Why Metropolitan Washington Needs a Smart Regional Plan

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Regional value: 22.5%

-34.5 to -0.2% (51)
0.0 to 11.5% (50)
13.1 to 22.3% (32)
22.5 to 40.2% (48)
41.3 to 75.6% (44)
78.6% or more (47)

Population change by municipality, 1990-2004  Source: U.S. Census Bureau in Planning the Future of Twin Cities, Orfield & Luce
# WHY METROPOLITAN WASHINGTON NEEDS A REGIONAL PLAN

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EXECUTIVE SUMMARY

This Proposal/Initiative goes beyond the Visioning exercise presented by International Urban Alliance (IUA) in July 2017. It is more pragmatic, focused on problem-solving, and meant to bring fresh insights into critical strategic issues of the National Capital Region from an international perspective, starting with the backbone of the region's mobility and accessibility, the Washington Metrorail and ending with the development of a Smart Regional Plan (Section 1).

The problem-solving approach described in Section 2 is holistic and regional, in the spirit of the writings of Elisa Barbour and Michael Teitz from Berkeley (A Framework for Collaborative Regional Decision-Making, E. Barbour and M. Teitz, Public Policy Institute of California, 2001). They propose new regional strategies, with a pragmatic, problem-solving focus, and make the case for effective regional/metropolitan planning.

While the role envisioned by Barbour and Teitz for the state in the new regional strategies might not directly apply to the Metropolitan Washington Region because of its tri-state uniqueness, the key goals identified certainly apply, and they include efficient use of existing infrastructure, compact development, provision of affordable housing, streamlined regulation, economic competitiveness, regional education balance and workforce development, reinvestment in inner city areas, public participation that enhances equity, preservation of critical resource areas and open space, and pollution reduction.

The holistic/systemic approach to problem-solving exploits the synergies between the various aspects of development, unleashes creative thinking, and unlocks hidden assets to boost growth and prosperity. The synergies involve improving the quality of life, in order to attract and retain talent and young professionals, and addressing regional inclusiveness, including the east-west socioeconomic divide. A major theme in an integrated regional approach and plan is the theme of reducing waste: underutilized public transportation and roads, urban sprawl, suburban low-density developments, and the underutilization of the human resources.
Section 3 of the paper examines the themes of regional/metropolitan planning and governance from an international perspective, in an attempt to identify the most appropriate governance structures and mechanisms for the Metropolitan Washington Region, and the answer is local governments cooperation and collaboration with the private sector and the civic society. An entrepreneurial solution for funding and fixing the Washington Metrorail cannot be achieved without the approval of the federal government, the District’s Mayor, and the Governors of Maryland and Virginia. Hence the ambitious initiative of the Greater Washington Partnership, which most likely intends to bring all the stakeholders to the table by extending the National Capital Region from Baltimore to Richmond.

Section 4 describes in detail a strategy of addressing the Metrorail funding by combining the Metro planners' integrated land use – transportation approach, with the 10 initiatives of the Long Range Plan Task Force of the Transportation Planning Board, and the European Commission’s Sustainable Urban Mobility Planning (SUMP) approach in an attempt to alleviate the region’s traffic congestion. The author is looking at the potential of technology and innovation in regional transportation and transit, and examines the role of the regional inclusiveness as a critical factor in boosting Washington’s global competitiveness.

Finally, Section 5 touches on two other issues impacting on regional mobility and transit: 1) a proposal for a World Technology/Research Park in the Metropolitan Washington Region, for the purpose of global competitiveness, which should bring all jurisdictions to the table, ready to cooperate and collaborate – just like the Amazon’s bid for their second headquarters, and 2) High Quality of Life and Technology to attract and retain talent and professionals in the region.
This Proposal/Initiative goes beyond the Visioning exercise presented by International Urban Alliance (IUA) in July 2017. It is more pragmatic, focused on problem-solving, and meant to bring fresh insights into critical strategic issues of the National Capital Region from an international perspective, starting with the backbone of the region's mobility and accessibility, the Washington Metrorail and ending with the development of a Smart Regional Plan.

The intent of the Proposal is to bring fresh insights into addressing critical strategic issues of the National Capital Region from an international perspective, starting with the backbone of the region's mobility and accessibility, Washington Metrorail and proposing the development in the end of a smart regional plan. **International Urban Alliance** (IUA) is a 501(c)(3) company based in Bethesda, Maryland, which was founded by Johns Hopkins University international urban fellows – a program that has been functioning since 1969. IUA has five regional centers in Europe, one in **Ottawa, Canada**, one in **Shanghai, China**, and one in the **Gold Coast, Australia**.

Through its members and its regional centers, IUA intends to document and apply the experience of funding rail and metro systems in Japan and China – Tokyo and Hong Kong, respectively – and the European experience and research in **Sustainable Urban Mobility Plans (SUMP)**. Traffic decongestion in many European metropolitan areas is approached by planners who use the tools developed by the Directorate-General for Mobility and Transport (DG-MOVE) as well as German GIZ norms and standards. IUA is proposing to compare and contrast the U.S. experiments and experience in regional and metropolitan governance and planning with the rich **European experience and research in regionalism**, as promoted by the Directorate-General for Regional Policy (DG-REGIO).
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The European vision of mobility, connectivity, and accessibility is a holistic, regional, and cooperating one. The Sustainable Urban Mobility Plan (SUMP) concept, developed over a period of almost twenty years, and supported by KonSULT, an approach based on 64 policy measures to alleviate traffic congestion, and MARS, a simple integrated land use-transportation model, has been applied in tens of European cities, as a holistic, regional, and participatory concept.

IUA’s intent is to collaborate with the outstanding planners in the Metropolitan Washington Region and with top U.S., Canadian, European and Asian specialists in transportation and land use planning, in order to identify and apply the most relevant international experience to the Washington region. The approach will build on the studies and forecasts of the Transportation Planning Board (TPB) and their Long Range Plan Task Force’s recent 10 initiatives to improve transportation in the region, as well as the Metrorail (WMATA) planners’ effort to fund and fix the metrorail by connecting mass transit with land use development around the existing transit stations.

The author of this Proposal, and IUA President, belongs to both worlds, and has consulted and contracted for the World Bank, USAID, DFID and JICA over the past 25 years. Dr. Enache has had significant experience with Brussels, European mobility and urban and regional planning, and studied and lectured on U.S. – European comparative urban planning.

2. THE CHALLENGE

The holistic/systemic approach to problem-solving exploits the synergies between the various aspects of development, unleashes creative thinking, and unlocks hidden assets to boost growth and prosperity. The synergies involve improving the quality of life, in order to attract and retain talent and young professionals, and addressing regional inclusiveness, including the east-west socioeconomic divide. A major theme in an integrated regional approach and plan is the theme of reducing waste: underutilized public transportation and roads, urban sprawl, suburban low-density developments, and the underutilization of the human resources.
2.1. Why the Regional Approach and Planning are Critical

Quite a few long-range plans have been developed for the Metropolitan Washington Region. Region Forward: A Comprehensive Guide for Regional Planning and Measuring Progress in the 21st Century developed a vision, goals, and targets for a more accessible, sustainable, prosperous, and livable metropolitan Washington. Additional plans studied are: Economy Forward, MWCOG report Place + Opportunity: Strategies for Creating Great Communities and a Stronger Region (2014), Momentum, and the 2015 Regional Infrastructure Report.

The Roadmap for the Washington Region's Future Economy (Stephen S. Fuller, December 2015) contains excellent documents and analysis, reflecting the work of several organizations, under the leadership of the Metropolitan Washington Council of Governments (MWCoG) and the 2030 Group. The challenges of population growth, accelerated urbanization, transportation/mobility/accessibility, climate change and environmental sensitivity, require all a regional strategy and vision, and some form of regional governance and planning, in a country which has a long and entrenched tradition of local government planning and action.

As Miller and Cox explain in their book (Governing the Metropolitan Region: America's New Frontier, D.Y. Miller and R.W. Cox, Sharpe, London, 2014), the interest in metropolitan regions took place in waves in America, starting with the first wave of decentralization from the city in early 1900s, and a second wave in the 1960s and 1970s, coincident with the massive post-World War II decentralization. The third wave of interest occurred in the 1990s, primarily as a reaction to the globalization of the world economy and the lack of sustainability of suburban and exurban sprawl (Reflections on Regionalism, B. Katz, Brookings, 2000).


Governing metropolitan regions poses a major dilemma, according to Miller and Cox: creating regional institutions that are divorced from local governments or are created in spite of local government institutions are equally flawed approaches, as the regional institution lacks the underlying credibility necessary to be effective. They believe that one way to addressing this dilemma is to think of metropolitan regions as networks. It is a pragmatic approach, which moves the argument from institutional authority to networking, cooperation, and collaboration, and enlarges the participation to include businesses and the civic society in addition to local governments. The role of states and local governments vis-à-vis metropolitan institutions will be further discussed in Section 3 of this report.
The current vision of metropolitan regions is that of City-Regions \textit{(The Rise of the “City-region” Concept and its Development Policy Implications, A. Rodriguez-Pose, European Planning Studies, Vol. 16, No. 8, 2008 and City-Regions in Europe: The Potentials and the Realities, I. Tosics, Rotterdam, 2007)}. The concept, enriched by technological advances, is explained by the Royal Town Planning Institute (RTPI) in a recent position paper \textit{(Better Planning: Smart City-Regions, Position paper, The Royal Town Planning Institute, September 2017)}. The British face major challenges, including addressing the housing crisis, boosting productivity, reducing inequality and shifting to a low-carbon economy. These challenges require local governments to work together across sectors like housing, transportation, health, and environment and focus on the regional scale of city-regions.

Urban and regional planning in the UK evolved from local autonomy to regional planning and state intervention in the post-World War II period, and then from regional planning to localism and privatization during the Conservative governments of 1979-1997, when public investment was reduced, and transportation, utilities, and heavy industries were privatized. The current interest is in devolution to English city-regions, an agenda which was present in various forms since 1997, as illustrated by the Greater London Authority established in 2000, followed by the Greater Manchester combined authority of 2011.

While devolution in the UK creates the potential for combined authorities to plan strategically across geographical and sector boundaries, and to take an integrated approach to housing, transportation, health, and the environment at the city-region scale, there are still major challenges related to jurisdictional fragmentation, local governments' lack of resources and capacity, public engagement etc. To respond to some of these challenges, the British are turning to technology and a tech-driven agenda, and smart cities in an effort to transform the planning system. The goal of RTPI is to have smart city thinking improve strategic planning, in a response to the new global standard for planning – the New Urban Agenda (NUA).

\section*{2.2. Why Metropolitan Washington is a Unique Region}

The history, culture, and evolution of settlement systems in the U.S. makes America significantly different from Europe, and other regions of the globe. The strong tradition of local governments, the home rule present in some regions, and the preference of Americans for small government, space and freedom, led to more \textbf{jurisdictional fragmentation} than one encounters internationally. There are many regions in the U.S., such as Minneapolis-St. Paul or New York, with hundreds of local governments, all competing each other, and with modest resources and capacity to solve problems.
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While the values of regionalism have become much clearer recently (Regionalism and Realism – A Study of Governments in the New York Metropolitan Area, Benjamin and Nathan, the Brookings Institution, 2001), its legal and constitutional barriers, and the limits to metropolitanism are also clear. In their narrative of the Port Authority of New York and New Jersey, Benjamin and Nathan describe an admittedly successful operation which lasted many decades, an interstate operating agency, formed in 1917 under the Compact Clause of the U.S. Constitution. Yet their story describes the hurdles of an agency that has always worked under the upper hands of the two Governors.

In spite of the relative small number of jurisdictions, Greater Washington is really a special case, with multiple divides:

- The states of Maryland and Virginia, the District of Columbia and the Federal Government
- The Potomac natural/physical barrier
- The East-West economic and social divide
- The political/party divide

The jurisdictions are naturally engaged in a fierce competition, in an attempt to attract business and resources to their own turf. The jurisdictional disputes and negotiations will always be there. For the Roadmap to become operational, and the WMATA Connect Greater Washington to be implemented, the recommendations must go beyond urging the local governments, universities, and businesses to cooperate, to stop competing each other unfairly, and start working together for a bright future for Washington. The jurisdictions, and in general all actors will only cooperate (while still competing among themselves) if they all have an ambitious common goal and concrete action plan (like Burnham’s celebrated Plan of Chicago of 1909), with clearly stated benefits for each actor, and with the potential of a multiplier effect for the region by leveraging all the regional internal strengths and resources.

As the capital of the United States of America, Washington could and should develop more ambitious and more entrepreneurial plans for the future and aim at becoming a major global player, highly competitive, and a world leader in innovation, technology and quality of life. Washington is known for its traditionally weak entrepreneurial leadership, due in part to the strong conservatism in its culture, and in part to its sheltered position as “federal town”. Entrepreneurship is by definition, ambitious and aggressive.
2.3. The Regionalism Imperative: Problem Solving in the Region - Going Full Circle

While each aspect of Washington’s development has been considered and analyzed in depth and in a highly professional manner, the synergies between all those aspects have not received sufficient attention. And it is precisely those synergies that bring along creative and sustainable solutions to urban problem solving. The imperative of funding and fixing the Washington Metrorail system has generated many ideas, policies and initiatives, yet a longer term, sustainable financial solution based on private initiative and entrepreneurship, like the rail systems in Tokyo and Hong Kong, has not been considered yet. Funding the Metrorail will not resolve by itself the urban mobility and the mass transit in Washington: automobile traffic, parking, app-based mobility and non-motorized mobility must be considered region-wide, along with many policy measures to fight traffic congestion, optimize the use of land, and change the behavior of city’s inhabitants.

Anthony Downs’ book (Still Stuck in Traffic: Coping with Peak-Hour Traffic Congestion, Brookings, 2004) is a realistic and sobering account of the challenges brought about by the American way of life and the reign of the personal automobile, in spite of the more optimistic smart growth advocacy (Dead End: Suburban Sprawl & the Rebirth of American Urbanism, B. Ross, Oxford University Press, 2014).

The synergies in the problem-solving approach involve improving the quality of life, in order to attract and retain talent and the young generation – the millennials, along with regional inclusiveness, including the East-West socioeconomic divide. A major theme in an integrated regional approach and plan is the theme of reducing waste: underutilized public transportation and roads, urban sprawl, suburban low-density developments, and the underutilization of the human resources.

The synergies must also go beyond the problem areas, into the regional governance aspects of growth and development. No matter what form of regional cooperation, leadership and governance works for Washington, it has to be implemented effectively. An ambitious and entrepreneurial solution to fund and fix the metrorail with development-based Land Value Capture (LVC), by a public-private autonomous agency, and without any government subsidies, will no doubt require the approval of the two states, District of Columbia, and the Federal Government.

Europe is a good example of regional governance, with a variety of approaches in various states and planning cultures. Great Britain, which has had traditionally strong regional governments, is currently pushing for establishing the office of “regional Mayor” in at least five regions. The British are pursuing three types of institutional integration: 1) horizontal: between sectors within an authority; 2) spatial: between adjacent authorities; and 3) vertical: between tiers of government.
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The figure below illustrates the synergies involved in attempting to address the problem of funding and fixing the Washington Metrorail. A more detailed picture is presented in Section 4 – Problem solving: Funding and Fixing the Washington Metrorail.

The same issues would have to be tackled if the problem solving were focused on reducing waste in the region, in order to make the region more aggressively competitive globally. Regional transportation, traffic congestion, mass transit, quality of life and affordable housing, and inclusiveness, are all key aspects in addressing waste reduction.
The same thinking applies to the goals of improving the quality of life and regional inclusiveness (the next two pictures). It would be significantly more difficult to achieve the proposed goal without a REGIONAL PLAN, supported by a REGIONAL GOVERNANCE structure, and powered by technology, hence the idea of a Smart Regional Plan.

Problem solving approach for improving the quality of life

Problem solving approach for achieving regional inclusiveness
3. REGIONALISM, REGIONAL PLANNING, AND METROPOLITAN GOVERNANCE

Looking at regional/metropolitan planning and governance from an international perspective, helps identify the most appropriate governance structures and mechanisms for the Metropolitan Washington Region - and the answer is local governments' cooperation and collaboration with the private sector and the civic society. An entrepreneurial solution for funding and fixing the Washington Metrorail cannot be achieved without the approval of the federal government, the District’s Mayor, and the Governors of Maryland and Virginia.

3.1. The Rise of Regionalism: An International Perspective

While local jurisdictions in the Metropolitan Washington Region find it difficult sometimes to cooperate across the Potomac River, in the unique experiment of the European Community, cooperation occurs between neighbouring metropolitan areas and across national borders, sometimes between countries previously separated by the “iron curtain” (Spatial Governance across Borders Revisited: Organizational Forms and Spatial Planning in Metropolitan Cross-border Regions, C. Fricke, European Planning Studies, Vol. 23, No. 5, 2015). Yet things are not so simple and spectacular in Europe as they sometimes appear to be (Building a cross-border territorial strategy between four countries: wishful thinking? A. Decoville and F. Durand, European Planning Studies, Vol. 24, No. 10, 2016). The reason is that regionalism and regional experiments are not only a function of socioeconomic and political factors, but also entrenched historic and cultural traditions (Comparative Planning Cultures, B. Sanyal, Routledge, 2005).

David Hamilton (Governing Metropolitan Areas: Growth & Change in a Networked Age, D.K. Hamilton, Routledge, 2014) quotes European scholars who categorize local government systems in Europe in three groups:

1. The Franco group places a strong emphasis on democracy and is resistant to centralization reforms. The local government is political rather than functional.
2. The Anglo group has a cultural heritage based on efficiency, with local governments as the efficient and economic deliverer of local government services. These countries experiment with various forms of regional government that tend to centralize and consolidate local governments.
3. **The Germanic group** includes Germany and the northern European countries, and tends to place equal emphasis on local democracy and the efficient delivery of public services. Local governments have a strong constitutional status and a relatively high degree of policy-making autonomy and financial independence.

There has been a variety of approaches to, and experiments with, metropolitan governance in Europe (*Governing Metropolitan Regions in the 21st Century*, D. Phares, Sharpe, London, 2009). Many large urban areas, particularly those in the Anglo group, have tried a **tiered form of regional government**, but most have abandoned this form in favour of a more consolidated or **centralized form of government**. The countries in the Germanic group have moved to a type of new regionalism or a collaborative form of regional governance. A true consolidated system of government would continually require the annexation of outlying areas into the central city, which creates political problems, just like in Northwest U.S. (*Multi-level Governance Reforms: Overview of OECD Country Experiences*, OECD, 2017).

Europe has moved away from **the structural reform system to a collaborative or new regionalism form** involving a broad array of public and private actors. For example, Hanover metropolitan region is a public-private partnership in which the regional tier and the city of Hanover as well as major companies located in the region are engaged in economic development activities.

An interesting case for the Metropolitan Washington region is the **Frankfurt-am-Main region in Germany**. In 1975, a planning agency was established by the Land (state) to do regional planning for 43 municipalities in the region. It was a directly elected body with broad authority over planning including land use, transportation, and utilities. The agency had coordinating authority but no implementation authority. There was conflict among board members over regional versus parochial agendas, and the organization had difficulties in reaching agreements with the municipalities and service providers. It was abolished in 2000 and was replaced in 2001 with a regional association with no authority.

Recent research in Europe found few examples of currently well-functioning administrative models of **metropolitan governance**. The strong autonomy and identity of individual municipalities is a major reason for the resistance to structural reforms and lack of effectiveness of current regional governing systems. It looks like metropolitan governance would only happen through **cooperation among willing local government actors** (*Empowering metropolitan regions through new forms of cooperation: New perspectives on metropolitan governance*, L. van den Berg et.a., EURICUR, 2006).
3.2. Regional Planning and Metropolitan Fragmentation in the U.S.

“Fifty states, fifty different systems” is how Miller and Cox describe the fundamental tension that exists between a state and the local governments within its borders in the U.S. States vary considerably in the role played by the various types of local governments in each state. Some states prefer greater utilization of county government, other states rely heavily on special districts, while others emphasize cities and towns. A key point of comparison between states is the discretionary authority granted to local governments by their respective legislatures. The discretionary authority includes four characteristics:

- **Finance**: the degree to which a local government can raise revenues necessary to support the functions it has decided to undertake.
- **Function**: the ability of a local government to choose activities or functions it wishes to undertake
- **Personnel**: the ability of a local government to regulate and determine the makeup and responsibilities of its workforce.
- **Structure**: the degree to which a local government can define its own organizational structure.

Mills and Cox emphasize the role of the state in fostering the development of local government partnerships through the authorization of a variety of service-sharing approaches such as interlocal agreements, cross-jurisdictional arrangements, cross-jurisdictional reorganization, two-tiered governments, multi-jurisdiction organization, annexation, and the consolidation of services through the merge of departments or governments.

Jurisdictional fragmentation complicates the management of boundary-spanning public infrastructure, environmental pollution, crime, regional economies, and other problems that spill over the borders of one city to the next (Governing the Metropolitan Region: America’s New Frontier, D.Y. Miller and R.W. Cox, Sharpe, London, 2014). **Service-sharing arrangements** can be made through interlocal agreements (ILAs), e.g. parks, libraries, water management, waste management, law enforcement, fire departments and land management. Service-sharing agreements are being made for a variety of reasons: economic reasons, budget savings, new revenue streams, stimulating innovation, improving decision making, building complementary strengths, transferring knowledge and skills, increasing the level of service, and improving the work relationships.
Metropolitan Regions. The Federal Office of Management and Budget (OMB) has defined these regions as “statistical areas”, but over time they have come to take on more than a data collection role. The Washington Metropolitan Region is a good example where individuals, groups, organizations and businesses are beginning to act as citizens. The degree of fragmentation (“diffusion”) of the metropolitan regions has a major impact on the metropolitan governance. Regional scholars have defined a measure of fragmentation, the Metropolitan Power Diffusion Index (MPDI) as a single score that measures how many separate local, county, and special-district governments provide 11 common public services and how much each of those governments spends in providing those services.

Interestingly, Giuliano, in a 2007 paper in the Journal of the Transportation Research Board, examined the changing structure of decision making in public transportation using the MPDI score and concluded that decentralized and fragmented decision making gives veto power to local interest groups. One example in the Washington Metropolitan Region is the controversial proposal of the northern bridge across the Potomac.

Regional Governance. Among the arguments for regionalism and regional governance, the issue of resiliency is central. Resiliency gives a region a better overall capacity to deal with the issues confronting it, and that capacity is measured by 1) the economic strength of the region; 2) the characteristics of its citizens, and 3) the civic culture and institutions that are present in the region.

As public problems grew beyond the boundaries of any one government, given the structure of federalism in the United States, no authority was responsible for developing cross-boundary systems and protocols to address issues that were no longer solvable within a single jurisdiction. The federal government was severely limited in its ability and willingness to intervene. States, often dominated by rural and suburban interests, were unwilling to seek new ways of working together. Central cities would tend to isolate themselves from the rest of the region, in order to preserve the local political power, and suburbs might talk to their neighbor ring suburbs, but not the city.

The consequence of this situation was that two kinds of regional governing organizations were initiated, both by the federal government: one type of organization was transportation centric, to coordinate transportation both within and between metropolitan areas – primarily the interstate highway system, and another type is governance centric, to govern the region as a complex geopolitical entity that needs governmental coordination of key components including transportation, housing, economic development, regional assets, and water and sewer infrastructure. The regional governing organizations come under a variety of names: council of governments (COG), regional planning commission (RPC), regional council (RC), associations of governments (AOG) and Metropolitan Planning Organization (MPO).
The Metropolitan Planning Organization (MPO) is the key organization, particularly after the Intermodal Surface Transportation Efficient Act (ISTEA) of 1991 established a relationship between the federal government and a single organization within each of the metropolitan regions in the United States. That organization (MPO) – which in the case of Metropolitan Washington is the Council of Governments (MWCOG), is vested with the power to decide, not just recommend, which projects are to be undertaken and when. These powers strengthened the role of the MPO within the region and the state, with a focus on regional transportation.

Advocates for the centralized responses in the late 1990s starting moving away from advocating for a restructuring of government to advocating for centralized governance solutions. They propose tax base sharing schemes for large metropolitan regions and some form of overarching regional district with significant authority. The Regional Plan Association (RPA) recommended in 1996 the establishment of a metropolitan service commission for the New York region, modelled on the Twin Cities and Portland systems. A similar structure could be proposed for the Washington Metropolitan Region, taking as a model the New York metropolitan service commission, which was supposed to assume some or all of the following responsibilities (Governing Metropolitan Areas: Growth & Change in a Networked Age, David Hamilton, Routledge, 2014):

- Administer a regional urban growth boundary and oversee a regional land use planning system in which municipal plans would become consistent with regional goals.
- Consolidate transportation planning and capital budgeting through assuming responsibility for owning highways, bridges, and rail corridors, and contract for operation and maintenance of these systems with existing public authorities or private operators.
- Assume responsibility for funding land acquisition in the proposed regional reserves and assume control of state and regional parks, parkways, and greenways.
- Transfer from the states environmental, land use, and other regulatory responsibilities and taxing authorities.
- Assume responsibilities for environmental planning, regulation, and even operation of solid waste, wastewater treatment, and public water supply systems.

Effective Regional Governance. An effective regional governance system should have some control over land use (Cities Without Suburbs: A Census 2010 Perspective, David Rusk, Woodrow Wilson, 2013). Rusk’s argument is that for regionalism to succeed, there must be regional control over land use for the orderly development of the region and to be able to integrate low-income housing throughout the region to diminish racial and economic segregation. Regional land use plans should be comprehensive, and the area-wide governance system should have authority to compel municipalities to abide by its plans. A regional governing system should have an independent political base – maintain Miller and Cox – and the most appropriate way to develop a political base is to have a separately elected body that is responsible directly to the voters in the region, just like the Metro in Portland, Oregon (The Portland Edge: Challenges and Successes in Growing Communities, C.P. Ozawa et.al., Island Press, 2004).
3.3. Regional Plans

3.3.1. Region: Planning the Future of the Twin Cities

The Metropolitan Council in Minneapolis and St. Paul, Minnesota, is the largest and most active regional governing organization in the United States. In 1967, the Minnesota legislature voted to create a regional planning and coordinating body, the metropolitan council for the two-city, seven-county area. It became the institution that develops, advances, and finances regional goals and infrastructure investments. Each of the 16 geographic districts is represented by a council member appointed by the governor of Minnesota. The fact that the members are not elected rather appointed by the governor, creates a distance between the local governments and the council and makes them indirect participants in the activities of the council.

The Metropolitan Council of the Twin Cities is the largest and – not without hurdles – the most successful regional governing organization (RGO) in the country, yet it cannot be the model for governing the Metropolitan Washington Region, because of the uniqueness of the National Capital Region. From the point of view of transportation, the region is tri-state, with the federal government involved in decision making as well. From the point of view of land use, the decision making is fragmented into all the local governments on both sides of the Potomac River. The competition between the jurisdictions is tough, starting with the competition between the two states: Maryland and Virginia.

Nonetheless, the relations between each state and their own local governments can be strenuous as well, as demonstrated by the long story of power struggle over land use, during two decades of smart growth initiatives by the state of Maryland, often opposed by its turf-protecting local governments (Sprawl and Politics: The Inside Story of Smart Growth in Maryland, John Freece, State University of New York Press, 2008).

What can be a model for the Metropolitan Washington Region is the Regional Plan developed by the Metropolitan Council of Minneapolis – St. Paul, which is one of a kind in the country (Region: Planning the Future of the Twin Cities, M. Orfield and T.F. Luce, University of Minnesota Press, 2010). The plan is an effort to bring much better regional data to show how the region operates, to refine the goals of the regional policy, and to reinvigorate interest in reshaping regional policy. An a parallel to the Washington Region's East-West divide, the Plan for the Future of Twin Cities uses more in-depth data and analysis to stimulate thinking about the socioeconomic polarization that is occurring in the region, and to decide what to do about it.
3.3.2. Megopolitan Regions and Planning

Greater Washington Partnership' (GWP), an initiative founded in 2016, maintains that to compete, the Washington area must evolve into a “supercity” to be on par with other large metropolitan regions, such as those centered in New York, Los Angeles and Chicago. The “supercity” or “super-region” they envision, extends from Baltimore to Richmond, and is the third-largest regional economy in the United States and seventh-largest in the world. They make the case for "super-cities" – which enable regions to better compete globally with increasingly tough competition from world global cities.

“Working closely with the public and our region's many stakeholders, the Greater Washington Partnership aims to deliver in 2018, a Blueprint for Regional Mobility that will elevate and help accelerate bold solutions, as well as pragmatic answers, to change our mobility trajectory on four priorities: connecting the super-region; improving the consumer experience; ensuring equitable access; and integrating innovation to improve on these outcomes” (Advancing Our Region: Preface to a Blueprint for Regional Mobility, Greater Washington Partnership, October 2017).

A recent global trend is towards mega-regions, or super-regions, as highly globally competitive national entities (Explaining Governance in Five Mega-City Regions: Rethinking the Role of Hierarchy and Government, D. Evers and J. de Vries, European Planning Studies, Vol. 21, No. 4, 2013).

Adding the Richmond metropolitan region to the Washington-Baltimore Corridor builds a super-region in which Richmond is clearly the weaker link. The 100-mile stretch between Washington and Richmond has almost no notable settlements, or developments, except the city of Fredericksburg. Building a high-speed connection between the three metropolises, as proposed by GWP, would create the premise for economic development. But maybe the political implication is even more significant: such a super-region would have the potential of bringing the governors of Maryland and Virginia to the table, into a partnership/cooperation/collaboration which Metropolitan Washington alone would find difficulty in achieving.
3.4. Conflict, Competition and Cooperation: What It Takes to Collaborate

The European experience of cooperation – including trans-border and trans-national cooperation can offer lessons for jurisdictional disputes and cooperation (ESPON Research Outputs and Policy Advice on Functional Areas - 15 Years of ESPON Cooperation Programme, Ilona Raugze, Director, ESPON EGTC, 2017).

The jurisdictions are naturally engaged in a fierce competition, in an attempt to attract business and resources to their own jurisdiction. The jurisdictional disputes and negotiations will always be there. For the Roadmap to become operational, and the WMATA Connect Greater Washington to be implemented, the recommendations must go beyond urging the local governments, universities, and businesses to cooperate, to stop competing each other unfairly, and start working together for a bright future for Washington. In our experience, the entire picture is a game of power (Power and Conflict, Blalock, H., 1989, Sage Publications, Rules for Radicals – A Pragmatic Primer for Realistic Radicals, Alinsky, S.D., Vintage Books, 1971, and Power - Why We Want It and What to Do with It, Toombs, D., Prometheus Books, 2016).

The jurisdictions, and in general all actors will only cooperate (while still competing among themselves) if they all have an ambitious common goal and concrete action plan (like Burnham's celebrated Plan of Chicago of 1909), with clearly stated benefits for each actor, and with the potential of a regional multiplier effect by leveraging all the regional internal strengths and resources. Attracting major international players in higher education to the area could be a key stimulus and catalyst of development. Other common and mutually beneficial goals that could completely restructure the relationships between the local jurisdictions are: major companies attracted to the Washington region – such as Amazon’s second headquarters – and major events, Olympics, world exhibitions, festivals, entertainment parks, arts-music-film quarters, etc.

Interesting models for the Washington region – even if just transportation centric - can be found in multi-state MPOs (Multi-State Metropolitan Planning Organizations: Approaches, Cases, and Institutional Arrangements, AASHTO Standing Committee on Planning, 2006).

Finally, an in-depth and wise analysis of state government and regional planning was done by Elisa Barbour and Michael Teitz from Berkeley (A Framework for Collaborative Regional Decision-Making, E. Barbour and M. Teitz, Public Policy Institute of California, 2001). They propose new regional strategies, with a pragmatic, problem-solving focus, and make the case for effective regional planning. Making their case from California, which is a champion in planning and innovation, Barbour and Teitz see a major role for the state in promoting a type of integrated and strategic regional planning (quote):
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• First step: clearer state growth management policy goals, both growth accommodating and growth restricting. Key goals to consider include efficient use of existing infrastructure, compact development, provision of affordable housing, streamlined regulation, economic competitiveness, regional education balance and workforce development, reinvestment in inner city areas, public participation that enhances equity, preservation of critical resource areas and open space, and pollution reduction.

• Second step: the state should indicate to regional planning agencies and local governments what could be expected from them in order to help achieve the state's growth management goals.

• Third step: the state should reward innovation and collaborative decision-making. Solving regional governance problems cannot be done without full participation of state and local governments and agencies, while recognizing the role of non-governmental networks and organizations. A new framework will require institutional mechanisms that reflect that role, especially in fostering dialogue between state and local governments about collaborative regional planning.
Metrorail funding can be addressed by combining the Metro planners’ integrated land use – transportation approach, with the 10 initiatives of the Long Range Plan Task Force of the Transportation Planning Board, and the European Commission’s Sustainable Urban Mobility Planning (SUMP) approach in an attempt to alleviate the region’s traffic congestion. The mid- and long-term entrepreneurial solution to Metrorail financing is the creation of a public-private authority, which would use Transit-Oriented Development (TOD), Land Value Capture (LVC) and Public-Private Partnership (PPP) mechanisms by investing directly in developments around metro stations.

This Proposal for METRORAIL FUNDING is focused on **Middle-term actions**:

- Integrated transportation – land use: WMATA – Connect Greater Washington initiative
- Traffic congestion reduction:
  - Transportation Planning Board – 10 initiatives of the Long-Range Plan Task Force
  - TOD around existing stations: interactive and dynamic scenarios / impact studies
  - TOD around Metro infill stations and BRT and LTR stations
  - Sustainable Urban Mobility Plans (SUMP) – European Union
  - KonSULT approach – 64 policy measures to reduce congestion
- Technology impact: sensors, big data, real-time information, AVs

The **Short-term actions** to fund the Metrorail are already being negotiated by WMATA and its stakeholders, and they include operational measures and increased subsidies from the compact.

The **Long-term actions** are focused on a sustainable financing formula for the Metrorail in an entrepreneurial approach, which should actually start in mid-term:

- Metro as public-private authority (real estate capability, direct investment)
- Development-based Land Value Capture (LVC) mechanism to increase ridership and provide revenue from residential, retail and office rent
- Public-Private-Partnership (PPP): Metro, developers, local governments, ap-based (Uber), AVs
The figure below illustrates the synergies involved in addressing the problem of funding and fixing the Washington Metrorail.
The end goal of the Proposal is developing a **SMART REGIONAL PLAN** for the Metropolitan Washington Region, which should capitalize on all the strategies and plans produced by COG and the area’s planners:

- Economic development (Roadmap)
- Regional connectivity (across the Potomac)
- Smart growth – polycentric
- Activity centers, Place + opportunities
- Alternatives to POV (privately owned vehicles)
- Environment & climate change

Since the **REGIONAL GOVERNANCE SOLUTIONS** for the unique and complicated Washington Region are based on cooperation (local governments) and collaboration (businesses, civic society), incentives (“carrots”) and **pressure** (“stick”) could be conceived of to reach regional consensus and agreement. Such **incentives** could be:

- Overarching, mobilizing Goal (Washington Region as a global competitor)
- Attracting a presence in the region of world universities: Tokyo, Beijing, Singapore
- Attracting major U.S. companies (e.g. Amazon)
- Benefits for all players brought about by a broader region (Baltimore-Washington-Richmond)
- Major development around Amtrak station between Washington and Richmond
- Amtrak – local governments - Land Value Capture mechanism

Political pressure for cooperation could potentially be applied through a platform for participation and crowd urban & regional planning.

A major theme of the problem solving exercise can be **REDUCING WASTE**, such as:

- Transportation and mass transit (empty trains and buses, unreliable commuting, etc.)
- Regional sprawl – outer suburbs
- “Ticky-tacky boxes” – inner suburbs
- Human resources and talent under-utilized
- The “under-class”: minorities, poor, etc.
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4.1. Integrated Transportation - Land Use: Connect Greater Washington

WMATA Connect Greater Washington CGW Policy Alternatives Task 8 (June 2015) is an impeccable report produced by the WMATA Planners who sought to address metrorail crowding and underutilization, its funding and operating subsidies, and traffic congestion by testing several 2040 policy scenarios which emphasized integration of land use and transportation planning in a regional approach. The study investigated regional policies, such as alternative land use patterns, improvements to station area pedestrian and bicycle access, changes in the cost of driving, and others that might better utilize the 2040 baseline transit network of existing and already planned projects to address these issues.

The METRO Planners developed three scenarios:

- **Scenario A**: Efficient Transit
- **Scenario B**: Cost-Effective Transit
- **Scenario C**: Maintain Current Travel Times

For the scenarios, future growth in population and employment between 2020 and 2040 was reallocated within the region from the 2040 baseline land use, the Metropolitan Washington Council of Governments (MWCOG) draft Round 8.3 Cooperative Forecast. The scenarios moved population and/or employment growth from areas outside of the MWCOG designated Regional Activity Centers (RACs) to RACs located within one mile of a high-capacity transit station. 2040 forecast regional totals for population and employment were maintained in all scenarios (quote from the Final Report, June 2015).

Overall, the scenarios resulted in significant shifts in travel patterns with increased transit ridership, lower Metrorail operating subsidies, and lower roadway congestion, but none were able to fully resolve transit crowding while maintaining service and capacity at the 2040 Baseline level. However, additional iterations of the basic scenarios, which reallocated population and employment growth within jurisdictions and across jurisdictions showed increased benefits of a regional approach, i.e. allocation across jurisdictions. Also, the scenarios showed how effective land use combined with walkability can be in fostering ridership.

The planners conclude that in a region expected to continue growing in population and employment, some capacity improvements to the transit network would also be needed to address forecast transit crowding and Metrorail core capacity limitations. However, they maintain that changes in land use decisions while adding pricing strategies could provide the region with the necessary funds to make expansion possible.

Since most of the land use is fixed, achieving purely balanced passenger loads is difficult. One conclusion is that a more targeted strategy of increasing density only at specific stations may have more success in changing ridership patterns and growing ridership on underutilized lines and directions while not exacerbating crowding.
Interestingly, the model also tested the effectiveness of several other policy measures and concluded that:

- **Cordon pricing** produced major travel demand shifts to transit even without any land use changes.
- **The VMT tax rate** selected for the C scenarios (1.1 cent/mile) was identified as a revenue-neutral tax level and may have only a limited effect on mode choice.
- Policies designed to reduce the overall demand for peak-period motorized travel (teleworking, alternate work hours, non-motorized trips) can help ease congestion on the roadway network without necessarily adding to transit crowding.

In a follow-up presentation for decision-makers and the stakeholders of the Connect Greater Washington study, the Metro planners make the points that Metro still has plenty of capacity to take tens of thousands of cars off the roads without additional investment and that there is plenty of development opportunity around high-quality transit stations and corridors, suggesting that we made land use our region’s primary transportation strategy.

Also, **making development and investment decisions as a region** helps addressing congestion, environmental quality, regional competitiveness, healthier local budgets, lower taxes, and bridging the East-West divide. Integrated transportation – land use planning is opportune and timing because:

- People are choosing higher-density, transit locations more than ever.
- Real estate developers favor higher-density, transit-accessible locations.
- Businesses are moving to transit-adjacent locations.

Cooperating regionally means identifying where we have excess transportation capacity across the region and matching that with development that will benefit the region as a whole.

Moving forward, Metro planners identify as possible next steps:

- Develop and implement a full cost accounting framework for all development decisions
- Convey ongoing costs of development decisions to enable full evaluation of all options
- Commit to a regional growth framework
- Develop a long-range transportation plan that addresses truly regional needs
- Find the courage to stop competing with ourselves for economic development
- Embrace land use as a transportation strategy today
4.2. Entrepreneurial Solutions to Metrorail Funding

The Washington Metrorail could become more entrepreneurial by considering long term financial sustainability achieved with development-based land value capture (LVC) mechanisms, rail-property creative financing and Public-Private-Partnerships (P3). Some of the best world examples are Hong Kong and Tokyo (Tama Garden City and others). Transit authorities in Hong Kong and Tokyo are the only ones in the world that do not rely on public subsidies, and even turn a profit. Set up as autonomous public-private authorities, they partner with local authorities and developers and invest directly in real estate through their own strong real estate departments. The local government upzones the areas around the transit stations (railways and metro) and the transit authority and the partner developers develop those areas by building residential, office and retail facilities. The transit authority benefits from increased ridership – usually covering most of its operating costs, with revenues from residential, office and retail rents stabilizing the income and covering the capital investments. The partnership is a win-win situation, as the developers can make great profits with reduced risk, while the local government benefits from significantly increased taxes.

While the WMATA 2015 study Connect Greater Washington demonstrates convincingly that “land use can be our region’s primary transportation strategy”, in practice independence of government subsidies in running transit is very hard to achieve, without significant entrepreneurship and creative financing. For example, in spite of having strong real estate departments, the transit authorities in West European cities still rely on government subsidies, sometimes quite heavily. The Hong Kong’s and Tokyo’s transit authorities have been able to function without any government subsidy, and even turn a profit, but their ride has not always been smooth, depending on the ups and downs of the business cycles. Between the two successful examples, the model for Metropolitan Washington would be Tokyo, which has private freehold of land, versus Honk Kong, where the land freehold is public.

Another interesting example of smart growth policy and creative financing is the recent British initiative of reviving the garden cities concept with increased density, LVC mechanisms, and institutional innovations – as part of the urban regeneration effort, and in response to the deep housing crisis. The Greater London Authority (GLA) has decided recently to build residences on the London Greenbelt, both inside and outside the city limit, in order to satisfy the vast shortage of housing in GLA. The residential developments are strategically located around stations on transit lines.

This Proposal is to explore development around metro stations targeted in the WMATA Connect Greater Washington Report (June 2015), using Transit Oriented Developments (TOD), development-based Land Value Capture (LVC) and Public-Private Partnerships (P3) between the transit authority, the local government, and the developer. Auto manufacturers (Ford, GM et.al.) could provide a full urban mobility service - first and last mile – to the station area residents. As a matter of fact, last year at City Lab in Miami, the author proposed to General Motors’ VP for Global Strategy, a disruptive business model to increase the auto manufacturer competitive advantage, i.e. to invest directly in real estate around transit nodes and stations, in partnership with transit, local government, and developers, and to offer the residents and the employees a “full mobility solution”, in the old inter bellum tradition of “company towns”.

TOD: Interactive and Modular Allocation Scenarios. Smart growth is dynamic, as economic, social, environmental and political conditions change, and so do decisions on population and employment location across the region. The Proposal is for developing an interactive and modular population and employment allocation model, using the same models and base data used by the WMATA Connect Greater Washington project, as reported in June 2015. Users – decision-makers, professionals, businesses, and the public – should be able to play what-if scenarios, based on their views and preferences, under certain constraints, and view the impact of their local or regional assumptions and decisions.

Based on the experience of using MapDecision 3.0 – Group Decision Support System for Strategic Assessment (EMI Systems, Inc., Bethesda, MD) for twenty years in international projects financed by the World Bank, USAID, DFID and JICA, and on the RAND Corporation approach Assumption-Based Planning (ABP), interactive scenario playing could add to the WMATA models user-friendliness, info-graphics and visualizations, and possibly animations.
Phased Implementation for Metrorail Funding. Reaching independence from government subsidies took a long and strenuous journey for the Hong Kong’s and Tokyo’s transit authorities, due to the slow build over time of land use assets, in conditions of complex institutional arrangements. Several U.S. planners even express reservation versus the expected impact of land use policies on transportation (Travel by Design – The Influence of Urban Form on Travel, Boarnet and Crane, Oxford University Press, 2001). Boarnet and Crane contemplate the chance that there are policies that, when viewed through the prism of transportation issues, have more promise than urban design, which should be evaluated for its broader, community-building goals.

One fact is certain: it will take a long while to be able to finance the Metrorail with smart growth and changes in land use, and a phased approach might need to be considered. Such a phased approach for Metrorail sustainable funding could be the following:

Short-term: quick fix, service and management measures, possibly dedicated funding through a renegotiated compact between the funding jurisdictions. Selling land – like the proposed approach for the New Carrolton station, might not be the best short-term strategy, because it is a one-time transaction, and completely giving up valuable assets.

Mid-term: improved regional mobility and accessibility through policy measures supporting ridership with “carrots” and “sticks”; possibly experimenting with the first Land Value Capture developments around existing or in-fill stations, based on Metro direct investment – like in Tokyo. The policy measures proposed approach is described in the next section 4.4.

Long-term: full implementation of development-based Land Value Capture on station sites and full use of the policy measures described in the next section: Brusells’ KonSULT approach to Sustainable Urban Mobility Plans (SUMP) and Germans’ GIZ standards.

4.3. Regional Traffic Decongestion to Put Transit Back on Track

To fix the Metrorail system (“transit”) and make it sustainable, traffic congestion in Washington and its metropolitan region must be addressed. Pouring more money into the Washington Metro without close coordination with the general transportation and the land use patterns cannot guarantee an increased Metro ridership.
4.3.1. The Long Range Plan Task Force of the Transportation Planning Board (TPB) – 10 Initiatives

The Long Range Plan Task Force of the Metropolitan Washington Council of Governments (WMCOG) Transportation Planning Board (TPB) has recently presented at COG their draft analysis results, and their response to the perceived regional challenges: 1) Roadway congestion; 2) Transit crowding; 3) Inadequate bus service; 4) Access to bike/ped options (unsafe biking and walking); 5) Development around Metrorail; 6) Housing and job location; 7) Metrorail repair needs; 8) Roadway repair needs; 9) Incidents and safety; 10) Pedestrian and bicyclist safety; 11) Environmental quality; 12) Open space development; 13) Bottlenecks, and 14) Reliable access to intercity hubs (travel time reliability).

Based on their analysis, the Task Force came up with 10 initiatives, falling in three categories:

Multimodal
1. Regional Express Travel Network
2. Operational Improvements and Hotspot Relief
3. Additional Northern Bridge Crossing/Corridor

Transit
4. Regionwide High-Capacity Transitways
5. Regional Commuter Rail Enhancements
6. Metrorail Regional Core Capacity Improvements
7. Transit Rail Extensions

Policy-Focused
8. Optimize Regional Land Use Balance
9. Transit Fare Policy Changes
10. Amplified Travel Demand Management (for commute trips)

A number of Performance Measures (Measures of Effectiveness) have been selected for use and a Sketch Planning Approach was proposed by the TPB Task Force (see picture below).
The impacts of each initiative on the 14 identified transportation-related challenges were analyzed and a number of Factors to Consider in Selecting Among Initiatives were introduced:

- Affordability and User Costs
- Costs of Implementation
- Equitable Distribution of Benefits
- Placemaking
- Right-of-Way and Community/Other Environmental Impacts
- Public Support and Implementation Feasibility

The main criticism of this short analytical exercise has been that it does not assess the combined impact of groups or packages of initiatives and policy measures on alleviating traffic congestion in the region. Another point made by a member of the TPB was the absence of technological advances from the initiatives and solutions proposed by the Long Range Plan Task Force. We would also suggest attempting to devise creative solutions to controversial problems. One such problem is the Potomac Northern Bridge, which is strongly opposed by the local government in Montgomery County, because of the potential negative impact on the residential areas around Potomac and Gaithersburg, some of the most expensive in the region, as well as the negative impact on the county agricultural reserve.

The Northern Bridge was proposed as early as 1964, in the General Plan for the Maryland-Washington Regional District in Montgomery and Prince George’s counties, known as the Wedges and Corridors Plan. The plan in the figure below was very probably inspired by the London Regional Plan and Copenhagen Regional “Finger Plan”. The concept of corridors was proposed in order to direct growth on certain axes, and protect sensitive and valuable natural land and ecosystems, as well as agricultural reserves.
However, just like in Copenhagen, “travel between corridors cannot be ignored”. "Two circumferential freeways and numerous lesser highways tie the whole Regional District together, affording adequate access to all parts of the urban patters”. Indeed, the Northern Bridge and the Outer Beltway are clearly pictured in the Wedges and Corridors Plan (see figure left).

Technical and political solutions can be found to move people across the Potomac over an improved American Legion Bridge, and extending the Purple Line to reach the Dulles International Airport. But the controversial “Northern Bridge” could become less controversial if it were a “Northern Crossing”. Such a crossing is critical for the Metropolitan Washington Region’s connectivity and unity, for connecting outer suburbs and counties across the river, and for bridging the regional East-West divide.

Moreover, such a “Crossing” is critical for security reasons. If the American Legion Bridge were to be affected by a major incident, the entire region would be paralyzed. In 1998, police closed the six lanes of the Woodrow Wilson Bridge to all traffic for five hours to talk a depressed 32-year-old man out of jumping off the bridge railing. Within an hour of bridge closing, traffic on the beltway was backed up for eight miles on each side of the bridge.
A creative solution to a “Northern Crossing” of the Potomac should definitely not be another American Legion Bridge, with an ICC (Inter County Connector) highway like the one in Montgomery county, which was designed and built like in the 1950s and 1960s. There must be ways to increase the number of Potomac crossings in a low environmental impact formula, with creative and smart, beautifully landscaped parkways, separated in the two directions, with co-existing automobile, transit and non-motorized modes. They should be ready for the latest technology, such as app-based hailing, real time information, first mile-last mile service, and a clear policy for accommodating the autonomous vehicle – cars and buses – which are all coming, and soon.

4.3.2. Sustainable Urban Mobility Plan (SUMP) and the KonSULT Measure Selection Approach

We propose to complement the TBP’s 10 initiatives approach with the European methodology of Sustainable Urban Mobility Plan (SUMP) and the KonSULT Measure Selection Approach. The concept of Urban Sustainable Mobility Plans (SUMP) was developed by the European Commission and was meant to contribute to reaching the European climate and energy targets set by EU leaders. It has been widely promoted via the Action Plan on Urban Mobility (2009) and the Transport White Paper (2011) as a new planning concept able to address transport-related challenges and problems of urban areas in a more sustainable and integrative way.

The picture below shows the SUMP innovations vis-à-vis the traditional transportation planning.
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The SUMP approach consists of a flexible cycle of 11 steps grouped under four phases: preparation, goal setting, plan elaboration, and plan implementation.
After SUMP implementation in a large number of European cities, it has been credited with several important benefits: 1) Improving quality of life; 2) Saving costs – creating economic benefits; 3) Contributing to better health and environment; 4) Making mobility seamless and improving access; 5) Making more effective use of limited resources; 6) Winning public support; 7) Preparing better plans; 8) Fulfilling legal obligations effectively; 9) Using synergies, increasing relevance, and 10) Moving towards a new mobility culture.

Very few approaches to traffic decongestion are comprehensive, and none is “complete”. In our experience, an excellent approach is the one developed under EU projects, by Professor Emeritus Anthony May in Leeds: the KonSULT approach for traffic decongestion. The **KonSULT Manual** has **64 policy measures** to address traffic congestion – their selection and order of priority depend on the city type, its development goals and other characteristics (Measure Selection: Selecting the most effective packages of measures for Sustainable Urban Mobility Plans, European Platform on Sustainable Urban Mobility Plans, March 2016).

<table>
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<th>Rank</th>
<th>Code</th>
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The **KonSULT Policy Guidebook** provides information on each of the policy measures available to urban transportation planners. It provides a description of the measure, a first principles assessment of its ability to contribute to a range of objectives, problems and strategies, and compares that assessment with the results of a series of case studies.

The six categories of policy measures in KonSULT are:
- Land use measures
- Infrastructure measures
- Management and service measures
- Attitudinal and behavioural measures
- Information provision
- Pricing
Each of the 64 measures is described following a standard structure (see http://konsult.leeds.ac.uk/pg/) including taxonomy and description, and several characteristics and assessments:

- Why introduce “x” measure?
- Demand impacts
- Short and long run demand responses
- Supply impacts
- Financing requirements
- Expected impact on key policy objectives
- Expected impact on problems
- Expected winners and losers
- Barriers to implementation
- Evidence on performance
- Policy contribution

Three levels of option generator are provided: 1) an ordered list of individual measures; 2) an ordered list of measures which complement a specified measure, and 3) an ordered list of packages of measure.

All three of these are generated by the user, who specifies the area in which they are interested, their policy objectives, or problems, or performance indicators, and their strategy in the following way:

- For area type, the user is able to specify “any context” or a specific one: for a second context, the user would need to run the option generator again;
- For objectives, problems, and indicators, the user chooses one of these types of outcome, to avoid double counting, and then identifies those in the standard list which are of interest, and rates each on a five point scale (from very important to of limited importance).
- For strategy, the user is able to specify “any strategy” or identify those in the standard list which are of interest, and rates each on a five point scale (from very important to of limited importance).

Both the second and third option generators offer a choice between two methods of packaging: the pursuit of synergy and the reduction of barriers. For synergy, the focus is on the extent to which the whole is greater than the sum of the parts in its contribution to the chosen objectives. The generators use four synergy matrices, based on research into levels of synergy for different types of measure in contributing to each of four different types of policy objective. The synergy score (which can be negative) is added to the sum of the individual measures’ scores. For barriers, the focus is on the extent to which a given measure can reduce the barriers faced by another, including finance, governance, political and public (un)acceptability. The generators use the (negative) scores from the barriers tables in the Policy Guidebook and add these to the score.
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While not as sophisticatedly structured as the KonSULT 64 policy measures, the “disciplined” German GIZ standards for traffic decongestion are a valuable complement to KonSULT.

Finally, the role and the future of app-based transportation (Uber, Lyft etc) must be clarified – Bruce Schaller, the former NYC Deputy Commissioner for Traffic and Plan, demonstrates their unsustainability, disastrous increase in vehicle miles travelled in NYC, and the implicit increased traffic congestion (Unsustainable? The Growth of App-Based Ride Services and Traffic, Travel and the Future of New York City, Schaller Consulting, January 2017).

4.4. Technology and Innovation in Regional Transportation and Transit

A Vision where technology can radically change the future of Greater Washington, and the implications for the region of smart city concepts, ecological developments, climate change and green and healthy cities deserve focused and detailed consideration (Technology and the Future of Cities, Report to the President, February 2016). The available literature and initiatives on the topic are huge, starting with the research presented in Atlantic's CityLab and Google’s Sidewalk Labs, and the national and international experience in resilient cities: Bloomberg’s What Works Cities, Rockefeller Foundation's 100 Resilient Cities, MetroLab’s network of cities and universities, World Bank’s urban resilience initiative, and the recent United Nations’ shift to cities and local solutions to address global problems (Global 2030).

The goal is to maximize the use of the technology existing today in the integrated transportation – land use system, and anticipating future technological breakthroughs. For example, real time information and an “MRI” of the urban and regional traffic and transit in each moment of the day would provide invaluable service both to transportation planners and to the users of the transit systems, highways, and parking spaces. Big data and social media are already making a great impact on urban transportation, and crowd problem-solving and participation can assist travellers, just as waze is a systems with user provided content.

Finally, the future of autonomous vehicles in the Metropolitan Washington Region deserves immediate and thorough attention. A sketchy analysis can be developed, following the New York Model (New Mobility – Autonomous Vehicles and the Region, Regional Plan Association, the Fourth Regional Plan for the New York-New Jersey-Connecticut metropolitan area, October 2017).

The main benefits the authors see in the advent of AV’s are: 1) AVs will make us all safer; 2) We’ll get some time back; 3) Seniors, the disabled and the young will be able to get around more easily, and 4) Goods should get cheaper.
To prepare for an AV future, several strategies are contemplated, which are different for urban centers and for suburban areas. **Strategies for Urban Centers** include:

- Prioritize street space for public transit, pedestrians, bikes, and freight
- Implement vehicle-miles-traveled (VMT) fees or higher tolls to deter congestion
- Cap the overall number of AVs (and remaining manually operated vehicles) during certain times of day or in the most congested parts of cities
- Use geo-referencing to implement these caps or to restrict vehicles from certain areas during certain times of day
- Provide sufficient curb space for pick-up/drop-offs and deliveries to not impede the free flow of traffic in mixed-lanes.
- Reduce off-street parking requirements and eliminate on-street parking for long-term vehicle storage.
- Prioritize affordable, high-quality transit

The envisioned **strategies for Suburban Areas** are:

- Continue to promote transit and the use of AV to link to transit hubs. This would control congestion on regional roads and allow the repurposing of parking lots at local transit stations.
- Subsidize on-demand AV transit services to improve mobility for the disabled, young and elderly within the suburbs. This can replace more expensive options being used today.
- Discourage private AV use by scaling VMT fees to the number of passengers in a vehicle, making it more expensive to travel far distances alone. Ideally, a portion of VMT fees captured could be redirected to subsidize transit costs and encourage compact, transit-oriented development. Otherwise, personal AVs could dominate the auto travel industry inducing and/or reinforcing existing sprawl.
- Encourage vehicle sharing.

The **Regional Plan Association** is making recommendations for **equity, accessibility, and affordability** in connection with the future use of AVs:

- Pricing policies need to be clear and transparent
- Shared AV service must serve all communities
- Governments should consider subsidizing shared AV services to provide discounts for low-income residents, seniors and the disabled
- Governments should rezone and repurpose parking lots, especially around rail stations to help provide more affordable housing
4.5. Regional Inclusiveness: Critical for Washington as a Global Competitor

Karen Chapple, from the University of California at Berkeley, makes the case for linking economic development, environmental protection and improvement and equity goals of urban and regional sustainability programs (Planning Sustainable Cities and Regions – Towards More Equitable Development, Chapple, Routledge, 2015). She is confronting the challenge of equitable regional planning for neighborhoods, housing and jobs.

Themes like infill development and density, mixed-income neighborhoods, regional growth, gentrification and displacement, and generally, the geography of opportunity should play an important role in the integrated transportation – land use modeling and planning in the Metropolitan Washington Region. While models like MWCOG Version 2.3.52 Model and the Regional Transit System Plan (RTSP) Model allow METRO Planners to allocate population and employment to the regional RACs in close proximity to the Metrorail stations, not much is told about the demographics, income, and education level of the ridership in various areas of the region. A $5 Metro ticket might be a bagatelle for a Metro rider in Arlington County or on the red line in Bethesda, and a significant daily expense for a rider in the Eastern regional “hemisphere” of the metropolitan area.

Similarly, the scale, the profile, the value, and the timing of investments and developments in the West and in the East might be very different. Businesses locate where talent and skills are located. And if the Eastern GW population cannot compete with the Western GW in terms of computer and technology skills, or other high-level, high education capabilities, a regional inclusiveness study must analyze and find solutions for a more equitable and durable economic structure of the E-W regional divide, by identifying specific skills and talents (“Washington got talent”) of the entire population and promote counties and sub-regions for specific businesses and activities, for example: music, dance, film, sports, local foods, tourism/hospitality, spas/health/fitness, luna park/entertainment, etc. Two Swedish authors convincingly argue for discovering hidden assets in cities and society, such as real estate/land assets, commercial enterprises, and human and social capital (The Public Health of Cities – How to Unlock Hidden Assets to Boost Growth and Prosperity, Detter and Folster, The Brookings Institution, 2017).

Karen Chapple described many failed attempts at inclusiveness and inclusion of lower income population in the mainstream economic activities and jobs, such as physical proximity to higher income groups, physical proximity to employment centers, transit access (quite limiting) to employment and jobs, etc. A serious regional inclusiveness study (with an initial sketchy draft) could determine that the best and most effective integration and inclusion can be realized by diverse people – and in particular young people – working together and producing interesting things, creating, innovating, and developing as individuals and groups. And maybe creating unique work spaces, attractive and stimulating spaces, like the ones promoted by Adam Neumann’s WeWork, a six-year startup valued at $20B, could facilitate this inclusion.
WHY METROPOLITAN WASHINGTON NEEDS A REGIONAL PLAN

Inclusionary design and social life are development goals. Physical design for an inclusionary city must be coordinated with social programs, where all “hidden human resources” must be identified, e.g. the talents of minorities and underprivileged, culture, sports, music etc. Amenities must be located and designed to service the universities, the research park residents, and the local or larger community.

Affordable housing is needed for inclusionary social policy – NYC’s long experience with affordable housing is a model. Technological advances in housing construction (prefabrication, industrialization, etc) and cost effective solutions must be in place in order to generate feasible alternatives. A new concept is proposed for selling affordable housing and residential properties in general – a combined value of shelter and transportation/mobility/access availability.

5. PROBLEM SOLVING: RELATED ISSUES IMPACTING ON REGIONAL MOBILITY

Two additional issues impacting on regional mobility and transit are: 1) a proposal for a World Technology/Research Park in the Metropolitan Washington Region, for purpose of global competitiveness, which should bring all jurisdictions to the table, ready to cooperate and collaborate – just like the Amazon’s bid for their second headquarters, and 2) High Quality of Life and Technology to attract and retain talent and professionals in the region.
5.1. World Technology/Research Park for Global Competitiveness

Among the “requirements” stated by the Roadmap documents for Greater Washington’s competitive advantage, we will make reference to the following: 1) Talent development, attraction and retention, 2) The region’s quality-of-life, 3) Transportation flexibility and adaptability, 4) Entrepreneurial culture, and 5) Competition among local jurisdictions.

Talent and creative class must be cultivated if global competitiveness is an economic development goal, and the Washington Metropolitan Area universities are key in this effort - they would significantly benefit from a closer virtual and physical connectivity. The Consortium of Universities of the Washington Metropolitan Area must be proactive and effective in building the synergies between the member universities, and identifying the particular strengths of each university related to the 7 industry clusters identified in the Roadmap.

In order to take a leading position in the global competition, Washington should strive to attract departments from top international universities in Tokyo, Singapore, Beijing, and London and large, entrepreneurial, and creative U.S. firms. They would be closely cooperating with the Washington universities, and would connect with the Washington’s seven technological clusters: 1) advocacy, 2) information and communication technology, 3) science and security technology, 4) biological and health technology, 5) business and financial services, 6) media and information, and 7) business and leisure travel – in an effort to reduce dependence to the Federal Government.

Land and utilities would be provided to the international universities, so they can build facilities in Washington – in a World Technological/Research Park. The best locations are probably the campuses of the University of Maryland and the George Mason University, as well as Seneca Park in Montgomery County which have ample land resources – one good model is the location on Roosevelt Island in NYC of the Bloomberg’s competition winners – the Cornell-Technion Universities Consortium.

Businesses and high-tech industries must be targeted for location in the World Technological/Research Park of Washington Metropolitan Area, based on a detailed, ambitious, yet realistic assessment of the seven industry clusters, in synergy with the Consortium of Universities. A good model for competitive advantage in the global economy is Research Triangle Park in North Carolina (The Research Triangle: From Tobacco Road to Global Prominence, William M. Rohe, University of Pennsylvania Press, 2011).
5.2. High Quality of Life and Technology to Attract and Retain Talent in the Region

The smart graduates (millennials) must be retained in Washington. They need affordable accommodation and a new life style ("Madrid, Spain" style and New York examples). Rental apartments might be possible solutions – smart design, with optimum use of space (The New Urban Crisis, Florida, R., Basic Books, 2017). Co-living solutions can be tried on an experimental basis. Place-making, eco districts, urban labs and co-design are key words here (Climate of Hope - How Cities, Businesses and Citizens Can Save the Planet, Bloomberg, M., St. Martin's Press, 2017).

Infill walkable developments around transit are essential, provided they have excellent design, higher densities and mixed use (The Option of Urbanism: Investing in a New American Dream, Leinberger, C., Island Press, 2009). They must retain at least some of the dislocated population and resolve the NIMBY problem through smart rezoning and buffering.

To attract world universities and top U.S. companies to the region, one has to offer a healthy city and a vibrant social and cultural life with meaningful activities and satisfying jobs. Vibrant street life, with street markets and events can be modeled after London, New York, and several other successful U.S. cities (Triumph of the City: Richer, Smarter, Greener, Healthier & Happier, Glaeser, E., Penguin, 2011). Event-based strategies can help economically, socially, and in marketing and branding the city – Barcelona’s Olympic Games and Park as the focus for urban regeneration and city rebranding is a good example.

Applying the most advanced technologies, big data and IoT (The Responsive City - Data Smart Governance, Goldsmith, S., Jossey-Bass, 2014) is key in the design and implementation of the smart city concept, which should include the participation of all stakeholders, and in particular the native digital millennials and Generation Z.
The Kashiwa-no-ha Smart City near Tokyo was built on the themes of environmental symbiosis, health and longevity, and creation of growth industries. The objective was to develop a city focused on environment, healthy living, creativity, and communication around the Tsukuba Express train line. The initiative, formulated by Chiba Prefecture, Kashiwa City, the University of Tokyo, and Chiba University, states that its objective is to “realize an international academic city in which cutting-edge knowledge, industry, and culture can be developed and bring about a next-generational environmental city where people coexist in harmony with a rich natural environment and healthy, high-quality living and working environments in a creative setting that integrates the campus and town through partnerships among the government, private industry, and academia.”
6. ANNEX. PLANNING RESOURCES

6.1. Expertise

6.1.1. International Urban Alliance (IUA)

• Mircea Enache (IUA President)
• Lorenzo Ciapetti – Urban Economist, Bologna, Italy (Metropolitan Regions in Europe)
• Amador Ferrer – Architect, Barcelona, 1992 Olympic Games developments (Smart Cities)
• Eric Champagne – University of Ottawa, Canada (Smart Cities, Infrastructure Financing)
• Jieming Zhu – Urban planner, Shanghai (Smart Cities in Asia)
• Center of Excellence in Planning (IUA, Bucharest)

6.1.2. U.S. and International Consultants, Advisers, and Peer Reviewers

• Robert Cervero – Prof. Emeritus, University of Berkeley, CA (Transit Oriented Development)
• Robert Dunphy – Georgetown University (Transit Oriented Development)
• Hiroaki Suzuki – World Bank and Tokyo (Development-Based Land Value Capture)
• Anthony May – Prof. Emeritus, University of Leeds, UK (KonSULT)
• Simon Shepherd, University of Leeds (Land Use - Transportation Modeling)
• Todd Litman – Victoria Transport Policy Institute, Canada (Cost-Benefit Analysis)
• Bruce Schaller – former NYC Deputy Commissioner for Traffic and Plan (app-based mobility)
• Roger Stough – Prof. Emeritus GMU (Regional Economics)
• Sonia Hirt – Dean, School of Architecture @ UMD (Urban Land Use Planning)
• Edgar Kiviet – Adjunct Director, RTKL London (Urban Design)
• Sidewalk Labs, NYC – peer reviewers in urban technologies

6.1.3. Working in Consultation With:

• Washington Metropolitan Area Transit Authority (WMATA) Planners
• Metropolitan Washington Council of Governments (COG) Planners
• Transportation Planning Board (TPB) Planners
6.2. Methodology and Software Tools

- KonSULT – Sustainable Urban Mobility Plans (SUMP), European Commission (DG-MOVE)
- MWCOG Version 2.3.52 Model - TBC
- Regional Transit System Plan (RTSP) Model - TBC
- Assumption-Based Planning (ABP) – RAND Corporation

6.3. Supporting Documents and Readings

- Books – Supporting the Metropolitan Washington Initiative (980 books)
- American Planning Association (APA) – Selected Papers
- American Planning Association (APA) – PAS Reports and Books
- Urban Land Use (ULI) Reports, Case Studies, Publications
- Brookings Institution – Books, Reports and Publications
- European Planning Studies – Selected Papers
- Web resources – Downloads
Source: U.S. Census Transportation Planning Package.
in Planning the Future of Twin Cities, Orfield & Luce
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