

The Road Map for a VREF initiative on Financing Urban Access

Report to VREF by the Interim Steering Board (ISB) for the start-up phase

October 2013

Summary

The mission of the initiative should be *“to propose, in cooperation with forward-looking cities, analytical frameworks for how to achieve socially inclusive access including its financing and governance”*.

Need for a new paradigm

The view of the ISB is that the time is ripe for a *new access paradigm* in urban transport. The current paradigm could be called the *timesavings paradigm*, since it by and large is based on the assumption that access is provided by travel speed and thus on mobility. It emerged out of the first decades after WWII and the ensuing urban sprawl and is now the dominant paradigm in the developing world. Social inclusion does not figure in this paradigm – in contrast to similar urban paradigms for clean water, health and education or, in rural areas, for electrification - nor does the environment or, for that matter, economic development. Focusing on socially inclusive access will necessarily have to be linked with financing and governance, since social inclusion in all likelihood will require large additional resources. Since it is unlikely that these resources will come from user fees only, further beneficiaries of urban access will have to be identified and possible additional placed-based sources of revenues discussed.

Four themes

The work of the ISB is based on ten papers produced for a preparatory workshop (Bellagio, May 2012) plus eight additional papers commissioned by the ISB. Four themes are identified:

Measuring access and estimating its impact with the following *Conclusion: A FUA initiative based on cooperation between academics and practitioners should make a systematic effort to develop metrics for access improvement (as well as deterioration of access) for different economic actors and social groups that can capture the impacts on a wide variety of different beneficiaries. Developing appropriate models will have to be a key component in this work.*

The financing and organization of access with the following *Conclusion: A FUA initiative should make a systematic effort to map how different urban access systems are financed today, how the costs of services provided are distributed and how all this reflects*

constitutional principles, national legislation and local circumstances. No such empirically based map exists today.

The institutional design and governance of access with the following *Conclusion: A FUA initiative will need to think creatively about institutional design and governance. Many aspects could be considered including what to include and what to exclude in a more detailed analysis (it will e.g, be necessary to consider the extent to which land use and transport actually can be integrated). A deep dialogue between academics and practitioners with experience in urban governance will be necessary.*

The organization and financing of urban transport with the following *Conclusion: A FUA initiative should sketch possible forms of how integration between urban transport modes could be reflected in organization and cross-financing from wider sources of revenues than are used today – and perhaps ending up in one urban transport utility.*

Sketching the road ahead

This initiative is not a mainstream academic research program but rather a journey into uncharted and foggy terrains. The four themes are not written in stone.

The ISB view is that the first phase of a FUA initiative should run for 2½-3 years. Starting the first phase could well take more time than envisioned in the 2-2½ years suggested by the VREF. Two phases should be sufficient to test the viability of the ideas in this Road Map.

The first phase should focus on developing the analytical framework of the new paradigm for socially inclusive urban access including its financing and governance. This should preferably be done together with a couple of innovative cities that already are pushing the borders of the current time savings paradigm. This first phase should give a clear understanding of the issues to be addressed in shifting from the current to the new paradigm as well as an established network of young researchers willing to cooperate with practitioners on the new paradigm.

The second phase would then focus on testing and further developing the new access paradigm (and) its financing and governance through developing a series of case studies demonstrating how this paradigm would lead to specific conclusions of financing and its organization. These case studies could concern cities that, so to speak, could be considered to be next in line for pushing the borders of the current paradigm.

Academics and practitioners have to participate in both phases but with different intensities and styles of interaction.

Main Report

This Road Map is based on two contentions. First, that it is time for a paradigmatic shift in urban transport: away from a paradigm of mobility – called the *time savings paradigm* - towards a paradigm of socially inclusive access - called the *access paradigm*. Second, that this shift will require additional financing and thus new financial instruments, new forms of governance of access and of the organization of urban transport. The access paradigm will identify a wider set of beneficiaries of access than the time-savings paradigm, which in turn should open up for new, location-based financial instruments. Academics as well as knowledgeable practitioners will need to cooperate on analysis and implementation.

The Road Map is based on ten papers produced for a preparatory workshop (Bellagio, May 2012) plus eight additional papers commissioned by the ISB. Four overarching themes have been identified:

- measuring access and estimating its impact;
- the financing and organization of access;
- the institutional design and governance of access;
- the organization and financing of urban transport.

The first phase of a possible initiative would develop these themes – or revised versions of them – in a joint cooperation between academics and practitioners, hopefully together with innovative cities. A network of young researchers (post-doc) interested in working outside the mainstream and together with practitioners should also be established. The second phase would extend the conclusions and hopefully together with additional cities. The initiative should have considerable resources for communications and publications.

1. The ISB task

The ISB was set up by the VREF with the task to propose a road map for a possible VREF initiative on Financing Urban Access. The Road Map should include a project plan for a first full phase. The VREF indicated each phase lasting perhaps 2-2½ with a budget frame of 4-5 MSEK per year.

This road map and the project plan is the ISB proposal. It is supported by eight commissioned papers and ten papers from the preparatory workshop.

The proposed initiative is in line with the current VREF strategy. The VREF has during its FUT program invested in ten CoE's around the world with the common purpose to explore how to cope with the complexity of urban transport. The latest VREF initiative - the study of political leadership in the transformation of urban transport – opens up a new thematic

field: as a complement to the established urban transport research on WHAT to do, this new research field addresses HOW change is achieved and by WHOM.

This initiative on Financing Urban Access is in line with the emphasis in the VREF current strategy on affordability and on governance and change processes.

The VREF board has for some years discussed the need to better understand how urban transport presently is and in the future could be financed. The first step was an international workshop in Bellagio, Italy in May 2012. The proceedings will be published in the spring of 2014. This Road Map with its recommendations represents the second step. The ISB has consisted of José Viegas (International Transport Forum/OECD and chair, Caroline Gallez (IFSTTAR, Elliott Sclar (Earth Institute/Columbia), Fred Salvucci (MIT), George Banjo (former World Bank) and Måns Lönnöth. Mats Jarnhammar has been the technical secretary and Henrik Nolmark the VREF contact person.

2. The initiative – the case for a new paradigm for urban access

A possible vision for a VREF initiative could be

“to contribute to the understanding of the key role of ensuring socially inclusive access, including its financing in making cities and metropolitan regions equitable, productive as well as environmentally sustainable”.

Thus, a mission of the **VREF initiative** could be:

“to propose, in cooperation with forward-looking cities, analytical frameworks for how to achieve socially inclusive access including its financing and governance”.

“Socially inclusive access including its financing” – this is the linchpin phrase in the vision and the mission statements. This proposed road map is based on three propositions:

The first proposition is that *social inclusion* is somewhat of a stepchild in today’s urban transport planning, policy-making and implementation. Within the urban transport community, social inclusion is broadly seen as an “externality” - something that preferably “someone else” should take care of. Urban transport is different from other urban services such as water, education or health services where social inclusion is an accepted concept based on a long and strong analytic tradition of linking access to them to achieving economic and social progress.

The second proposition is that a *policy of socially inclusive access including its financing* is as much about land use and the organization of activities, more generally about the geographical distribution of opportunities, as it is about mobility – and also about financial instruments. Today’s guiding principles for urban transport financing shape and constrain the extent to which socially inclusive access can be provided. These principles also restrict the amount of revenues available and thus the possibilities of achieving a socially inclusive and ecologically sustainable access.

The third proposition is thus that a *new and expanded set of financial principles will have to be developed* which reflect more directly the relationships between access and the economic and social gains that access delivers.

This Road Map structures a proposal for a VREF funded project based on the contention that the current paradigm of urban access has run its course.

Cities are about opportunities for interaction and interaction requires access. Accessibility has been defined as the potential opportunities for interaction which in turn is determined by where people and opportunities are distributed and the ease of movement to reach the different opportunities. The current urban access paradigm operates as if accessibility depended merely on the ease of movement and thus on travel speed. Accessibility is improved through investments in infrastructure which in turn are evaluated primarily by the resulting savings in aggregated travel time. Today’s paradigm of urban access can be characterized as a *time savings paradigm*.

This paradigm was first formulated in the big US cities during the first decades after the Second World War. The paradigm subsequently spread to Western Europe. Oil was cheap, water was no problem, land around the cities was plentiful, household income was increasing and the middle class was growing. The markets determined the locations of the opportunities (homes, jobs, shopping, recreation, etc.) to which the transport sector should respond and its users should pay as in any other market. Property and real estate development drove transport planning. The working class was expected to gradually move to suburbs, buy cars and join the middle class. The rising tide would lift all boats. The end of wide-spread poverty seemed to be near. This paradigm had broad public and thus political support and Robert Caro's biography of Robert Moses describes well why.

It was also a Keynesian paradigm for jobs in the construction and the automobile sector. A whole political economy was built around this time-savings paradigm, which explains its continued political support also today; it is still in full swing in China and many developing countries. But the negative impacts of roadway disruption of urban neighborhoods, parks, and wetlands, contamination of air and water supplies, social isolation of poor neighborhoods, and persistent growth in congestion have raised and still raise doubts. In many ways, the time-savings paradigm is a paradigm of unrecognized negative externalities, urban sprawl and inequitable distribution of the benefits of transport investments.

Today's urban future is different and a *new paradigm is needed*. Today's urban future is about the world and not only about North America and Western Europe. The world's urban population is expected to double in some 40-50 years. Cities of all sizes in the developing world are growing at unprecedented rates. So is motorization, so is sprawl and so is the political pressure for transport investments that save middle class time. The social inequities neglected by the current travel time-focused paradigm are being reinforced.

In the already urbanized world of the developed countries with more or less stable populations some cities grow and others are stagnating or even contracting. As the city centers no longer are dominated by polluted and over-populated slums, high access becomes more valuable and the middle classes are moving back into the cities. Households with lower incomes are pushed out to low access suburbs with less expensive housing, low density of commercial and public facilities and inadequate transport. In the developed world, urban sprawl is the sprawl of the poor. But in the developing world it is the sprawl of the middle classes and of the poor leading to the paradox of investments made in highways leading to increasing car congestion while public transportation systems remain overcrowded because of underfunding.

The new paradigm will have to be based on both WHAT should be achieved and a deep understanding of HOW changes take place in urban affairs. The current paradigm was essentially based on post-World War Two politics where large majorities in the first couple of decades had a shared view of the future and therefore agreed on what to do. This broad consensus started to fragment, however, as congestion and pollution grew, neighborhoods were razed and habitats, wetlands and parklands were destroyed in the process of 'improving access'. China today appears headed long the same path as the US and Western Europe did in the first decades after the war and with possibly the same political implications.

The new paradigm will have to be different. Yesterday's broad majorities are now more fragmented. The politics of the new paradigm is more likely to be based on calculated ambiguities, with 'majorities' created when different 'minorities' agree to courses of action for sometimes contradictory motives. Creating stable conditions for the large scale financing necessary for achieving an urban access that is both ecologically sustainable and socially inclusive will require political leadership.

This is why a *new paradigm for urban access* is needed. The current paradigm is insensitive to social justice, weak on understanding the relations between access and social and economic progress and therefore also ineffective in mobilizing the additional necessary financial resources.

The new access paradigm must provide better and more informed answers. This Road Map is based on the belief that this is possible and that the time for a new access paradigm has come.

The social and economic costs of non-access and the corresponding benefits of access have to be much better understood and described. Only then will it be possible to estimate the extent to which investments in socially inclusive access also are economically productive.

In the current time savings paradigm, time savings typically make up some 70% of the benefits of the cost/benefit transport analyses. Of these time savings, some 70 % (i.e. 50% of the total benefits) come from time savings less than two minutes per trip. Small time savings are indeed noticed by their beneficiaries (who change path in response to them) but possibly should not constitute 50% of the social welfare gain accounted for in the justification for the project. Counting only time savings per trip larger than two minutes (an approximate threshold above which alternative, valuable uses of time can be arranged) would rearrange the order of project priorities and also make most projects not worth while under the current paradigm.

Projects rejected under the current paradigm may however be worthwhile under other criteria.

La Société du Grand Paris (SGP) has the task to build a massive new automatic metro double-ring of the Grand Paris development project (250 kms, 57 new stations and more than 20 billion euros). The ministry of Finance only accepts as benefits the time savings calculated along the current paradigm. The SGP argues, however, that the new metro system will produce agglomeration effects that should be included in the benefits of the projects. The Cross Rail project in London did just this: the assessments of agglomeration effects made clear and quantifiable the wider economic benefits that show the significant benefits of the project. This understanding broadened the political constituency for the project and helped to bring the property industry into participating in the investments. Similar discussions exist in the expansion of the Stockholm metro and the new 7th avenue subway in NYC. The new tram systems introduced in many French cities appear to have impacts on urban renewal and city life that are not accounted for in the current paradigm. Broadening the concept of benefits of investments in access broadens the identified class of beneficiaries and the political constituency and thus expands the set of potential sources of and political support for financial revenues.

The new access paradigm will emerge gradually as analytical methods evolve and political constituencies grow. Given the amount of data now available it should be possible to develop methods to assess a broader set of benefits for a more sophisticated segmentation of the population which in turn would create a broader constituency to increase support for expanded revenue sources. A political constituency could be built for the investment needs necessary in order to make access socially inclusive, ecologically sustainable as well as economically productive.

This broader constituency will need a corresponding academic constituency. Many researchers from different disciplines are working on the accessibility concept, but there is still no comprehensive view of the link between key issues of measuring, financing and governing access. Furthermore, the new access paradigm has to be assembled from widely different academic fields such as transport planning and land use development, finance and urban governance, the political science of different levels of government, urban sociology as well as the sociology of professional organizations and bureaucracies.

Studies and proposals from the academic world will have to be tested against the reality of urban contexts and urban policies. Innovative views of the problem might also be raised by practitioners and then explored by academics.

City leaders around the world look at their innovative colleagues. Cities today look at London and Stockholm for congestion charges and cities in the future will look at London and perhaps Paris for how to include agglomeration effects and effects on property values into their financing schemes. Regions grappling with the intertwined problems of excessive greenhouse gas emissions and the need to mitigate damage from flooding and extreme weather conditions may be experimenting with how to develop the political will to impose high carbon taxes to fund infrastructure remediation programs. Cities and regions that develop new access metrics will have many followers.

The VREF should aim to interest today's innovative cities and regions to take part in this initiative. Through this dialogue the necessary questions will be sorted out and defined in both academically rigorous and practically useful terms.

This Road Map is based on the observation that there already is a momentum for something new. The VREF should, through a dialogue with interested practitioners and academics within and outside of the current paradigm, give this existing momentum a further and decisive push.

How to organize this dialogue will be the biggest challenge of this VREF initiative

3. Building the analytical framework for the new paradigm

The analytical work on a new access paradigm should be based on the four overarching and interconnected themes that emerge out of the Bellagio workshop and the FUA Start-up phase:

- measuring access and estimating its impact;
- the financing and organization of access;
- the institutional design and governance of access;
- the organization and financing of urban transport.

Taken together, these themes provide the framework to structure the issues.

3.1 Measuring access and estimating its impact

Conclusion: A FUA initiative based on cooperation between academics and practitioners should make a systematic effort to develop metrics for access improvement (as well as deterioration of access) for different economic actors and social groups that can capture the impacts on a wide variety of different beneficiaries. Developing appropriate models will have to be a key component in this work.

The current time savings paradigm provides a convenient – but perhaps not very convincing – tool for decision-makers. Basically, benefits counted as time savings are converted into estimates of economic gains. A whole economic theory has been built around the justification of this conversion.

Nevertheless, this is the starting point for the new access paradigm. It will have to provide more convincing estimates of the benefits of improved and socially inclusive access even if the underlying measurements of access metrics are more complex. Only then will decision-makers start to think about the access paradigm.

The metric for socially inclusive access is discussed in the Bellagio papers by Fol-Gallez and Macario. The papers demonstrate both the need for these new metrics and the complexities of making the metrics simple enough for professional and political decision-makers. The ISB papers by Vigos & Martinez and by Paez take the discussion one step further and begin to flesh out possible approaches for a metric of social inclusiveness.

Extremely large amounts of data are now available that should make it possible to develop these new metrics for different social groups. It should thus be possible to develop methods that will demonstrate to decision-makers the effects of different courses of action for improving the social inclusion of access and supporting economic development. The idea is to replace the estimates of aggregate time savings in the current time savings paradigm. These new metrics will have to be developed in collaboration between academics and practitioners.

The next step will be more complex: to estimate the benefits of access – and the costs of non-access – to different social groups and economic actors, and their impact on society at

large. To what extent will improved access to more job opportunities for persons with few job opportunities translate into increased household income and thus a more robust city economy? And, conversely what are the social and economic costs if access deteriorates for low-income groups? How will different employers react to changes in access when they decide to locate their activities? How will property owners and real estate developers adapt? The list of questions is long. Transport modelers are key to any new paradigm, but they also need to develop their understanding of other social sciences.

The impact of access is also linked to the financing of this access, however. Improving access to the point that it is socially inclusive will require additional financing on a large scale which in turn will require broad and stable political support. It is not likely that the present user fees will be sufficient, so this additional financing will have to come from local, regional or national taxes such as income tax, sales taxes, property taxes, or fuel or carbon taxes. Given the present (and coming) economic pressures on local and/or regional and/or national governments, it is not likely that social inclusiveness alone will be able to generate this political support. Large scale investments will need the support of a broad base of beneficiaries whose benefits will have to be accounted for.

3.2. The financing and organization of urban access

Conclusion: A FUA initiative should make a systematic effort to map how different urban access systems are financed today, how the costs of services provided are distributed and how all this reflects constitutional principles, national legislation and local circumstances. No such empirically based map exists today.

Organization and finance always have to be seen together. They are two sides of the same coin even if they tend to be seen as conceptually separate silos. However, very little empirical analysis exists of finance and organization of urban access.

Following Hansen, urban access should be seen as the combination of the geographic distribution of opportunities and the ease – or cost – of reaching these opportunities. The institutional organization of access reflects both the organization of the use of land – the distribution of opportunities - and the organization of mobility.

The current time savings paradigm sees the geographic distribution of opportunities as given, determined by various social, political and economic forces external to the transport sector. In this paradigm, financing is about how transport and mobility should be financed largely based on user fees, without recognizing or assessing the benefits by employers and real estate owners. Not even this more restricted area is well covered empirically.

The new access paradigm must start with the connections between location and movement. It also needs to understand how a whole variety of legal and financial instruments and variables influence both location and movement. Taxation of households, for example, influences both housing and transport costs for households and therefore also the distribution of land use. Whether the distribution of legal control of land use between different levels of government reflects or not the distribution of the legal and financial control of urban transport is another example. Again, empirical studies are needed.

To untangle these relations between location and mobility across different political and constitutional systems is no easy task and it is much too early to say how far a new paradigm might reach.

The Bellagio papers of Eliasson, Viegas and Salvucci and the ISB papers of Gwilliam and Zhao/Block-Schatcher begin to structure the connections between location and mobility.

Eliasson addresses how time, space and service quality could be reflected through technology in a pricing system for urban transport. Viegas takes the challenge to the next level in discussing and sorting out the design of empirical studies of the possible principles for raising revenues from direct and indirect users as well as from different beneficiaries of the transport system. Salvucci explores the difficulties of integrating new financial models into the political context of governance. Gwilliam goes through the standard theories of financing urban transport and demonstrates quite clearly how the assumptions of these theories are dependent on constitutions, political structure and the quality of local and central administrations. Zhao/Block-Schatcher take this discussion one step further by illustrating how two cities in China finance their urban transport investments through (almost perverse) mechanisms that in turn have quite definite impacts on urban form and therefore on access itself.

Four observations (at least) emerge from these papers:

- First, there is no such thing as a generic best practice. Conditions differ between countries and often also between cities within countries. Options that are available in one country may very well be totally out of bounds in another. All best practices are specific to the political and constitutional context in question. Detailed empirical studies could show whether a handful of generic situations are possible to identify.
- Second, the financial tools available in any given context should be analyzed empirically in terms of their impacts on urban form and therefore also on access in the future.
- Third, the future financing needs are considerably higher than what today is available, particularly when considering the challenges and large potential benefits of megaprojects. New principles and thus new institutional forms for how to turn the values of access into financial revenues will have to be developed.
- Fourth, the interdependence of land use and mobility – which define access – is only recognized very partially. Some cities- notably the city states of Singapore and Hong Kong – are capable of some integration but most are not. Most metropolitan regions will have to settle for the second or even third best solutions. Here again empirical studies would be helpful.

A systematic effort to map how different urban access systems are financed today is needed. No such empirically based map exists today.

3.3 The institutional design and governance of access

Conclusion: A FUA initiative will need to think creatively about institutional design and governance. Many aspects could be considered including what to include and what to

exclude in a more detailed analysis (it will e.g., be necessary to consider the extent to which land use and transport actually can be integrated). A deep dialogue between academics and practitioners with experience in urban governance will be necessary.

The new access paradigm would in principle require considering modifications in land use and density at the same time as transportation investments, suggesting a much more complex institutional design than the current time savings paradigm. Striking the balance between the desirable and the doable will be necessary (and the outcome may moreover differ between cities due to capacity of administration and governance) and has to be based on the empirical studies of access and of financing and organization discussed in the two previous sections.

This institutional design should reflect the interests of the different beneficiaries of improvements in access (middle class and less-than-middle class ..., employers, private and institutional property owners, real estate developers and so on) as well as the respective financial flows from these different groups. It should also reflect the current wisdom of how to achieve operational efficiency in urban settings.

Several papers begin to address this theme of institutional design, such as Vasconcellos in the Bellagio book and the papers by Dodson et al and Allaire et al under the ISB initiative. The paper by Zhao/Block-Schatcher is also relevant.

First and foremost comes physical planning and the extent to which land use and transport infrastructure are treated in separate or integrated silos.

In principle, urban specialists agree that land use and transport infrastructure should be better integrated. In practice, however, this has shown to be extremely difficult to achieve apart from the odd success here and there (Tokyo, Hong Kong and Singapore). The politics of land use and the strong financial interests in the real estate industry tend to continue to drive sprawl and thus override the academic principles.

It is possible to see signs of an emerging anti-sprawl trend, however, in the growing cities in the developed world (but not yet in cities in developing countries). Practical tools for measuring access and estimating its impact on different stakeholders should reinforce this trend.

The papers mentioned above indicate that a broader tool box than just physical planning will be needed for reigning in sprawl. Most importantly, financial mechanisms and instruments have to be considered, such as taxation systems (various forms of tax deductions, property taxes and the like) and principles of rate setting in the use of the urban transport system (private as well as public). The mechanisms through which the urban transport system is financed will themselves have a powerful influence on urban form and thus on access (which is addressed in the paper by Zhao/Block-Schatcher).

Additional aspects should include the management decisions of key public services such as the location and quality of schools and health services. The quality of public schools appears to have a powerful impact on where households, that can choose, choose to live. Halden (2009) describes how a proposal to relocate a hospital in Liverpool was reconsidered once the impact on the need for additional transport infrastructure was taken into account.

It will be necessary to think creatively about institutional design and governance in a deep dialogue between academics and practitioners with experience in urban governance.

3.4 The organization and financing of urban transport

Conclusion: A FUA initiative should sketch possible forms of how integration between urban transport modes could be reflected in organization and cross-financing from wider sources of revenues than are used today – and perhaps ending up in one urban transport utility.

Institutional organization is key to urban access. The new access paradigm must have a clear thought about how urban transport is to be organized and thus financed.

The current time savings paradigm reflects the idea that urban transport is a market where people make individual choices. The different modes of urban transport are therefore organized in separate silos, each with its own financial flow, based on the idea that competition between models provides the best solutions. There is a strong bias towards user fee finance, which inherently limits available funding and reduces access to the socially disadvantaged.

The new access paradigm will have to be based on integration of the modes. It will also have to have a broader financial base and a correspondingly broader institutional base in order to reflect its broader social and economic and therefore political mandate.

The history of urban transport demonstrates how important organizational innovations are. The New York Port Authority solved a problem that previously was insurmountable – how to build tunnels under and bridges over the rivers around Manhattan. Later, the tolls from these and other bridges and tunnels started to contribute to the funding of the NYC mass transit system. RATP was, when it was conceived after the war, a revolutionary idea of geographical integration. In the 1970's it was extended geographically and also organizationally. TfL, Transport for London, is a more recent innovation with the broadest set of responsibilities of any metropolitan transport organization (congestion charges, streets, buses, the underground and a so far not utilized authority to tax parking). TfL has also managed to get the business sector to accept a more comprehensive implementation of capturing the business property value of access (Crossrail) than seen elsewhere. The Hong Kong MTR has a well-developed real estate business that adds significantly to the cash flow, but has no control over the bus services, and is overall less integrated than TfL.

All these organizational developments reflect the evolving understanding of the need for integration and thus also of financing. There are reasons to believe that new organizational forms for urban transport could evolve both rapidly and in unexpected directions.

Information technology is likely to unlock new alternatives, but run the risk of reinforcing the user-pays bias. Congestion charges are now much easier to implement than before and could evolve into user charges for urban roads, which in turn could theoretically co-finance public transport. Out of this, new organizations could be born. Parking is the link between land use and transport. Taxes on the owners of parking resources and IT-controlled parking could evolve into a dynamic and integrated part of the urban access organization.

Smartphones could stimulate organized minibus transport also in the cities of the developed countries and contribute to address the so-called first/last mile problem.

The total amount of car traffic could well decrease as car pools and car sharing and, even more radically, driver-less cars offer the flexibility of the private car while significantly reducing the need for owning cars. The urban transport system in developed countries and perhaps also in developing could well look very different within a couple of decades.

There are indications of these possibilities in Viegas' paper in the Bellagio book and a thorough understanding of how present financial flows could be morphed into an integrated organization would be a logical next step. Gwilliam's paper mentions the idea of urban road funds. Robert Yaro explores the idea of one single and integrated urban transport utility, regulated much along the same way as an electric utility.

A rather natural step would be to cover the total costs for operations and maintenance of the urban transport system (private and public) by user fees (transit, roads and parking) while major investments in existing and new capacity would be covered from access-related fees or taxes, but this could raise equity concerns unless complemented by a broad set of assessments on businesses and real estate beneficiaries. Obviously, organizational and thus financial integration would also open up a hornet's nest of issues around governance.

Finally, it should be recognized that above the level of the mayor, regional, national, and multi-national levels are important. In the US, federal funding has been an element in institutional organization for over 50 years, and in Europe the OECD and the EU are important. The World Bank plays an important supranational role. It is unlikely that sufficient funding can be generated purely at the local and regional level to fund equitable accessibility. Even in the unusually successful Crossrail case, only one-third of the capital was raised through the business rate surtax, and at least one-third of the cost will be covered by National Grant.

4. Sketching a road ahead

This initiative is not a mainstream academic research program but rather a journey into uncharted and foggy terrains. The four themes sketched above should be seen as an initial attempt at structuring the research field. They are not written in stone.

The ISB suggests that the first phase of a FUA initiative should run for 2½-3 years rather than the 2-2½ years suggested by the VREF. The reason is that starting the first phase could well take more time. Overall, the two phases should be sufficient to test the viability of the ideas in this Road Map.

An initial sketch of these two phases of the initiative could be the following:

The first phase should focus on developing the analytical framework of the new paradigm for socially inclusive urban access including its financing and governance. This should preferably be done together with a couple of innovative cities that already are pushing the borders of the current time savings paradigm. Partners from industry (telecommunications, mobility industry) and real estate could also be sought. The results of this first phase are two-fold: first, a clear understanding of the issues to be addressed in shifting from the current to the new paradigm as well as the general guidelines for how to approach the issues; and, second, an established network of young researchers willing to cooperate with practitioners on the new paradigm. The research should be both conceptual and empirical.

The second phase would then focus on testing and further developing the new access paradigm (and) its financing and governance through developing a series of case studies demonstrating how this paradigm would lead to specific conclusions of financing and its organization. These case studies could concern cities that, so to speak, could be considered to be next in line for pushing the borders of the current paradigm.

This two-phase approach should make it possible to better understand how circumstances vary across countries including across levels of development. There does not appear to exist a deep enough analysis of what is generic and what is specific and contextual between different countries. The purpose of the first phase is therefore to separate the generic and the specific in order to be able to first identify and then study specific cases during the second phase.

Academics and practitioners have to participate in both phases but with different intensities and styles of interaction:

In the *first phase*, the research is conceptual as well as empirical of the situation and the observed paths of evolution in a handful of innovative cities. The research will be carried out by the academics/researchers. Practitioners from the partners and also from other quarters will need to be involved, however, in order to first discuss and then define the relevance of the different approaches suggested by the academics. These practitioners should be expected to participate quite intensely, and it is likely that already retired politicians and high level technical staff in administration or consultancies are more likely to find the working time and the emotional distance necessary. Therefore an additional outcome of the first phase would be a network of young researchers well versed in working together with practitioners and also willing to continue to work on further developing the new paradigm.

In the *second phase*, the research should focus on further cities that are willing to consider the new paradigm. This work would be more action-oriented, possibly in mixed teams of researchers and practitioners, each team developing a proposal for alternative action (based on the new paradigm) in a specific case city. Hopefully, three to four innovative cities/regions would participate in this phase. The network of young researchers established during the first phase should be expanded during this second phase and progressively encompass all those who recognize the value of the proposed paradigm and are willing to dedicate their research activity along those lines.

The VREF should make extensive efforts to encourage and recruit a multidisciplinary network of young researchers (the word “young” should not be taken too literally) willing to work on practical cases and together with cities and other partners. By implication, this means post-docs and not PhD students. The VREF should therefore announce this initiative soon and broadly. The appropriate channels need to be determined.

5. The first phase

The result of the first phase is to develop a clear understanding of the issues to be addressed in shifting from the current to the new paradigm as well as the general guidelines for how to approach the issues.

The starting point for identifying the questions leading up to the new paradigm should be the four themes identified earlier:

- measuring access and estimating its impact;
- the financing and organization of access;
- the institutional design and governance of access;
- the organization and financing of urban transport.

The current time savings paradigm may be inadequate but it does have one major advantage: it is simple, straightforward and easy to use. A stack of models exists for estimating the time savings from different investment alternatives. Nevertheless the current paradigm is a default option since too many obvious aspects of urban life and thus of urban politics are left outside and thus seen as “externalities”.

The new access paradigm with its emphasis on financing socially inclusive access therefore has to pass two key tests: first, it has to reflect better the realities of urban life and politics and, second, it has to be practical and easy to communicate and understand. The new paradigm will be more complex than the existing one but it cannot be so complex as to be unusable.

Access is inherently cross-cutting between transport, land-use, housing, education, provision of green areas, healthcare, commercial and social services and so on with each sector having its own professional, financial and governance structure. A too encompassing definition of access will be too cumbersome for practical use. Much thinking will have to go into how and where to draw the line between the desirable and the practical, what to include and what to exclude.

The ability to organize the dialogue between academics and practitioners will be decisive. The first phase should therefore preferably be centered around innovative cities already pushing the boundaries of the current paradigm (London, Paris, perhaps a city or two in Asia come to mind). The initiative should also benefit from partnership with industry. Several companies, including very large ones, are looking at urban mobility, smart cities, new forms of car use, the technological potential for user fees but also at methods for processing very large amounts of data from sometimes unorthodox sources. The real estate industry as well as the housing industry may also be interested. Establishing a partner network would be a major achievement.

6. The second phase

At this stage, the outline of a second phase can only be indicative. The first phase will determine the final structure. If and when the first phase manages to create a strong network of partnerships all bets are off about what a second phase might look like.

With these caveats, the following could be said today of the purpose of a second phase:

- 1) to apply the academic work begun in the first phase to the political/professional challenges of influencing with the aim to improve ongoing urban development; and
- 2) to analyze the extent to which the reframing ideas evolved during the first phase are useful for or adaptable to practitioners.

At the end of the second phase the initiative should be able to approximately answer the following thematic question *“How could socially inclusive urban access be financed and governed in a selected group of innovative cities?”*

The general strategy of the second phase is to extend the practitioner’s network already established in the first phase to include new groups directly involved in urban development or redevelopment efforts.

The new paradigm should evolve around concepts for access, finance, organization and governance. Three to five diverse cities of varying sizes around the world should be found where mayors, city leaders, and multi-city organizations are willing to allow research teams to have access to data and to the local practitioner networks. Depending on the depth of engagement accepted by those mayors and city leaders and also depending on which aspects of the new paradigm they find the most interesting, two to three national and supranational organizations should be included. The second phase could be structured as either a **prospective action research** project or a **case-based workshop for practitioners or a combination of both**.

New planning methodologies for measuring access and estimating its impacts could conceivably lead to prospective action research, while ideas around financing, organization and governance could be subjects for the case based workshops.

The Prospective Action Research model would have research teams meet regularly with the local practitioner networks to review the ongoing work. The review could concern inquiries

about decisions taken, why other ways were not adopted and suggesting how a stronger emphasis in access may improve the approach.

These teams could be drawn from the research teams assembled in the first phase. They could also be substituted or extended via support from national associations of planners with local ties or local planning schools. Planning school faculties typically have members very involved in local planning efforts who would be amenable to ideas about socially inclusive access and its financing.

There are various reasons why local political leaders could prefer to cooperate with an external network of academics and practitioners. Mayors can at times value the existence of outside groups to help float ideas that have potential but that for a variety of reasons the mayor and other local leaders do not want to be directly initially attached to them. In addition, outside researchers do not generally have a local constituency base that might raise political concern for the mayor.

The Case Based Workshops for Practitioners could be adopted where the ramifications of the actions suggested would need to be more thoroughly analyzed. It could be built around a series of workshops for mayors and other high level officials around specific themes (such as new forms of finance, new forms of organizing urban transport and so on). Questions about urban access and finance would frame the workshop. The workshop itself would be arranged around a set of case studies of actually taken development or redevelopment decisions. The workshop would ask “what would have been the outcome and expectable impacts if the development decision was taken through a frame in which access was in the foreground?” The researchers would have prepared alternative courses of action and the practitioners would react with their views about the respective technical, financial and social feasibility, as well as in general about their pros and cons.

The second phase should work in tandem with the first one. In preparation for the second phase, during the first phase, a small number of cities that are interested in pushing the borders of the existing should be identified. The already established network of practitioners would take part in a workshop in order to explore and better understand the pressures and constraints that the mayors of these cities might face. This would set the context for the second phase in ways that are innovative from both practical and academic perspectives.

7. Communication, dissemination and outreach

A dissemination and outreach part. The dissemination and discussion part should be designed to stimulate debates within wider audiences. Seminars, workshops and publications should be planned accordingly. Idea papers, research papers and studies should be well edited for maximum circulation and impact on discussion. The management should strive to make the initiative widely known within both academic and practical circles. Annual meetings/conferences should be planned from the start. A publication strategy should be developed and an editor seconded to the management.