The Roadmap for the Washington Region's Future Economy

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Executive Summary

The performance of the Washington metropolitan area economy is lagging the national economy and the performances of its peer metropolitan areas. This is not a one-time event but reflects a five-year trend dating since 2010. This lagging performance is apparent in both the region's generation of new jobs and the value of the jobs it is generating. The Washington region's economy has not experienced a structural change similar to this since the end of World War II.

There is an urgency for repositioning the Washington region's economy for growth, replacing its historic dependency on growth in federal spending with growth in non-federally dependent businesses serving non-local markets, that are characterized by high-value added jobs and for which their location in the Washington region reflects its competitive advantages. The longer that the Washington region's economic growth lags the nation and its peer metropolitan areas, the more difficult it will be to regain its historic position as one of the fastest growing and high-value added economies in the nation.

The Washington region's competitive advantages that provide its economy with clearly distinctive assets for attracting, retaining and growing its non-federally dependent, export-based (non-local serving), and high-value added business base start with it being the seat of the federal government with its concentration of federal functions and services. As the world's number one government power center, the region is home to almost all of the foreign governments and consulates and its connectivity to the world endows the Washington region with a uniquely attractive business ecosystem.

Reinforcing this unique ecosystem is the region's attractive quality-of-life, its multiple layers of cultural diversity and resources, its large number and high quality of educational resources and institutions, a workforce that reflects high labor force participation rates for both men and women and that has more years completed in formal education than any other labor market in the U.S. Additionally, the region possesses a highly specialized, advanced business base with identifiable concentrations of employment in high-wage occupations. These interdependent national and international functions establish a unique competitive position for the Washington region within national and global markets.

Seven advanced industrial clusters have been identified as possessing the potentials for re-accelerating the region's economic growth as presented in the following table that identifies their employment trends dating from the beginning of the previous business cycle in 2003. These advanced industrial clusters can provide the region's economy an alternative source of continuing growth in the coming decade and they are already well established within the region's economy.

The Washington Region's Advanced Industrial Clusters

Cluster		Washington Metro Area 2014 Jobs	2003-14 Job Growth	2014 Avg Wage	Location Quotient
Advocacy	ADV	115,731	19%	76,097	3.5
Information and Communications Technology	ICT	204,489	5%	97,216	2.7
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Media and Information	MAI	35,745	-20%	73,450	1.5
Business and Leisure Travel	BLT	85,919	-1%	45,457	1.1
Total of Seven Clusters	**TOT**	**811,193**	**15%**	**84,028**	**2.0**
Washington Metro Area	**WMA**	**2,973,337**	**9%**	**62,213**	

Location Quotient is the percentage of jobs in a cluster in the Washington region divided by its respective percentage of jobs in that cluster nationally; this is a measure of economic specialization.
Source: JobsEq and Inforum calculations

The Washington region is not currently prepared to realize the growth potentials inherent in these seven advanced industrial clusters. Research has identified the principal "requirements" that will determine the course of economic growth in the Washington region, conditions that will shape the structure of an economy that is no longer dependent on federal spending for its continued growth. These "requirements" can apply to all types and sizes of business but have been identified here as being especially important to the types of businesses comprising the seven advanced industrial clusters for which the Washington region already possesses a competitive advantage over peer metropolitan area economies.

- Talent development, attraction and retention
- The region's quality-of-life
- Transportation flexibility and adaptability
- Access to capital
- Regional branding and national and global marketing
- Entrepreneurial culture
- Competition among local jurisdictions
- Public costs and disincentives

These "requirements" can be bundled into two interdependent groups: (1) those that describe what businesses need to grow and (2) those that describe constraints to business growth based on the underlying conditions characterizing the Washington region. These requirements and challenges are not self-correcting. They will require changing how the region is organized to manage and finance economic growth. To satisfy these "requirements" and to resolve the challenges that constrain the growth of business in the region, the region will need to design and initiate collaborative arrangements, it will need to learn to trust its neighboring jurisdictions and historically competitive organizations, and it will need to identify new channels of leadership and action to the benefit of the entire region.

None of these "requirements" can be more effectively achieved at the individual jurisdictional or organizational level than at the regional scale. All of these "requirements" by their nature span political boundaries. They all possess implied economies-of-scale to the advantage of the region. Still, today, there are no regional organizations or channels for leadership or action that have the explicit goal of strengthening the region's competitive position to the advantage of its non-federally dependent business base.

Achieving the region's growth potentials as a knowledge-based economy will require more than passive recognition of the prerequisite "requirements." It will require collaborative actions of the region's business and public sector leaders and organizations. The actions outlined in the Roadmap's call-to-action are just the beginning of a continuing regional effort. None of these "requirements" will be ever fully achieved, not in a dynamic global economy where competitors are continually enhancing their respective competitive positions and where the nature of business innovation continues to alter the "requirements" of the business platform upon which the Washington region's future economic growth depends.

The Roadmap for the Washington Region's Future Economy

Introduction

The Washington region's economy has undergone a major structural change since 2010. Coming on the heels of the Great Recession and just as the regional economy was moving into recovery mode, the region's principal economic driver—federal spending—was curtailed. The cutbacks in federal spending, both payroll and contracting, over the past four years resulted in the region's economy registering no growth in 2013 and having the smallest job growth rate among the nation's largest fifteen metropolitan areas in 2014. This pattern of under performance is likely to continue into the future as long as the region's economy remains overly dependent for its growth on increases in federal spending.

The Roadmap identifies an alternative to this current slow-growth pattern. It is widely recognized that the Washington region possesses distinctive assets and competitive business potentials that are not dependent on federal spending. These assets and potentials represent a path to regaining the region's economic vitality. However, there is an urgency for repositioning the Washington region's economy for growth, replacing its historic dependency on growth in federal spending with growth in non-federally dependent businesses serving non-local markets, that are characterized by high-value added jobs and for which their location in the Washington region reflects its competitive advantages. The longer that the Washington region's economic growth lags the nation and its peer metropolitan areas, the more difficult it will be to regain its historic position as one of the fastest growing and high-value added economies in the nation.

The Roadmap is designed to identify: (1) the Washington region's competitive advantages within the national and global economies; (2) its non-federally dependent, export-based (non-local serving), high-value added, advanced industrial clusters having high-growth potential consistent with the region's competitive advantages; and (3) public and private sector initiatives that could accelerate the expansion of these advanced industrial clusters for which the Washington region has a competitive position. The Roadmap will present a call-to-action; that is, recommendations to guide state and local government initiative and initiatives that can be advanced by local and regional business and not-for-profit organizations that will capitalize on the region's non-federally dependent, high-value added, export-oriented business base to position the Washington region for growth as the nation's leading knowledge-based economy.

Federal Spending Dependency and the Structural Impacts of the Sequester

The performance of the Washington metropolitan area economy is lagging the national economy and the performances of its peer metropolitan areas. This is not a one-time event but reflects a five-year trend dating since 2010. This lagging performance is apparent in both the region's generation of new jobs and the value of the jobs it is generating. The Washington region's economy has not experienced a structural change similar to this since the end of World War II.

The strong and continuing economic growth that the Washington region's economy enjoyed over the 1980-2010 period was driven by steadily increasing federal procurement outlays in the local economy (increasing from $4.2 billion in 1980 to $82.4 billion in 2010; the R-square between federal procurement spending and GRP growth was 0.95—see Appendix for full regression analysis), complemented by growth in federal civilian employment and payroll that peaked in July 2010. Since 2010, federal spending in the regional economy has declined and, with this downward trend, the region's employment growth has slowed, as has the growth of its gross regional product (GRP)—the value of goods and services produced within the regional economy. These federal procurement and economic performances patterns are shown on Table 1 on page 6. The effects of the reductions in federal procurement spending on the region's economic performance since 2010 period are shown in Figure 1.

Figure 1

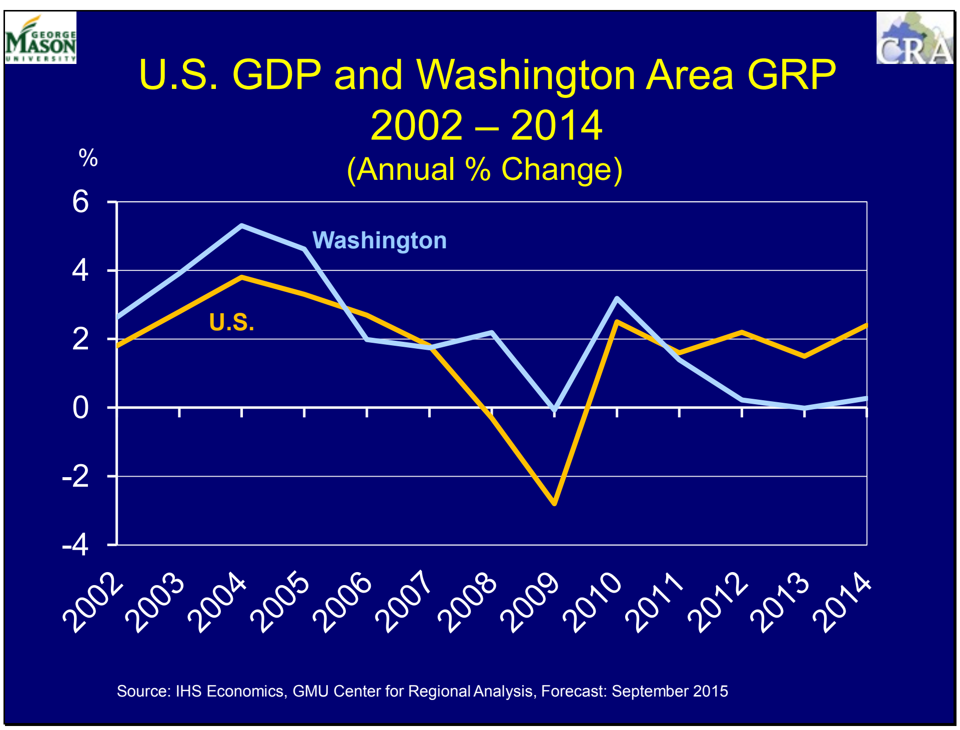


Table 1

Washington Region's Economic Performance
Is Tied To Federal Procurement Spending, 2002-2014

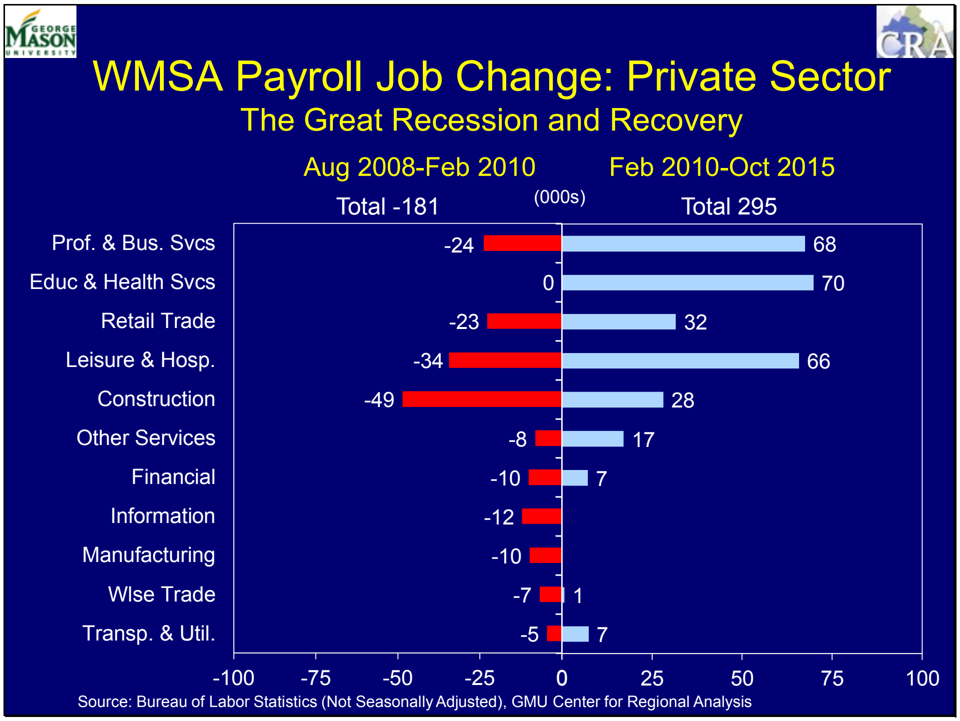
Year	Federal Procurement $s[1]	Percent Change	Real Annual Change GRP[2]	Real Annual Change GDP[3]
2000	$29.3			
2001	32.1	9.6		
2002	37.1	15.6	2.6	1.8
2003	44.0	18.6	3.9	2.8
2004	52.6	19.5	5.3	3.8
2005	54.5	3.6	4.6	3.3
2006	57.1	4.8	2.0	2.7
2007	59.1	3.5	1.7	1.7
2008	68.9	16.6	2.2	- 0.3
2009	75.6	9.7	- 0.1	- 2.8
2010	82.4	9.0	3.2	2.5
2011	79.8	- 3.2	1.4	1.6
2012	76.3	- 4.4	0.2	2.2
2013	69.1	- 9.4	0.0	1.5
2014	$71.2	3.0	0.3	2.4

Sources: IHS Economics, GMU Center for Regional Analysis
[1]in billions of current year dollars reported by place of performance.
[2]gross regional product, metropolitan data series dates from 2001.
[3]gross domestic product.

Federal employment growth patterns are typically counter-cyclical, increasing when the private sector is in decline and thereby helping to moderate the economic consequences of a recession. As shown in Figure 2, the Washington region's private sector lost a total of 181,300 jobs during the Great Recession. Federal employment increased by 49,000 jobs during this same period. Since the region's job base began to grow again following the recession (April 2010), the private sector has added a net of 295,200 jobs through October 2015 while federal employment has declined by 23,800 jobs.

State and local government job trends tracked more similarly to the private sector than to the federal sector but lagged private sector job declines by more than a year peaking in March 2009, declining slightly until early 2012, and regaining their pre-recession peak in November 2013. Over this cycle, state and local governments shed approximately 10,000 jobs between March 2009 and March 2011 and have added back 26,000 jobs through October 2015 for a net job gain of 16,000 over their combined peak pre-recession employment level.

Figure 2



In addition to the job counts and shift between sectors shown in Figure 2, the job changes have had significant economic impacts reflecting their contributions to the region's gross regional product (GRP). The calculations for the private and government sectors are shown in Table 2. While the region gained a total of 113,900 net new jobs over the past five years, a gain of 9.8% from the region's July 2010 employment base, the GRP value of these jobs has increased by only 0.64 percent from the region's $433.24 billion GRP value in 2010. Adding in the gains and losses of government jobs for this business cycle completes the calculation: the loss of 23,800 federal jobs cost the regional economy $4.4 billion in GRP value while the addition of 16,000 state and local government jobs contributed $1.3 billion to the region's GRP. The net GRP contribution of these job changes in the federal and state and local government sectors spanning the 2010-2015 period through October is minus $3.1 billion.

This loss of total government employment value of $3.1 billion offsets the private sector's GRP value of its additional 113,900 jobs over the business cycle and their contribution of $2.8 billion to GRP. These analyses confirm that the structural shift underway in the Washington region's economy has resulted in the loss of higher value added jobs and the jobs that have been generated in the emerging economy contribute far less to gross regional product resulting in a reduction in overall economic value on a per employee level. To accelerate its growth, the region will require either much stronger future job growth in lower value-added sectors or the substitution of high-value added jobs in the private sector for the jobs being lost in the federal sector and by federal contractors due to declining federal procurement spending in the Washington region.

Table 2

The GRP* Effects of Job Changes in the Washington Metropolitan Area
During the Recession and Recovery To October 2015

Period	Job Change	GRP Value of Job Changes (in billions of 2014 $s)
Private Sector		
Recession	- 181,300	- $29.044[1]
Recovery	295,200	31.826[2]
Change in Private Sector	113,900	$2.782
Government Sector		
Federal	- 23,800	- $4.422[3]
State & Local	16,000	1.308[4]
Change in Government	- 7,800	- $3.114
Net GRP Value Change since 2010		- $0.332

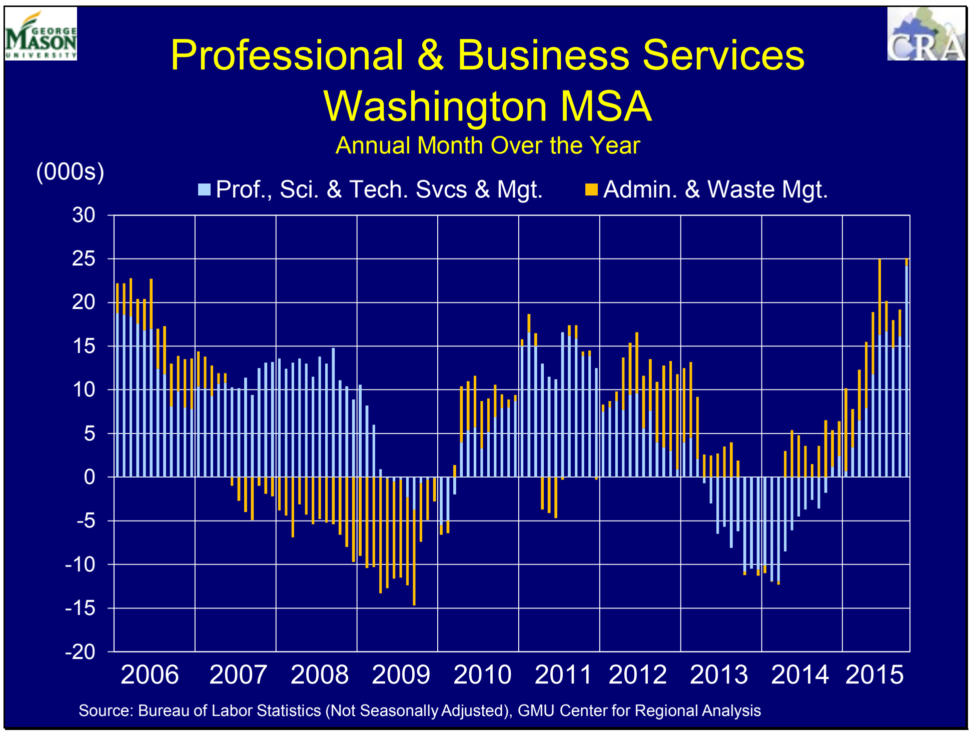
Source: GMU Center for Regional Analysis
*Gross Regional Product
[1]average of $160,199 per job contribution to GRP
[2]average of $107,812 per job contribution to GRP
[3]average of $185,804 per job contribution to GRP
[4]average of $87,736 per job contribution to GRP

The Washington Region's Economic Performance Has Lagged Its Peer Metropolitan Areas Since 2010

The dependency of the Washington region's economy on federal spending has resulted in a growth pattern that is unlike any of its peer metropolitan areas. Rather than accelerating each year since the beginning of the recovery in 2009, the Washington area economy has slowed after experiencing a shallow recession in 2009 followed by a quick start in 2010 (see Figure 1). As a consequence of structural changes in the region's employment base, compounded by a contraction of its federal sector, the region's employment gains and their shift to lower value added jobs (Table 2) have resulted in slower relative economic growth compared to the Washington region's peer metropolitan areas.

This pattern of change has been driven by jobs losses in the region's two largest employment sectors: professional and business services and federal government. Job losses in professional and business services (P&BS) began following the beginning of the Sequester in March 2013 and continued through fiscal year 2014 (see Figure 3). It is important to note that the P&BS jobs being lost during this period were scientific and technical and management jobs while during the recession the P&BS jobs that were lost were largely administrative jobs.

Figure 3



Federal job losses coincided closely with the enactment of the Budget Control Act of 2011 and continued through the end of 2014. This downward trend appears to have stabilized in 2015 (Figure 4). However, IHS Economics forecasts an additional loss of 18,000 federal jobs over the 2015-2020 period. The cumulative effects of these structural employment changes in the Washington region's economy on its rankings relative to its peer metropolitan areas are summarized in Table 3.

Figure 4

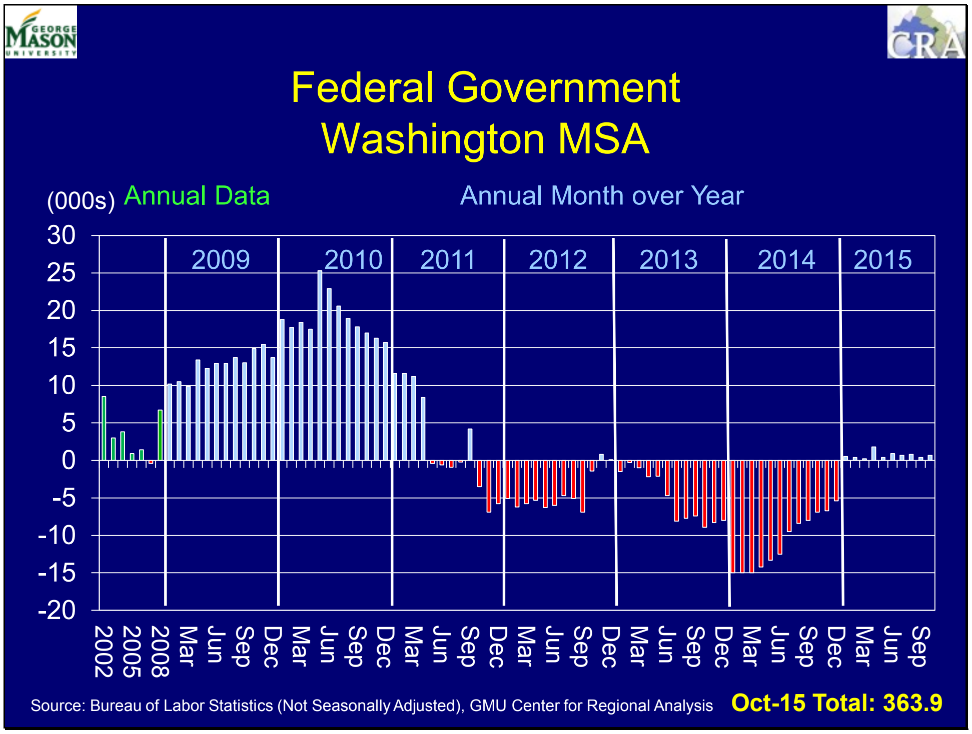


Table 3

Washington Metropolitan Area's GRP and Job Growth Rankings among the Nation's Largest 15 Metropolitan Areas, 2010-2015

Year	Rank by GRP Size	Rank by Annual Change in Jobs	Percent Job Change	U.S. Percent Job Change
2010	4	2	0.4	- 0.7
2011	4	10	1.4	1.2
2012	5	14	1.3	1.7
2013	5	15	- 0.8	1.7
2014	5	15	0.6	1.9
2015[1]	6	8	2.1	2.1

Sources: IHS Economics, Inc., GMU Center for Regional Analysis
[1]job ranking based on October 2015 employment data.

No evidence can be offered to suggest that federal spending in the Washington metropolitan area will return to its 2010 level. Therefore, the solution to the region's weak economic performance must be in growing its non-federally dependent business base:

- businesses that already exist in the Washington region (there is a market-based reason for these businesses having located and flourished in the Washington region);
- businesses that serve non-local markets (it is the region's export base that drives growth and that has been dominated by federal spending);
- businesses that are characterized by high-value added jobs (these businesses support high wages); and,
- businesses that are projected to grow rapidly at the national scale (focusing on rapidly growing businesses rather than slower growing businesses takes advantage of emerging national and global market trends).

In essence, the solution to the slow economic growth resulting from the contraction of the economy's historically dominant federal sector is to build on the region's competitive advantages measured against national and global market conditions and trends. The Washington metropolitan area economy must transition from being a "company town" to a global business center.

Regional Competitiveness: The Washington Region as the Model for Knowledge-Based Economies

The major metropolitan centers in the U.S. and around the world are in transition toward what has been termed the knowledge economy in the information age led by innovation. These metropolitan areas did not begin their history with a knowledge-based economy and that is where they differ from the Washington metropolitan area. It could be argued that the Washington region's economy has always been on this trajectory and possessed the fundamental ingredients of the future economy for which the nation's other major metropolitan area economies are striving.

The Washington region's economy has not evolved from being a manufacturing center as did Detroit and New York, or as a transportation hub as did Atlanta, Dallas, Los Angeles, Seattle and Denver, or from a natural resources base such as for Houston. Rather, the Washington region's economy has always been a knowledge-based, policy center focusing on government, administration, ideas and information, communications, networking, connectivity and technical applications to problem solving cutting across the growth sectors of the future. While the Washington region's economy became over-specialized in government-based policy and applications, it possesses untapped private sector knowledge-based business potentials. Given this perspective, the Washington region's economy could be the test bed for strategies and policies for managing and directing economic growth that will define all metropolitan-scale business centers in the future.

Comparing the Washington region's economic performance to the nation's major metropolitan areas can yield incorrect conclusions. Rather than identifying the weaknesses or gaps in the Washington region's economy based on the economic performance and structure of its peers and striving to replicate their economic conditions, it can be argued that these differences are not defects in the Washington region's economy but the result of it being an advanced economy and that these differences are, in fact, defects in these other metropolitan areas' economies. Rather than attempting to diversify the Washington region's economy so it has a sectoral structure more like Atlanta or Boston or Dallas, the reverse should actually be the model; that is, the long-term growth of the Boston, Atlanta and Dallas economies will depend on them becoming more like the Washington region's economy, one specialized in knowledge resources and expertise, the connectivity across public, non-profit and private sectors, the advancement of ideas and knowledge and the application of new technologies to the solution of global problems having important social consequences (peace, world hunger, global warming, potable water, renewable energy and distribution, and a smart workforce, among others).

The Washington region, as the prototype for the knowledge-based economies of the future, must focus its economic growth and development strategies, policies and initiatives on building out its knowledge- and information-based platforms to achieve the efficiencies and optimal balance between their interdependent parts. This will require strengthening the region's business foundations in parallel with its federal government base and its dependent and related functions and enhancing the growth of export-based (non-local serving) and high-value added employment.

The building blocks for this knowledge-based economy include a stable and well-funded core industry that generates policy and information—the federal government—that attracts a broad base of organizations and businesses with connections to global networks of organizations and businesses, a diverse resident population and an educated and culturally diverse workforce, a ready supply of venture capital, advanced institutions supportive of economic growth and development including research organizations and universities, progressive local governments, and strong public and private sector leadership. Building on the interdependencies across the horizontal and vertical network of the knowledge-based economy and strengthening its connectivity to global markets will define the successful metropolitan area economies of the future.

The Washington region's economy is much closer to the required framework for sustained economic growth when its assets are measured against the requirements for advancement towards the economy of the future than are its peers' economies as measured against the economies of the past, economies that depended on traditional exports and competitive advantages in the market place based on labor costs and market access. These traditional metrics are obsolete in the knowledge economy and will be replaced by measures of innovation and entrepreneurship, communications, and applications of information and new technologies to the solution of problems, and advancement of ideas and human needs. Positioning the Washington region as the forerunner of the knowledge-based metropolitan area economy is the underlying assumption guiding the Roadmap for the Washington's region's future economy.

The Washington Region's Competitive Advantages as the Basis for Growing a Business-Driven Economy

The identification and analysis of the Washington region's competitive advantages, those that provide its economy with clearly distinctive assets for attracting, retaining and growing its non-federally dependent, export-based (non-local serving), and high-value added business base, starts with it being the seat of the federal government with its concentration of federal functions and services. The Washington region is the home of the U.S. government; there is only one national capital city. And, this capital city is the headquarters of the world's largest economy, most powerful military, and third largest population. As the world's number one government power center, the region is home to almost all of the foreign embassiess and consulates and its connectivity to the world (diplomatic, political, institutional, informational) endows the Washington region with a uniquely attractive business ecosystem.

Reinforcing this unique ecosystem composed of interdependencies spanning international governments and organizations, state and local government organizations and service providers, and non-government organizations with national and international missions, is the region's attractive quality-of-life, its multiple layers of cultural diversity and resources, its large number and high quality of educational resources and institutions, a workforce that reflects high labor force participation rates for both men and women and that has more years completed in formal education than any other labor market in the U.S. Additionally, it possesses a highly specialized, advanced business base with identifiable concentrations of employment in high-wage occupations. A basic listing of the region's competitive advantages is presented in Figure 5.

Most of the Washington region's assets that support the growth of its non-federally dependent, export-based, high-value added businesses flow from it being the nation's capital with its concentration of executive, legislative and judicial functions. These interconnecting flows—monetary, regulatory, and advisory—are illustrated diagrammatically as follows in Figures 6 and 7.

Figure 5

Figure 6

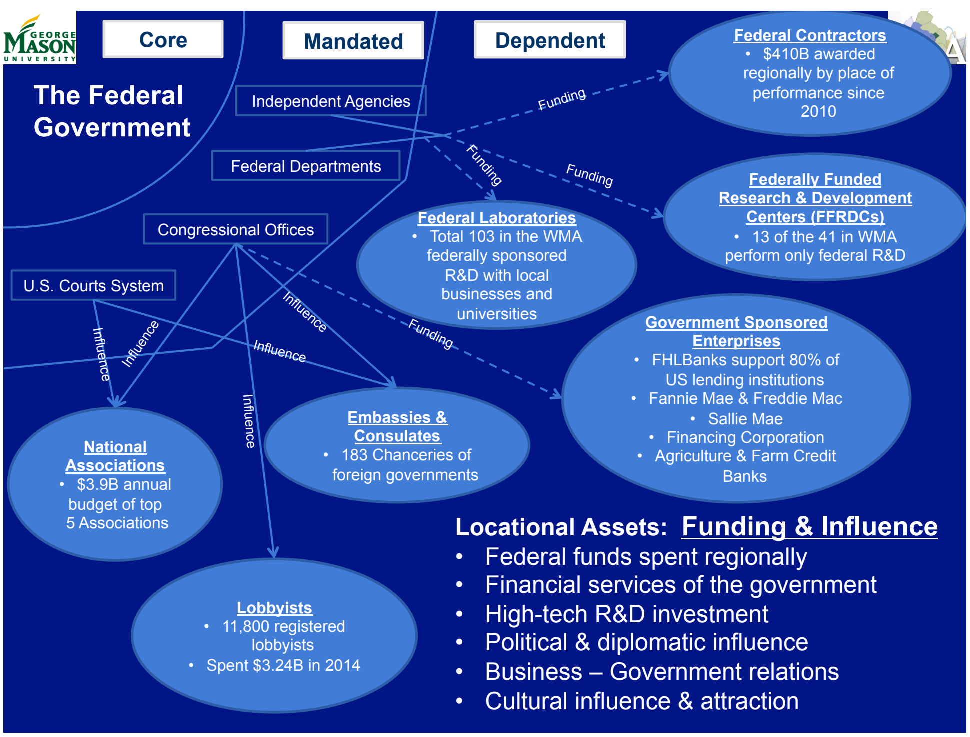
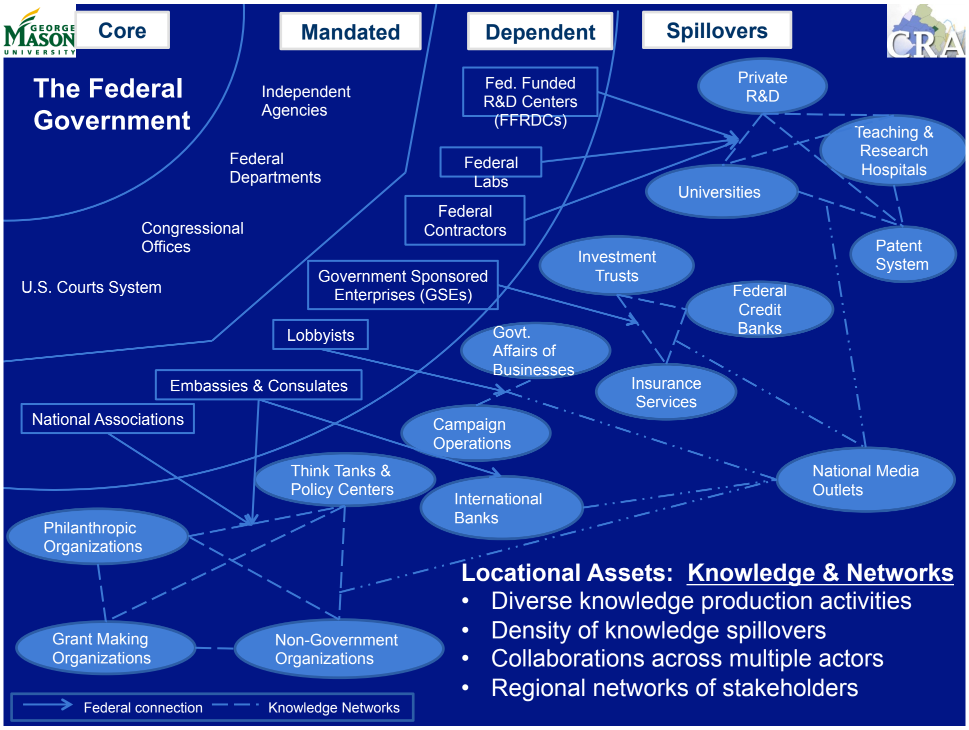


Figure 7



The Washington Region's Advanced Industrial Clusters

The research report entitled Roadmap for the Washington Region's Economic Future: Seven Key Economic Clusters, prepared by Inforum of the University of Maryland, presents the analyses undertaken to identify the non-federally dependent, export-based, high-value added, advanced industrial clusters for which the Washington region offers a competitive location. Seven advanced industry "clusters" are identified and analyzed that have the potential to drive the Washington region's growth over the next decade. As these advanced industrial clusters are already established within the region's economy, they are analyzed using existing industrial and occupational data.

The clusters were selected and formed based on their magnitudes of employment and job quality, growth potential, wages levels, and degree of concentration in the Washington region. Not surprisingly, many of the businesses defining the region's advanced industrial clusters that reflect its competitive advantages are precisely in the sectors that had previously developed in response to the growth of federal procurement spending. The region's challenge will be to employ these non-federal assets to facilitate a "pivot" of a talented and experienced work force toward non-federal markets at national and global scales.

The following advanced industrial clusters have been identified as incorporating the target businesses (non-federally dependent, export-based, high-value added) that can accelerate their growth during the next five to ten years and thereby can become the region's economic driver serving the role filled by federal spending prior to 2010. These seven advanced industrial clusters have been identified based on the following criteria: they encompass the natural advantages present in the nation's capital, they are technology-intensive or otherwise-advanced consistent with a knowledge-based economy, they have above-average wages, they possess high growth potential nationally and/or locally, and they already have a concentration of employment located in the Washington metropolitan area.

(1) Advocacy Services

The capital region is a logical setting for advocacy organizations, ranging from well-established lobbying firms and trade associations to political action entities to philanthropic foundations to startup grassroots organizations. Much of the nation's social science research is supported by these organizations and much of that activity is conducted within the Washington Beltway.

(2) Information and Communications Technology Services

The federal government has attracted numerous information and communication technology companies and professionals to the area. A large and sophisticated information and communications technology services cluster is particularly important in the global economy as it supports other regional industries via spillovers of technology and productivity.

(3) Science and Security Technology Services

Proximity to the national defense, intelligence and space sectors has enticed science and security technology firms to the region. This advanced technology cluster has important new opportunities for growth and its presence provides important spillovers for other clusters in the metropolitan area. Additionally, the strong local Information and Communications Services Cluster contains particular expertise in cyber-security and so will be intimately linked with the Science and Security Technology Services cluster.

(4) Biological and Health Technology Services

The region's role in health financing and research flows from the Centers for Medicare and Medicaid Service, the National Institutes of Health, and the Federal Food and Drug Administration. These organizations provide a continuing catalyst for new biological and health research performed at universities and private labs throughout the region. One of the most significant efforts will revolve around health information technology, another area where the Information and Communications Technology Services cluster becomes important.

(5) Business and Financial Services

A Washington region's large management consulting presence has developed supporting the federal government and most of this cluster will continue in this role. Additionally, these organizations also bring specific knowledge to the markets of the global economy. As the Washington region is the home of many important institutions such as the World Bank, the IMF, and the Federal Reserve Board, it will continue to play an important role in global finance.

(6) Media and Information Services

Washington, as the seat of the federal government, will always be a primary source for the nation's news and information. Despite a market shift from print to digital publications, the Washington region remains a hub for world-class documentary, advocacy, and political media and information firms. All global print and electronic networks compete and collaborate within an ecosystem using cutting-edge technology and talented and powerful global participants.

(7) Business and Leisure Travel Services

The Washington region's professional environment, rich history, and national landmarks make it a natural destination for business and leisure travel. Tourists and business travelers contribute to supporting the region's hotels and large development projects such as the National Harbor and the Walter Washington Convention Center, venues that have world-class attractions for business and other organizations. This cluster supports a large network of suppliers and complementary businesses that expand naturally with national income growth.

These seven clusters were found to employ 811,193 workers within the Washington region in 2014, accounting for 27.3 percent of the private employment base (see Table 4). These clusters' combined workforce is two-times larger than the federal civilian workforce is at present in the Washington region. In aggregate, the workforce of these seven advanced industrial clusters grew 14.6 percent between 2003, the beginning of the recovery following the 2001-2002 recession, through 2014. This compares to a 9.3 percent growth for job growth across all sectors in the Washington region over this same period. The average wages for workers in these seven advanced industrial clusters were 35 percent higher than the average wages for all jobs in the Washington region. By these measures, these clusters represent high-value added and high-growth potential businesses for which the Washington region is a competitive location.

The Washington region's employment growth in comparison with the national equivalent shows that regional employment outpaced national employment growth in the seven clusters from 2003 through 2011 (Figure 8). Since 2011, however, the Wasington region's employment growth in these seven clusters has been essentially flat, while national job growth in these clusters has been strong since the job recovery started in 2010.

Table 4

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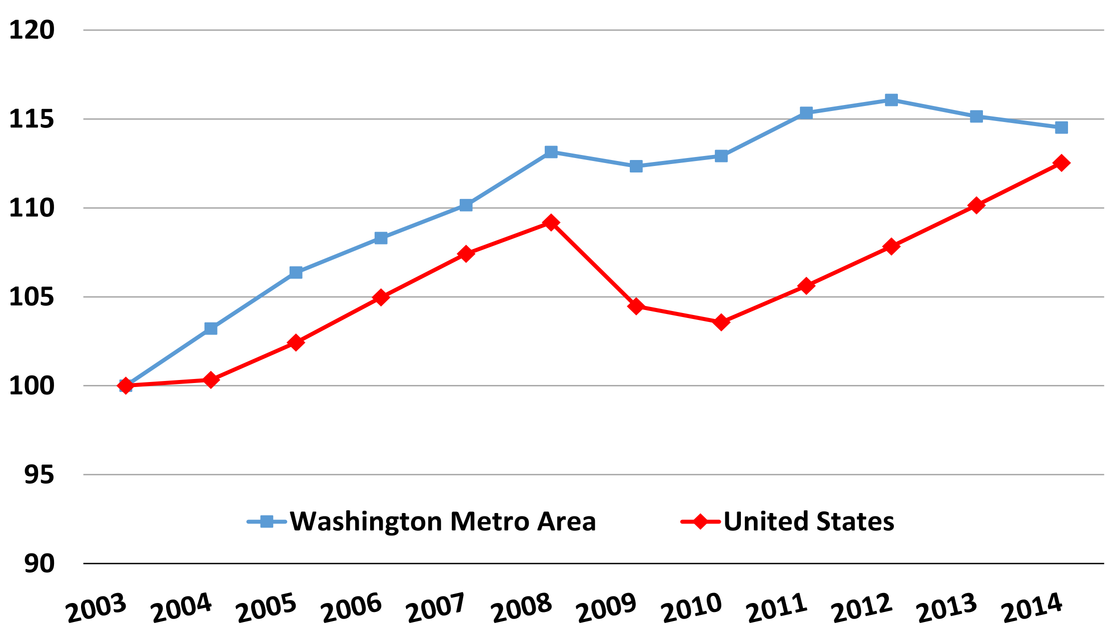
Location Quotient is the percentage of jobs in a cluster in the Washington region divided by its respective percentage of jobs in that cluster nationally; this is a measure of economic specialization.
Source: JobsEq and Inforum calculations

Figure 8

Growth Trends for the Washington Region's Advanced Industrial Clusters
Total Employment, WMA vs. US. (Index = 100 in 2003)



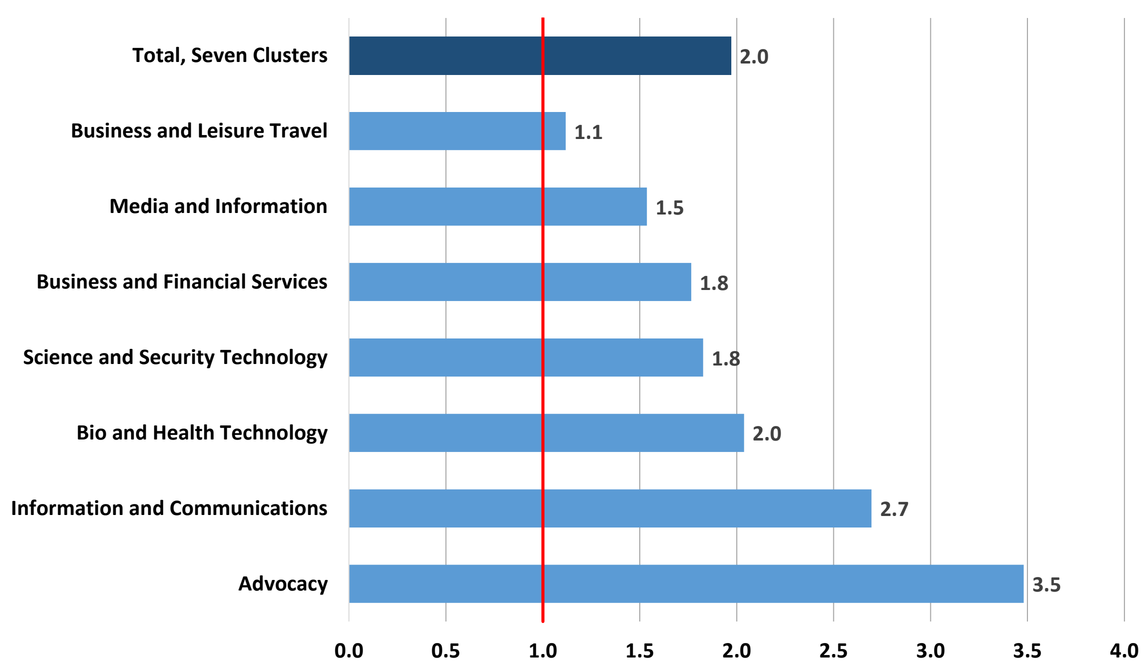
Source: JobsEQ and Inforum Calculations

That these advanced industrial clustered are already concentrated in the Washington metropolitan area and therefore have a proven record of performance (that is, their concentration proves that the Washington area offers a favorable ecosystem in support of their continued growth) is seen in their disproportional share of the local employment base compared to their respective distributions nationally. This concentration is measured by what is called the location quotient (LQ). A cluster's LQ is the share of that industry's jobs in the region divided by the share of that industry's jobs in the national economy. A LQ exceeding 1.0 indicates a regional concentration and presumably a comparative advantage for that industry. A location quotient of more than 2.0 indicates that the regional share of the industry's employment is twice as large as its share nationally. Table 4 and Figure 9 show the location quotients for the region's seven advanced industrial clusters in 2014. In each case, the Washington region enjoys a significant regional concentration.

The past performance of the region's non-federally dependent advanced industrial clusters does not guarantee future success. The global and national economies are incredibly dynamic and capital and labor resources are footloose. Other regions are working to increase their attractiveness for these same industrial clusters and their constituent firms and the technology frontier are in continuous flux, sometimes eliminating previous regional advantages.

Figure 9

The Washington Region's Advanced Industrial Clusters: Location Quotients, 2014



Source: JobsEQ and Inforum Calculations

Two employment scenarios for each of the region's advanced industrial clusters and the overall Washington region's economy are projected through 2025. The first scenario assumed that each advanced industrial cluster reduces its dependence on federal spending and successfully diversifies into other markets. For this projection, cluster-specific regional employment projection equations were generated with corresponding regional- and industry-level employment forecasts from IHS Economics. These forecasts show that regional employment growth in knowledge-based industries, such as in the Washington region, will significantly exceed projections for national growth in the same industrial clusters. Given that federal government spending and employment growth is forecast to be weaker in the coming decade compared to the 2001 to 2011 period, this regional projection implies that these knowledge-based industries will successfully diversify away from any historic federal dependency. This forecast is referred to as the "Successful Diversification" scenario.

The second scenario assumes that the clusters are not able to find significant sources of new revenues beyond the federal government. This alternative forecast uses industry-level national employment projections to drive the forecasts for the Washington region's advanced industrial cluster employment. Since 2011, the region's employment growth has lagged national growth in these key clusters. If local increases cannot consistently exceed national rates, then the region's advantages are discounted and overall economic and employment growth will, at best, track the national average. This forecast is the "Business as Usual" alternative.

Table 5 presents the results of these two alternative forecasts resulting in three sets of job levels and growth rates for each advanced industrial cluster. The first two columns provide the number of 2014 jobs and the employment growth for each cluster for the eleven years from 2003 to 2014. The job growth during this historic period ranged widely across clusters, with four clusters experiencing rapid growth (including Advocacy, Science and Security Technology, Bio and Health Technology and Business and Financial), one experiencing slow growth overall with more rapid increases in the most skilled jobs (Information and Communications), and two clusters in which regional employment actually contracted (Media and Communications and Business and Leisure Travel). Total employment in the seven advanced industrial clusters grew by 14.6 percent over 2003 to 2014, helping to drive the overall region's job growth by 9.3 percent, compared to 5.1 percent growth in the national economy.

The second two columns in Table 5 present the results of the "Successful Diversification" scenario with 2025 job levels and job growth from 2014 to 2025. In the eleven years from 2014 to 2025, employment in the fast-growing clusters that had strong performances between 2003 and 2014 are expected to grow at about the same rate over the forecast period. Information and Communications Services is projected to grow slightly faster than during the 2003-2014 period. Unlike the historic period, Media and Information Services and Business and Leisure Travel Services employment is expected to grow going forward in this forecast scenario.

Under this favorable scenario, total employment in the sectors increases by 20.9 percent, notably faster than from 2003-2014 that included the Great recession and substantial curtailment of federal spending (procurement and payroll). Under this forecast, the region's total employment will increase by 14.4 compared to 9.5 percent for the U.S. economy as a whole. This job growth forecast is similar to many current forecasts for the Washington region over the next decade suggesting that these forecasts are assuming successful diversification away from a federally dependent economy.

The last two columns in Table 5 present the "Business as Usual" case where the Washington region's employment growth in the key knowledge-based clusters is much slower, growing only 7.6 percent from 2014 to 2025 due to a failure to reduce these clusters' dependency on federal spending. In several clusters, this sluggish growth is actually similar to their performances in recent years. This pace of job growth is projected to continue if the region's workers and firms are not more successful in developing a more diversified portfolio of non-federal customers in national and global markets. In the "Business as Usual" scenario, total regional employment growth over the next eleven years is limited to 4.0 percent, compared to 9.5 percent growth rate for the U.S. economy.

Table 5

Job Growth in the Advanced Industrial Clusters and WMA, 2014 – 2025

		Washington Metro Area					
		History		Successful Diversification		Business as Ususal	
Cluster		2014 Jobs	2003-14 Growth	2025 Jobs	2014-25 Growth	2025 Jobs	2014-25 Growth
Advocacy	ADV	115,731	19.0%	138,868	20.0%	122,303	5.7%
Information Communications Technology	ICT	204,489	5.5%	224,872	10.0%	213,621	4.5%
Science and Security Technology	SST	123,785	19.0%	147,104	18.8%	135,707	9.6%
Biological and Health Technology	BHT	55,396	25.1%	67,929	22.6%	58,388	5.4%
Business and Financial Services	BFS	190,128	39.0%	269,053	41.5%	218,851	15.1%
Media and Information	MAI	35,745	-20.1%	41,667	16.6%	36,292	1.5%
Business and Leisure Travel	BLT	85,919	-1.3%	91,512	6.5%	87,807	2.2%
Total of Seven Clusters	**TOT**	**811,193**	**14.6%**	**981,005**	**20.9%**	**872,969**	**7.6%**
Washington Metro Area	**WMA**	**2,973,337**	**9.3%**	**3,402,570**	**14.4%**	**3,092,270**	**4.0%**
United States	**USA**	**152,077,125**	**5.1%**	**166,505,562**	**9.5%**	**166,505,562**	**9.5%**

Source: Inforum

Requirements for Economic Growth Building on the Region's Advanced Industrial Clusters

The Washington region has been shown already to possess the business base that has the potential for replacing federal spending as the driver of future economic growth. This business base has developed due to the region's inherent competitive assets (Figure 5). In addition to being non-federally dependent, this business base serves a non-local market nationally and globally and is high-value added and has the potential to grow at an above-average rate in the coming decade. The measure of these businesses' natural fit within the Washington region's economy is the relative concentration of their current presence as employers; that is, their location quotients (LQs) as a measure of their local specialization, as shown in Figure 9. The advanced industrial clusters identified as having the potential to drive the region's future economic growth have established concentrations of employment in the Washington region and these jobs support higher salary levels locally than these same industries support at the national scale. These high-wage businesses are located in the Washington area because of its competitive assets.

The essential question is how to accelerate the growth of these businesses for which the Washington region already provides an established competitive platform? To answer this question, as well as to learn more about the firms that comprise the seven advanced industrial clusters identified as potential drivers of the region's future economic growth, business leaders were interviewed across the Washington region representing a selection of four to six firms in each of these identified clusters. A total of 33 interviews were conducted. Senior members of the research teams from the American University Center for Metropolitan Policy Analysis and Business Development Advisors conducted these interviews.

The results of these interviews are reported in Growth Opportunities and Constraints: Perspectives from CEOs and High-Ranking Executives prepared by the American University Metropolitan Policy Center and Business Development Advisors. The results of these interviews provide the framework for formulating an action plan that will strengthen the business environment required to advance the region's competitive position as one of the world's advanced knowledge-based economies. There is a broad consensus among business thought-leaders concerning the Washington region's general attractiveness as a place in which to locate and conduct their business. These findings provide the context for identifying the requirements for sustaining and advancing the region's competitive position in the rapidly changing business environment.

The Washington region's foundation of federal agencies and laboratories is its most important distinguishing asset. This foundation has attracted a diversity of businesses and residents that further reinforce the region's capacity to respond to a changing business environment. The region's more than 100 institutions of higher education with an estimated 400,000 students provide untapped potentials for strengthening its competitive position in national and global markets. The Washington region has excellent connectivity to U.S. and world business centers and, with its international financial and political organizations, is one of the important communications and information crossroads of the world. These headquarters functions for governmental and business organizations and associations and their well-educated and professional workforce support a high-quality cultural environment and quality-of-life that has long attracted talent from other major business centers around the world. The Washington region has an advantageous position in the competition for investment and human capital. However, the Washington region also has shortcomings that threaten to undermine its assets.

In summarizing the interviews with business thought-leaders representing a cross section of the seven advanced industrial clusters for which the region has an identifiable competitive advantage, eight categories of "requirements for future economic growth" were identified:

- Talent development, attraction and retention
- The region's quality-of-life
- Transportation flexibility and adaptability
- Access to capital
- Regional branding and national and global marketing
- Entrepreneurial culture
- Competition among local jurisdictions
- Public costs and disincentives

These "requirements for future economic growth" are interdependent and cumulative. Interestingly, they can be combined into two more-focused groups: (1) what businesses need to grow and (2) constraints to business growth based on based on the underlying conditions characterizing the Washington region. This second group of "requirements" can also be thought of as continuing challenges that will affect the growth potential of the region's advanced industrial clusters and its broader business base. Each of these two groups includes four "requirements" as identified in the interviews of business thought-leaders. These are elaborated further in the following pages.

<u>What Businesses Need in Order to Grow in the Washington Region</u>

- Talent Development, Attraction and Retention

  Assuring the talent required to support an advancing economy is critical to competing in the world economy. To maintain the skills and knowledge base required by the demands of a changing economy, the region needs to have the capacity to continually up-skill and further educate the current workers employed by local businesses. This requires building the capacity within the region's existing educational institutions to collaborate with employers to assure that the skills training and education provided are effectively linked to the employment requirements of the region's business base.

  Investment in the preparation of the region's future workforce is critical to achieving its full potential and the full potential of the region's future economy. Unevenness in the quality of the public schools across the region and increasing fiscal pressures are threatening the Washington region's reputation as offering the highest quality of elementary and secondary education. Advancing the capacity of the region's public school systems is prerequisite to endowing its future workers with the ability to perform at the required levels in their pursuit of higher education and the career paths reflecting the future directions of the Washington economy.

Additionally, better deployment of the region's workforce over the lengthening work life of the employee will extend the utilization of the region's talent pool to actively employ its older workers (post-retirement) to the competitive benefit of region's businesses as well as to the benefit of these workers possessing valuable experience and knowledge gained during their career.

The region also needs to increase its attraction of talent by advancing its reputation as a good place in which to live with excellent career pathways available to its resident workforce spanning all levels and stages of employment.

- The Region's Quality-of-Life (QOL)

Talent is attracted and retained by a region's qualities-of-life and the vibrancy of its residential communities. An uncompetitive QOL will cause talent to relocate to what are perceived to be better places to live and will deter these highly mobile workers from moving into the Washington region even when high-quality employment opportunities are available. The bundle of qualities that establish a place as competitively attractive to highly educated or high-skilled workers include: cost of living—this is principally housing affordability; the quality of locally provided public services—public education and public safety; the availability and quality of multi-modal transportation services and associated costs of mobility; the qualities of residential neighborhoods and public spaces—visual appearance, physical condition, social structure); the region's reputation for diversity of life styles, ethnic mix, equity in the distribution of its qualities-of-life, and response to poverty conditions. The list goes on and near the bottom is local tax burden and differentials across local jurisdictions.

The Washington region's quality-of-life is viewed to be positive by the business thought-leaders who participated in the interviews although differences and inequalities across the region were identified as conditions that undermine the region's competitive position. Also, the region's high cost-of-living detracts from its long-standing positive image as a good place to live. The quality of the public schools in the region, while uneven across jurisdictions, is viewed as an asset but there are concerns that these qualities are under fiscal pressure that could tarnish the Washington region's historic reputation for having high-performing public school systems capable of preparing tomorrow's workforce. And, the region's demographic and cultural diversity is recognized as one of its important assets for supporting the growth of a nationally and globally competitive business base.

However, the region's QOL is facing it greatest challenge in recent history—the steady deterioration of its basic infrastructure and transportation systems. In the past, these systems represented advanced technology and designs and were built with excess capacity to meet the demands of a growing population and expanding economy. Today, the region's basic infrastructure is aging and reflecting the consequences of public disinvestment, mismanagement and over-capacity usage. This is particularly evident in the region's transportation systems.

- Transportation Flexibility and Adaptability

  Transportation was cited by business thought-leaders as a key "requirement for future economic growth." It is an important determinant of the region's reputation as a good place in which to live and do business. Transportation is a fundamental building block of a competitive economy as it is required to move the region's workers to and from their places of work as well as to move the region's commerce efficiently within and to and from the region at competitive costs.

  The cost of moving the region's goods and services internally and externally, inclusive of the cost of lost time from congestion delays, is a major determinant of business location and for place-of-residence choices by the region's workforce. Interviewees emphasized that plans and designs to achieve more efficient connections between employees' places of residence and their employers must reflect multi-modal options. And, furthermore, the transportation requirements involving workday mobility for both business and personal purposes were equally important as they affected the overall costs of doing business in the region. The poor alignment between the region's transit infrastructure and services and workday requirement contribute further to its transportation challenges.

  The worsening of these mobility problems in combination with changing mobility demands of the region's workforce will accelerate its shift to alternative work patterns, which has been facilitated by telecommuting and other technologies. The outcome of these trends is already seen in the decreased demand for traditional office spaces located in densely development central places.

  While there is no quick fix for the region's transportation challenges, in the short-term the deteriorating state of the region's transportation infrastructure and absence of regional collaboration in responding to the region's growing transportation crisis are sending a negative message to business investors and entrepreneurs, as well as prospective workers considering relocation to the Washington region. This message is that the region is in a downward economic spiral abetted by a public leadership unwilling to raise the necessary resources to reinvest in the region's capacity to achieve its growth potentials.

- Access to Capital

  While capital availability was not cited as a major constraint to the growth of non-federally dependent businesses in the Washington region, venture capital and a strong commercial banking system are essential to generating a vibrant entrepreneurial ecosystem. Inasmuch as the focus of the Roadmap is to grow existing mid-size firms that populate the seven advanced industrial clusters identified as constituting the Washington region's competitive business base, capital access for start-up businesses and early-stage investment capital are not the focus of this research.

  What several business thought-leaders did cite as missing in the Washington region is a cadre of senior-level executives who have built successful companies, sold them and subsequently started other business ventures. While the region has generated new and successful businesses, as these have grown they have too often become the acquisition targets of larger non-local companies. With these acquisitions, the local talent that had nurtured these local firms through their early stage development often has been relocated to the home offices of the acquiring firms. This process has reduced the number of repeat investors in the Washington region and undermined the entrepreneurial processes required to support a vibrant re-generating business ecosystem. In a company town, this is not a problem. However, in an economy that is diversifying away from its dominant employer, establishing a strong cadre of local entrepreneurs, experienced managerial talent and venture capitalists is necessary to realize the region's inherent business potentials.

<u>Constraints to Business Growth Based on the Underlying Conditions Characterizing the Washington Region</u>

The second group of "requirements for future economic growth," as culled from the interviews of business thought-leaders spanning the seven advanced industrial clusters, includes four categories of concerns that are acting to diminish the region's competitive position. These constraints appear to have evolved from existing conditions in the Washington region in part because it is a company town, partly because the region is comprised of multiple state and local jurisdictions, and partly due to the absence of regional administrative organizations established to realize its economies of scale and/or to combat the inefficiencies and the higher costs of intra-regional competition.

- Lack of a Unified Business Image

  The Washington region does not have a favorable image upon which to promote its business base. As a Federal City, its government functions have overshadowed its competitive advantages for non-federally dependent businesses. The region's reputation that is broadcast nationally and globally revolves around the White House, the Capitol and the Supreme Court and actions related to the federal government (administrative, regulatory, budgetary, international relations and diplomatic, legislative and judicial). There rarely is a business report that identifies Washington as a business center, in spite of it being the location of 43 Fortune 500 firms that are principally non-federally dependent and export-based.

  This absence of a business brand for the Washington region's economy results in part from the media's fixation on news generated by the federal government with no parallel reporting on the region's business activities. Local professional sports teams get substantially more media coverage than the region's major business achievements.

  What the region needs is a business image, a national/international brand that communicates to the world its "other economy" that represents advanced, technology-based, professional services and its already in-place knowledge-based economy of the future. Until the Washington region is able to present a balanced portrait of its interdependent economic ecosystems, its diverse business potentials will be undervalued by business investment professionals and venture capitalists and misunderstood by the talent it will need to attract in order to meet the labor force requirements of its growing economy.

- Entrepreneurial Culture

  Due to the region's roots and traditions as a Federal City, its culture has been described as bureaucratic and better suited to administration and management of programs and regulations than it is entrepreneurial and fertile for innovation and business creation. The Washington region's culture is not viewed as being risk taking in the way that the culture is in Silicon Valley or other major hot beds for advanced, technologically intensive, business formation. The growth of federal contracting may have reinforced this introverted culture with its security and paperwork requirements.

  Business thought-leaders point to the region's culture as being less accommodating to business formation and entrepreneurial activity. This less accommodative business environment may help explain the loss of locally generated businesses to other more entrepreneurially rich regions. A result of the disproportionally smaller segment of the region's economy that is generated from non-federally dependent, non-local serving businesses is that the tradition of entrepreneurial succession is weak in the Washington region.

This weakness in business tradition has reduced the region's supply of senior executives and leadership talent who might mentor younger entrepreneurs and reinvest in local start-ups. The region's weaker entrepreneurial environment is reinforced as larger, well-established, non-local firms buy up the region's smaller, successful new businesses and shift their management control to other business centers along with their senior managers.

Re-balancing the region's entrepreneurial culture to underscore its business development assets will help attract the attention of venture capitalists and established businesses seeking locations for regional or international headquarters and will reinforce the region's branding as a "good place to do business."

- Competition Among Local Jurisdictions

The Washington region, as defined by the U.S. Census, consists of two state level governments, the District of Columbia, six independent cities (in Northern Virginia) and a total of sixteen counties (5 in Suburban Maryland and 11 in Northern Virginia). With its federal overlay, the Washington region has a unique political structure that all but guarantees dysfunction across political boundaries.

The consequences of this complex governmental structure is inter-jurisdictional competition that contributes to higher costs for public services, inefficiencies and unevenness in the delivery and quality of public services, costly duplication and potentially higher local tax burdens due to these inefficiencies and scaling problems. The unevenness of public services and the inability to achieve economies of scale in the provision of these services or to coordinate services across borders contributes to the region's uneven quality-of-life and its social inequalities, and reinforces the region's negative image to the outside world.

This jurisdictional competition also has been reflected in the failure to come together to promote economic development as a single region. Rather, each jurisdiction is out to one-up its neighboring jurisdiction and there is no hesitation to poach each other's businesses. As one CEO noted, "local poaching has costs, it undercuts the ability to market the region as a totality that would result in a much more persuasive case of investment, expansion or relocation to the region."

This competition has fed local distrust among jurisdictions undercutting cooperation on solutions to critical regional challenges affecting the region's ability to achieve and accommodate long-term economic growth. And, this competition is not limited to local and state governments. Local business and not-for-profit organizations also suffer from parochialism and introversion.

In order to position the Washington region to achieve its potentials as a knowledge-based economy, the public and private sector leadership must unite in their efforts to meet the region's challenges and to convey to the outside world that in the Washington region the local and state jurisdictions and business community are on the same page and together embrace a can-do attitude to meeting the region's requirements for economic growth.

- Public Costs and Disincentives

  The region's business thought-leaders identified the high costs of doing business in the Washington region as a deterrent to business investment. One large bundle of publicly imposed costs that contribute to the high cost of living in the region include its land use regulations, including fees and other extractions on the construction of residential properties that contribute significantly to the final cost of housing without adding permanent value to the property.

  In addition to these higher costs of living that impact the ability to recruit and retain the talent local jurisdictions need to grow their businesses, the region's higher operating costs that businesses must absorb subtract from their firms' bottom line. Bureaucratic and red tape delays by government agencies impose costs on local businesses, especially the regulatory processes that delay or interrupt productivity in the conduct or expansion of existing business activities. The publicly imposed costs that have no compensating benefits to the businesses they affect are the costs that give owners and investors reason to re-evaluate whether to maintain their business location in the Washington region or relocate to a more business-cost favorable location elsewhere in the U.S.

  State and local government fiscal policies towards business—operation, relocation, expansion—were not cited as having a major impact on the firms in the interview sample. However, it was noted that fiscal policy can have impacts on small business and early-stage enterprise, especially firms with long research and development cycles. The bio-tax credit in Maryland and the capital gains tax exclusion for start ups in Virginia were cited as examples of employing fiscal policy to promote the growth of selected businesses consistent with state economic development goals.

  While the state and local jurisdictions were found to be proactive in their economic development policies, there is no evidence that these policies are coordinated across jurisdictions. This go-it-alone approach further contributes to the unproductive competition among local jurisdictions.

> What is called for here by the region's business thought-leaders is increased collaboration at the regional scale to: (1) promote the region's economic development activities with the objective of enhancing the region's business-friendly reputation, and (2) reducing intra-jurisdictional variation in fiscal and regulatory policies to create a more uniform economic development platform that will enable businesses to choose locations that best suit their operating and marketing requirements, absent the distortions currently imposed by competing local governments.

Call for Action

The Washington region's economy is struggling to accommodate a long-term reduction in federal spending upon which its historic growth was dependent. Shifting this dependency to non-federally dependent businesses that can support high-value added employment and serve national and global markets, and for which the region already possess competitive advantages, can substitute for the loss of business growth previously supported by federal spending in the region's economy. This re-balancing of the region's economy can be complementary to the economy's historic foundation built up over 200 years as the nation's capital city.

As one of the nation's leading knowledge-based economies and seat of the federal government and center for U.S. and international governmental institutions, the Washington region is a global center for information exchange and connectivity among public and private sector interests having global scale. These interdependent national and international functions establish a unique competitive position for the Washington region within national and global markets. Seven advanced industrial clusters have been identified as possessing the potentials for re-accelerating the region's economic growth and that can provide the region's economy an alternative source of continuing growth in the coming decade.

However, the Washington region is not currently prepared to realize the growth potentials inherent in these seven advanced industrial clusters. Research has identified the principal "requirements" that will determine the course of economic growth in the Washington region, conditions that will shape the structure of an economy that is no longer dependent on federal spending for its continued growth. These "requirements" can apply to all types and sizes of business but have been identified here as being especially important to the types of businesses comprising the seven advanced industrial clusters for which the Washington region already possesses a competitive advantage over peer metropolitan area economies.

These "requirements" can be bundled into two interdependent groups: (1) those that describe what businesses need to grow and (2) those that describe constraints to business growth based in the underlying conditions that characterize the Washington region. These requirements and challenges are not self-correcting. They will require changing how the region is organized to manage and finance economic growth. To satisfy these "requirements" and to resolve the challenges that constrain the growth of business in the region, the region will need to design and initiate collaborative arrangements, its local jurisdictions will need to learn to trust neighboring jurisdictions and historically competitive organizations, and it will need to identify new channels of leadership and action to the benefit of the entire region.

None of these "requirements" can be more effectively achieved at the individual or organization-based level than at the regional scale. All of these "requirements" by their nature span political boundaries. They all possess implied economies-of-scale to the advantage of the region. Still, today, there are no regional organizations or channels for leadership or action that have the explicit goal of strengthening the region's competitive position to advance its economy by growing its non-federally dependent, non-local serving business base.

Achieving the region's growth potentials as a knowledge-based economy will require more than passive recognition of the prerequisite "requirements." It will require collaborative actions of the region's business and public sector leaders. The actions enumerated here are just the beginning of a continuing regional effort to accomplish these "requirements." None of these "requirements" will be ever fully achieved, not in a dynamic global economy where competitors are continually enhancing their respective competitive positions and where the nature of business innovation continues to alter the "requirements" of the business platform upon which the future of the Washington region's economic growth depends.

What businesses Need To Grow

The number one requirement threatening the achievement of the Washington region's economic future—its ability to support the accelerated expansion of businesses for which it possesses a competitive advantage—is talent; that is, a workforce sufficient in number and quality to meet these businesses' continually changing knowledge and skills requirements.

To achieve and maintain this workforce, that by its qualities becomes a magnate for new business investment drawn to the Washington region to take advantage of this appropriately specialized and highly productive workforce, requires a concerted effort spanning multiple dimensions of the region's educational systems and governments. And, it requires more than education and skills training. It also requires a region that is attractive as a good place to live involving all of the qualities-of-life important to retaining and attracting talent: the cost of living and housing affordability, public safety, public education, convenience and cost of mobility, regional image and brand distinction, multiple career pathways, cultural endowment and diversity, health and environment, recreation and social fabric, and collaboration among public- and private-sector leadership toward ensuring the region's future.

- <u>Addressing the Region's Talent Requirements</u>

  The easy first steps to achieving these "requirements" is to utilize existing organizations in the region and have them broaden or redefine their missions to extend their activities towards better accommodating the actions needed to fulfill the requirements.

  The Consortium of Universities of the Washington Metropolitan Area, with its 14-member institutions and approximately 250,000 students, represents a significant capacity in the Washington region to become recognized as a world leader in collaborative education for the workforce requirements of advanced industries in a knowledge-based economy. This will require broad-based collaboration in defining the full range of continuing workforce development, educational and skills requirements and designing and implementing programs to fulfill these requirements across all stages of a potential fifty-year career extending from entry-level education through encore career retraining, and the stages in between, to assure the required workforce upskilling in response to changing workplace technology and markets.

  The Consortium also should expand its membership to include all of the significant institutions of higher education in the region including the community colleges to bring under one umbrella-organization the capacity potential required to respond to the talent requirements of the region's workforce requirements. Centralizing the talent development capacity into one collaborative network of educational institutions would make the Washington area unique among its peers and send the message to workers worldwide that Washington region is the place to live if you desire a community with supporting organizations in place that catered to workers wanting to prepare and pursue a life-long career path without having to move to another region.

  The region's workforce of the future will include a disproportional concentration of professional, scientific and technical occupations requiring advanced and continuing education. Investing in the region's public education capacity to ensure that its graduates have the necessary capabilities to pursue careers requiring advanced education and skills training is essential to advancing the region's competitive position within the U.S. and global economies. Business leaders and organizations and public school systems should: (1) institute cooperative programs to increase internship opportunities for students while in school, (2) increase financal support for advanced educational curriculum and teacher development, and (3) pursue other joint initiatives that will enable the region's public school systems to prepare their students to meet the region's workforce requirements of the future. A significant portion of the region's future workforce will be the product of its public schools; the success of the public schools will be a critical determinant of the region's ability to compete in the global economy.

- Improving the Region's Quality-of-Life (QOL)

  The quality of the region's living environment is critical to its ability to attract the talent it needs to support economic growth. There are two key requirements to achieving and maintaining the region's QOL that necessitate region solution: (1) the region's high cost-of-living (20% above the U.S. average) reflected principally in its decreasing housing affordability, and (2) the region's failing or underperforming transportation systems and resultant mobility constraints and higher costs of distribution (logistics) and travel inclusive of the value of lost time.

  The region needs to address its high housing costs and resultant challenges of affordability as they impact talent attraction and retention and the region's reputation as a high-cost place to live. Housing affordability has multiple facets including publicly imposed costs impacting new residential construction that contribute no real value to the quality of construction or value of the finished product.

  Housing prices in the Washington region are higher than in its peer metropolitan areas because there has long been a housing supply shortage. Because of this shortage of housing, the region experiences more in-commuting from beyond its natural laborshed than its peer regions. Increasing the housing supply would therefore accomplish two requirements: it would lower housing costs and it would decrease the commuting traffic on the major interstate corridors swollen by long-distance, journey-to-work, generally single-driver vehicles.

  In order to fully consider the constraints that restrict the supply of housing, local governments need to come together to assess the region's land use policies that impact the densities and locations of residential development. They need to consider region-wide policies affecting land use mix, densities, and redevelopment zones to address the requirements of the region so that it can house its future workforce more efficiently relative to its places of work, thereby reducing transportation demand. And, these policy solutions need to address the provision of housing at costs that better reflect the household income and demographic patterns of the region's future residents. The Metropolitan Washington Council of Governments (MWCOG) could take leadership in seeking regional resolution to reducing the unproductive, publicly imposed costs that impact local housing affordability.

  Collaboration among non-profit organizations, residential developers and local governments would provide the appropriate organizational framework for elevating the discussion of solutions to the region's high housing costs.

The objective of this discussion and collaboration should be to identify and monitor the magnitudes of housing shortages in the price and rental ranges in demand by the talent the region required to support its economic growth. Furthermore, there is a need to develop and implement programs to preserve and improve the quality of the existing affordable housing stock appropriate for meeting the requirements of the region's broader housing needs across all income groups. Success in meeting these housing objectives also could result in reducing the region's demand for mobility and its resultant congestion and higher costs that impact negatively on the region's reputation as a good place to live. MWCOG could provide important leadership in advancing this broader housing discussion among local jurisdictions and private and non-profit organizations.

- <u>Improving the Transportation Systems' Quality and Capacity</u>

The region's transportation system is failing. Thirty years ago the region's transportation system was considered an asset in support of the region's continued economic growth. The combination of disinvestment in the system's maintenance, failure to invest in systemwide capacity expansion in anticipation of future growth, and failure to design and institute a regional management organization with financial authority have precipitated the transportation system's current status, one that must be corrected if the Washington region is to prosper. Several initiatives would reverse this negative trend. The first would be for the states (DC, Virginia and Maryland) to come together on a dedicated funding source for the Metropolitan Washington Transit Authority. This will require voter and legislative approval.

Private sector leadership and representative organizations need to give this the highest immediate priority. Regionwide transportation system planning needs to be elevated to a higher platform than it currently is under the purview of the MWCOG Transportation Planning Board. Systemwide assessment of operations and alternatives for improving transportation services in the near term are required. These should include analysis of technology that might be adopted to improve daytime mobility and transportation-demand management alternatives that could be adopted by employers and local governments in the near term to maximize the existing system's utilization across all modes and travel time-bands.

The ultimate solution is the authorization of a Tri-State (DC, MD, and VA) Transportation Authority including highway, transit and ferry boat services that has the authority to plan, finance, construct and operate the region's transportation system, a New York Port Authority-type organization for the entire Washington metropolitan region. Regional approval and management coordination across all jurisdictions in the region is the only long-term solution that can solve the system's current deficiencies and deliver a system designed to fulfill the region's mobility requirement for the 21st Century. In the absence of expanding the region's transportation capacity to meet its future economy's requirements, the region's economy can only be expected to continue its under-performing growth path as other more-forward looking metropolitan areas resolve their regional transportation constraints.

Constraints to Business Growth Based on the Underlying Conditions Characterizing the Washington Region

The actions required to correct the region's inherent constraints to it becoming a business-based economy, in parallel with its historic role as the Federal City with its interdependent economic activities, include a combination of promotional, cultural and political initiatives.

The reputation of the Washington region as a good place to do business—as a business center with a supportive business cultural—is weak; whatever this reputation is in the outside world, it is overshadowed by the region's image as the U.S. Capital. National political issues dominate the interests of the firms conducting their business from the region in national and global markets. The historic weakness of the region's non-federally dependent, export-based businesses has contributed to this absence of a strong business image. It also has contributed to the region's weak entrepreneurial culture, a culture supportive of innovation in the delivery of new services and products and the cycle of business formation.

This unbalanced economic structure, with the public sector dominating the growth of the private sector and being the principal historic source of GRP growth, also has contributed to a fragmented local political culture that has generated an unproductive competition among jurisdictions in the pursuit of economic development, an unwillingness to collaborate on multi-jurisdictional infrastructure planning and investment, and land use planning. This inter-jurisdictional competition has engendered a distrust that interferes with designing and implementing regional solutions to acknowledged regional problems.

- <u>Business Branding for the Washington Region</u>

  The development of a business brand for the Washington area needs to be initiated by the private sector as the public sector is too fragmented and competitive to come to consensus on a singular regional brand; that is, the public sectors' interests do not sufficiently coincide with those of the region's businesses and are too sensitive to the jurisdictions' self-interests.

  The region's chambers of commerce and business and professional organizations, coming together in a transparent and collaborative process, can succeed in designing and implementing an impactful brand for the region as a global business center. This process should include the maximum involvement of business organizations across the region with the commitment to live by and promote the consensus brand. These organizations will need to follow through on an implementation program to get the brand out to national and international media and businesses organizations. This is not a feel-good exercise but one that has to have long-term staying power that puts the Washington region on the global business map.

- Achieving Regional Collaboration Among Local Jurisdictions

  Establishing a culture of collaboration among local jurisdictions, even within the same state, will be challenging but needs to start somewhere, as the cost of non-collaboration is high and the region's economic future cannot afford it. Currently, the MWCOG provides the principal collaborative platform for local governments in the region. MWCOG could do more to foster collaborative solutions by its member jurisdictions that work on a one-problem-at-a-time basis.

  An important initiative would be to institute regionwide collaboration on economic development efforts to present the Washington region as an interdependent economy to non-local business investors and decisionmakers as they undertake their initial location analyses. Such an approach could be modeled after Denver and Atlanta. Denver provides an excellent example of how to organize and implement a non-compete alliance among its multiple local jurisdictions. Each jurisdiction agrees that it will not poach business from any other jurisdiction that is part of the agreement. The MWCOG should initiate such an agreement with a penalty clause similar to that in the Denver agreement. This would be a positive message quite different than the cutthroat messages communicated by competing jurisdictions within the same region.

  Mayors and their economic development managers could team up on their business development promotional tours. Including business representatives from the region's chambers of commerce would strengthen the message that these collaborative missions communicate—that the Washington region has its act together and speaks with one voice for the region.

  There are numerous opportunities for collaboration to achieve improved and more cost-effective delivery of public services. Some of these already have been implemented where the cost savings or logical extension of authority across borders required collaboration (public safety, emergency services, weather-related emergencies, environment management). Still, unless the region's public leadership takes this process seriously, regional collaboration will not be extended to other public services and potential cost savings and improved service delivery will not be achieved.

- Inefficiencies among Multiple Governments

  The Washington region is an expensive place in which to live (a counterforce to attracting and retaining talent) and operate a business (a deterrent to business investment). Some of the costs that impact businesses may be found in any dynamic business center and are considered the price of entry into a strong market location. Business costs that differentiate one primary business center from another will disadvantage the higher-cost region.

  These cost differentials also may exist within the region and result in business investment seeking locations that favor lower-cost jurisdictions over higher-cost jurisdictions. These cost differentials should be a red flag to all local and state jurisdictions. Unless these higher costs can be rationalized by the businesses being affected, they will be viewed negatively and avoided. It should be each jurisdiction's responsibility to assess its regulatory and administrative fees and charges to assess whether these are business-location neutral within the region.

  Besides creating a landscape of differential public costs, the wide range of these regulatory and administrative fees and costs within the Washington region presents an added complexity to external investors and business leaders that reinforces their negative opinion about locating and/or doing business in the Washington market. Reducing unproductive fees and administrative costs and leveling the region's business cost differentials across the region's local jurisdictions will contribute to enhancing the region's competitive advantage in the national and global competition for business investment.

  The Metropolitan Washington Council of Governments is the only existing organization that could host this conversation and encourage negotiations among member jurisdictions with the objective of reducing the unproductive costs of local government regulation. This would have important benefits to the participating jurisdictions and strengthen the region's image as being a good place to do business.

Organizing for the Region's Future Economy

The recommendations included in the Call for Action are principally focused on the short term, as there is an urgency to taking the actions required to successfully reposition the Washington region's economy to compete for the business growth opportunities for which it has a competitive advantage. Most of the recommended actions require regional collaboration to overcome the years of costly competition between neighboring jurisdictions and states. Relying on existing organizations to divert their attention from their established missions to take on the joint responsibilities for regional initiatives may be successful for a short time, but these collaborations will stretch the resources of these organizations or eventually may conflict with their agendas.

Ultimately, the solution to the absence of a regional organization whose mission it is to undertake initiatives on behalf of the region's economic growth and long-range vitality is to create a new organization with this mission. This organization would need to be regional in its scope of operation, independent of existing organizations, designed as a representative and collaborative entity composed of public, business and not-for-profit leaders with the single mission of achieving the region's economic potentials.

To accomplish this mission, this new organization would need to be established with the authority to do the planning, coordinating, monitoring and implementing of programs to address the region's capacity to attract and support economic growth. In the absence of the creation of an independently financed and operated regional entity with these broad powers and responsibilities—an Alliance for the Washington Region's Future, it is unlikely that the requirements needed to ensure the Washington region's competitive position in national and global markets will be achieved and sustained through reliance on informal and voluntary arrangements.

Appendix: Measuring the Washington Region's Economic Dependency on Federal Spending

The economic impact of this rapid increase in federal procurement spending in the Washington metropolitan area can be measured. Federal procurement spending can be shown to have accelerated the Washington region's economic growth and to have generated above-average job growth. But, more importantly, this rapid increase in federal procurement spending altered the structure of the region's job mix, shifting it to professional and business service jobs and to jobs having higher earnings, and it altered the distribution of economic activity within the metropolitan area favoring Northern Virginia over Suburban Maryland and the District of Columbia.

Federal contractors located in Northern Virginia captured the largest percentage of federal procurement spending since 1980, and, as a result, the impacts of this growing source of business earnings and corresponding growth in high-wage and high-valued added jobs accelerated Northern Virginia's economic growth relative to the District of Columbia and Suburban Maryland jurisdictions. In 1980, Northern Virginia accounted for 31.6 percent of the Washington metropolitan area economy; by 1990, it accounted for 38.8 percent; by 2000, its share increased to 43.8 percent; and by 2010, Northern Virginia accounted for 46.0 percent of the Washington metropolitan area economy. This increased share of the Washington metropolitan area economy, which was also was growing significantly over this period (real GRP increased 215.1%), provides a measure of the importance of this disproportional gain in federal procurement dollars that was captured by businesses located and doing their work in Northern Virginia.

In a report prepared by this author for the National Capital Planning Commission in 2002, the statistical correlation between the changes in gross regional product (GRP) and the changes in federal procurement spending and in the value of the federal payroll over the 1983 and 2001 period were calculated. The results of this research are summarized here to provide further documentation of the important economic relationship between federal procurement spending and the region's economic performance.

Appendix Table 1 confirms that federal spending for procurement has had an impact on the differential growth rates experienced by the National Capital Region's (NCR's) sub-state areas over the 1983-2001 period. The sub-state area that experienced the most rapid growth rate—Northern Virginia—benefited from federal procurement outlays totaling $160.3 billion over this 19-year period, an amount accounting for 48 percent of all procurement outlays in the region. Suburban Maryland experienced the second fastest GRP growth rate, although one well below the rate in Northern Virginia, and had federal procurement spending totaling $92.7 billion, a level 42 percent below the total procurement value in Northern Virginia. And, the District of Columbia's economy experienced the slowest growth over this period and experienced the greatest increase in federal spending for salaries and wages but the least accumulated value for procurement outlays.

Appendix Table 1

Federal Payroll and Procurement Spending
in the Washington Metropolitan Area by Sub-State Area, 1983-2001
(in billions of 1996 dollars)

Sub-State Area	Change in GRP*	Federal Payroll	Federal Procurement
District of Columbia	46.5%	$206.6	$81.5
Suburban Maryland	103.8%	72.3	92.7
Northern Virginia	153.4%	94.8	160.3
WMA**	99.1%	$373.7	$334.5

Sources: U.S. Census Bureau and GMU Center for Regional Analysis (CRA)
*% change from 1983 to 2001; **GRP growth for the Washington metropolitan area.

This simple comparison would seem to support the hypothesis that federal dollars spent for procurement have had a greater impact of the local economy than federal dollars spent on salaries and wages. To test this hypothesis, a regression analysis was performed with gross county product of each of the region's local jurisdictions serving as the dependent variable and federal payroll spending and federal procurement being the independent variables. These values were regressed for the Washington metropolitan area and for Northern Virginia and Suburban Maryland (the District, with only 19 observations was not analyzed independently from the WMA). The results, presented in Appendix Table 2, confirm the importance of federal procurement spending over the 1983-2001 period to the economic growth of the Washington region.

The correlation between economic growth and federal spending for procurement and federal payroll is strong, with the coefficients for the two variables showing federal procurement to be twice as important as spending for federal payroll in this correlation. In Northern Virginia, which experienced an almost 150 percent real increase in GRP between 1983 and 2001, the correlation between this growth and federal spending was very strong with federal procurement spending being almost 3 times as important to this correlation as spending for federal payroll (as established by the relative coefficient values). In comparison, federal spending had a slightly weaker correlation to the economic growth in Suburban Maryland over this period (real GRP doubled between 1983 and 2001) but procurement spending had only a marginal impact on this growth; spending for federal payroll was much more significant but yielded weaker returns to the economy. In conclusion, a dollar spent for federal procurement in the Washington region's economy has been more important than a federal dollar spent for federal payroll; based on the relative coefficients, a federal procurement dollar had two times the economic impact of a federal payroll dollar.

Appendix Table 2

Federal Payroll and Federal Procurement Spending
in the Washington Metropolitan Area by Sub-State Area, 1983-2001
Summary of Regression Model Results

Area	Correlation Value (R)	Coefficients	
		Payroll	Procurement
WMA	.956	2.315	4.756
Northern VA	.973	1.720	4.971
Suburban MD	.935	12.743	1.415

Source: GMU Center of Regional Analysis (CRA)

The strong correlation between federal procurement spending and Northern Virginia's economic performance cuts both ways. When federal procurement outlays were accelerating, they fueled Northern Virginia's economic expansion. As federal procurement spending was growing during the Great Recession, this growth helped to compensate for declines in Northern Virginia's non-federally dependent business activities cushioning these negative effects and helping to moderate the full impact of what was the worst economic contraction experienced in the U.S. since the Great Depression. And, as federal spending has declined since 2010, the strong correlation between federal procurement spending and the region's economic performance has resulted in its economy underperforming the U.S. economy since 2010.