienced such an acute urbanization process.

His mother told him that when he was 2, he used to ride a tricycle on the avenue that is now the busiest one. This fantastic evolution has imposed enormous challenges upon the city and its population. However, the city shows a relatively low rate of car ownership, when compared to those in developed countries. For instance, in California, there are 38 million inhabitants for 18 million automobiles!

If Mexico would have such a rate, the transport situation would be very difficult to face. Latin American cities are really concerned about what they will do when reaching a rate of car ownership equivalent to the ones in North America or Europe.

He explained that 7 centuries ago, Aztecs reached their destinations on foot because they did not have any horse. Moctezuma messengers ran at a 15 km/h speed and boats travelled at a 20 km/h speed. Today, cars have a 10 km/h speed in cities and it has taken them 7 centuries to come to this!

He explained that Latin American cities were aiming at humanising transport prospects through putting forward quality of life criteria and limiting the use of car. They are careful not to increase the space devoted to cars. However, their efforts have been delayed as there are more vehicles than viable spaces and the limit has been exceeded during peak hours for demands. Transport systems remain heavy and should be redefined.

The common point to Latin American economies is a sense of urgency due to important delays and the need for further resources.

The distribution of wealth is very unequal: large groups of the population are on relatively or really very low income. Services should be heavily subsidized to improve the quality of life.

He also remarked that Latin American cities are in a process of growth and their institutions are currently being structured.

In Mexico, it has been only 8 years since the city has elected officials. Before that, there were no elections at all in the city ; the President of the Republic had authority, which entailed some difficulties: on the one hand, actions were simplified to be implemented but on the other hand, the complexity of local problems was ignored.

Today, everything gets more complicated. There are three parties, called delegations, that manage the federal district <sup>(1)</sup>. The political limits of the Federal District have been exceeded; it administrates three republic states. He explained that lively discussions have taken place with the participation of the citizens. Each decision regarding transport has been very much debated. This method is more satisfying because the former one as it allows debates and contradictions. This type of functioning has to be consolidated.

<sup>(1)</sup> The Mexican Federal District, known in Spanish as Distrito Federal (D.F.), is an area within Mexico that is not part of any of the Mexican states, but is administered by the Mexican Federal Government and is the seat of the Federal Government. The core of the vast Mexico City Metropolitan Area is within the Federal District's limits.

Another question drew his attention: how can megaprojects be developed in cities with great activities? This question has been illustrated by New-York, Boston and Seattle. He explained that in Mexico, they have built 30 km of skyways on a busy main artery that was operational nearly every day. The problems faced were obviously the same but with lesser technical resources and financial means.

There are a great number of points to be commented : Latin American cities are very concerned to favour the human aspect in the urban projects' implementation as in North America and Europe. The ability to plan, to reduce the nuisances to the minimum for users are part of their ambitions. They are willing to build cycle lanes, to improve pedestrian areas and they are fighting to solve the problems caused by 30 million spans in Mexico...

*North American Perspective:*

**Wayne TANDA**, General Manager, Los Angeles Department of Transportation

**Wayne TANDA** had two observations first:

For North American people, there seems to be in their DNA a desire to have traffic congestion!

For instance, San Francisco that has one of the best transit system in the US with cable cars, street cars, the lightrail system is more congested now than it has ever been.

A second element is that Americans will protect till the end of time their right to participate. And he was amazed at the presentation of Quito because they have implemented really quickly what they had in mind whereas in the US it takes them at least 15 years of planning and then they do the preliminary engineering and sometimes they do not end the project. This NIMBY symptom can stop good major projects.

He added that this gathering is exceptional inso far as it gathers all the heads of the agencies. They would have normally gatherings with several hundred of technical people rather than policy shapers.

Therefore, he wanted to focus on common questions:

- The political environment in which they have to work. Seattle is very lucky to have a Mayor with a passion for transportation.
- Funding: the question is how much money is needed to build constructions that provide improvements? And how to get the funds ?
- What about the organisation of cities? There is not one US city whose organisation matches another jurisdiction. What about the partnership between public and private sector?

**Miguel D'ESCOTO** remarked that the way cities are set up a certain way goes along with what cities intend to achieve in the future. There can be founded commonalities.

A participant observed that organisations develop around two things: one is what makes sense and that is minor, the other is personality. Amongst the organisations he has seen, everything is a spin off of people. The average ten years of most heads in transportation groups is short. What do people want to accomplish when there? They are there to achieve something whoever the political leader is.

**Jim GILLOOLY** answered about how much money is needed. Transit systems have improved greatly with the project but some people who switched to transit switched back to roadway. In the Boston Metropolitan Region, they dedicate 70% of the Federal funds to

maintaining systems and good repair. So, the answer is that for new projects, you need lots of money. Besides, a project like the Big Dig entails capacity problems and there are other projects under way to help clear out some of the congestion points.

Answering a Latin American participant, **Wayne TANDA** remarked that in the US, almost all of the transit systems lose money. Even if they build everything themselves public and turned it over to private, there again, there is a struggle. Transit systems that would break even or turn to profit, at this point of time are marginal if they exist.

**Julio GARCIA RAMON** said that in Europe, in 95% of the cities, transport modes at a municipal level are under the control of the administration. In Barcelona, the bus system income only covers 40% of the total amount. 60% is a subsidy from the administration. So it is easier to make decision than in Quito where you have to discuss with private partners. It is not so clear when interregional transport is concerned.

Regarding congestion issues, the only possibility is to control the demand and therefore to control the price. Because if you build larger infrastructures, sooner or later, further congestion problems occur. Therefore, in Europe where there is a very low capacity, another tool is needed to control the demand after having reduced the available space for cars through bus lanes...

**Mario ZEPEDA** added that the other point to be clarified is the participation of the private sector. In Quito as in most Latin American cities, the private sector has the competences and manages transport trade and in particular the micro buses. Local governments and municipalities are not the operators as in numerous developed cities where almost all transport is managed by the government or the cities.

In Latin America, they have tried to define a framework enabling private operators to maintain their businesses while having to meet specific requirements. The city, the local governments define a level of service for public transport and propose a business plan that is viable on an economic and financial level. The operators discuss their participation with the local government and decide whether they have interest to go on with the process.

The private sector has invested \$22 million and the municipality \$25 million. This investment from the public sector is given to the private sector, it is an investment from the State for the community.

## Bringing Transit to Your Community, and Community to Your Transit: Transit-Oriented-Development

Moderator: **Hidalgo NUNEZ**, Director, Quito Metropolitan Transport

### **Sustainable Strategies in Europe**

**Laurence DOUVIN**, President, IMPACTS Europe

**Laurence DOUVIN** pinpointed that sustainable development of cities is a political aim for the EU, which is one of the key actions outlined in the 6<sup>th</sup> community environment action program and it will be developed in the next one.

In that respect, the EC initiated a number of working groups towards a thematic strategy on the urban environment. In 2004, such a group was formed with 25 experts from a wide variety of backgrounds and functions and from 14 European countries. Laurence DOUVIN was one of them.

She tried to give an overview of the work accomplished:

In the medium-term perspective, the EU organised a council in Lisbon whose objective was to make the EU into the most competitive and dynamic knowledge based economy in the world by 2010 with increased economic, environmental and social cohesion.

It meant that over the long term, the European cities would lose their abilities to compete if they did not take some measure or run the risk of falling behind other regions of the world such as Korea or China.

### *What are the challenges?*

- Globalization: it presents an enormous pressure of competition for European towns and cities.
- The age structure in urban areas will be undergoing massive changes. As early as 2050, the average age of the European population will be 50, approximately 10 years older than the average US age. The population patterns will also change a lot due to migration.
- Relations between the cities and their surroundings will be different and there will be new challenges for urban policies.
- Research results are relevant for implementation, most specifically if towns and cities are not only the focus of research but are also simultaneously research subjects.

### *The group proposed new approaches:*

- Sustainable environmental management plans: this includes tools for creating, implementing, monitoring sustainable environmental management plans as well as complying with Directives on air, water quality as well as noise.
- An urban system approach: the creation and comparison of urban models of sustainable development and tools is needed. This successful implementation relies on a

deep understanding of urban development driving forces and the urban social technical structure dynamics involved.

- New forms of cooperation: public/private partnership and the extent to which they can coordinate public and private interests and balance economic, social and environmental objectives. At the same time, sustainable development needs new forms of administrative cooperation and strategies at a horizontal and vertical level. New questions emerge: what does a sustainable city administrative body look like?

- The need to improve networks and cooperative research demonstrating and training strategies among European cities and regions.

- Sustainable economic development: the economic, social and environmental effects of liberalization are rather widely researched. However, their effects on the local level are hardly known.

### *Research needs*

The group focused on 7 points:

- Developing and assessing sustainable urban development: existing quantitative indicators are not sufficient to influence local level. The system needs furthermore to be supplemented by qualitative indicators and a new approach. Tools are also needed to assess risks, for instance health risks related to air, water and noise.

- Analyzing behavior and stakeholder expectations : in the end, urban development is the sum of individual decisions, whether it be of multinational firms or families who decides to move to the countryside.

- Adopting urban sustainable mobility plans: this means to link transport with land use planning beyond administrative boundaries and also to meet the needs of people living and working in it. This can be reached through the development of mobility plans.

- Using information technologies : they are frequently used in order to enable traffic to flow smoothly. Yet there is still limited knowledge of potential application fields.

- Considering energy and mobility: we are faced with more scarce and expensive resources so it is necessary to compare strategies to reduce fossil fuels and energy use through urban and regional mobility policies and to develop applications and systems for energy and fuel alternatives.

- Choosing density versus sprawl: European cities are facing the decline of inner urban areas and at the same time, tools have to be developed to reduce urban sprawls and managing growth.

- Deciding sustainable building and construction: the building sector has a key influence on sustainability. Performance criteria for sustainable buildings need to be developed.

Following these principles, a sort of urban code research would recognize first that cities are the major actors and recipients of urban research. Second, that all topics of relevant groups and disciplines have to be included. And third, that research needs to be multi- and interdisciplinary.

## *The need for training*

The report of the working group ended on insisting on the need for training:

### *Training WHO?*

- Local authorities and stakeholders at different levels of government
  
- Administrative bodies' training programs should emphasize an integrated approach to dealing with good governance in general and particularly with directives dealing with air, energy, water requirements. Training of officials and elected representatives are also necessary.
  
- Citizens: they are the end users. In cities of more than 100,000 inhabitants, there are sustainable management plans. So information campaigns will be needed to communicate the meaning and information of such sustainable transport & mobility. Educational efforts are needed, made by the press, the media also in schools. These programs will need support from the citizens, the NGOs and the public at large.

### *What is needed for this training?*

- Sustainable transport plans
- Air quality and noise
- Alternative fuel substitution
- Education efforts
- New trends in traffic management
- Modal split
- Construction and planning
- Reuse of land

Regarding international cooperation, unless there is research and planning at a European level, local authority bodies in the EU will not be in a position to face future challenges because towns and cities in Europe are confronted with common problems and have a number of potential in common which however produce maximum added value only when results are coordinated at European level. Bringing the reflection to an intercontinental level can only help to share further thoughts, better practices and the feeling that there is a common destiny which is to protect the planet and to bring to each one a better quality of life in the cities.

## **Creating Lifestyle Choices with TOD (Transit oriented Development)**

*Otis ROLLEY, Dept. of Planning, Baltimore City*

**Otis ROLLEY** said this was an honor to speak with such an assembly.

Increased development pressure as well as renewed enthusiasm for urban living in Baltimore provide the background for a Transit-Oriented approach as a means of expanding lifestyle choices.

They see TOD as an opportunity to focus investment towards neighborhood revalorization that increases long term accessibility and mobility in the region, making Baltimore a more desirable choice for living and working.

In recent years, the city has broken with past trends of population loss. In many post-industrial North eastern US cities, they have lost a lot of their population to the suburbs. Since 2000, the rate of population loss has declined. By 2010, they will begin to see the population increase once again.

There is vacant property due to the people leaving for the suburbs. The vacant property they left was a great opportunity for redevelopment in general and more specifically along their transit lines.

One target strategy for redevelopment is Mayor O'Malley's "Project 5000" which aims to acquire properties for redevelopment and target the neighborhood.

The housing market has increased significantly in recent years with appreciation of homes of slightly over 50% and the demand for urban living within the center cities in the US has increased dramatically. This demand is really an opportunity to promote TOD and the diversity of housing types it can accommodate, as a lifestyle option. Providing different versions for urban living can only strengthen the market growth in Baltimore.

Other opportunities for TOD and other developments include Baltimore amenities such as access to DC by commuter rail and media academic institutions.

Major redevelopment efforts include a development near Johns Hopkins Hospital (EBDI) and Park Heights.

Both neighborhoods are in the vicinity of existing transit lines (EBDI near end of Metro and Park Heights near Cold Spring Metro Stop)

- EBDI investment project is about \$800 million and 1,500 new housing units
- Park Heights investment amounts to \$800 million and 1,500 new housing units

As currently redevelopment efforts illustrate, leveraging public investments is seen as an important aspect of pursuing TOD as an economic development tool.

Neighborhood investment especially combined with transit access, can greatly increase lifestyle choices within Baltimore.

Proposed expansion to the existing regional transit system including a new East-West transit corridor provides additional opportunities in the centers for TOD.

A current challenge for TOD is the existing transit system which is fragmented and widely considered as a barrier to successful TOD. A better functioning transit system with access to more destinations will make a TOD approach more viable.

The City is focusing on the connection between transit supported land use and being successful for obtaining federal funding for additional transit to increase access and mobility in the region.

In addition to the range of benefits the TOD can provide, they see the federal transit administration competitive funding process's New Starts as an immediate incentive.

New Starts funding is the competitive process by which we are seeking federal funding for the Red Line.

In the context of the application process, Baltimore's cost effectiveness rating is weak. Increased ridership and land use patterns that promote it are important to offsetting this rating and providing optimism for the future of transit in Baltimore. TOD is one key way of addressing this problem. As shown on the slide, a high land use rating can offset a lower cost effectiveness rating.

Promoting TOD is a collaborative effort involving HCD, BDC, Transportation, as well as the State agencies. Creating common goals develops consensus among agencies. These objectives are currently being vetted by agency staff (inter-agency) and more formal adoption of them will be sought.

The four goals fall under these categories respectively:

- Economic Efficacy and Growth
- Transportation Choices

- Efficient Land Use (benefits of pedestrian use, density, “synergy”)
- Neighborhood Benefits

### *The TOD checklist*

A checklist of questions about land use, design, and street patterns has been developed to guide agency staff in evaluating development proposals and small area plans for how transit-friendly they are.

The diagram compares transit-oriented and auto-oriented site plans. The transit-oriented site clusters active uses near the transit and is pedestrian friendly. Auto use does not dominate as it does in the auto-oriented site plan.

#### *Land Use*

Are there higher densities at the defined transit center?

Is there a mix of uses including residential, commercial, and retail within walking distance of transit stations?

Are active uses, such as retail, located on the ground floor and directly connected to sidewalks?

Are single-use zones and automobile-oriented uses discouraged?

#### *Site & Building Design*

Are active uses, such as retail and public facilities, clustered near transit facilities?

Do architecture and quality open space create a focus around the transit center?

Are buildings and public spaces oriented towards sidewalks and streets?

#### *Street Patterns & Parking*

Are parking requirements reduced, or shared parking allowed, for uses in close proximity to transit?

Is parking located near but not directly adjacent to transit stations?

Is most of the parking located to the side or rear of buildings and away from main streets?

Current efforts to implement TOD reflect a focus on opportunities to promote TOD but more specifically to promote a greater variety of housing and transportation options in the region.

#### *Red Line Transit Study*

- Light Rail and Bus Rapid Transit being considered
- FTA application evaluated by land use policies that promote transit
- Locate stations to maximize benefit

The proposed Red Line is a 10.5 mile east-west corridor from Woodlawn area in B. County, through Edmondson Village, West Baltimore and downtown to Fells Point/ Patterson Park.

Station area sketch plans have been developed to explore TOD potential – way of maximizing benefit of transit (Edmondson Village, West Baltimore MARC, and Canton Crossing).

The Dept. of Planning has continually worked with the Community Working Groups to ensure that transit planning emphasizes connection to land use and benefit to neighborhoods. The June open houses provide an opportunity for broader outreach on the reduced alignment options.

#### *State Center TOD Strategy*

- Reconnect neighborhoods
- A cultural & regional destination

- An improved transportation system

A week-long charrette was held in January to explore problems and opportunities. Community leaders were interviewed before hand and an open house was held each night of the charrette to obtain community concerns and input. A draft strategy document has been produced by the consultant team and identified the following goals for TOD at State Center Planning department participation continues with additional outreach into surrounding neighborhoods.

Other TOD efforts address opportunity at West Baltimore MARC station, the commuter line to Washington DC. Improvement of the linkages between the station and the neighborhood will be emphasized as well as opportunities for redevelopment.

A community-base planning initiative by Baltimore Neighborhood Collaborative is examining opportunities to expand workforce & housing opportunities around 3 transit hubs. The City Planning is developing supportive policies and playing role in outreach in these projects.

There are also future opportunities for transit supported land use in Baltimore: existing Reisterstown Plaza & Rogers Avenue stations present development opportunities with the Maryland DOT. The City (including the Planning Department) is attempting to influence the proposed developments at these sites to be more oriented to transit. Sharing the TOD checklist and promote mixed income housing are the focus of their arguments.

At Westport, TOD development principles are integrated into the design guidelines of this master plan. The existing light rail station in Westport combined with development pressures (Middle Branch, proximity to MARC and DC access) create the opportunity for TOD.

In addition to promoting TOD objectives, it is important to develop a strategy for land assembly near transit stations. Interim Overlay Zone can address opportunities along proposed lines, as well as accommodating TOD retrofits at existing station areas. Zoning options call attention to needed variations in the implementation process to address new and existing station areas. The focus along proposed lines is to be proactive to protect the potential for future TOD. They realize if you do not anticipate it, it is much harder to achieve.

They are at the beginning stage of promoting TOD within the city of Baltimore. They are still gaining the support needed to successfully pursue this developemnt approach. However, their current efforts combined with Baltimore amenities and development opportunities suggest great potential for transit-supported landusers.

Future success in creating a better fonctionning regional transit system is the key to the success of TOD in Baltimore city.

### **Mobility Pact**

**Julio GARCIA RAMON**, Head, Transport Project, Barcelona

**Julio GARCIA RAMON** presented some figures on Barcelona.

#### *The City of Barcelona*

Barcelona is a European and Mediterranean city. It is Spain's second city and the capital of Catalonia. With 1.5 million inhabitants, a 100 km<sup>2</sup> area and 15,000 persons/km<sup>2</sup>, Barcelona is a dense city unable to grow because of the surrounding sea and mountains. The ancient city of Barcelona is formed by narrow streets and octagonal city blocks. As for Greater Barcelona, it brings together 162 towns and 4,400,000 inhabitants.

Each working day, there are 6,250,000 trips in the city, 2 millions are produced by people entering and leaving the city, the other 4 million are internal trips. Inside the city, 36% of trips are made on foot because of the favorable climate. The total amount of movements by car is 1,600,000 each day! Motorbikes represent 25% of the total number of vehicles, which makes Barcelona come after Rome for its high rate of motorbikes.

Most internal movements are made using public transport (40%), most of the external movements are performed with a private vehicle (62%). This is the main problem. And it is impossible to control it. This type of problem cannot be solved inside Barcelona. It is furthermore impossible to offer a bigger supply of public transport in these areas because the density is very low. The only way to solve that problem is to use multimodal trips, which requires an important park & ride offer, especially in railway stations. These must be built outside the City centre. But this represents a legal problem because the municipality has not the authority to finance park & ride facilities outside the city.

As a Mediterranean city, Barcelona offers a combination of residential, commercial and tourist mobility. Besides, Barcelona lives 24 hours a day and people are very prone to using public spaces.

For 5/6 years, the most important problem expressed by citizens has concerned mobility and traffic.

### *The Mobility Pact*

Therefore, the Municipality of Barcelona government undertook a participating process and signed the Mobility Pact, on July 22, 1998. It included then 52 entities and civil associations related to mobility. Now, there are 70 entities! It meets yearly under the Mayor's presidency to follow-up the mobility policies.

It is an agreement among all the associations about the kind of moving the actors want.

It is a consulting and citizens participation tool.

It works with thematic working groups:

- Traffic management
- Security and road discipline
- Information and communication
- Freight distribution
- Bicycle Civic Commission
- Motorcycles and mopeds

**Julio GARCIA RAMON** is responsible for the Urban Freight Distribution aspects of the Pact.

### *A new trip policy*

- Citizens are increasingly demanding with the quality of life and environment.
- Citizens wish another allotment of public space and another way of moving.
- The quality of life is on bad terms with congestion, noise and pollution made by the massive presence of cars.

They changed the order of priorities:

- No-motor trips (by foot and by bike) have priority over motor trips.
- Among motor trips, public transport has priority on private transport.
- Among private transport, freight distribution, necessary to support the economic activity, has priority over private vehicle.

- Among private vehicle, motorbike, due to space reasons, has priority over cars.
- The car should be an exceptional trip mode in the city, and trips should be done in other choice.

### *The General objectives of the Pact*

- *Improve quality of life*
- *Reduce presence of cars:* **Julio GARCIA RAMON** remarked that now the US have the same approach as in Europe whereas it was not the case ten years ago.
- *Be able to move in other ways*
- *Preserve the economic activity*

*Reducing the presence of cars* is made through reducing space destined to cars. They are building a lot of pedestrian zones that cannot be entered by delivery vehicles at certain times.

Besides, the performance in streets must be restricted to improving the connection of the existing net without increasing the capacity of access. So wider sidewalks are built for pedestrians and prevent too many cars from entering these zones.

### *Use parking lots to dissuade from using car*

Using parking lots to dissuade from using car is also part of this policy. A strong enforcement is being implemented. For 2 months, the traffic in the city center has decreased by 8 to 12%. There are about 150 000 free parking spaces on the roads. Every year they remove 1.7 % of free parking spaces in the street, that is, an average of 2500 spaces every year. Every year the parking payment spaces in the street increases in an average of 250. Residence parking fees are very low.

### *The Basic Traffic Network*

The set of ring-roads, access roads and 1st- and 2nd-level connectivity roads is considered fundamental for traffic management, and it is the space reserved for the mobility of private vehicle.

These roads represent 21% of Barcelona's road network and absorb 68% of the city's traffic.

### *To move in other ways*

The following goals are pursued by the City of Barcelona:

- *More and Better Public Transport*

The city has bet strongly on public transport: there is a metro, a bus system, urban railways, interurban railways and national railways. There are 5 metro lines, 2 urban lines operated by the National Railways, 4 interurban lines operated by the National railways.

There are 90 municipal bus lines. But they are currently building new bus lanes each year.

As regards public transport, this is what is planned for the future:

- the Extension of Metro Schedule:
- Enlargement of natural gas buses to 70 units.
- Promotion of "Neighborhood Bus" (18 bus lines with 27 mini-buses (length 6.5 m) and 5 mini-buses (length 10 m)).
- Integrated Tariff System completed into the Metropolitan Region of Barcelona (RMB): it has existed since 2001. It includes metro, bus, metropolitan trains (FGC) and regional trains (RENFE). This is complete.

Furthermore, like in Paris, Barcelona is redeveloping its tramway system that has been left aside for many years.

The metro lines have been organised following a radial pattern; they are now building line no.9 which follows a ring pattern and will connect all the radial lines improving mobility for users.

- *To Promote Moving on Foot*

The weather and urban configuration without long distances favor trips made on foot.

36% of Barcelona inner trips are made on foot. Therefore, the Municipality is implementing the following measures to favor that mobility mode:

- More spaces for pedestrians
- Downtown pedestrianization
- Sidewalk enlargement
- Control access of pedestrian zones
- More time in traffic lights to cross the streets
- Better signposting
- Moving on foot web page
- Promotion campaign

- *To Promote Moving on Bike*

Up to now, the city had not very much encouraged cycling. Only 1% of the trips are made by bike. But things are improving through the extension of bike lanes and the elaboration of a Strategic Bike Plan.

### *Motorbikes*

Barcelona has 235.000 motorbikes. The total number increases 2% every year.

Motorbikes are a typical part of Barcelona's traffic

Motorbikes have been consolidated progressively as an alternative to the car for urban displacements.

Actions are being carried out to improve the situation:

- More security against accidents
- Organized Parking
- 12, 300 spaces on-street
- Reserved spaces in private parking lots: 1 motorbike for 3 cars

### *Preserving the economic activity*

The city is intending to reserve spaces for urban deliveries.

In Barcelona, there are 41, 000 vans and commercial vehicles representing 9 % of the total. The number of cars remained stable over the last years whereas the number of commercial vehicles is increasing – 30% over the last 5 years- , which is a great concern. Trips linked to freight distribution increases by 3,5% every year.

At the same time, commercial vehicles represent 20% of the trips.

There are a lot of loading/unloading spaces: 6, 200 in the city centre with a very important peak hour in the morning. There has been an increase by 13,2% of parking spaces for urban freight distribution last year.

Barcelona studied the characteristics of freight operations in the city: 96% of operations last less than 30 minutes and 90% less than 15 minutes, which gives the opportunity to reduce and make some arrangements. Most of the loading/unloading is made in an illegal way. That

is why enforcement officers are seeing that the delivery times are respected, which has been very successful.

Combined-use lanes have also been implemented. During peak hours, the lane is used for buses and when, off peak the lane is used for delivery purposes.

**Hidalgo NUNEZ** asked Otis ROLLEY what were the reasons why the people had moved from Baltimore city centre.

**Otis ROLLEY** remarked that in the city of Baltimore, there was a fascination with suburban living; both the reality of integration and the reality of federal funding towards highways happen to build out the suburbs. People moved to the suburbs, the centre of cities being seen as too dense. Job career opportunities moved as well to the suburbs.

Now, people are coming back to the city, being frustrated with having to drive. They realised that there were amenities inside the cities.

So the reason why the people moved out was a result of a combination of various elements: federal support for highway infrastructure as opposed to transit and the nervousness with density.

**Julio GARCIA RAMON** observed that narrowing lanes in Barcelona cannot be used in the US because of the size of the cars. In Barcelona, they are using lanes of 2.3 meters width, which is very narrow and compell the drivers to reduce their speed.

**Grace CRUNICAN** asked what was the approval process for narrowing the lanes in Barcelona. Because in the US, they have state standards regulations for their width.

**Julio GARCIA RAMON** answered that in Spain, there are the national, regional and municipal authorities. At each level, there are special rules. Obviously, they cannot be contradictory rules between each other.

One participant pinpointed the fact that business community leaders often require particular parking space for their employees. What role did the business community play in the decision regarding the decrease of car access to the city centre in Barcelona? How were they persuaded to rely more on public transport?

**Julio GARCIA RAMON** said that the Mobility Pact involved a lot of lively discussions between the different users. To reach a solution, arrangements had to be made. Most of the parking places were occupied by the shopkeepers but not for loading/unloading activities. On the other side, transport operators needed space for their deliveries. They reached a compromise favouring both.

## **10:15 - 11:45 AM                      SESSION 6: Innovative Financing for Sustainable Mobility Initiatives**

*Moderator: **Roland Rydin**, Vice Chairman, Traffic and Transport Committee, City of Göteborg*

**Roland RYDIN** introduced the session on congestion pricing. Since 2003, the congestion charging scheme is beeing regularly reviewed and assessed. He introduced Isabel DEDRING.

## ***Congestion Pricing***

**Isabel DEDRING**, Director of the Policy Unit, Office of the Commissioner for Transport, London

**Isabel DEDRING** reminded that the objective of the London congestion charging scheme was very much about reducing congestion and about being a revenue rising tool, as the Mayor has always clearly claimed.

### *The context*

There was a clear problem in central London. It is one of the largest metropolitan area in Europe and the fastest growing one as well. It is also the most congested UK city.

Over a hundred years, there has been a decrease in speed in London and the problem was expected to significantly increase because the population is growing rapidly and is expected to add another 1 million in the next 10/15 years.

There was a lot of pressure from the business community who required a solution because they were complaining about productivity losses.

There was a lack of resource and an unwillingness to spend the resource required to engage a major work enhancing road capacity. This was positive in so far as when you increase capacity you induce further demand. And the problem would have been bigger.

Most importantly, London had not had a Mayor until 5 years ago. It was a city government in the mid-80s with Ken Livingstone. It was abolished by Margaret Thatcher.

Ken LIVINGSTONE was the MP in parliament responsible for drafting the legislation to reintroduce London government and managed to get elected.

He wanted to run as a Labour candidate but was not selected by the party. So he ran as an independent candidate for which he was kicked out of the Labour party.

Congestion pricing was part of his platform but people did not pay attention to that until later on when it became a reality.

The purposes of the scheme was to reduce traffic by 10/15% in central London. There are about 1 million trips a day in this area. Out of these 1 million trips, 85% are on public transport. So, the objectives represented only 3% of the total trips.

The Congestion Charging Scheme concerns the Centre of London (6km/4km); it includes the main financial areas, retailer areas and tourist attractions. Outer London is a very different place. The road marking and signs indicate where the zone is located.

The system uses automatic number plate recognition, which is basically a series of cameras. That is checked against the payment database. If someone has not paid, the record is held until the end of the day. If it has not been paid at the end of the day, the driver's driving license is checked in another database held elsewhere and on that basis, the penalty notice is sent to the person.

As London has not a limited number of entry points, a tolling system could not be implemented. There is no physical barriers to tell people they enter the zone.

So the critical point was to set up information campaigns to explain to people what it meant.

### *The congestion charging scheme*

The congestion charge is a charge you have to pay to be in the area; it amounts to 5£/day, from Monday until Friday from 7am till 6.30 pm and will increase to 8£ in July.

In terms of paying, people contact Transport for London (TfL) by phone, web or go to shops, provide their registration number and operate payment.

There are certain categories of people who do not have to pay. The exempted vehicles constitute about 30% of the traffic. There are 100% discount for alternative fuel vehicles and 90% discount for residents in the area.

Exemption applies to disabled people, to public services vehicles (ambulances), to public transport vehicles, motorcyles and hybrid vehicles. There was a political trauma around the question of who is getting exemption. There was a huge debate about whether low paid service workers should get an exemption, for instance. In the end, that was not granted.

The amount of time spent on this issues negotiating with the different organisations who wanted an exemption was extraordinary.

The system was launched on 17<sup>th</sup> February 2003. The system proceeded virtually without a hitch (minor initial problems). There was a immediate 30% reduction in car traffic as drivers anticipate chaos. The level of media aggression against the scheme was difficult to imagine. It was helped by decision to do it during first day of school holidays (10-15% reduction anyway during this time – and indeed, this was part of how it was ‘sold’).

There were accusations that traffic lights were reconfigured and then set back, and that streetworks were deliberately worsened and then suspended just after the introduction of the charge.

### *The impacts*

The biggest impact was on private vehicles. There was a 33% reduction in car traffic, a slight reduction in vans and lorries because the businesses tended to pass on the cost of the congestion charge to their cutomers.

There was an increase in taxis, buses, motorcycles and bicycles.

The impact was not minimised over time.

The increase of the charge to 8 £ is because the Mayor would like this impacts to be greater.

Two years on, the total amount of traffic entering the zone has gone down by 18%. Congestion has decreased by 30%.

Regarding the people who shifted, 50 to 60% shifted to public transport, 20 to 30% changed their route in order not to enter the zone, and 15 to 25% are doing other things like car pooling and in many cases, it is a change in destination.

There are 5000 evaporated trips, which means that people are probably combining trips.

### *The financial results*

The net revenue is about 100 million £/a year, which is higher than what was expected. The reason is a high number of penalty notices issued. Out of a total 120 000 cars entering the zone, 10 to 20 000 are not paying.

The full revenue is reinvested in public transport and road improvements.

### *Other impacts*

- Improved bus service (reliability, speed)
- Decline in road accidents
- Reduction in CO<sub>2</sub>, NO<sub>x</sub>, PM<sub>10</sub>
- Retail sector claims negative impacts on business and remains concerned. But, in 2004, the business level picked up to reach the 2002 level. So, it cannot be said that it is the congestion charging scheme that affected the business in Central London.

## Lessons learned

1. The willingness to take political risk is crucial. Road pricing had been discussed for decades before it was implemented.
2. Having clear policy objectives is essential. From the beginning, it was cleared that the aim was to reduce congestion problems.
  - Supported by a strong fact base
  - Articulated in simple terms: "Traffic levels like school holidays"
3. The importance of the associated measures in traffic management and public transport and extensive public consultation
4. An extensive ongoing monitoring program which helped to come up against any opposition
5. An absolutely relentless public information campaign. In order to change people's behaviours, this was essential and carried out 5 months before the implementation;
6. Fault free operations: because of the media aggressiveness, they had to prove that there was not any problem in the back office.

## Consequences

One of the consequences is smoothing the path to further road pricing in the UK. Second, it has triggered a lot of interesting discussions about the need for other demand management measures. Far beyond transport, there is a ripple effect of the population feeling that it is innovative in terms of transport experience. Ken LIVINGSTONE has been readmitted to the Labour Party.

## What's next?

They are currently in the process of consulting on an extension to a slightly broader area. If it receives the green light, the existing congestion charge zone will expand from the centre of London (where the focus is on radial trips) to the west, predominantly a community-based environment.

Technology trials are currently under way to improve the existing system through:

- Improved ANPR
  - better detection, lower cost
- Tag and Beacon/ DSRC
  - positive results from pilots
  - indicates could be used by 2008/09
- GPS, GSM
  - unproven
  - not likely as an affordable solution in London before 2014)
- Working with UK and Europe – ideally to one standard

The government announced on 5 June a UK wide road pricing system with a satellite-based 'pay as you drive' system, with a charge to vary depending on congestion level (up to £1.34/mile). It would largely replace current fuel tax.

## Congestion Pricing

**Gönnar SÖDERHOLM**, Head of the Secretariat for Congestion Charges

**Gönnar SÖDERHOLM** observed that Stockholm Municipal Council adopted the Congestion Charging system on a trial basis on 2 June 2003. Then, the Swedish Parliament adopted the Law of congestion taxes on 16 June 2004 and IBM was awarded the procurement contract for the system on 9 July.

Stockholmforsöcket is the Swedish word for "The Stockholm Trial Congestion Taxes and Improved Public Transport for less traffic snarls and better environment".

It will start on 22 August 2005 with the improvement of Public Transport, during the autumn 2005, new Park and ride facilities will be built,

The trial with the Congestion taxes will start from 3 January 2006 till 31 July 2006.

And then a referendum will be made on 17 September 2006.

In Stockholm, they have a lot of new infrastructure projects: the North link will be built this autumn and they are starting to build a new railway tunnel under most of the central area of Stockholm.

The Congestion Charging is a complement to all the other projects.

The problem is that Stockholm is not allowed to take tax other from their own citizens according to the Law. Therefore, it was important to adopt a national law.

In the municipality of Stockholm, there are about 275 000 cars and in the whole county of Stockholm about 750 000 cars. The passages through the inner city amount to 280 000 cars every day. On the Outer ring, there are 875 000 passages a day; in the Congestion Charge area about 550 000.

The inner city would be the Congestion Charging area; it is 25 km<sup>2</sup>. Compared to London, the area is a much bigger part of the greater Stockholm. There are 270 000 inhabitants in the zone who live in 150 000 apartments.

The aims of the Congestion Charge are to reduce congestion, increase accessibility and improve the environment.

The secondary objectives are to reduce traffic volume by 10-15 % on the most heavily used routes during morning and afternoon hours and to improve accessibility for buses and cars in the inner city.

In London, you pay because you are inside the area, whether you move or not. In Stockholm, it is the passage that is charged. There are 18 passages in Stockholm. Signs are installed to tell people they are entering a charging zone.

The charge during the peak hours (7:30 – 8:30 ; 16:00 – 17:30) amount to 2.2 euros. In order to avoid queues of people waiting before the peak hours, near peak hours and medium volume hours charges have been set. In the evenings, during week-ends and holidays there is no charge.

The charge is a tax collected by the national fiscal Authority. For each vehicle, there is one decision every day. When the charging time is over, the administration decides what the vehicle 's owner has to pay. They count the number of passages performed and see if the maximum level of charge is reached (6.6 euros/day).

There are exemptions for different vehicle categories (emergency vehicles, vehicles for disabled,...).

The car owner is responsible for the payment of the tax. No request is made to him. This is a consequence of the Swedish tax system.

If not for this law, the system would have been easier for citizens. The Government did not want to change the law because they were afraid that the European Union would assign them.

If there is no payment within 5 days, there is an extra fee of 7.5 euros. And if there is still no payment 4 weeks after, there is an additional charge of 55 euros. Then only, a request to

pay is sent to the owner of the car. There are some possibilities of remission (if the car has been stolen,...).

The Swedish Road Administration (SRA) is responsible for the tax collection and the information on how to pay tax. The City has responsibility for general information, evaluation and park & Ride facilities. SL is the public transport company owned by the City Council.

The generated revenues go back to the Region of Stockholm for public transport and infrastructure connected with the trial. It is the Swedish Parliament that decides where it should be allocated.

All vehicles will be registered by cameras, two times in the front and two times in the back.

The Congestion Charging Trial is also a mean to improve public transport with new express lines and extension of bus services. This should encourage people to shift from their private vehicle to public transport.

This trial would entail an increase in traffic on the ring roads, which are already saturated. The experts are currently discussing different solutions to avoid these traffic jams (ramps,...).

An opinion survey has been carried out and shows that people are aware that congestion is the most important issue and that the trial is a solution to help decrease traffic and congestion. Furthermore, they expressed their intention to use their car less with the congestion charge. However, it is not known whether people will answer positively during the referendum.

In Stockholm, there is a very fierce opposition from the Conservatives and the Liberals, who normally should be in favour of monitoring methods to handle the traffic situation. The Left party is very much in favour of the system.

Before and during the trial, extraordinary evaluation programs will be carried out with monthly indicators regarding public transport, volume of cars, impacts on economy, environment and health, etc. This will put Stockholm at the top 5 of Europe.

In Sweden, people do not understand that all main cities in Europe implement road pricing systems. Annika Billström, Mayor of Stockholm promised not to implement the system for 4 years. But it was an undisputable demand from the left and green party. The Prime Minister asked the Mayor of Stockholm for support for a national law and she broke her promise. So it was a high political risk.

He advised the participants to go on the web to read all the evaluations and information about the following-up of the scheme:

[www.stockholm.se/miljoavgifter](http://www.stockholm.se/miljoavgifter)

[www..stockholmsforsoket.se](http://www..stockholmsforsoket.se)

### ***Public Private Partnerships***

#### **Making investments to Move Goods**

***John DOHERTY, CEO, Alameda Corridor Transportation Authority***

**Roland RYDIN** explained that Alameda is responsible for the project of 20 mile long rail cargo express way linking the ports of Long Beach and Los Angeles through the transcontinental rail network.

**John DOHERTY** remarked that times have changed with globalisation, which has stressed the rail and road capacity particularly in the US.

### *Introductory comments*

They seem to indiscriminately add capacity on the waterside without recognition of what is happening on the land side.

Besides, the air quality regulation severely lags behind because of the pressure to change engine technology.

As a result, there is highway congestion with cars and trucks. The ports of access are very polluted.

What the voters want right now, is to see the goods go away. Indeed, the public has a lack of understanding of the economic advantages of trade as well as what it takes to get goods to the market.

China has an \$ 80 billion five year goods movement infrastructure investment program in place. India has a \$ 17 billion five year goods movement infrastructure investment program in place whereas, in the US, there is nothing. They lack a national freight framework policy.

He asked the participants to consider two things:

Is it fair that the people of any state or county pay 100% of the structure costs associated with providing goods movement?

Shouldn't the person that gets the benefit of the low cost merchandise pay an extra penny to ensure those goods continue to flow to market?

It is necessary to give tremendous thought to what it's going to take to finance goods movement in the future?

### *The ports of Los Angeles and Long Beach*

The Ports of Los Angeles and Long Beach are the largest port complex in the U.S., the fifth largest in the world. It has the highest throughput per acre in U.S. It's an export port.

It represents \$200B in trade annually, 40% of all waterborne U.S. trade and 60% of all Asian imports. Over 60% is distributed to the rest of Nation.

He showed the congested freeway in and out of the ports. Something is going to be done at the end of the month to extend the gate hours at all the terminals. They got an agreement with the 13 terminal operators on that.

### *The future of goods movement*

- International trade and population are growing rapidly
- Existing infrastructure needs upgrading to keep pace
- New funding is limited to non-existent
- If funding was available, it would take years to plan and build projects
- Construction will cause added congestion
- In the interim, must optimize use of existing infrastructure

All their forecasts in the past have been wrong regarding the flow of cargo through some ports. They were exceedingly low in comparison with what really happened.

He showed a slide representing the rail routes for the 4 major carriers in the country.

It showed that the highest volume of traffic travelling on the rails converged to Southern California. In fact, 60% of the containers that reaches Chicago come from these two ports. The flow of goods is extraordinary.

### *The Alameda corridor*

They had a very bad situation. They had a first class transcontinental railway network that basically ended in downtown Los Angeles. 4 slow speed branchlines traversed 200 grade crossings and had about 15 trains a day that caused gridlock throughout this urban industrial area.

The four existing routes are replaced by a single consolidated, grade-separated 32km (20 mile) line, connecting with the existing rail network at Redondo Junction, near where the present route crosses the Los Angeles River.

This reduced the conflicts at 200 Grade Crossings. There were 4 millions Cu. Yds excavated materials, 40 Grade Separations constructed and nearly 2,000 Utility Interfaces handled.

What they did is take the weakest link in the transcontinental railway network and make it stronger.

Promoters hope the line will handle 100 trains a day by 2020, significantly reducing the number of road freight movements a day into the area - currently around 20,000. Average speed of freight trains is expected to double to 35-40mph.

The ten-mile (16km) Mid-Corridor Trench at the centre of Alameda Street, which carries the line under the existing road from Route 91 in Compton to 25th Street near Los Angeles city centre, is 15.2m wide, and accommodates two tracks plus a roadway for maintenance access. This was completed in 39 months. They spent about 1 million and a half \$ a day with about 12 000 people on the ground working.

This was a design built project.

It carries over 5 500 containers a day and it has carried over 45 000 trains in the first 3 years.

### *How was it funded?*

The project has been funded by a public-private partnership to raise the necessary \$2.4 billion. Of this \$1.16 billion has come from revenue bond proceeds, \$394 million from the port authorities, \$347 million administered by the Los Angeles County Metropolitan Transportation Authority and \$154 million from other state and federal sources. The \$400 million federal loan was refunded last year and became part of their revenue bond debt.

This is a toll road for trains and containers. Waterborne and loaded containers, which represents 94% of the revenue are charged \$16.26/TEU, non waterborne loaded containers are charged \$ 4.34/TEU. TEU is the size of a standard shipping container.

### *Is the Alameda corridor the Model for Future Goods Movement Projects?*

He answered by yes and no. The railroads benefited from this project tremendously . Unfortunately, they do not want to replicate this model in the country. It does not sit well with their customers to pass on charges to them for improvements. Half of this project was really of great public benefit.

It does have the ingredients to be a model. All future goods movement project will have to assess what the specific public vs private benefits are on a case by case basis.

### **Chicago, CREATE and the Skyway Project**

**Miguel d'ESCOTO**, President, IMPACTS North America

**Miguel d'ESCOTO** wanted to mention another public/private partnership: in downtown Chicago, there is a street called State Street. A block called "block 37" has been vacant for 10 years. Underneath, there is an opportunity to put an express line from downtown to the Midway airport. A developer has been identified, who will build a \$ 300 million building on that space and it has recently agreed with negotiation with the city to fund \$ 41 million to build the station down below. That has been worked on for two years.

### *The CREATE Project*

The CREATE project aimed at relocating a single line, which, as an elevated line, caused problems in the neighborhood. Besides, there was a freight line going under their convention facility. The issue became security because of freight rail.

So they got together with the railroads (6 major railroads operating) and the State of Illinois. They said they would be able to buy, relocate and move the trains to another section into the system in Chicago.

Everything went well, they had a Memorandum of Understanding but then Norfolk Southern pulled out of the deal and the other major railroad pulled out also.

Indeed, railroads have great immunity from state and local regulations and they do not appreciate government "interference".

The railroad lobby in D.C. is very powerful. State and local governments cannot regulate commerce between the States except for Public Health and Safety issues.

Therefore the Mayor wanted to sue them to court, a document has been drawn up to take legal action, with testimony from Surface Transportation Board (which regulates truck, freight and freight rail movements). They do not have a lot of control over freight rail but every merger, every deal, every expansion has to be approved by the Freight Transportation Board (FTB).

The chairwoman of the FTB advised them not to sue. At her request, the Mayor sent her a letter of all his issues with the railroads. The chair of the FTB called all the railroads and told them "the Mayor of Chicago has a problem with you".

The railroads are fierce between each other. What happened, is that the railroads operate independently in Chicago and they are not coordinated with each other.

### *Chicago train infrastructure*

He reminded that Chicago is the world's third busiest intermodal hub, that one third of all freight rail traffic converges to Chicago daily. Chicago's rail network is a key part of national, regional and local economy. Over the next 20 years, freight rail volume in Chicago will increase 80%. If rail capacity is not addressed, Chicago will lose \$2 billion in production over the next two decades.

The Mayor saw the consequences of what was happening if nothing was done:

*"Unless we do something, Chicago is in danger of becoming a bottleneck in the nation's rail transportation system. And that would have serious consequences not just for the City but for the nation as a whole. If we don't make improvements, we can expect even worse congestion."*

Furthermore, a physical switching of tracks for train operations is needed. And Chicago has a 100 Year old "Temporary" Structures.

They had Chicago Rail Action Plan which was a Precursor of CREATE and RRs Developed Computer.

The railroad model looked at what was going on in the movements.

Meetings were organised with the railroads.

They ended up with the CREATE program which :

- Focuses operation on 5 corridors
- Builds 25 road/rail separations
- Builds 6 passenger/freight rail flyovers
- Viaduct improvement program
- Grade crossing safety enhancements
- Improves train control system
- 50 miles of new track on existing right-of-way
- 364 new switches
- Automation of 14 interlockings

There has been a separate agreement by all 6 railroads to operate the new system as a single resource.

They came up with 4 new freight rail corridors and the reorganisation of all freight rail to these 4 corridors became an ability to take existing freight rail and create brand new passenger express service for passenger rail.

#### *Local and regional benefits*

- Less Congestion, fewer delays
- Increased safety
- Improved commuter rail service
- Cleaner air
- Increased lakefront land use
- A stronger economy

“Show me the money” becomes the issue. They have to wait for reauthorization and new funding. This is a \$1.5 billion plan. They convinced the railways to put \$ 212 million of their own money. The State is going to come with \$ 400 million. They are trying to secure some federal money and some money from the city.

The problem lies in the fact that federal regulations come versus private sector readiness:

- Railroads have money in hand and want to proceed
- Federal regulations slow process down
- USDOT urges more Public/Private partnerships but has not adapted to private sector needs

**Dave SEGLIN**, City of Chicago, Department of Transportation

**Dave SEGLIN** explained that the Skyway is a series of bridge structures spanning 7.8 miles in Chicago East side. Half of it is roadway pavement supported on embankment. The other half is made up of various types of elevated structures that overpasses viaducts and a bridge.

Built in 1958 at the cost of \$ 101 million, the Skyway provides access between Chicago downtown, the State of Indiana and other points east.

The city needed to take a look at why they were needing to lease the Skyway:

- ⇒ What was the need of the city as a public entity?
- ⇒ How would they assure their success?

⇒ What would be done with the anticipated revenue generated?

They were anticipating a leased price of \$ 900 million for a 99 year lease, which is an extraordinary sum of money.

The reason for a public entity to enter a public/private partnership must extend beyond the question of revenue. It also makes good transportation sense. The city is not in a business of operating a toll road. They thought that professional toll operators could bring great efficiency and knowledge in the operation of the toll way and therefore provide higher quality of service to Skyway users.

They figured to make out enough money to pay off the existing bond debt on the Skyway which was of \$ 460 million and have some significant funding left over to fund other vital city needs.

Another contributing factor was that they had just dropped \$ 250 million in the reconstruction of the Skyway, making the value of this facility on the open market as high as it has ever been.

The combination of the financial and transportation factors convinced them that the time was right to lease the Skyway.

There were a number of factors that made the Skyway a very attractive asset for the private sector:

- Lack of Competing Direct Route
- Strong Toll Revenue Growth Rates
- 45 Year Operating History
- Limited Capital Expenditure because of a major reconstruction that was just completed.
- Potential for Modernization

Once the decision was made to lease the Skyway, they realised that the choice of the right entity was most important. The continued smooth operation of the Skyway was absolutely essential.

They needed to establish a process that would assure them of maximizing their net proceeds while at the same time assuring that a competent entity would be selected.

They established detailed standards for safety, operation and capital maintenance of the highest engineering standards.

They also required the concessionaire to meet the city's requirements of minority and women on business program as well as the residents'.

They contacted over 40 potential bidders. 5 were ultimately found qualified.

They asked them to demonstrate that they knew what they were doing when it came up to operating a toll road. They needed proof of their competence in operations, maintenance, customers' service and safety issues. They also asked them proof of their capability to raise the necessary funding.

Then, they decided to keep information about the bidders' activity secret.

When the bids were open, a consortium from Cintra, a Spanish firm and Macquarie, an Australian firm, were found to be the winners with the high bid of \$1,830,000,000!

With the rough financial time, the City was going through, there was some support for using their new fund to plug the holes in their budget.

They decided to focus on the city's long term health.

So they paid off the existing debt of the Skyway, some other long term debt the city had. Then, they established the first ever long-term reserve fund and a new mid-term reserve fund

for the city as well. They established new fund for safety net programs, affordable housing and homeowner programs, creating jobs/job training, facilities and programs for children, facilities and programs for seniors.

Even the press admitted that leasing the Skyway was indeed the right decision to make.

### **The Double Decking of the Mexico City Outerbelt**

**Mario ZEPEDA**, *General Director of Transport Planning, Federal Government of Mexico City*

**Mario ZEPEDA** presented the transport plan of the city government for the period 2000-2006, which corresponds to the duty period of Andres Manuel Lopez Obrador, who is the current head of the government and whose popularity has greatly increased. He is the main candidate for the next 2006 elections. This is a brand new historical situation insofar as it is the first time that there is a potential center-left presidential candidate. On 30<sup>th</sup> July, as requested by the Mexican legislation, he renounced his mandate of government head and started his campaign as the candidate for the PRD (Partido de la Revolucion Democratica).

The success of his policy can be partly explained by the program of vast works that has been carried out and in particular by the building of a substantial network of new roadways. The building of 40 km roadways with a major part built on a double decking overpass (Distribuidor Vial) has enabled to relieve most of the disruptions caused by heavy traffic in the city.

**Mario ZEPEDA** explained that two essential components have made this achievement possible: investment in transport and roadworks. Both are indispensable in Mexico.

During many years, there had been no investment at all. The Federal District has 8.6 million inhabitants when the urban area has 20 million inhabitants. Mexico is the second biggest metropolitan area in the world after Tokyo. Obviously, the facilities and services available in Mexico have nothing to do with the Japanese city. This explains why the Mexican situation is alarming: the investments do not match the volume of users and flows. Therefore, the current administration has tried hard to generate investments in transport means and viable road equipments.

Concerning transport means, the extension of the metro network was questioned. The metro, created in 1969 is 200 km long. Each day, it transports 4.5 million passengers. Compared to London metro, which is the oldest in the world, with a 400 km network, the Mexico metro transports more people per day. And though it is much more recent than London's, it begins to show signs of age. Its first trains were purchased at the end of the 60s. Most of them were imported from France. He remarked that the Paris metro is their *alma mater*. In the 1990s, the Mexico metro used to transport up to 5.5 million passengers each day. This phenomenon drove the municipality to revise its expansion. Today, the metro has three additional lines. Trains are more numerous and it generates more jobs than ten years ago but transport less passengers.

Indeed, the town centre lost inhabitants. Citizens have moved to the outskirts, leaving behind the historical parts of the city. Therefore, transport users would come a long way with more problems without enjoying the infrastructures available. That's explains why the first objective of Andres Manuel Lopez Obrador was to stop the external growth and to repopulate the city center.

For this purpose, two measures have been taken :

- The first one was to prohibit building projects of major scale in the periphery.
- Secondly, investments were encouraged in the city center through tax relief.

These measures favoured the construction of sky scrapers. Water and transport installations have been renovated in the central area. The first results of this policy are encouraging: external movements have been limited and people have come back to town. Still, several more years are necessary to assess the definitive results.

Regarding transportation, the first issue to deal with is the metro obsolescence. There has been a first renovation of the obsolete rolling stock. The complete renovation of the stock is envisaged: 45 new trains have been purchased and 20 are now in operation.

**Mario ZEPEDA** repeated that there were three public companies owned by the Federal District – the metro, the buses and the electricity distribution -. The private service that transport the more passengers is the micro-bus which is really in a poor state. A program has been conceived to replace the fleet of vehicles, these new vehicles must be purchased by the contract holders. But as the new vehicles are larger, it requires the association of two contract holders for the purchase of one vehicle. Thereby, new vehicles with higher technological standards and more environmentally friendly are appearing in town. The government has invested about \$ 100 million for that purpose and so far 20% of the micro-buses, out of a total of 26 000 vehicles, have been replaced.

On the other hand, there are 106 000 taxis in Mexico which are mostly old Volkswagen models with no environmental requirements. The city is also intending to replace them. The action has been more rapid because it is easier to buy a \$ 8 000-10 000 vehicle. The government provides a \$ 200 subsidy for the purchase of one new taxi. Half of the fleet has been so far replaced.

There are two other actions that have been implemented in the transport domain : 8 years ago, following a violent strike, the bus company ran by the Federal District disappeared. The business was closed and the union disbanded. This company owned between 4 000 and 5 000 autobus in Mexico, which explains the current profusion of micro-buses. The administration put the bus company back to service and purchased 1 100 buses.

These measures cost a total amount of \$ 900,000 to the government and the same amount was spent on road equipment.

The city has looked for reliable indicators between the necessary number of buses per habitant, car ownership rates and the optimal length of road network.

They found out that there were no common criteria for world wide cities. In Los Angeles, it has been said that one inhabitant out of two owns a car. In Mexico, there is one car for 4 people. As there are 8.6 inhabitants in the city, they reach 2.5 million vehicles registered with the Federal District. But if considering the urban periphery, they reach 5 million motorized vehicles! Things will not improve: with 20 million vehicles, Mexico would be obliged to build a quadruple decking of ring roads and not a double as it is the case right now!

The city has a 900 km primary network. The primary network consists in ways with limited exit and entry points, enabling long trips through the city. It has a first internal circuit built in the 50s at the edge of the city. Then, in the 70s, as the city was growing, another ring was implemented, which became later an obstacle to the urban sprawl. This ring is located for 80% on the Federal District territory and for 20% on the State of Mexico. As there was no space left, the only solution was to build a second deck. It took them 2 years to build 30 km of upper deck.

This was a great engineering challenge. Because Mexico is an important seismic zone – in 1985, a major earthquake destroyed a large part of the city centre and made 25 000 victims. Besides, the lagoon makes the ground loose, which propagates seismic waves. However, Mexican engineers took on the challenge and with the help of the National Autonomous

University of Mexico and foreign consultations, they assessed and checked the resistance of the double decking to possible earthquakes.

The project was therefore achieved and it has enabled to reduce traffic congestion, thereby improving greatly the flow capacity. On the first deck, during peak hours, about 10 000 vehicles are crossing each other in both directions, with an average speed of 10-12 km/h.

15 km of tunnels and bridges have been added to this infrastructure, providing continuity to this roadway which crosses the city from North to South and transports both freight and passengers. They are in the process of improving the traffic on a North-South axis and are currently finalising the studies to join this axis to the East-West flow of the city (the Piedad viaduct built in the 50s) with a double decking of the viaduct.

The metro plan follows a program that will be delivered in 2020. They aim at a final network of 20 lines. There are currently only 11. From a financial point of view, it will be difficult to pursue work immediately. Therefore, they have chose an intermediate solution, which is the Metro Bus. For that purpose, they had to suppress one roadway used for car traffic to devote it to public transport in the longest and most central part of the city. They have also purchased 90 articulated vehicles with the support of public and private sector. It enables the former contract dealers to take a stake in the capital of the new company.

As for the financing of the double decking, most of it was financed by public funds but also thanks to an exchange: the city offered a wide plot of land to a private company which built a large part of the deck. That was a means to finance the project without having a lot of money to invest.

**1:00 - 2:30 PM**

## **SESSION 7: Using Technology to Enhance Sustainable Mobility**

*Moderator: Wayne TANDA, General Manager, Los Angeles DOT*

### ***The Renault Transport Policy and the Sustainable Mobility***

***Daniel Augello, Director, Transportation policy Delegate, Renault***

**Daniel AUGELLO** reminded that Renault is part of the Renault-Nissan alliance, which is the 4<sup>th</sup> group in the world in terms of automotive alliance. Renault has a 44% stake in Nissan and Nissan a 15% stake in Renault. The rough production of this alliance is about 5 million cars a year.

To go towards a sustainable mobility, *the principles of the Renault policy* are:

- The support of the sustainable development concept, namely the coherence between the short and the long term and the consideration of three pillars that are: economy, environment and social dimensions
- The pursuit of the progress in the reduction of the nuisances produced by the use of motorcar but with the permanent evaluation of the cost / efficiency ratio of the planned measures.
- The research for innovative services of mobility

*Other principles:*

- ❖ The rational and effective use of infrastructures thanks to the telematic services (before and during the trip)

- ❖ Particular attention on the relation between the use of individual car and the city by the necessary balance of usage between individual transport and public transport
- ❖ The mastering of the mobility: by the organization and not the constraint, like the travel plan of the employees of the Renault Technocentre
- ❖ Not give in to the intuition or to the songs of "sirens": two examples the e-working and the delivery of the shopping at home thanks to internet:
  - For instance, following a survey by MIT (Massachusetts Institute of Technology) in the area of Boston, e-working produces more vehicle kms because when you are an e-worker, you do not go to the office everyday but therefore you can live a long way from the office and in the end, at the end of the week, you have driven more kms than the people going to the office everyday.
  - Likewise, according to a study carried out with the City of Paris and the Chamber of Trade and Industry of Paris, home deliveries through internet entail a very inefficient process because a lot of vehicles deliver small parcels, which increases the traffic. Besides, people using this kind of services do not spend their free time at home but on the contrary drive somewhere else.
- ❖ To implement this policy the company has experts' network belonging to the various departments which contribute to the debate with citizen and in the realization of projects, both in the company and outside. This network is animated by the Transports et Mobility Committee chaired by the Executive Vice President in charge of the Strategy, Product planning and International Operations

*These principles are declined*

- **at national level,**
  - Renault contributes to two initiatives of car sharing services, the first one in Paris ( Caisse Commune) and the other in Strasbourg (Auto' trement).
  - Renault participates in the SARRAZIN project (Car Service in Rural Region of Accompanying On Name Registration) in partnership with Kéolis, a big French public transport operator in the region of Abbeville, north of France. It aims at guaranteeing 100 % of satisfaction in any demand of trip in low density rural area by mixing of transport on demand, car sharing and Van pooling.
- **at European level,**
  - A study of an Intranet server of car sharing for the professional trips inter-sites was realized in Spain. The experimental application took place in 2003 between the Renault sites of Madrid, Valladolid and Palencia. The experiment showing itself positive it is planned to widen this service to the other connections both in Spain and in France.
  - The FREDERIC project (FREight DELivery Rationalization In Cities) in the dynamics of the association of European capitals IMPACTS, aims at moving closer to manufacturers and to local governments around the subject of the mobility of the goods and services in the city, to define the best terms of service of vehicles necessary for the commercial activities and services in built-up areas.

- ***at international level***

- The " SMP 2030 " project within the framework of the WBCSD whose objective is to develop a vision of the sustainable mobility taking into account various imperatives and proposing acceptable and affordable solutions.

- The President of Renault, Louis Schweitzer, participated during the summit of the Earth in Johannesburg (in October, 2002) at the presentation of the project and at the meeting with the engaging parties organized in this occasion.

- ***and inside the company***

- The rational and effective use of infrastructures thanks to the telematic services (before and during the trip)

The first example is to use a telematic navigation system integrating traffic information service. It is available as basic equipment or as option in all Renault cars. This is based on traffic information usually gathered by public authorities. With these real-time information, the driver is able to see, while driving, where problems occurs and consequently choose another itinerary.

Another example is an Intranet server inside the company implemented for car-pooling for the Renault employees.

- The mastery of the mobility: by the organization and not the constraint, like the travel plan of the employees of the Renault Technocentre

*The Travel Plan for Renault Technocenter employees*

It employs 12 000 staff. It is a site of 150 hectares (375 acres), 350,000 m<sup>2</sup> of offices, laboratories and workshops(418 000 sq yd).

The internal site is completely car-free, there is a system of shuttles.

Since the decision to create this center, the priority was given to public transport. With the local and regional authorities, they created 13 public transport lines. At the first stage, these lines were financed by Renault and would only address Renault employees. But they succeeded in changing the statutes of these lines which have become, since, public transport.

They also built two bus stations insite the site.

Peope however own a car which they leave at the car park and chose to use public transport because it offers high quality services.

Besides, 10% of staff car-share on regular basis and 14.5% occasionally.

Right now, Renault is building an administrative center and they are applying the same process.

*Conclusions*

- To move on towards sustainability it is necessary to know how to observe, how measure the progress and enlighten the road ahead, because sustainability is a dynamic situation.
- It is necessary to organize something like a Mobility Observatory and to have a tool like a multi-criteria presentation of the current situation for the various examples of mobility.

He showed a diagram representing indicators comparing urban individual mobility by car and urban mobility by public transportation

He provided the Renault web site address regarding sustainable development:

<http://www.developpement-durable.renault.fr>

### ***Using ITS to get in and through downtown***

**Ross BLAKELY**, Acting Street Transportation Director, City of Phoenix

**Ross BLAKELEY** presented Phoenix Downtown Traffic Management System (DTMS) incorporating some fairly highly technology elements.

### *The City of Phoenix*

Phoenix has a population of 1.4 million inhabitants, is about 515 square miles, is the 5th largest city with Philadelphia and experiences a tremendous growth rate. The real central city is about 2 square miles in which can be found the Civic Center, the Bank One Ballpark and America West Arena. It's got a very good highway access.

### *Why a Downtown Traffic Management System?*

The thing that started them to think of a Traffic Management System was the announcement of a Major League Baseball in 1996.

Currently, the philosophy and operation of the system is to get people into and out of the games quickly as possible. With all the developments happening, this philosophy will change a bit: the people trying to develop the downtown core want people to stick around before or after the games

- Major event facilities:
  - Bank One Ballpark
  - America West Arena
  - Civic Center: it is undergoing major changes aiming at doubling its size. So the traffic is going to be more intense than it currently is.
- Cultural venues: there are three major performance theater
- Events generate significant circulation & parking demand
- Traffic & enforcement staff will benefit from enhanced technical tools

### *What are the goals of the DTMS?*

- Facilitate parking and traffic by equipping police and TMC with ITS tools.
- Expand event management partnership with police, traffic and stadium/center management

Among Downtown Phoenix Major Facilities are the Bank One Ballpark, which has a 53,000 Seating Capacity, the Civic Center which is 375,000 sq ft. (undergoing expansion to 900,000) and the America West Arena with a 19,023 Seating Capacity.

### *Event Traffic Management & Enforcement Needs*

- Enhance event ingress & egress
- Enhance event security

- Enhance interagency coordination

He showed Event Ingress Patterns for the Stadium as it used to be, with available parking garages. The slide showed the traffic flows basically going into the parking lots. Then, a lot of police officers were needed to control the traffic.

With the new system, the same patterns have changed. Not so many officers are needed at intersections.

### *Design & Implementation Process*

Implementing this system took 5 years even though it is not a heavy construction project. The Early planning was carried out from 1999 to 2000. The Design Concept Report was completed in August 2001 and the Construction & System Acceptance were completed in November 2004.

### *What ITS Tools are elements of the DTMS?*

- Surveillance
  - CCTV ( Closed Circuit TV cameras)
- Traveler Information
  - Dynamic Message Signs DMS (Arterial)
- Traffic Management
  - Blank Out Signs
  - Traffic Signals
  - Video Walls
  - Integrated Central Control Software

Regarding surveillance, a big part of the system allows to see not only for crowd control but also for security linkage. 3 more cameras were added.

The traveller information has been favoured through Dynamic Message Signs (DMS): there are 2 arterial DMS, a shared control for police & traffic management staff and ongoing test with freeway DMS coordination.

There were some Management Center enhancements: there are big video walls at police and Traffic Management Centers. Integrated Control & Monitoring Software (with remote capability) has been developed.

Right now, all the systems are hooked up either by fiber optic (City owned or privately owned), by City owned copper wire and leased telephone. Obviously, they are heading towards wireless connections.

### *What's next?*

They are in the process of :

- Working on the Operational plan
- Contracting maintenance for most field devices (after warranty period)
- Adjusting some scenarios & adding additional signs
- Tying in to parking garage & signal systems for traffic & parking data
- Coordinating with Light Rail construction & operations
- Evaluating the system once ASU Downtown campus opens

**Wayne TANDA** introduced Jack WHALEY, who is Director of Houston Transtar. Transtar is a very unique arrangement in the United States on how to deal with their ITS systems as it spans several jurisdictions.

### ***The Houston Transtar System***

**Jack WHALEY**, Director, Houston Transtar and Deputy Director, Houston Department of Transportation

### **TRANSTAR**

**Jack WHALEY** precised that TRANSTAR is a regional operating organisation and back in the early 90s, the 4 major government agencies in the region signed a new local agreement that said they would share resources, cooperate together so that they could do more than any other individual agency could do on their own.

They are not an authority, they are a transportation cooperative. This means that each of those agencies keep their own jurisdictional responsibilities but they are working through a common structure.

A good example is how they operate the Greater Houston Transportation and Emergency Management Center: it is a state-owned property maintained by the County, designed by the Transit Authority and the operating budget is held by the City.

They are trying to bring out what each agency does the best and bring it into the center so that the other people can benefit from that.

At the top of the chain are the persons that are appointed by their elected officials. The City person would be appointed by his mayor.

The agreement gave to these people a great latitude in what they can do, without having to go back to their elected officials so much so that it made their lawyers a bit nervous!

He presented himself rather as a facilitator than a director: if there is a conflict that cannot be resolved at one level, it is up to him to kick it up to the next level.

An organisation like that has got to have a mission: the same resources used by the transportation managers can be used by the emergency transportation managers as well.

Emergency management covers hurricanes, tornadoes, terrorist attacks...

When you got the technologies inherent with the new transportation world (surveillance, etc.), all that is very useful not only to the transportation managers but also to the emergency managers.

### ***Strong advocate***

They could not have started a new organisation like this without someone at a high level who is the existing Mayor of Houston at that time who brought these agencies together. It was a forced marriage of organisations that were not used to cooperate very well.

He had been at a state level, he was on the board of Transit Authority and now elected as Mayor, he brought enough knowledge of all these agencies together.

By the end of his 6 year-term, these agencies were so dependent of each other and were getting such a great benefit that they just carried on in a natural way.

### ***An inventory of the resources***

It was then necessary to take an inventory of the resources of each partner. Then responsibilities could be assigned among the different agencies.

As it is not an authority, there is a shared commonality that can be used.

For instance, regarding surveillance, there is one agency who has 357 cameras, another agency coming in with another 80 cameras and another with none... The transit authority as they are expanding their rail system would have cameras at all their stations. So this is going to develop into 600 camera installations.

ATM stands for Asynchronous Transfer Mode network. It is an example of where pulling the different resources together gives better result than the one each agency would have on their own. The results is a system that covers 70 00 square miles.

The system was set up the same way the organisation works.

### *Freeway Transportation Management:*

#### *Traffic surveillance*

Other resources that the county does not have like helicopters, the city has. The transit authority has transmission equipment. Bringing back both together were getting videos from helicopters back into the center.

#### *Dynamic message signs*

Lots of them are on the freeways but now they are using that system on the surface streets with the county project.

#### *Speed Surveillance*

They are using the technologies (Automatic Vehicle Identification System) that the toll roads have and put it on the freeways. That way speed can be monitored. The city and the county are becoming involved in that technology.

#### *Incident Management*

A slide showed a city policeman, a transit policeman, people from the city fire department all working together for one incident involving 7 different jurisdictions.

The problem they have is the great volume on the interstate system.

#### *Police dispatch*

There are several police agencies in the center.

#### *Special Event Management*

Large events such as the Superball or rodeos attract 1.5 million people. So the traffic generated has to be carefully managed.

The center started out with 10 consoles at first and they are 30.

The center also manages

- flood rescue,
- explosions: 50% of all the fuel in the US is created in Houston, 85% of petrol products in the US are made in Houston. So when explosions occur, transportation managers and emergency managers work together.

- collapses

They are feeding 6 TV stations.

### ***The European Experience***

**Fredy WITTWER**, Director of Mobility, Canton of Geneva

**Fredy WITTWER** remarked that he was very pleased to hear the Mayor of Seattle expressing the need for cities to meet the Kyoto requirements.

As regards the State (Canton) of Geneva, the Parliament (Grand Conseil in French) has adopted several measures regarding Agenda 21:

- Art 1, aims at integrating all authorities in Geneva and the region to take measures which are compatible with the planet and the needs for the future generations.
- Art.2 takes up the 3 pillars of sustainable development: social, economic and ecological aspects.

They created a specific commission on Agenda 21 whose role is monitoring.

They created a public service inside the government on sustainable development, whose goals are to make interregional cooperation and to collaborate with NGOs and citizens.

For instance, each year, this service organizes an exhibition on sustainable development where all NGOs are invited to show their actions in the field of sustainable development.

### ***The Mobility Plan***

They decided to implement an insurance quality standard for the mobility plan which includes the following steps: Planning, Action, Evaluation and Improvement

#### ***The Guiding Principles of the Mobility plan***

##### ***- Equity Access***

Transportation equity is an essential point of the policy. The mission of a public service is to favor the part of the population who does not own a private car (elderly, disabled, young people, the poor, etc). For Geneva, public transportation is not only a word. Therefore, they try hard to find suitable solutions to finance public transportation.

##### ***- Prospective versus Corrective Planning***

When looking at many transportation projects, it can be found out that often they are a response to a given situation, "corrective planning". For instance, when building a tunnel to deal with traffic congestion. Whereas prospective solutions are better to implement in a long term perspective of sustainable development.

#### ***Secondary Objectives***

##### ***- Political***

Many projects only deal with political objectives such as better quality of life, better air quality. But mobility plans require technical objectives with precise indicators with concrete figures and standards (the number of parking places for employees, etc.)\*

- a *good evaluation* is also necessary and requires the monitoring of data. To manage that, you need to know the current data and their evolution.

- Finally, you can make *an action plan*

In Geneva, they decided that the Mobility Master Plan and all the projects inside this plan should be certified "Agenda 21".

#### *What is a certified project?*

- *the Feasibility* should be determined through knowing precisely who is the Institutional Responsible for the project, what is the legal and financial feasibility, what is the time table and is the project complementary with other projects?

- *an impact assessment* has to be carried out regarding the technical, environmental, social and economic aspects of the project. In Switzerland, an impacts study does not only measure the impacts, it also put forward proposals for *Improvement Measures*.

- In conclusion, a project will be all the more positive if a multi-criteria analysis has been carried out based on political, social, economic and technical impacts.

When finally, the project is being carried out, measures have to be taken in order to reduce construction impacts and via the Observatory, measures and indicators have to be defined to determine the impacts of the project.

The evaluation phase is the assessment of the trends of indicators relative to the objectives, which leads to decisions for improvement.

#### *Facilitating the private initiatives*

They also have a Corporate Mobility Plan. In Geneva, a lot of international institutions (UN) as well as a lot of world companies are represented. The State has entered an agreement with each organisation regarding the Mobility Plan so that the companies take sustainable mobility measures in their own organisation.

Sometimes, private initiatives are very effective. Some of them concerned security actions such as the Noctabus service (night bus network) and the Pedibus intended for school children (200 itineraries).

Car sharing is another initiative.

He precised that these initiatives are funded by the State of Geneva.

#### *ITS tools*

ITS are tools to improve operation and monitor the impacts. In Switzerland, they use GPS to monitor the payment of truck taxes and to deal with safety (GPS linked with Airbag & Mobile Phone). They use a lot of digital cameras at urban tolls, for speed enforcement, as virtual detectors and accident detection.

Automatic signalization is another tool used on the freeway in case of accidents to redirect the traffic. The Radio and the internet are used for parking and mobility information.

**2:30 - 4:00 PM**

**ROUNDTABLE DISCUSSIONS**

**Local Capacity to Implement and Manage Sustainable Mobility Performance Measures for Urban Mobility**

**Moderator: Andrea d'AMATO, IMPACTS Advisor, former Chief of Environmental services, & Commissioner of Transportation, Boston**

**Andrea d'AMATO** explained that the topic of the discussion is local capacity. She remarked that, what they do as professionals, is really a data intensive profession. The measurements depend on the data and the problem is that data are sometimes unreliable. They have to depend on other agencies, regions and partners to try to get information that is outside their own arena. With the growing complexity of the world, cities need other types of data.

Besides, cities need to be more and more resourceful in the way they manage their financial operations so they need a better grasp of financial data. Cities need to respond more to a lot of other issues, that are the result of growing congestion. Only recently, there has been a growing trend to assess the impacts on health. And these data are not often accessible to transportation managers.

She learned from experience that transportation managers are accountable to the public.

So there is an expectation that cities need to have the data, to be able to understand it, articulate it, synthesize it and be able to communicate it back. And yet local capacity is often challenged by other crisis of the day like the lack of staff.

European Perspective:

**Patrick LEFEBVRE**, General Engineer, Head Displacement Department, Paris Transportation & Traffic Directorate

*POLIS Working group on environment and health*

**Patrick LEFEBVRE** explained that he will complete the presentation made by Laurence DOUVIN with the outcome of a POLIS working group on environment and health. The contributions came from European cities: Glasgow, Aberdeen, Toulouse, Roma, Aalborg, Dublin and Rotterdam. The aim was to hierarchise the different cities' initiatives in the field of sustainability development.

They approached the issue using three main criteria:

- the improvement of mobility and accessibility – including public acceptance-
- the improvement of urban life quality at environmental, safety and healthiness levels
- the maintaining of economic activity in cities.

*The improvement of mobility and accessibility*

In that prospect, Urban Mobility Plans are key points of local policies. Most of them present common points regarding the decrease of private car hegemony in cities, the development of public transportation, the development of soft modes, for some of them the development of the road network, the densification of public transportation network and for most of them, the development of parking charges as a tool for mobility.

The use of clean vehicles in public transport is another favourable element.

Other actions have been classified as less satisfying as regards mobility: the 30 km/h zones, the measures aiming at improving air quality which can be considered as a restraint, clean fuels.

*The improvement of urban life quality*

Clean vehicles were unanimously considered as a good way to improve urban life quality. The second criteria concerned access control with, for instance, road pricing systems like the London congestion charging scheme, 30 km/h zones, car pooling, bus reserved lines, the use of ITS, promoting soft modes and at last, air quality actions.

He remarked that for instance the development of Powered Two Wheelers (PTW) was not considered as improving the quality of life: they are noisy and disturbant.

#### *The maintaining of economic activity in cities.*

One of the top measures is the parking policy of the municipalities. Barcelona is a good example. But it is only valuable with an effective enforcement.

Company Mobility plans are also favourable elements.

Freight distribution policies are essential to promote economic activity in cities.

#### *Concerning urban pricing*

He reminded that in London, the objective was to curb congestion (by 30%) in Stockholm, it was more to finance infrastructures and in Amsterdam, the policy is quite the same. The City of Paris did not turn towards that kind of policy for social reasons. However, this could later adress some transport categories (HIV, etc.).

#### *Financing*

The presentations have demonstrated that public/private partnerships can be used successfully to finance infrastructures but sometimes, great difficulties can occur.

Negotiations and discussions between the different stakeholders can take a long time, which may entail a rethinking of the project.

In France, the public/private partnership is not very developed. It is rather a system of delegation by public authorities in which public contracting authorities appoint a private operator to build and maintain a project. In France, this kind of partnership can be found for the building of prisons and hospitals but it tends to develop in Europe in particular for sewage treatment plants.

#### *Paris Mobility plan*

In Paris, the policy has been assessed: the objectives of the Paris Urban Mobility Plan were to decrease trafic by 15%. Today, after 4 years, the effective decrease amounts to 11%, which is quite a good result. There is a 6% increase of public transport trips. The speed level is stable. There has been a 26% drop in injuries. And there has been a 33% increase of bicycle use.

So the measures that have been efficient such as the Mobilien lines, the new Streetcar, the environmently-developed areas will be emphasized and developed. Further actions will be carried out such as the redevelopment of Paris' "Portes" (entrance points) together with the neighboring suburbs.

Along the river Seine, there is a highway transformed into pedestrian zone during Summer, this should be extended to the whole year through.

There are also access regulation measures implemented like low emission zones. This should be developed and extended to more vehicles (4\*4, coaches,...).

#### *Data*

The difficulty is to measure and compare all the figures related to mobility. A Mobility Observatory has been created to measure and assess data. It would be interesting to compare all the models that have been tackled during the conference.

It is a fact that detailed studies can be precisely carried out in small district areas but as soon as the area is wider, it becomes difficult to work on these models. Research could help a great deal to solve these dilemmas.

Latin America Perspective:

**Patricia RUIZ**, Quito City

**Patricia RUIZ** pinpointed that the issue of transport changes perspective according to whom deals with it and how they deal with it. In the political context, it should be considered as a service and consequently, should be dealt with in a possible technical, economical and financial prospect towards the community and its requests. Transport is a right of the community. Local government representatives ought to provide the best possible services with high quality standards. Today, urban areas require a permanent attention from the local governments. The result should be a sustainable policy for business, tourism and productivity, which is tightly linked to political matters. The urban question should be tackled in a middle and long term perspective.

These daily battles cities are fighting with regard to transport issues entail a modification of the community statu quo. Though cities care for permanent improvements, there is always a moment of chaos, of great upheaval when it is essential to stick to a determined strategy in order to avoid disruptions as much as possible. For that purpose, there are numerous new engineering options but they are not sufficient. Because it is always possible to come up with a deregulation more important than expected. And the cure can be in this case more harmful than the disease itself.

Often, certain groups of the community feel their rights are being baffled – for instance, transport corporations in the labour legislation- some other feel their quality of life is threatened (the inhabitants that live near large building sites). And there are always those that are in the political arena and are impatient to cast doubt on the engaged policy so that they are able to come to power. This approach is essential for Latin American cities because it is really a political issue.

Considering all these points, one needs to understand that the different costs of the cities' projects should be balanced, discussed, and applied according to each city's own reality. Not only economic costs are concerned but also costs related to environment.

North American Perspective:

**Miguel, d'ESCOTO**, City of Chicago

**Mark HOLLENBECK**, director, Washington State Transportation Center

**Mark HOLLENBECK** works for Washington state. He was the day before in Japan to speak about sustainable development, which seems to be a subject of world wide concern!

He remarked that often, cities do not try to measure what they are actually trying to accomplish, in particular in Seattle. So he advised cities to start committing to what they are trying to achieve.

He referred to a speaker that said that" what gets measured, gets managed".

If cities are not measuring what they are operating and building, then how can they manage what they have built? How can they defend the huge expenditures?

As a person who gathers data, he asked the cities to let the systems store, save and analyse the data. The hard part is to summarize so that it can be presented.

When you have the information, people agree. So cities should give a little to gain trust to make the very complex deals described during the conference.

Simplifying a very complex system into what makes it really important is also a hard task to be carried out by cities.

In the end, these complex systems have many levels: mobility, political acceptability, financing. The Monorail is a perfect example of financing versus technical capability, versus political acceptability. Each level has to be measured. But in the end, it should be summarized so that the engineers that know the details can tell their manager what the manager needs to know. The manager then can summarize to the Mayor or the Governor what they need to know.

The same way, the City has to talk to the Region that has to talk to the State or Province that has to talk to the Nation.

When you can defend what you do, based on the data you have collected, then you can have a sustainable development. In the US, the difficulty is that cities are not built like private companies. They do not collect the data that allow them to manage what they do.

The most successful companies know exactly what their people do. Their data is part of their job. Cities need to do the same things.

So he concluded that only if cities can make rational and acceptable trade off of why they are making these decisions, they will be able to succeed in their projects.

8:30 - 9:00 AM

**CONFERENCE SUMMARY: Sustainable Mobility  
Commonalities in Experience, Policy & Practice.**

**Miguel D'ESCOTO** made a first summary of the discussions.

First, he explained that there has been a lot of discussions about **data**, whether it be on traffic congestion or safety issues, on modality splits. But data is not always easily available, because no standards measurements are done before the projects are started. And furthermore, data is not always reliable. It is not necessarily standardized from a country to another. The number one priority for transportation is safety and data for safety is not kept by the transportation people. In Chicago, safety data is kept by the police (accidents, fatalities...).

Yet, data is vital to determine the type of actions to be undertaken. Data is sometimes used to persuade the public on what transportation people are doing. It can also be used to secure the funding. The debate also came across a public distrust of data, in the congestion pricing issue in London, and in Stockholm. So the data should be accurate and provable.

Secondly, **Implementation** was another theme that came back during the conference. Implementation depends on political reality involving jurisdictions. For instance, in Stockholm the Mayor had to reverse a promise that he made, in order to get the appropriate votes. Public support is very important or at least no public rebellion.

Some of the cities are dealing with new laws to implement technological advancements. Either they take existing laws and modify them to account for the new technology.

**Funding** is also at the core of the matter: there is a growing need to find alternative ways to fund the projects. In Chicago, he saw three different ways to finance a project: one was a discussion with the developer, a very rational presentation from the Public Transit Agency and the developer was convinced to provide 40 million dollars to help build the station. The other one concerned the railroads, threat was used and then the third way is you sell something, it was the case of the Skyway. You have a piece of infrastructure that can be sold for somebody for at least a hundred years, then you sell it and turn it over to a private entity. This is similar to cities when you consider public/private partnership.

**Laurence DOUVIN** expressed her deepest gratitude to Seattle, the hosting City and to Grace CRUNICAN and Patricia GILLESPIE who allowed IMPACTS members and friends to work in such favorable conditions.

She thanked them for a wonderful reception and for very interesting technical visits, that gave reality to the projects introduced by Grace CRUNICAN, the viaduct, the monorail and the lightrail for example. She added that she was very impressed by the Mayor who is for sure a transportation man! Besides, his declaration on the Kyoto protocol showed a great sense of awareness.

She appreciated all presentations from the three continents - it was the first time that IMPACTS three entities could express their points of view - and from the industrial partners because they answered a part of the problems cities have in common. Before the conference, she had feared that sustainable mobility would not have the same meaning for

everyone but she found out that she was wrong. Even though financial resources are different, even if the population does not grow the same way, each city is getting aware that mobility issues have to be considered under their global aspects in the perspective of tomorrow challenges.

The European cities brought their experiences: Paris with its new policy based upon a restricted surface for the cars and an enhanced public transportation, London with the congestion charging scheme, Stockholm with its future experiment of a cordon paying scheme and Barcelona with its new parking policy. Geneva added a very good presentation on ITS in Europe and Göteborg moderated sessions with its usual talent.

Patrick LEFEBVRE had explained the three priority objectives most European Cities have: better the mobility, better the quality of life, the environment and the safety and maintain economic activities. He also explained the action plan:

- develop a mobility plan aiming to reduce the number of cars, encouraging public transportation, soft modes and clean vehicles
- improve the quality of life of citizens by taking care of parking problems and introducing limited access zones in different ways
- taking into deeper consideration freight activities with an efficient delivery system and a controlled parking paying on street surface with an efficient enforcement.

She retained for the American part, the definition of sustainability by Wayne TANDA from Los Angeles:

- meeting public expectation for mobility and
- meeting society's expectations for environment and the economy

Laurence Douvin also wanted to pick up the conclusion of the 1<sup>st</sup> roundtable lead by Andrea d'AMATO insisting on the necessity to deal with green building technology and urban planning. She noted that it is the first time in an IMPACTS conference that the links between transportation problems are so familiar with environment and planning.

She was also impressed by the big projects developed by American cities like Baltimore, Boston, Chicago, New-York and of course the different ways to finance them.

Also, the presentations from IMPACTS America Latina showed they are quite aware of the problems they have to face. The booming in their population and how they have to hurry to find new solutions in terms of efficiency and combination for instance between local and national governments.

She invited the participants to have a look at the charter that has been elaborated by the ITS France association that is going to be distributed to the participants. She read the preamble and the articles that could be transmitted by participants to their city to see if they agree on such a charter, which could be a good starting point for IMPACTS future activities.

*“The organisation and the management of transport systems have an impact on living conditions and environment and play a great role in public and private economy. Therefore, they are key elements of the development whose sustainability should now, in line with the international agreements, be an essential quality.*

*Indeed, it is now widely known that the notion of sustainability, which is inseparable from the idea of development, must be a driving force and not a restraint.*

*There are three main elements that ensure the success of a transport project: the economic, social and environmental development, the latter aiming not only at protecting the environment but at improving it. Without these three components of development, sustainability has no meaning.”*

She then took the opportunity to thank IMPACTS former presidents: Andrea D'AMATO and Miguel D'ESCOTO for their great job and cooperation with IMPACTS. She also saluted Grace CRUNICAN for her positive attitude towards IMPACTS and SMARTCITI initiative.

**Miguel D'ESCOTO** thanked Laurence DOUVIN for her leadership for 10 years and for being a true visionary about the relationship and interdependency of transportation, environment and economic growth and how they lead to quality of life issues in the cities

**Patricia RUIZ** thanked the city of Seattle for their warm welcome. She expressed her gratefulness to have been able to participate in the discussions. She said that Seattle was a beautiful city with beautiful inhabitants.

She listed all the objectives that IMPACTS America Latina intends to reach during the year 2005 under the Secretariat General of Quito.

First, it is necessary to strengthen the network with the 16 current member cities and with those who are not yet members but whose expectations are known. This will be done during the next Executive Management Board meeting in the next months and through a meeting in Buenos Aires that will take place at the end of 2005 or at the beginning of 2006.

Particular strategic points should be furthermore added in the statutes:

- the duration of the president and secretary's mandate (according to her, both should be located in the same city in order to maximise efficiency)

- the financing of the network

- strategic alliances should be pinpointed (private sector, education, health,...).

Sustainable mobility should be tackled in local government in a transversal way.

Sustainable Mobility should be a « transversalized » subject that requires the involvement of political decision-makers like it is the case in Seattle, London and Mexico.

It is essential to integrate real strategies with a notion of citizenship and to improve communication and information with regard to technical solutions that will be implemented.

Patricia RUIZ mentioned the internet portal of IMPACTS America Latina and provided its address:

<http://www.impactsamericalatina.org>

An information note on this portal was distributed to all the participants.

She announced that IMPACTS America Latina is currently studying the possibility to create an Observatory. This will take time.

She remarked that the conference has a great value for South American cities that are trying to consolidate their actions, find intelligent solutions and apply them as they have been applied in European and North American cities.

She hoped that South American cities will have new results to present during next IMPACTS Conferences.

**9:00 - 12:00 PM**

**IMPACTS “SMARTCITI” INITIATIVE - Experience  
Sharing to support Sustainable Urban Mobility  
Policies**

Moderators:

**Ilan JURAN**, Secretary General, IMPACTS North America

**Jean-Louis GRAINDORGE**, Secretary General, IMPACTS Europe

European Co-Chair:

**Gönnar SÖDERHOLM**, Head of Secretariat for Congestion Charges, City of Stockholm

North American Co-Chair:

**Grace CRUNICAN**, Director, Seattle Department of Transportation

Latin American Co-Chair:

**Patricia RUIZ**, President, Transportation Commission of Quito

**Ilan JURAN** told that he would like to think about IMPACTS next steps, to identify what kind of information the cities need to share, how they can share it on a continuous basis and also how discussions can be extended to other stakeholders and strategic partners. For this purpose, the morning session will focus on SMARTCITI.

**Laurence DOUVIN** tried to answer two questions: why SMARTCITI and what are SMARTCITI's objectives?

- Why SMARTCITI?

Sustainable mobility is a growing part of sustainable development and is now a permanent issue in the three continents.

Sustainable mobility is not only transportation, it also includes environment, landuse planning and construction, preservation of energy resources. Each city in the world is more and more aware and affected by air pollution and greenhouse effects. Therefore, the SMARTCITI initiative extending the discussion on sustainable mobility will benefit from bringing together other strategic partners from industry and services involved in energy, environment and economic development.

Recently, IMPACTS Europe has worked with the automotive industry and logistic companies on freight deliveries on a European project called FREDERIC; this cooperation was beneficial to all stakeholders. Barcelona, London and Paris who were part of the project can testify it. She believed that such a co-operation should be pursued through SMARTCITI.

- What are SMARTCITI's objectives?
  - to extend and deepen the dialogue between cities.
  - to develop and implement information sharing responding to the enquiries and the needs of the cities.
  - to explore strategic partnership and cooperation

IMPACTS provides the opportunity to rise issues and to identify initiatives and interests and the need is felt to go beyond this, to cross-fertilize and permanently capitalize the information from the cities and from other stakeholders in a very concrete way that can be useful to each of them. Further partnerships could be facilitated for further initiatives.

There are many international organisations working on that issue. IMPACTS is a small group of large cities trusting one another and sharing experiences, which makes the difference.

She explained that the objective of the session is to agree on the purpose and method of such an initiative.

**Ilan JURAN** reminded the focus points for the morning session:

- Identifying specific initiatives for experience sharing
- Defining the value added information and information sharing process
- Sharing perspectives on best practice assessment of local sustainable mobility initiatives in a way that would be understandable in the different institutional contexts represented by all the cities.
- Exploring strategic partnerships and co-operations for institutions, public/private sectors that are involved in sustainable mobility development.

**Grace CRUNICAN** pointed out that Laurence DOUVIN through her 10 years' experience with IMPACTS has lead the way to the SMARTCITI initiative and this is a challenge that can be met by the cities. She would like to present what they are doing in Seattle in terms of pilot projects.

She insisted on the fact the Mayor of Seattle has initiated an environmental action agenda for the city of which transportation is merely one part. He is attempting to initiate the greenhouse gas emission task force called the Green Ribbon Task Force whose aim is to help the cities meet the Kyoto accords. In this taskforce, the Mayor has some representatives from business, such as Starbucks and Microsoft, from the environmental community in Seattle, community leaders such as William Ruckelshaus who is a former EPA (Environmental Protection Administrator at the national level), from the health community.

They began to take an inventory of what they have in order to find some standard measures of emissions and of impacts.

She added that there were some limitations: Seattle is only 38% of the population of the Metropolitan Region, they have better relations with Chicago than they have with their neighbors across the water. It is difficult to figure out what is in the city and what's in the neighboring towns for instance regarding electricity. Traffic is a regional problem and they are looking for measures on recycling waste. The airport is not located in the city property. Yet, it is a source they need to be mindful of and figure out how to capture. The problem is how to reduce emissions when the economy is blossoming.

"Seapac" is an air quality technical committee who did an inventory of the city's corporate emissions, what comes from whom? Who is responsible? What tools should be used?

They then looked at the emissions, made some comparisons with their neighbors to the South, Portland who got great press as to how they are reducing their emissions and who could be taken as an example.

If they were to reduce emissions, what would it take? They would have to reduce their consumption of gasoline by 2/3, take ¾ of the cars off the Seattle city streets!

The Mayor has asked people who run major positions in corporations to engage in this targets. They have a list of 150 small actions that can be taken, many of the items being in transportation field. Some of the goals are meant to approach individuals, some of them are meant to approach companies, others are meant to approach government. The Mayor thinks that if you show the leadership, people will follow. Likewise, she said that Laurence DOUVIN has shown the leadership and encouraged people to get together.

**Miguel D'Escoto** explained that in Chicago the Mayor is very environmentally oriented. They went through several models through the last three years and found out for instance that 13 mature trees would move the pollution for one car for one year. They are also starting to

quantify and to measure energy conservation, water conservation as standard data they can refer to. So they have some data to share and exchange.

**Ilan JURAN** thanked them for relevant examples of data that could be shared. The question is how to work together to bring out the benefits of such experiences. He asked each member city representative to express their opinion.

**Gönnar SODERHOLM** insisted on the fact that the City of Stockholm has tried to share all the information they got from the trial to put them on a website and to translate them in English. So, it is possible to follow the outcome of the trial month by month (number of cars in the city, travelling time, impacts on the retail businesses, etc).

He also pinpointed that next year, Stockholm is hoping to host the next IMPACTS conference that will be the opportunity for the participants to see how the trial works out and to exchange with Stockholm politicians and people from the National Swedish Road Authorities as well as with technicians.

He stressed the fact that one of the main problems is that most of European big cities are involved in cooperation with many organisations. Then, according to him, IMPACTS's strategy is to be unique, to find a place where you concentrate on a purpose you do not find in the other organisations.

To him, it is important not to overdo things. In Stockholm, the goal is good enough to get together and share the experiences as a network. He did not think it necessary to create further goals for cooperation. Stockholm is however ready to take into consideration further proposals but at the moment, they are not ready to take a decision regarding SMARTCITI without the other IMPACTS European members.

**Claude DARGENT** pointed out that IMPACTS conference create opportunities to put outcomes in common. But these conferences are limited and Paris thinks it would be interesting to set up a more permanent network which could be active between the different conferences. Indeed, cities have study departments, schools, laboratories that operate and produce results that could be exchanged in a more permanent way. Indeed, in the field of public transport public policy, experiences are carried out on a full-scale so it is important not to make mistakes. Therefore, the sharing of experiences between cities enables to gain time and money. This type of co-operation can be very fruitful.

**Patrick LEFEBVRE** reminded that Paris is implementing a transport plan that involves all stakeholders (users, environmental associations, etc.). This action has to be supported by evaluation indicators. One could imagine exchange on impacts models regarding pollution., in function of the penetration rate of the different modes of transport. So that it is possible to make comparisons between the different cities. Pollution is a good indicator to compare.

**Julio GARCIA RAMON** explained that from Barcelona's point of view, this initiative seems very interesting because in every city, experiences are carried out and it is quite difficult to extend them to other countries. The City of Barcelona participates in a lot of Spanish networks but they are not translated for international purposes. Besides, the essential point is to translate the indicators to be able to compare the same things. It is moreover the role of IMPACTS to favour this type of exchanges.

**Isabelle DEDRING** said that London would obviously support this kind of exchange because measuring things is essential. She mentioned however that there is a need to define what is meant by Sustainability in order to reach a common understanding. Indeed, when listening to the Charter quoted by Laurence DOUVIN, it almost sounds like the whole agenda of

Transport for London; but maybe the balance and the prioritization is shifting. To have a repository that gathers all the information regarding experiences implemented in a particular mobility field would be very useful.

In terms of common indicators, she underlined that it is not necessary to solve this problem because you can point people in the right direction and show them what the general impacts of such measures were in a number of cities. If more details are necessary, it is then possible to make contacts.

She explained that in London they have the reverse problem because they have too much data on these things because the Mayor is very interested in environmental issues and sustainability. So every single project in London has to be measured against financial considerations and transport impacts but also regarding noise, air quality, etc. But she wondered if she has to tell the business planning team to put every single piece of analysis on to the SMARCITI website. Obviously they do not want that so it would be useful to reflect on how to create specificity around which type of projects is needed.

She concluded by reminding that London would be very happy to contribute but the following questions have to be answered first: What is specifically meant by sustainability? Does it mean to give priority to certain projects?

She imagined that it would mean to have a list of projects with some high level impacts and she repeated that the more concreteness around the project, the better.

**Ilan JURAN** reminded that the exchange of information means to integrate intelligence as an input and has to be interactive so that you are not overflooded with information.

**Jorgen LINDER** observed that two different matters are concerned: one regarding the development of experience sharing, the other concerning the change in the way of working in IMPACTS. If it heads more towards environmental sustainability, Göteborg finds it a problem because the city is already involved in a lot of organisations dealing with that subject. So far, the experience of IMPACTS has been fruitful exchanging experiences on transportation between cities. If the orientation should be changed, it would have to be prepared by the Executive Management Board and presented during IMPACTS General Assembly to the other member cities that might be surprised by such a change. Furthermore, he stressed that he was rather doubtful concerning the participation of other members than cities in this organisation.

**Fredy WITWER** agreed with the city of Stockholm when they say there is a lot of different associations that already provide some data. So if SMARCITI wants to bring something new, it has to have a specificity compared to what already exists. Geneva is not only interested in the comparison of data first because they can be found elsewhere and secondly, because cities calculate data in different ways. According to him, it would be interesting to compare the targets, which is not done so far. For instance, Seattle main objective is to reduce the CO2 emissions by 18% while Geneva aims at reducing decibels down to 65 by 2012, which means to divide the traffic by 4! So it would be better to compare the objectives of each city and how every project contributes to meet the requirements. He said that Geneva managed like London to decrease congestion by 30% the last 10 years though they have no congestion charging system. So the objectives were the same one but the means to reach them were different.

Secondly, regarding sustainable mobility, training and cooperation with developing countries is very interesting because it is obviously better to train people than to finance them. Besides, each city in every country has to spend 0.4% of its budget to help developing countries. In Geneva, 0.4% represents about 30 million dollars. A service called International

Solidarity has been created in Geneva, which is in charge of spending these 30 million dollars. A part of this fund has been used by Fredy WTTWER to organise technical cooperation and university training between the city of Quito and the city of Geneva.

**Pierre SCHMITZ** made a first remark as a Belgian citizen: he observed that in Belgium, Kyoto protocole is much discussed but in a wrong approach: what is discussed between the three regions is the number of quotas to be purchased in the Kyoto gas stock exchange. Instead of taking practical measures to decrease emissions, the regions work on the assumption that they will not succeed in meeting the requirements.

Therefore, he said he is very much in favour of an exchange of good practices. Seattle is a good example to show to Belgian politicians.

Regarding indicators, he remarked that there are many networks dealing with the subject. And IMPACTS specificity is unique because it is a meeting place for both technicians and policy makers. He took the example of the Mayor of Roma who was reelected though he had implemented an access control zone for vehicles. When asked about his success, the Mayor said that the indicator they had used was the pride of the Roman citizens. Likewise, IMPACTS should not reflect on the CO2 gas emissions but should ask its city members which indicators they find interesting. This political perception constitutes IMPACTS uniqueness.

**Patricia RUIZ** totally agreed with the analysis of Geneva. She insisted on the fact that mayors should be explained projects in a clear and concise manner so that they are able to understand and involve themselves. It requests numerous discussions. Relationship with the private sector is part of this process. There is a need to work jointly to define a precise timetable which should involve new realities and similar objectives. She expressed her enthusiasm towards such an initiative and advised to pursue the goals that have been already defined.

**Jean-Louis GRAINDORGE** made a quick report of what had been said during this first session: the first conclusion is that there is a common agreement between cities to work thoroughly on sustainable mobility and environmental issues. Secondly, there is a problem of definition that varies from one continent to another. Therefore, a definition is needed.

Another concern is the position of the SMARTCITI initiative. He thought that SMARTCITI should be built in very close relation with IMPACTS but should be able to live by itself.

The third question is: will the actions concern research or information or both? He estimated that SMARTCITI rather targets first information flow. He therefore agreed with Isabelle DEDRING from London who said that information was too rich, too heterogeneous to be dealt with. To have an entity that gives homogeneity to information would be very interesting. As far as scientific activities are concerned, he insisted on the importance of political indicators which are often left aside in many programmes.

One theme that has not been yet explored is the setting up of a partnership and the implementation of this project which will be tackled during the 2<sup>nd</sup> session.

## 10:45 – 12:00AM “SMARTCITI” INITIATIVE – PLANNING & STRATEGIC PARTNERSHIPS

Moderators:

**Ilan JURAN**, Secretary General, IMPACTS North America

**Jean-Louis GRANDORGE**, Secretary General, IMPACTS Europe

European Co-Chair:

**Gönnar SÖDERHOLM**, Head of the Secretariat for Congestion Charges City of Stockholm

North American Co-Chair:

**Grace CRUNICAN**, Director, Seattle Department of Transportation

Latin American Co-Chair:

**Arturo CASTILLO CHIRINOS**, Mayor of the Provincial Government, Chiclayo, Peru

**Ilan JURAN** explained that in order to explore strategic partnerships within SMARTCITI, private partners have been invited to attend the conference: Daniel AUGELLO, Director of Transportation Policy Delegate from Renault who will provide a summary of a study carried out by the World Business Council for Sustainable Development, Lee SHIPPER was initially invited to talk about the EMBARK program funded by the Shell foundation but as he is busy in Mexico so Mario ZEPEDA will replace him.

**Daniel AUGELLO** presented an overview of the report “Mobility 2030”. He explained that the Sustainable Mobility Project of the World Business Council for Sustainable Development is one of the most comprehensive review of the state of the art of mobility across the globe and has identified some of the actions that are required to make mobility sustainable over the next 30 years. This SMP 2030 is in total harmony with the proposal of the SMARTCITI initiative: it goes into details in the various aspects of the sustainable mobility, details on indicators to assess, details on assessment of the situation, details on the operational goals and details on the process and organisation necessary to achieve the goals.

He remarked that the SMARTCITI initiative is not aiming at inventing new indicators or to make further research on indicators. A set of indicators has to be selected thanks to common definitions. He illustrated this fact by the example of the term “congestion” which leads to many definitions amongst the participants. In order to work together, an agreement on common definitions has to be reached. He insisted on the fact that objectives have to be considered in terms of target of data and not in terms of solutions.

The SMP 2030 project is a global collaboration involving 12 worldwide companies which cooperatively began the task of learning, dialogues and actions to meet the challenges required. The project involved 200 employees. The 8 automotive companies produced 70% of the work.

The project measures sustainability and provides indicators for measuring it, provides an assessment of the future mobility if the current trends continue and proposes 7 goals for achieving sustainable mobility. It also describes the potential contributions of vehicle technology and fuels.

He showed a list of indicators regarding Mobility users, Society as a whole and from Mobility providers. Besides, the indicators are precisely defined. The project also provided projected growth in personal transport activity and goods transport.

When factoring in all the indicators, it appears that today's system of mobility is not sustainable. Nor is it likely to become so if present trends continue.

7 goals have been defined:

1. Reduce conventional emissions from transport to levels where they do not constitute a significant public health concern anywhere in the world
2. Limit GHG emissions from transport to sustainable levels
3. Reduce the number of transport-related deaths and injuries worldwide
4. Reduce transport-related noise, which requires an integrated approach. It is not only the vehicle technology that can solve the problem nor the infrastructure. All the dimensions have to be integrated and need the cooperation of many stakeholders.
5. Mitigate traffic congestion
6. Narrow "mobility opportunity divides"
7. Preserve and enhance mobility opportunities available to the general population

He underlined that conventional emissions will decrease dramatically in the future and efforts have to be put on the GreenHouse Gas emissions.

The reality to manage this kind of problems such as the CO<sub>2</sub> is that single technologies pathways are likely to happen over the next 50 years. A most probable scenario is that this different technology lever get pulled in parallel, and to examine this, the project models a combined technology case with development of diesel in light duty vehicle, hybrid vehicle on light and medium duty vehicle, biofuel, fuel cell with fossile hydrogene, fuel cell with low CNG hydrogen, mix shifting by different measures like light weighing of the car, downsizing of the car and efficiency improvements with ITS solution.

The conclusions of SMP 2030 is that mobility can be made sustainable but there is no single magic technological solution. A portfolio of solutions is required. It will take longer than 3 decades and will require coordinated efforts starting right now by all actors of the society: government, business, cities, public working together in working group structure. Moreover, he insisted on the fact that as a representative of industry, that industry is ready to work with cities. The problem of financing can be solved.

As a conclusion, he said that the key words should be: speak with data, imagine business model, try to define affordability, facts, figures, assessment and perspective.

## QUESTIONS

**Grace CRUNICAN** asked Daniel AUGELLO what were, in this project, the counterparts in the United States. She heard that from other representatives from Europe do not wish to pay some more dues to get this work accomplished.

**Daniel AUGELLO** answered that for private public partnership, General Motors and Ford were present in the project. There is also a correspondant organisation of WBCSD in United States. The weak point is the Latin America but this can be improved.

SMP 2030 has cost a lot of money and the various companies finance it. But working on small working group structure does not require so much money. In the near future, some priorities, some key issues will be defined with voluntary and expert people from the domain concerned. So it is not necessarily a big financing problem.

After listening to the proposals expressed by the cities, **Patricia RUIZ** thought it necessary that Quito participates in that project. She said that some cities are working a lot with big

budget and others like Quito are only in the process of defining their participation and aims within the municipalities.

The city of Quito is currently conducting this process of awareness. During the 4 years of Paco Moncayo's mandate, the city has reached its goals. In the 4 years to come, the situation will be different because the awareness of the population has increased and has become more demanding.

The reinforcement of the ecological movement in Quito is very important and obliges the municipality to find tools, like the SMARTCITI network to be informed about the most recent debates and to be able to express their point of view. The city has to fight battles against the State. It is necessary that the country frees itself from the fact that it is an oil producing country. Ecuador does not apply an adequate oil processing; it does not meet the minimum international standards. That is why it is essential to set economic tools for the management of the environment in the Kyoto perspective. There is also a need to properly interconnect internal city areas and make sustainability a transversal concept which goes beyond the issues of transport and vehicles.

The city of Quito is initiating a very important step with the signature for the building of a new airport. This means that the city will have new industrial zones, that should remain in adequation with the basic needs in term of infrastructure. IMPACTS can be useful in that prospect to help Quito implement what is necessary but also to support its demands. The private sector should be involved and made responsible at a political level as well as at an environmental level. Quito is therefore responsible for looking for new types of exchanges through networks like IMPACTS or SMARTCITI.

Thanks to meetings like this, cities will save time and money by removing doubts regarding technical issues and the definition of mobility and conceptual development. **Patricia RUIZ** totally agreed with Isabelle DEDRING from London as far as sustainable development is concerned. Latin America represents one of the biggest lung of the planet. Therefore, it is necessary that Latin America cities reflect on the consequences of sustainable development over production and on future world exchanges. SMARTCITI is a useful tool to connect these views with each other.

Future is shaped day by day. Each day, decisions are taken after being discussed. Networks enable to question policies and in that perspective, the conjunction between IMPACTS and SMARTCITI is essential. She expressed the need for Latin American cities to be part of the SMARTCITI initiative to be more free in their actions, at a lower cost and to be able to create strategic alliances. She officially invited the cities to get involved in an international cooperation with Latin America in the field of mobility and environment.

**Daniel AUGELLO** said that first for car companies, there is no direct link between what they can do together in the near future and specific business in Paraguay, Bolivia or Brazil. Of course, they are doing business, they are manufacturing car in Latin America but there is no direct link. It is a general interest to work with the countries where there are already factories, where they plan to develop factories... He explained that for instance, Renault which has two factories in Brazil is doing business but is also working with Rio de Janeiro University on the topics of mobility, innovation, on new transport means, etc. Other manufacturers are doing the same in various countries including China for some of the competitors.

They will be more efficient if they work closely together with on one side, the automotive industry and, on the other side, big cities around the world.

This will not cancel individual initiatives of course; on the contrary, it will reinforce within a global framework.

**Mario ZEPEDA** presented the EMBARQ project:

EMBARQ acts as a catalyst for socially, financially, and environmentally sound solutions to the problems of urban mobility in the developing world.

EMBARQ is a center within WRI (World Resources Institute), founded in May 2002 by WRI and the Shell Foundation with a 5 yr, US \$7.5 M grant by the Shell Foundation.

Additional *EMBARQ* sponsors include : Hewlett Foundation, Energy Foundation, Blue Moon Foundation, Asian Development Bank, Netherlands Ministry of Foreign Affairs, US Environmental Protection Agency, Ford Motor Company.

It consists of a core of world-class - in geography, environmental science, public finance, public policy, transportation, engineering, energy, and economics - experts bolstered by a network of firms, people, technology, and development banks around the world.

⇒ **EMBARQ Strategic approach**

**Mario ZEPEDA** focused on three main goals :

- Work with politically and financially empowered authorities
- Form strategic public-private partnerships
- In-depth engagement with cities to design and implement “best-practice” urban transport solutions

⇒ **Project locations and prospects**

The projects are located in :

- Mexico City, Mexico
- Querétaro, Mexico
- Porto Alegre, Brazil
- Shanghai, China
- Xi'an, China
- Pune, India
- Hanoi, Vietnam
- Istanbul, Turkey

Some prospects presented are located at :

- Leon de Guanajuato, Mexico
- Monterrey, Mexico
- Lima, Peru

⇒ **City on the move : Mexico City**

**Mario ZEPEDA** highlighted the projects developed in Mexico city :

- Creation of strategic partnerships with Mexico City government, the World Bank, and private sector stakeholders to streamline project development
- Creation of an NGO, Center for Sustainable Transport (CTS), in May 2002 as day to day partner with city government, to monitor activities and advise on new initiatives
- Design and implementation of Bus Rapid Transit (BRT) system on city's primary avenue. The first corridor was launched on June 19 on city's primary avenue (W Bank)

- Test of best engine/fuel combinations for new high-capacity, low emission transit buses (W Bank)
- Test of emissions control retrofits on older transit buses (EPA/AID) : -90% reduction of particulate emissions
- Development of a methodology to measure and validate GHG emissions savings from BRT

#### ⇒ **Projects in other cities**

- **Shanghai, China** : Signing of Memorandum of Understanding in October 2003. From then a joint work in BRT conceptual and pre-feasibility studies begins; the of indicators of sustainable transport focused on clean air/local emissions and access/congestion is a priority.
- **Porto Alegre, Brazil**: Creation of second CTS in Latin America to implement BRT corridor and develop additional sustainable transport solutions
- **Querétaro, Mexico**: Assist the city in developing a BRT corridor, as part of a broader sustainable mobility and urban development strategy
- **Istanbul**: Early stage development of private-public partnership incorporating the municipal government, business leaders, and the public sector
- **Hanoi, Pune, and Xi'an**: Development of sustainable transport indicators for decision making and action with an emphasis on traffic congestion, mobile source emissions, and transport-related accidents

#### ⇒ **Indicators of Sustainable Transport How Do Cities and their Projects Perform?**

- **Key Pillars of Sustainable Transport**: Environmental and Safety, Economics, and Access
- **Global Indicators**: Local emissions and air quality; time loss, speeds, modal shares, walkability, proximity of homes to transit stops; ped., veh-occupant safety; economic performance of sector.
- **Project Indicators**: Development of baseline of transport activity, local emissions, GHG emissions etc. to measure impact of project over time

**Mario ZEPEDA** explained that the cooperation with the city of Mexico is a true bilateral one. The city took advantage of the contacts developed through Embarq and obtained additional resources to carry out important studies in the three following domains:

- the implementation of their first bus line with specific corridors
- the creation of the Sustainable Transport Center
- the operating of a limited number of buses using various technologies from derived fuel to electric vehicles. They use bus lanes and thanks to Embarq financing, they are assessing and comparing the potentiality and performances of each technology.

This cooperation has been very fruitful for the city of Mexico as it has enabled to widen the scope of its exchanges with many other multilateral organisations.

Likewise, the City is a member of UITP.

They also participate in several associations gathering metro, roadway and infrastructure construction companies. It is worthy of interest to keep in mind the perspective of different companies in order to deal with transport issues: such as electric railcar companies, fuel producers like Shell (in Mexico, PEMEX, the public company has the official monopoly over oil and petrol products).

These cooperations are essential for granting additional financing but the city takes decision, defines studies, manages and implements policies. Numerous studies could not have been achieved without these supports. He added that IMPACTS should take more importance in Latin America so that all the cities can express themselves together with all the south american stakeholders.

**Ilan JURAN** thanked Mario ZEPEDA and added that unfortunately, Lee SHIPPER, Director of the Research of EMBARK could not attend the conference. He explained that EMBARK have currently a 5 year grant to work to extend the experience tackled by Mario ZEPEDA and see how they can work with different partners, Latin American cities and also with IMPACTS in order to facilitate and support pilot projects such as the BRT in Mexico.

## CONCLUSIONS

**Grace CRUNICAN** concluded the session on the SMARTCITI initiative by reminding the objectives that have been agreed upon:

### ***SMARTCITI Objectives***

- IMPACTS Cities from Europe, North America and Latin America expressed interest in pursuing, deepening and extending the dialogue initiated during the conference on the critical needs, best practices, innovative financing, role of emerging technologies and current initiatives of sustainable mobility.
- For this purpose, recognizing the great value of this international exchange and the constraints of time available for more in-depth experience sharing, the Cities have expressed their interest in participating in the SMARTCITI initiative proposed by Laurence DOUVIN, president of IMPACTS Europe, in order to:
  1. **Develop a continuous information exchange support** and terms of reference to extend their dialogue and further the experience sharing among policy makers and their technical experts on policy trends, implementation practices as well as global and local impacts of sustainable mobility initiatives,
  2. **Explore and develop the necessary dialogue and cooperation with strategic public and private partners**, on global and local levels, towards sustainable mobility – the presentations of EMBARQ for Latin American Cities and the study conducted by WBCSD have illustrated the mutual benefit of such cooperation

She remarked that over the course of the conference, discussions between cities and other stakeholders made some of the concerns lighter and easier. The understanding of transportation is growing; she explained that she has been a transportation official for 25 years at the federal level as the deputy of transit, at a state level for the entire state of Oregon and at a city level. She has grown more and more aware that the cost benefits they were accustomed to in the transportation world have now grown, that both the costs and the benefits are now to other activities not just how fast the traffic moves but the air that is

breathed, the noise, the health factor. In America, the right of way is also the right of way for the utilities, water, sewer and the experts of the sprawl, in particular the gentleman from Phoenix, Ross is becoming more aware of the cost of the sprawl.

### ***The Next Step***

Several proposals for implementing the SMARTCITI initiative have been proposed and discussed, including a web based forum and information sharing systems. In order to develop the framework and terms of reference for the proposed initiative, she proposed that the cities empower a Working Group to accomplish the following tasks:

1. Propose the most effective information sharing forum for implementing experience sharing and best practice assessment
2. Explore the most appropriate partnerships and develop terms of reference for their implementation
3. Establish an Action Plan and identify the necessary resources for its implementation
4. Present the Recommendations of the Working Group to the Cities for implementation in October 2005
5. Discuss the proposed action plan in Stockholm, June, 2006

### ***The Working Group***

She wished to propose to form a working group that will include:

1. Grace CRUNICAN, for IMPACTS North America
2. Laurence DOUVIN, for IMPACTS Europe
3. Patricia RUIZ, for IMPACTS America Latina
4. Mario ZEPEDA for Mexico city
5. Daniel AUGELLO for WBCSD
6. Lee SHIPPER for EMBARQ
7. Jean-Louis GRAINDORGE, for IMPACTS Europe
8. Ilan JURAN for IMPACTS North America

She explained that Seattle is also member of several committees and working groups and this is no interest in duplicating their work. However, there are no alliances that reach to Europe or Latin America.

And this working group would be a great contribution and to make it applicable to the problems to be solved in the future, this working group should come forward with a work plan that would encompass best practices, translation of various measures, policies, that are very instrumental in changing behaviour and then issues of finance, of technology and innovations in pilot projects. This working group could come forward with some activities they did not have before.

**Patricia RUIZ** agreed with Grace CRUNICAN. Indeed, when considering international cooperation and private investments with Latin America, there are numerous reluctances linked with political considerations. Questions remain on how the setting up and management of these businesses can match Latin American agenda.

She underlined the fact that existing networks are managed by cities, local governments that are in the best position to offer the guarantees required by international capital. Social liability

that is held by private businesses in the rest of the world is very frequently absent in Latin America. This may be linked to the exigencies of the authorities imposed on those intending to settle down in Latin America. This theme should be developed. **Patricia RUIZ** wondered how IMPACTS America Latina could join the movement. She advised that SMARTCITI should work together with IMPACTS because they have the same goals. She asked how this win-win process can be initiated.

**Grace CRUNICAN** said that this group could bring together the sustainable mobility and the initiative of the SMARTCITI and could figure out how to bring those ideas together and to move ahead in support of the proposals put forward.

**Laurence DOUVIN** said that this initiative is open to the cities that wish to participate. Regarding IMPACTS Europe, she expressed her being volunteer to be part of the working group. IMPACTS Europe steering committee will discuss the matter but she already knows that some cities are willing to participate.

**Gönnar SODERHOLM** supported the idea of a working group. However, he agreed with Göteborg, that the final decision should be taken by discussed by IMPACTS General Assembly on the basis of a proposal from the IMPACTS Executive Management Board.

**Grace CRUNICAN** understood that there are more established procedures in Europe like the General Assembly. She also pinpointed that Al FOXX is the President of IMPACTS North America and would like to say a few words.

**Al FOXX** expressed his enthusiasm at attending this conference and that Grace CRUNICAN has done an outstanding job to organise it. He proposed a round of applause for Grace CRUNICAN and for Miguel D'ESCOTO, who has moved NACTO organisation forward working at shaping and influencing policies as they affect the urban environment.

He observed that, as a transport professional, working within communities, he understands the differences and tries to take the basic principles from efforts carried out in cities and to apply them. So this will help to bring better services to citizens. Again, he thanked everyone for being there and looked forward to working with everybody in the future.

**Grace CRUNICAN** thanked Al FOXX for his upcoming leadership. She proposed that anyone rejecting the proposal that has been made raise their hands. No one did. So she proposed that by the end of August, all the parties have at least one conversation together to agree upon the method.

She stated that an agreement has been reached concerning the setting up of a working group, concerning the participation of the private sector, of IMPACTS staff and representatives from each continent.

She also mentioned that they now have an agenda to explore policies, financial and technological aspects, some pilot projects and funding as well.

She also remarked that when vision and experience come together in an individual, it makes a great deal of difference. The people who have shown a leadership on IMPACTS today have that.

She invited Patricia RUIZ to come forward. She said that having IMPACTS America Latina to come into IMPACTS was very encouraging as well as the outreach that has been expressed. She handed out a small token to Patricia RUIZ and thanked her again for coming, for her expertise and for sharing her experience. Everyone applauded.

She thanked Miguel D'ESCOTO, who is no longer working directly with the city of Chicago, for guiding them through this process and for being a great source of energy for collateral and collaborative work that has gone on in the American Cities and asked him to come to receive a token, representing a seagull.  
Everyone applauded.

Then she asked Laurence DOUVIN to come forward. She insisted on the fact that Laurence DOUVIN is really a woman who has put together 10 years of experience. She retained that though she is moving on from IMPACTS, her 10 years experience within it told her that the SMARTCITI initiative was there.

**Grace CRUNICAN** explained that she experienced transportation over her 25 years' experience and that she was glad to see someone not just take this experience and move in something else entirely but to show leadership and vision. Therefore, she handed a token over to Laurence DOUVIN, which is a stylized seagull and a book of Seattle to remind her that her decade's service will not remain unnoticed and will lead to build further developments and those coming in pledge to work on the work she has done.  
Everyone applauded.

**Laurence DOUVIN** expressed her deepest thanks to Grace CRUNICAN, to Patrice GILLESPIE, to Al FOXX and to the Seattle team.

**Grace CRUNICAN** proposed to have a round of applause for Patrice GILLESPIE-SMITH who is the one who prepared the conference.  
She thanked everyone for coming and told the participants that she would be glad to provide any additional information needed on Seattle.