

**The Subcommittee on Technology and Innovation
of
House Committee on Science and Technology
U.S. House of Representatives**

**Research and Development
to Support
the
Department of Transportation's Strategic Goals**

testimony of

Alan E. Pisarski

Nov. 19, 2009

Good morning, Chairman Wu, Ranking Member Smith, and members of the subcommittee. My name is Alan E. Pisarski. I am pleased to be invited to testify before you regarding transportation research needs. I speak as an individual researcher representing no organization or interests. This is the fourth reauthorization, starting with ISTEA, in which I have been asked to assist the Congress in its deliberations. It is a privilege that I take most seriously.

I have chosen to focus on just two aspects of the charge put to us in your invitation: the first will specifically address the strategic goals of the DOT and the need for research to make them more concrete in order to make them effective programmatic guides; and the second will address the information demands these goals and the other proposed approaches under discussion in the reauthorization legislation will place on us. Much of my career's focus has been on designing and employing statistical sources to meet transportation policy needs at the metropolitan, state and national levels here and abroad.

DOT's Strategic Goals and Research

The Goals

Safety

Livable Communities

Economic Competitiveness

Environmentally sustainable Transportation

Of the four strategic goals, Safety, is the one we expect to see first – and pertinent to this discussion the most directly transportation related and the most tangible of the strategic goals. The most telling thing we can say about transportation safety in America is that it has been a great success in terms of improvement in the total death toll and in the rate of fatalities and crashes – we take great pride in that accomplishment – and yet when we examine world trends we see that many countries that had far worse records than America in past decades began catching us about a decade ago and, despite our improvements, have passed us by. Just one small example: the US's number of fatalities from 1980 to 2007 declined by almost 20%, of which we might feel justifiably proud – until we examine other countries and see that France and Germany saw fatality declines by more than 60% -- about a two-thirds decline in the same period. Had we declined at that rate our annual fatalities would be on the order of 17,000 instead of above 40,000 in 2007. What do they know that we don't? What have they done that we can learn from?

Moreover, a compelling structural definition of the safety goal developed by the European Union, EU, bears consideration.

Every EU citizen has the right to live and work in safety. So, when you are walking, cycling, biking or driving a car or a truck, you should do so with a

minimum risk to be hurt or killed. Likewise, other road users should not be damaged by your own participation in traffic.

The Congress will need to assure that the research is done to determine where the successful approaches have occurred and then to act on the research findings that identify the policies and actions that can achieve such life-saving practices. We could find that these policies may be more draconian than we have been prepared to enact in the past. That trade-off should be made consciously – knowing full causes and effects. As we set national goals for safety we will find that many states have already surpassed it but others have long ways to go. In 2007 our national fatality rate was 1.36/100 million VMT with almost exactly half of the states above and below that level. If we set a commendable goal of 1.0/100 million VMT nine states would already be there and five would be more than double the goal.

Another point where safety teaches lessons about strategic goals and performance-based planning is that safety tends to lend itself most directly to performance measures because the goals are so clear and so definitely subscribed to by all. If we measure fatalities, crashes and crash costs, if we measure rates of these events, we have clearly quantified our goals. There are important sub-sets to be addressed – pedestrians, motorcycles, etc. We know that we get very different senses of performance when we measure rates based on measures per capita; per vehicle; or per vehicle mile, but the goals are eminently clear and international discussions, for example, can proceed with common perceptions of identical goals in mind. Could such a discussion of Livability occur internationally? The variations on meaning of that would make discussion interesting and perhaps even educational but certainly not comparable.

It harks back to a popular phrase of the 60's that went like this: "If we can put a man on the moon why can't we the blank might be filled by ... have a good school system; make a prettier city; a happier life, a more livable city. The simple answer is we can state the goal for men on the moon in one single English declarative sentence: "Place men on the moon in a life support condition and bring them home safely." Every thing else is engineering. There is no single sentence or paragraph that can define these other goals that more than a handful of people would subscribe to. Volumes have been written about them. They are constructs of each individual and different for each. They are human aspirations. Just as the livability goal is merely aspirational until given real substance.

One measure of this is gleaned via review of the work of the different Regional Economic Commissions of the UN. Those in Latin America, South Asia and Africa barely mention transportation in their goals statements about sustainability. Their focus is on sustainable food stocks, sustainable water supplies and sustainable health conditions. The ECE (Economic Commission for Europe, of which the US is a part) addresses transportation more fully.

I recently conducted a review of sustainability around the world for the Institute of Transportation Engineers and discovered references to close to 100 definitions of

sustainability. In most cases they were merely aspirational political statements. The word began to become more useful in the European Union, where it was in fact written into the EU charter in the Maastricht Treaty of 1992.¹ In order to give substance to the term the statistical arm of the EU, Eurostat, has worked for almost two decades to define and refine the scope, the scale, and the content of that vision. They have developed measures to examine goal sets and subsets and established context measures to guide policy and to structure programs. They have a long way to go both programmatically and statistically.

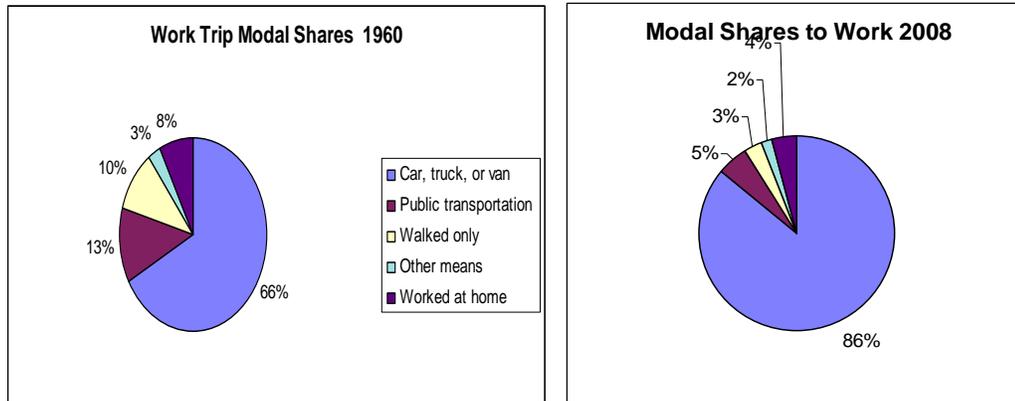
While it may be worth monitoring the continuing efforts of the EU and also the OECD (Organization for Economic Cooperation and Development) to quantify these concepts, the US must give them far greater tangibility than they now contain before considering programs or funding in these areas. It will take considerable research effort in both time and funding to create a sound programmatic environment. The potential for wasted effort and wasted resources is immense.

Certainly the term livability will need to be subjected to a far more rigorous delineation of its scope and content before tangible programs with measureable performance outcomes can be structured. Without these steps it would become perhaps the perfect federal program: almost anything could be funded under the rubric of livability; with such an amorphous goal there would be no real measure of success or failure; and funding could go on forever with no real accountability.

The present view seems to use livability as an umbrella term for walking, biking and living in access to close-by jobs and other opportunities, but most of all for increasing the densities at which we live and work. This seems a somewhat idyllic notion – a nostalgia for simpler times in the past. My years of research in commuting indicates that those goals fit nicely into somewhere about 1960.

¹ The Union shall set itself the following objectives:

- to promote economic and social progress and a high level of employment and to achieve **balanced and sustainable development**, (*emphasis added*) in particular through the creation of an area without internal frontiers, through the strengthening of economic and social cohesion and through the establishment of economic and monetary union, ultimately including a single currency in accordance with the provisions of this Treaty, *ARTICLE 2 OF THE MAASTRICHT TREATY; 1992*



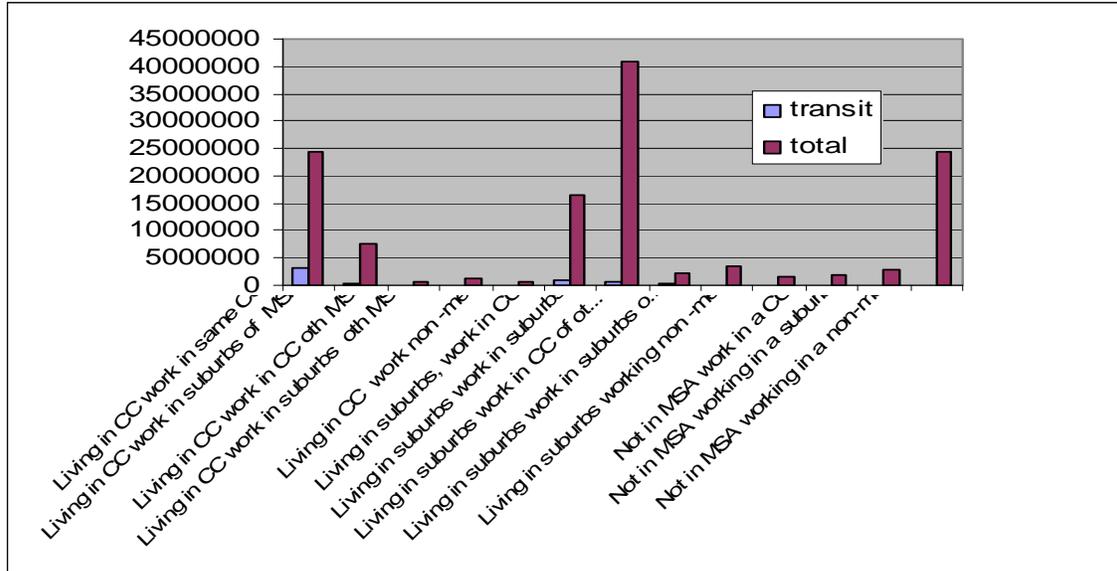
In 1960 we had fewer than half the workers commuting that we do today. The transit share was more than double today's share (close to a million more than today in numbers); working at home was almost double today's share (lots of farmers then who "worked at home"); and walking to work was close to four times today's share. We didn't think that those were halcyon times then. The 1962 Highway Act, that mandated the metropolitan planning process, was enacted to address the problems of the era.

Numbers similar in terms of modal shares to 1960 can be seen for the population below the poverty line today. A great problem is that these heavily idealized visions of walking and working at home don't often comport with reality. When we think of increasing walking to work we have a vision of an executive or software designer leaving her town house and strolling to her office. If we recognize that a lot of walking is by low income people making trips to distant jobs – picture a Black mother walking several miles to town to work in the hospital – then our benign vision changes. Thus when I see walking declining in numbers and share as it has for forty years I see success not failure. That means access to transit or access to a van pool and a far greater opportunity sphere of potential employment for the low income population. This of course is not to suggest that we should not be supportive of those who do walk to work (about 2.8%) or bike to work (about .6%) and to increasing opportunities for it, but it does say that we must carefully measure and monitor what goals we set and their implications in the real world. They are certainly not sufficient to base the entire program on.

One of the real conflicts in the livability goal as it is commonly used is some of the inherent weaknesses that have trouble standing up to the realities of modern life style needs and preferences. Note in this chart from the Commuting in America III series the number of people who live and work in rural areas is just about identical to those who live and work in central cities (about 25 million) yet we somehow tend to expend the major part of our focus on those in central cities. I would think that the rural population has just as great a claim on our interest. In the future when jobs return and skilled workers become again a key issue, assuring employers access to a larger commuter shed spread over larger and larger areas will be the norm. I suggest in that environment work trip lengths will get longer not shorter – and that will be a good thing – one of the keys to greater economic competitiveness. It will mean workers with greater access to more jobs and employers with greater access to potential employees. It must be obvious that in

our job short environment today with 10% unemployed, job seekers will be willing to travel greater distances than they might in the past to get the job they want or that they can get.

National commuting flows - 2000



In the longer term the prospects for working at home are great – it is the only “mode” to work that has grown in share each decade since 1980 along with driving alone, but growth prospects for walking and biking will be slimmer. Why?

- Increasing job specialization among the skilled in bigger and bigger metros will require/permit drawing workers from ever larger orbits.
- About 70% of workers live in a household with another worker(s). Whose job will they live next to? Will the average trip length to work improve?
- Job velocity is high – it is highly unlikely that workers will change home locations every time they change jobs – that is economically unrealistic.
- Our work force is aging; unlikely candidates for walking/biking.
- As incomes rise workers choose other things as important beyond optimizing the commute – amenities, safety, schools, etc.
- The commute is a small and declining share of travel (about 20%). Other factors are more important to household interests and to improving their travel situation.

In short, we don't live outside the factory gate anymore, for good reasons. As noted in the last bullet work is not the major travel factor it once was. If we consider all the other trips householders make, the notion of walking to them does not stand up to inspection. Trip purposes that are growing are social recreational travel and personal/family business. We see that super markets, shopping centers and schools are all getting larger, indicating larger market sheds for their customers and longer trip distances as a result. This is a natural product of private and public efficiency goals and the growing specialization of goods and services the public desires. Consider the kinds of milk we buy today – 50 or

60 years ago there was just milk – now markets will have a dozen kinds of milk, dozens of kinds of lettuce. Absolutely the same applies to doctors. In my childhood the three generations in our household had the same doctor who was a few blocks away. Today people don't have a doctor they have several or many – none selected on the basis of how close-by their offices are.

Conversely, the situation of being dependent on the single store you can walk to leads to lack of competition and monopoly-like pricing behavior. Research has established that low income neighborhoods often pay more for basics because of their immobility. Even the threat of being able to leave the neighborhood to reach competitive suppliers helps reduce prices.

Part of this links to the third goal of Economic Competitiveness. While competitiveness is again one of the “soft” words that is open to broad interpretation, it seems easier to attach sufficient tangibility to it to make it an effective guiding tool than some of the others. There is a tendency to link it strongly to freight movement. There is validity in that, but there is much more to it. Businesses and nations compete today based as much on their overall logistical capabilities as on their products. As products to be moved increase in value the demand for speed, control and reliability increase, generating greater increases in air freight and trucking. The US, being a high labor cost nation, must seek to reduce its disadvantages by more effective transportation and logistics services not just in and out of ports but throughout the entire logistical chain of production.

Beyond freight movement there is the movement of persons in business travel – which can be a major cost factor for services firms with high value personnel. While there are increasingly surrogates for travel in new technologies the need for continued travel will be with us for a long time. Increasingly effective means of communications may substitute for travel in specific occasions, but ultimately increases the prospect for travel and face to face interactions. Another element in competitiveness is tourism – both domestic and that of foreign visitors. Foreign visitation in the nation is a major source of export revenues. We have seen in this recession the impact that declines in business and leisure travel can have in many areas. Travel and tourism is the top industry in three states and in the top ten in all states except two – all of it synonymous with long distance travel.

The objective I would set for transportation in order to enhance economic competitiveness and livability and in fact the other two goals as well would be this:

Design the transportation system of the future that will serve the needs of a population with a value of time double of that of today's average traveler (say \$50 an hour in current dollars) and serving an economy with an average value of goods moved double present average values per ton.

High value workers and high value goods movement will demand and be able to tolerate the costs of high value transportation services. What the economy and the society will not be able to tolerate is lack of safety, lack of reliability, environmental damage, and

congestion that eats time and energy resources. Research is needed on what the economic and other impacts would be of the development of a transportation system designed to serve a high income/high value society.

The aspect of transportation that most users express greatest anger and frustration about is congestion. It is significant that it is not mentioned in the strategic goals. I would like to think it is because it is seen as a symptom rather than an objective in itself. But addressing congestion as a major priority serves to achieve all the four strategic goals identified. Research has shown that relieving congestion improves safety, environmental damage, GHG emissions, and economic competitiveness. Most Americans would certainly associate it with livability as well. In the affluent society we all expect in the future, the value of time will be the ultimate driver of goals and activities. Time is the ultimate unsustainable resource.

Failure to invest in the infrastructure and services that can support our economic competitiveness will be major detriment to our economy if transportation is seen only as a problem to be minimized rather than an integral part of our economic competitiveness and livability. We need research that demonstrates the connections between transportation investment and our economic progress. Great work has been done in Europe and confirmed here showing that increases in access to jobs within (say) 30 minutes adds immensely to productivity. We need more extensive research in these areas. Another area that grows out of research funded at TRB on the future of the Interstate system is the need for a national inventory of the physical state of the Interstate system and what the costs for reconstruction will be in the coming decade.

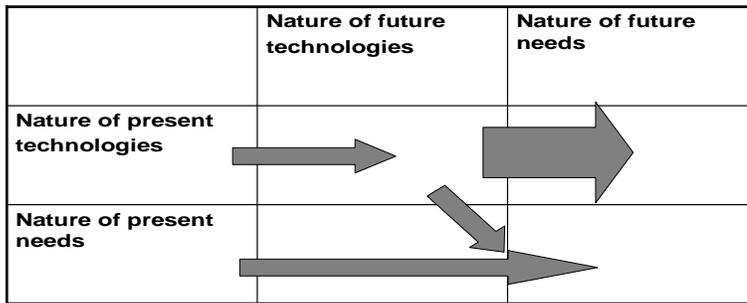
The strategic goal area of environmentally sustainable transportation suffers from a lack of effective research. The OECD in its Insights series, states:

*We see the expression “sustainable development” everywhere these days, but what does it actually mean? How do production and consumption influence sustainability? Is globalisation of the economy helping or hindering it? Can sustainability be measured using the traditional tools of economic analysis? What can governments, enterprises and citizens do to promote it?*²

It further makes the important point about sustainability that seeking to preserve resources to permit future generations to address their needs, requires us to better understand what future perceptions of needs might be and what resources and technologies might exist to serve those needs. The following chart lays out some of the elements of that understanding.

² OECD INSIGHTS - SUSTAINABLE DEVELOPMENT: LINKING ECONOMY, SOCIETY, ENVIRONMENT ISBN 978-92-64-055742 © OECD 2008

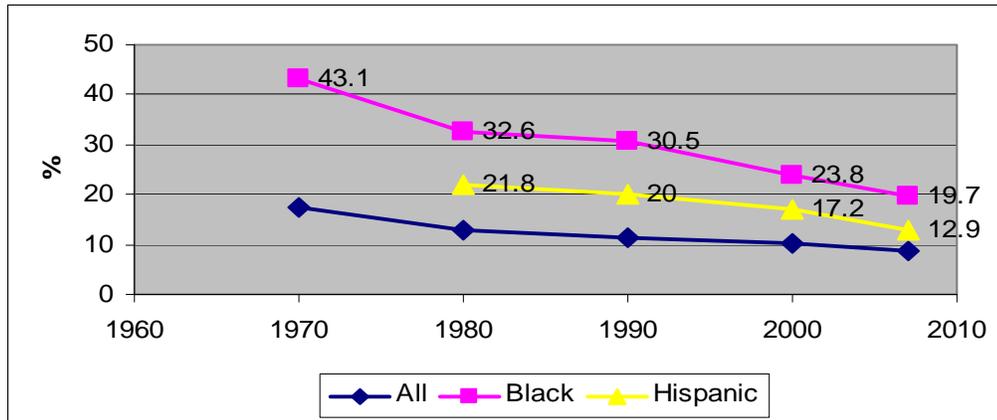
The Sustainability Matrix



It suggests that present technologies lead the way to future technologies and that both have immense bearing of what the sense of needs in the future might be. In a sense technological possibility creates needs. One would expect that the concept of needs in the future would grow but technologies would reduce the resources required to meet those needs.

At present there are many assertions about the air quality attributes of modes, their GHG characteristics, and their relative subsidy costs. All of these areas need more dispassionate, more sound and more effective research. The pace of technological change in fuels and vehicles will easily dominate these issues in surface transportation. There seems to be a failure, research-driven or institutional, in which transportation agencies fail to recognize and incorporate the technological opportunities that exist, or that are in the offing, and instead tend to focus on seeking to encourage or mandate behavioral change. This has a long record of failure. If we look back at all the improvements in air quality of past decades, they occurred almost exclusively due to changes in vehicles and fuels and, if anything, behavioral change was a negative influence. With respect to GHG emissions, where the technological opportunities are even more clear, we should guide our policies accordingly. The goal is to reduce GHG emissions not to reduce VMT. Raising the cost of travel, making it more onerous, and trying to squeeze drivers out of their cars will only force the lowest income groups – those who are on the fringes of vehicle affordability out of their cars. The accompanying figure shows the dramatic increases in vehicle ownership by African-Americans and Hispanics over the past decades.

Percentage of Households without Personal Vehicles by Race and Ethnicity



ACS, Bureau of the Census

The percentage of African-American households without vehicles dropped from 43% in 1970 to just below 20% in 2008 – a great increase in opportunities to access jobs and services for that group, but still more than twice the level of the rest of the nation. Hispanics enjoyed similar gains as seen in the figure. Who can possibly argue that those gains were a bad thing and would want to see it arrested? Do we want to make the disparities between the overall population and these Racial and Ethnic groups permanent?

Further, there are great low cost and rapidly implementable responses to creating environmentally sustainable transportation that do not seem to enjoy the public cache' of some others. This includes intelligent transportation systems technologies that can increase throughput on existing systems, information technologies that can inform travelers of accidents and problems ahead and point out alternative routes. Using information to produce predictive traffic information, melding data and forecasting using both public and private tools is one of the future opportunities that we must be ready to seize.

One of the great research-driven areas of potential success in the future, serving very effectively to meet every one of the aspirational strategic goals of the DOT, will be the increasing automation of personal vehicle travel as well as buses and trucks. These technological opportunities will enhance safety, energy consumption, and environmental impacts thru effectively improving road capacity, traffic management, speed and reliability. We can develop them here or import them later from Asia and Europe.

A final thought that this committee can champion. In the area of intended responses to GHG emissions reductions there is an equity – efficiency trade-off argument. In this case “equity” is portrayed as each sector of the economy being responsible for reducing, on an equivalent basis, that share of emissions that it produces – transportation is roughly responsible for 28% of US man-made emissions and therefore should be responsible for about the same share of reductions. This is a very short-sighted sense of equity. Based on efficiency grounds, those areas that lend themselves best to improvements in GHG emissions such as electricity generation should be the focus of our research and policies – the so-called low hanging fruit approach.

To the extent the issue is petroleum it must be recognized that in the last energy crises of the early eighties every sector of the economy that could get out of oil did. Only transportation, heavily dependent on a portable, high energy per pound, high energy per cubic foot fuel, such as petroleum provides, stayed with it. It arguably should be one of the last places to look to for reductions. This does not mean being complacent – there are many opportunities for efficiency improvement that are and should be developed – but it does mean that it is reckless to insist on, and invest in, emission reductions that cost thousands of dollars per ton removed when reductions can be obtained more readily and more immediately at \$50 per ton. The Science and Technology Committee can champion the scientific approach to this challenge by supporting research and analyses that identify cost-effective trade-offs in the economy. The question “where will a billion dollars spent buy us the most GHG reductions?” should guide the research and the policies.

In broad summary of this first area, research and policy analyses need to be directed early on to provide some sound scope and tangibility to the very admirable but soft DOT strategic goals before they can provide the basis for programs or investment. We will need to define quantifiable means of performance measurement of the goals, defining their bounds, their scopes and their content. Those measures will in fact define the goals in ways that can be funded, pursued, achieved and success or failure measured.

Research Needs – Scoping the Program and Data Needs.

About a year after the US DOT was formed, the Congress addressed a letter to the new Secretary indicating its displeasure with DOT's lack of action on developing a statistical program. In response the DOT produced "The Red Book" a design for the Department's overall statistical program. I actually worked on that book. No further action was taken by the DOT or Congress. Now, 40 years later and we are not much farther ahead.

Nothing can be more telling about the state of statistical programs in DOT than the following: In late 2006 the TRB published a document: *Transportation Information Assets and Impacts – An Assessment of Needs*. This began as an effort by the Data Section of TRB in support of the congressional mandate in the current reauthorization SAFETEA-LU, directing the U.S. Department of Transportation to sponsor a comprehensive transportation information needs assessment (TINA). Our intent was to contribute to the identification of information needs, but the TINA study was never conducted nor funded by DOT, so our work broadened to substitute for the DOT failure to respond to Congress. The work was based on surveys of TRB committee members to identify data needs and examples of productive applications of data and information in transportation decision making. This was followed by interviews with a small number of decision makers to develop a better understanding of the attributes of information that are most useful in the policy process.

Let me point out Mr Chairman that while this was a product of the TRB Data Section while I was its chair, the work was the accomplishment of the many committee chairs and members of the section all on a volunteer basis. I just got to watch some very good people do some very good work – out of a sense of professional pride and recognition of the importance of the work. The only money spent to my knowledge was that TRB absorbed the cost of printing. So this volunteer effort substituted for what DOT was unable or unwilling to do. So here we are almost 40 years after the Red Book and the Department is still unresponsive to the Congress and the user community still lacks a sound, sustainable transportation information program.

My challenge now would be for the Department to finally take responsibility and respond to the SAFETEA-LU request by the Congress, albeit several years late. As the report calls for, I would ask them to assess the status of the data assets within their scope, identifying new data sources, new and unmet data needs, the expected value and costs of meeting those needs, and recommend priorities for enhancing local and national transportation data assets.

I understand that the prospective legislation of Chairman Oberstar has on the order of 40 sections calling for new reporting requirements, performance measures, and performance targets. To say the Department is not up to it is an almost laughable statement; but neither are the states, or MPO's, or anyone else. We don't have the content; we don't have the methods; we don't have the institutions; and we don't have the funding.

The Department's basic statistical reporting has suffered due to losses of skilled people to retirement, inability to recruit and train replacements, and the failure of leadership to recognize this area as a priority.

- The summary version of the problem: Our statistical capability is relatively good in interstate/international freight movements, but weak re the characteristics of local urban goods movement; On the passenger side it is the opposite, we are stronger on local travel, but weak at the national activity level. Our last survey of long distance passenger travel – the kind one would use to evaluate a high speed rail proposal for example – was done in 1995 – and done badly.
- When the Census Bureau proposed to cancel the Vehicle Inventory and Use Survey, DOT/BTS was not at the table to protest. This is the only survey of the national vehicle fleet that exists, which could be so valuable today with energy and GHG concerns so great not to mention the clunker program. It was ended by the Census Bureau with no response from the data authorities at DOT. It would probably take up to a maximum of \$15 million every five years to restore it.
- One of the flagships of the transportation data program the National Household Travel Survey, NHTS, will soon be available. That's the good news. Its story is symptomatic of our institutional problems. It has been postponed endlessly due to lack of financial commitment at DOT. There were \$20 million in state and MPO funds committed to supporting the survey and the DOT could not find the \$1.5 million to fund the basic program to get it started. I think we finally embarrassed them into getting going. Unlike previous cycles there was no BTS participation in the survey. This is perhaps the most central statistical program of the Department. It needs to be assured in its periodicity, rather than enacted whenever the funds can be raised by passing the hat. Where it not for the continuance of the authorization we would be deciding the post SAFTEA-LU program with the same data we had before SAFTEA-LU was enacted. The survey system needs methodological improvements as the traditional land line phone survey approach is overwhelmed by technological and societal changes.
- The most positive story, one of few bright spots, was the establishment of an effective national picture of freight transportation by conducting the Commodity Flow Survey every 5 years (after a hiatus in the eighties), collecting monthly Transborder Freight Data, and creating the Freight Analysis Framework. The Framework is designed to fill in the missing pieces, provide provisional annual updates, and make forecasts against which policies and investments can be analyzed. The picture of freight is provided as maps and tables in the annual Freight Facts and Figures publication, which is widely cited in policy studies and discussions that have helped inspire the many freight provisions in Chairman Oberstar's bill. This statistical program can be given credit for the real renaissance in thinking about freight in America demonstrating the real power of statistics. But the survey approach was reduced in 2002 and work must begin now in planning for the next 2012 effort. It needs to be expanded not reduced.

We can not begin to talk about government transportation decisions making a serious contribution to economic competitiveness without recognizing the waste in decision-making from weak data systems. The methodologies here are also weak and raise the ire of respondent businesses who are forced to do laborious data recording. We need new methods and new dedication.

USDOT needs effective institutions and adequate resources to meet the growing data needs of performance management, concerns with sustainability and livability, and efforts to reinvigorate our economy. To continue programs such as the Commodity Flow Survey and bring back the Vehicle Inventory and Use Survey as part of the 2012 Economic Census, USDOT must begin planning and investing now. If we falter, the maps and tables you will be using in the next reauthorization will be the same pictures we are using today even though the world they measure will have changed dramatically.

We need to address the data program failure on four levels:

- Content
- Methods
- Institutions
- Funding

Content The most directly evident gaps are:

- metropolitan goods movement, truck distribution and local delivery activities are a key question;
- intercity/long distance passenger travel getting at long distance trips for recreation, business, foreign tourism, and family/social purposes by all modes,(perhaps 25% of all transportation Person Miles of Travel);
- inventories of the size and characteristics of the vehicle fleet, for example distinguishing pickups and vans used for business vs personal household use;
- Linkages of travel activity with national economic productivity;
- Linkages of travel activity with access to social services/opportunities;
- Linkages of travel activity with GHG and pollutant generation;
- Linkages of travel activity with land use configurations.

Methods There are severe methodological challenges, among which are:

- Household travel surveys have shifted from face to face to telephone over the last 30 years. Now the expansion of phone numbers, replacing of land lines in households with cell phones, intolerance by the public to intrusions, severely threatens the utility of such methods;
- Establishment surveys, such as for freight movements can be arduous and time consuming paper-based processes meeting with increasing negative responses from economically challenged businesses;
- Census Bureau disclosure rules force retrenchment of available data due to the power of computers and the internet to mine data and discover linkages between respondents in different data sets. Thus we are paying more and getting less.

- We are perpetually on the cusp of utilizing new data technologies as substitutes for declining capability in our existing methods that promise greater speed and cost-effectiveness. The DOT has failed in conducting the research and testing in new methods that is critical to our future capabilities.

Institutions The DOT has tried a multitude of arrangements of program and staff over the years without success. What has not proven sustainable at DOT has been the high level focus of resources on information. Maybe our most fundamental weaknesses are here:

- The BTS has failed to take on most of the challenges it faces;
- There do not seem to be any mechanisms for coordination of statistical programs among DOT agencies;
- The FHWA tends to end up as the ultimate resource for data development;
- There is no high level support or impetus to setting data priorities;
- There is no place to which users can go to make their needs known.

Funding This is always the ultimate question. Resource restraints are severe but not overwhelming in that the relative costs are small compared to investment program scale and the scale of the impacts from some of the programs. As said in my testimony on Challenges for the Future in 2007³

The pathetic nature of our data collection programs and analytical capabilities demands Congressional focus. We are effectively naked with respect to our ability to understand and interpret national patterns and trends. Our future decision-making must be keyed to performance-based reporting systems. If our future decisions are to be founded on sound understanding of our rapidly changing society and grounded in effective, performance-based, economic justification it will have to be supported by far superior data and analytical capabilities than now exist. The costs are trivial contrasted to the cost of ignorance.

³ Testimony Before The Us House Of Representatives; Committee On Transportation And Infrastructure, Sub-Committee On Highways And Transit: Surface Transportation System: Challenges For The Future, January 24, 2007

Closing

We have failed in the original goal to make high quality data available to support planning and policy development; and now we are talking about taking data requirements to a whole new level – making it central to establishing accountability, transparency, and improved performance for ongoing programs throughout transportation. While all parts of the transportation community must participate in this endeavor it is fundamentally the federal component that must lead.

In June of last year I again testified before the authorizing committee regarding Federal Roles. First on my list of federal roles was the following:

- *Provide better data and research needed for more effective business and government planning. This is a central, indisputable federal role.*⁴

Without effectively meeting this federal role to produce better data and research the US DOT cannot expect to make significant progress towards its new strategic goals.

⁴ Testimony before The United States Senate, Committee On Environment And Public Works regarding The Future Federal Role For Surface Transportation, June 25, 2008