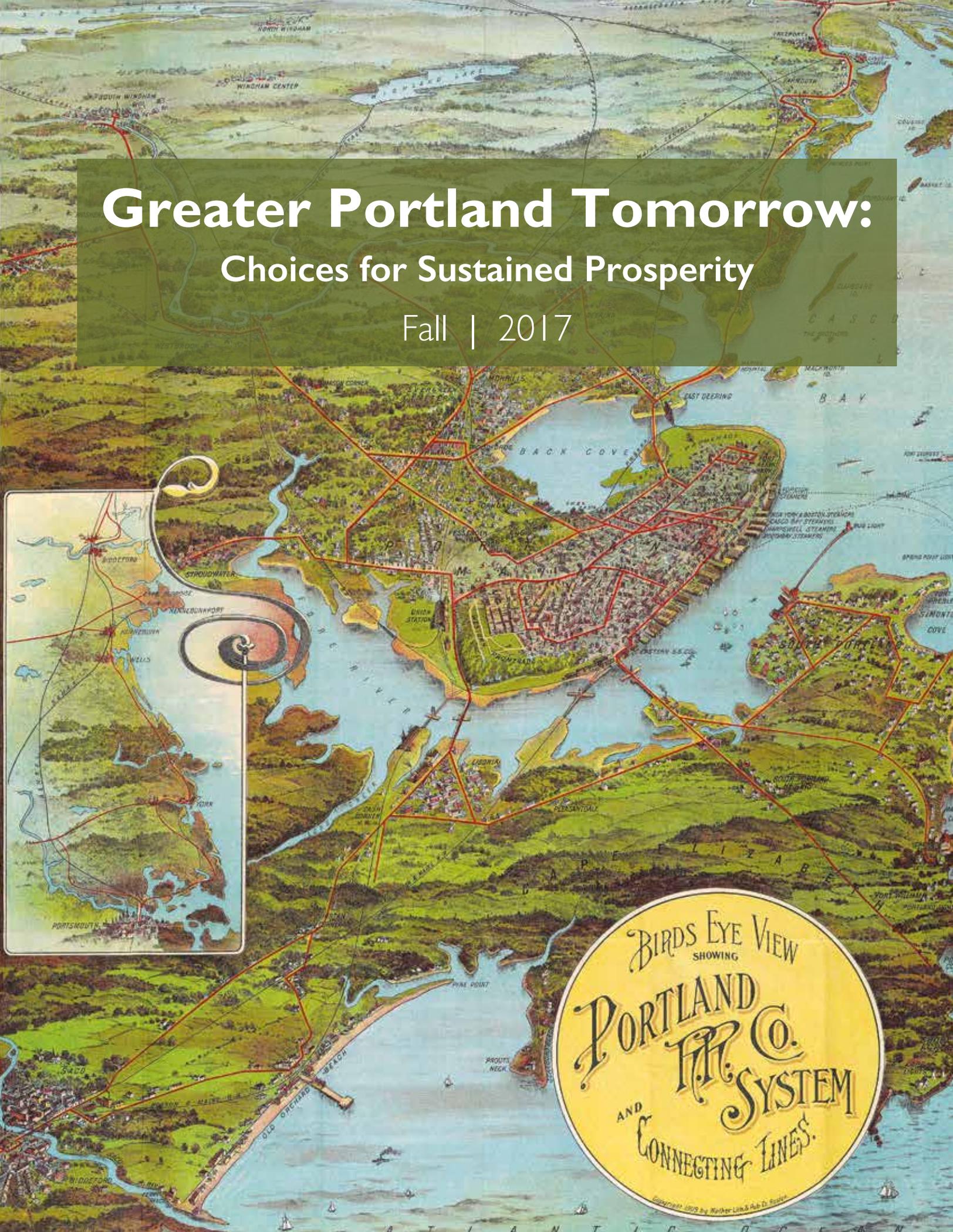


Greater Portland Tomorrow: Choices for Sustained Prosperity

Fall | 2017



BIRDS EYE VIEW
SHOWING
PORTLAND
AND CO.
SYSTEM
AND
CONNECTING LINES.

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“The age of the industrial city is over, at least in the West (where) cities and their metropolitan areas are now wealthier, healthier, and more alluring than ever.... The city has triumphed.”

Economist Edward Glaeser, *The Triumph of the City: How Our Greatest Invention Makes Us Richer, Smarter, Greener, Healthier, and Happier*, Penguin Books, New York, 2011



“The whole notion of an ‘urban Maine’ is unsettling, in part because it so conflicts with the mental images we all carry around, about what it means to be in Maine and not in Massachusetts or someplace else. We are a state where the vast majority of us now work in cities, live in cities or suburbs, and everyone thinks they’re in the middle of the country. It is also unsettling because (of) a paradox: *to retain Maine’s special character as a place that feels closely connected with the natural environment, Maine people will have to pay much, much more attention to the built environment. Put another way: to keep what is special about its natural environment, Maine must decide how best to become more urban.*”

Economist Charles Colgan, “Maine’s Changing Economy: The Rise of Urban Maine,” in *Changing Maine: 1960-2010*, Richard Barringer, editor, Tilbury House Publishers, Gardiner ME, 2004



Portland Headlight, Cape Elizabeth

Greater Portland Tomorrow: Choices for Sustained Prosperity

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September 2017

This report is available electronically at <http://digitalcommons.usm.maine.edu/muskie/8/>
and at www.portlandregion.com/greater-portland-tomorrow-choices-for-sustained-prosperity.html

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Key Findings

1 Cities drive national and regional growth today. Cities and their metropolitan regions now have dominant and enduring influence over the world economy. Just 600 cities account for three-fifths of global GDP. Kennedy School economist Edward Glaeser notes that successful cities are powerful magnets for people, offering vast opportunity for employment and upward mobility, accommodating diverse peoples of all incomes and social classes, and ensuring the availability of shelter that is affordable to all. (They) are the nodes that connect our increasingly globalized world.¹

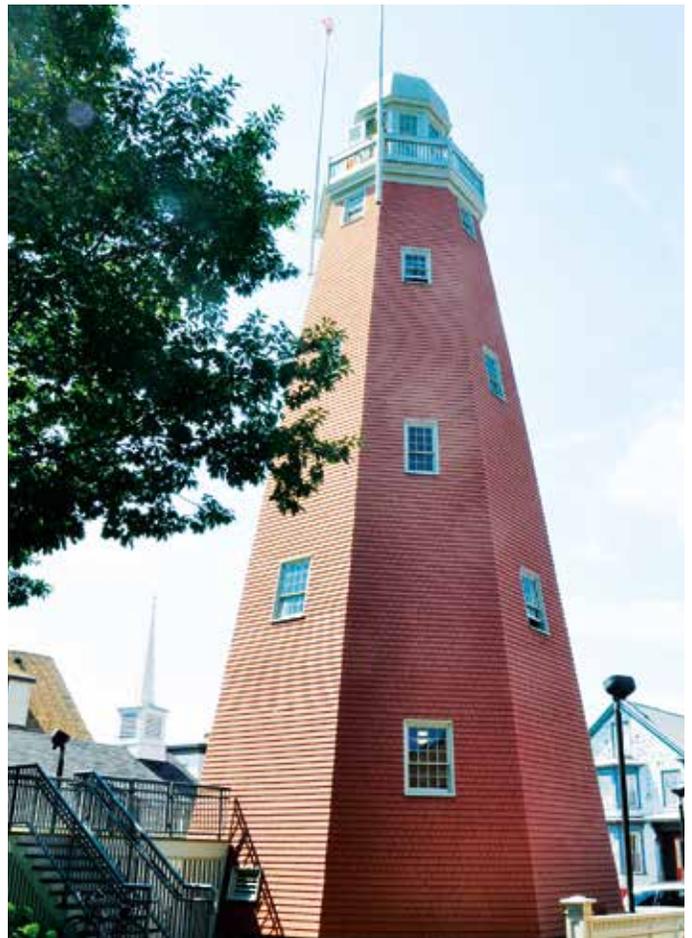
2 Greater Portland is Maine’s urban engine of economic prosperity. Today and for the foreseeable future, Maine’s indispensable economic node is Portland and what is referred to as the Greater Portland region. While it accounts for less than one-thirtieth of the state’s land area, it is home to one-fifth of Maine’s population and one-fourth of its jobs. Forty percent of Maine’s job growth since the Great Recession has occurred in Greater Portland. In the public sector, the region delivers nearly one-third of Maine’s General Fund through sales and income tax revenue.

3 Economists generally agree that a growing population is essential to sustained economic development.² Meanwhile, Greater Portland’s workforce is likely to decline by some 5,000 workers by 2034. As many baby boomers retire, the workforce is expected to shrink 3%, even as the overall population increases 8%. If that occurs, existing businesses will have more difficulty finding workers and few new businesses will locate in the region.

4 Greater Portland can maintain and grow its economy if it attracts enough new residents. Economic models show doubling the rate of in-migration would maintain, and slowly grow the region’s workforce by 4% through 2034. That growth rate would essentially maintain the *current* level of economic activity. If the region gained 1,500 working-age residents per year, its workforce would grow 10% by 2034. That would help existing businesses expand and attract new businesses.

¹ See Edward Glaeser, *Triumph of the City: How Our Greatest Invention Makes Us Richer, Smarter, Greener, Healthier, and Happier*. Penguin Books, New York, 2012.

² See, for example, Ruchir Sharma, “To Be Great Again, America Needs Immigrants,” *New York Times*, May 7, 2017; and Charles Lawton, “Stagnating Population Growth Has Great Economic Cost,” *Portland Press Herald*, June 27, 2017.



The Munjoy Hill Tower, known today as the Portland Observatory. Built in 1807, renovated in 1939, and restored in 1998-2000, it is a National Historic Landmark.

5 Foreign Immigrant Issues. Foreign immigrants represent a potential pool of needed workers. Many are college-educated and entrepreneurial, but many encounter challenges with language, transportation, credentialing, discrimination, and lack of familiarity with the US culture and employment practices. Many also perceive problems with employers’ abilities to communicate with and to trust new workers.

6 Portland and its surrounding communities co-exist in a mutually beneficial and reinforcing economic relationship. It is one from which all may benefit even more through increased collaboration and cooperation to address the chronic challenges they face, namely: workforce development, workforce housing, public transit, public revenues for needed investments, good urban design, and protection of a shared quality of life and place, their greatest economic attractant.

7 Lack of Critical Mass. Greater Portland lacks critical mass in most industry sectors, and depth in the workforce, especially in technical fields, compared with other successful cities. This discourages potential employees from coming to Maine, as they wonder how they may advance their careers when there are too few firms in their field in the region. Meanwhile, firms are hesitant to relocate here because of the lack of depth in the workforce. This threatens a vicious cycle.

8 Workforce Development. The public university system is very important to all businesses with whom we spoke; and most, especially in the technology sector, would like to see more purposeful engagement with the public university for socializing, networking, and professional development purposes; and for faculty to gain better understanding of employers' needs. Current efforts to address workforce development issues are fragmented, with no one organization responsible for identifying the needs of employers and coordinating the many organizations educating and training the region's future employees.

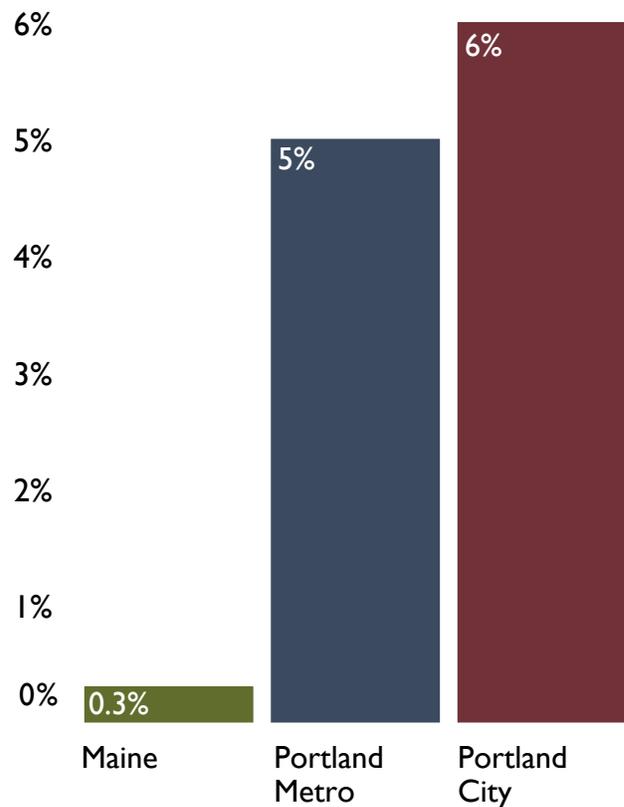
9 Urban Densification. Most Portland neighborhood residents feel that housing is too expensive, and support the concept of higher-density housing next to neighborhood and village centers. But they only support such housing if issues of parking and traffic are dealt with – in other words, if there is a strong public transportation system that will reduce the need for cars.

10 Fragmentation of Regional Efforts. A number of promising regional development efforts are underway within organizations that are independent of one another in terms of overall mission, staffing, and funding sources. Their careful and continuing integration, as well as greater public accountability, will best advantage prospects for sustainable prosperity across the region.

Key Recommendations

1 We recommend the creation of a **Workforce Development Center** at USM's Muskie School/Cutler Institute, to help address Maine's workforce crisis. The Center would serve as a convener, bringing together employers and education/training organizations to identify needs and shortcomings, and to create alignment between educational outcomes and employer needs. Among its other activities, the Center would conduct needed workforce research, program evaluation and assessment, and longitudinal surveys to track program graduates in the workforce.

Job Growth and Distribution, 2004-14: Portland and Portland Metro relative to ME



Change in Job Growth, 2004-14

Source: U.S. Census Bureau's Local Employment Dynamics (LED) OnTheMap Application.

2 We recommend the creation of a **Center for Good Urban Design** at USM in collaboration with the undergraduate Architecture program at UMA and the Portland Society for Architecture, to assist local communities in the principles and practice of urban design that will at once strengthen the region's economy, Quality of Place, and local neighborhoods. A good place to start creation of such a center was made in 2011, in an earlier proposal to the University of Maine System (see Appendix C).

3 We recommend that legislation be introduced in the Maine Legislature to **enact 0.5 cent local option sales tax in Cumberland County to be used exclusively for investment in regional infrastructure**, including broadband service, public transit, affordable housing,

trails development, and related utilities. The fund would best be administered by the County in collaboration with GPCOG. This might best be proposed as a demonstration project that, if successful over a period of five years, might be extended to other counties.

4 We recommend creation of adequate and effective regional authority to address the critical issues of economic and community development, workforce housing, transportation, broadband telecommunications, energy, brownfields, and human services; and that the capacities of GPCOG, PACTS, the Greater Portland Economic Development Council, the Greater Portland Metro, and Cumberland County be combined in some form for this purpose.

5 We recommend creation of an ambitious **communications and public information strategy, funded by private and philanthropic sources and delivered by the Portland Regional Chamber, to:**

- Raise awareness of the need for sustainable development that honors its economic, environmental, and community foundations, as well as the abiding advantages of good urban design;
- Identify Quality of Place as a critical asset to the region and attractant to new residents, workers, and businesses; and
- “Brand” Greater Portland as a whole, as “Portland Aspires,” or something such, much as has been done by Saint John NB and its surrounding communities under the successful banner of Enterprise Saint John.

Population & Income Snapshot

	City of Portland	Rest of Greater Portland	Rest of Maine
Population*	66,872	223,105	1,039,351
Per 1000 residents...			
Residents age 20-34†	290	160	170
Residents age 65+†	130	170	180
Residents of racial or ethnic minorities†	150	60	50
Bachelor’s degrees *	290	236	137
Jobs *	947	444	355
Residents in poverty*	155	97	140
Wage and salary earnings per capita*§	--	\$32,171	\$16,842
Transfer payments received per capita*§ (primarily Social Security, Medicare, Medicaid, Veteran’s benefits, etc.)	--	\$8,344	\$10,019
Total income per capita*§	--	\$52,298	\$40,149
Income tax revenue by capita**	\$1,314	\$2,041	\$1,118
Retail sales per capita‡	\$24,470	\$17,422	\$15,168
Est. retail sales tax revenue per capita‡	\$1,346	\$958	\$834

*2015, †2011-2015, ‡2016, **2014

§These statistics are not available for the city of Portland; the city is included in “Greater Portland.”

The Future of Greater Portland's Workforce and Economy

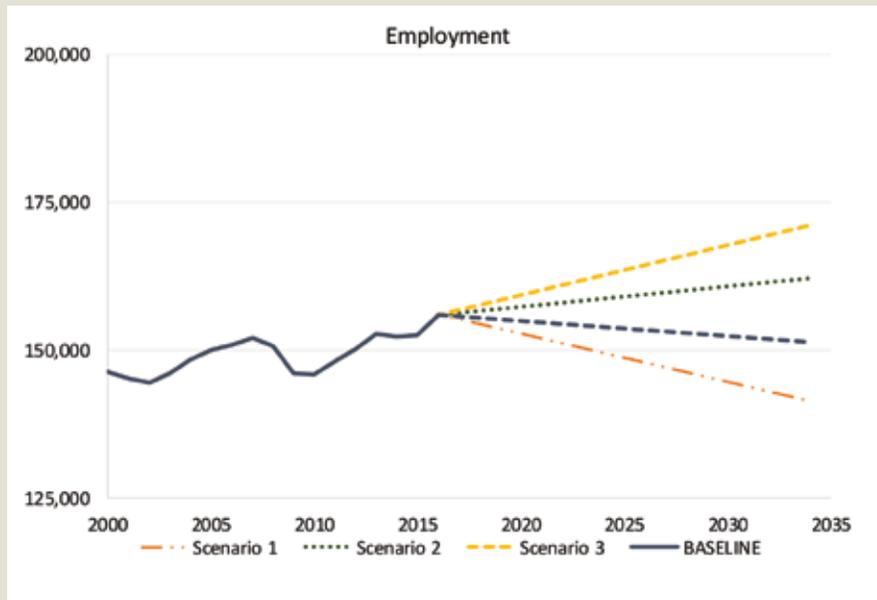
Imagine if no one moved to Portland for 16 years, not a soul. What would happen to the economy and labor force? What about taxes for public schools and needed public infrastructure? Then, imagine that 1,500 young adults move to Portland each year. How would this change the labor force and economy?

These scenarios and two others are explored through a model of the Portland economy developed by 45 North Research and presented in Appendix A. The model draws on historical relationships between Greater Portland's population, labor force, employment, income, and taxes. Each scenario assumes a different rate of in-migration:

The Baseline Projection is the State of Maine's current projection of Greater Portland's population in 2034, based on current patterns of births, deaths, and migration.

Scenario 1 alters the baseline projection by assuming migration into Greater Portland stops.

Scenario 2 assumes in-migration doubles from its current rate, and twice as many people in every age cohort move to Greater Portland.



Scenario 3 assumes in-migration grows but is concentrated among young adults; Greater Portland gains 1,500 new residents age 20-34 each year.

The results are dramatic. If Greater Portland fails to attract young workers, it will have thousands fewer workers and jobs, and millions lost earnings and tax revenue. If, however, Greater Portland attracts a steady flow of working-age res-

idents to backfill the retiring baby-boomers, businesses will have the workforce they need and the economy will grow.

In the chart above, the gap between Scenario 3's projections and the others illustrates the compelling choice before Greater Portland: attract working-age people to grow the labor force and economy or stagnate with corresponding weak or negative economic growth.

This view, from the Gambo Bridge circa 1900 facing south along the Presumpscot River, shows the edge of the original Gambo Dam running under the bridge to the Oriental Powder Mills's Stone Mill on the Windham, or eastern side of the river. The building on the right, the Gorham side, was a water-powered mill of an unknown type. Workers used the two footbridges to cross the river via the narrow island. The Oriental Powders Mills operated along the Presumpscot during the 19th century and into the early 20th century, and was known for manufacturing gunpowder. During the Civil War, the Mills produced 25 percent of the Union gunpowder. Collections of Maine Historical Society





Western Maine Sunset, courtesy of Migis Lodge

Introduction

Portland today is the foundation of the southern Maine regional economy, which in turn is the dominant economic engine of Maine. It enjoys many of the characteristics of a successful city and, together with the surrounding region, has the potential to grow significantly in coming years due to the job-creating spread effects of a resurgent Boston, the workforce demands of a post-industrial economy, the new attractiveness of cities to the young and old alike, the global migration of displaced persons, and the warming effects of climate change.

The question before us is not whether Portland and its metropolitan region will grow, but how, and how well. Will this growth be reactive, driven solely by market forces and private profit? Or will it, as well, be intentional, strategic, and responsive to long-standing cultural traditions and public values? In a recent, year-long collaboration, Creative Portland, the Portland Regional Chamber, the Portland Society for Architecture, and USM's Muskie School of Public Service examined these questions for Portland, itself, concluding that:

- To sustain its current prosperity, Portland must grow its population and workforce; broaden its property tax base or face dramatic tax increases; strengthen its schools and public infrastructure; expand its regional public transit system; and most importantly, create more housing and commerce along major thoroughfares and in select neighborhood centers on and off the peninsula;

- Portland and its surrounding communities are increasingly interdependent in matters of economic growth, employment and housing opportunities, and transportation policy choices, and will only grow more interdependent with time; and
- A principal obstacle to Portland's growth and development is the absence of a widely-supported vision of its future and strategy to realize it. If Portland and the region are to grow successfully and retain its attractiveness, careful attention must be paid throughout to matters of good urban planning, design, and investment, learning from other successful cities and regions along the way.³

Early in 2017 the same collaborators were invited to extend this analysis to the region as a whole, adding the Greater Portland Council of Governments (GPCOG) to their collaboration, with financial support from Maine Economic Improvement Fund (MEIF) at USM. The goal of the project is to advance a wide, public consensus on a small number of key strategies that will help the greater Portland region seize this singular moment in our shared history, and move toward more sustainable and shared prosperity.

The geographic delineations of "Portland" used in various economic data sources differ greatly. For purposes of our economic analysis, then, "Portland" herein refers to the City of Portland; "Greater Portland" refers to the City

³ See Growing Portland, Not Whether but How, at <http://digitalcommons.usm.maine.edu/muskie/7/> or at <http://www.portlandregion.com/news/growing-portland-not-whether-but-how>

of Portland plus its surrounding Cumberland County. In reality, the flow of residents, workers, and commerce connected to the Portland economy extends well into northern York (Biddeford/Saco), southern Androscoggin (Lewiston/Auburn), and southern Sagadahoc (Bath) counties. Most data sources do not currently provide enough detail, however, to construct results for this extended area. As a result, the conclusions respecting Greater Portland's regional and statewide economic significance presented in this report are likely *underestimated*.

The authors are deeply grateful to Kris Sahonchik and Terry Shehata, administrators of USM's MEIF, for their wise counsel and financial support throughout; to Michael LeVert and Catherine Reilly deLutio, co-principals in the firm 45 North Research, for the regional economic analysis presented in Appendix A; to John Dorrer, for the regional workforce analysis in Appendix B; to Andrew Clark, Muskie School graduate student, for his research into the "best practices" presented in Appendix E; and to many private individuals for the generous gift of their time, their high aspirations for the region, their experience and expertise, and their candid assessments and assistance in our research.

The latter include especially Mark Adelson, Sondra Bogdonoff, Steve Carson, Stephanie Carver, Ed Cervone, Andrea Maker Cianchette, Andrew Clark, Charles Colgan, Patrick Costin, Hugh Coxe, Dan Coyne, Peter Crichton, John Duncan, Kristina Egan, Carl Eppich, Lai-Yan Faller, James Gailey, Camelia Graham, Nelle Hanig, Natasha Hoffman, Greg Jordan, Jeff Jordan, Jason Judd, Steve Hewins, Tex Haeuser, Quincy Hentzel, Theo Holtwijk, Sue Inches, Alex Jaegerman, Jess Knox, Cristos Lianides-Chin, Karen Martin, Ed McKersie, Nathan Miller, Peter Mills, Greg Mitchell, Tom Rainey, Josh Reny, Steve Rowe, Addie Smith-Reiman, Liz Cotter Schlax, Eric Stark, Paul Stevens, Julie Sullivan, Dana Totman, Liz Trice, Julia Trujillo, and Ryan Wallace.

Special thanks go to John Duncan, Sue Inches, and Greg Jordan for their help with public infrastructure matters; to Sondra Bogdonoff, Jennifer Hutchins, and Dinah Minot, with the creative economy; to Quincy Hentzel and her staff at the Regional Chamber, with the survey of businesses; and to Peter Weed for layout and design of the report. None of the above is, of course, responsible for the content of the report or for any errors of commission or omission it may contain, all of which are the sole responsibility of the principal authors.

Federal Reserve Bank of Chicago

Economic Growth and Broad-based Opportunity

Researchers with the Federal Reserve Board of Chicago recently found that while larger cities and regions tend to dominate today's discussion of economic dynamism, small and mid-sized cities are often driving hubs of employment, retail, health care, and education for millions of Americans, including many from surrounding, more rural communities.*

In particular, they find that small and mid-sized cities in the top quarter of economic dynamism tend to have one or more of the following characteristics, all of which favor the Greater Portland region: the nearby presence of large industry or a military base; home to a college or university; proximity to or part of a tourism or second-home market; and location in the shadow of a larger city.

At the same time, data on small and mid-sized cities reflect a contradiction between economic growth and

broad-based opportunity for all. A place can appear to thrive according to standard metrics that may mask that many residents increasingly struggle to benefit from regional economic growth.

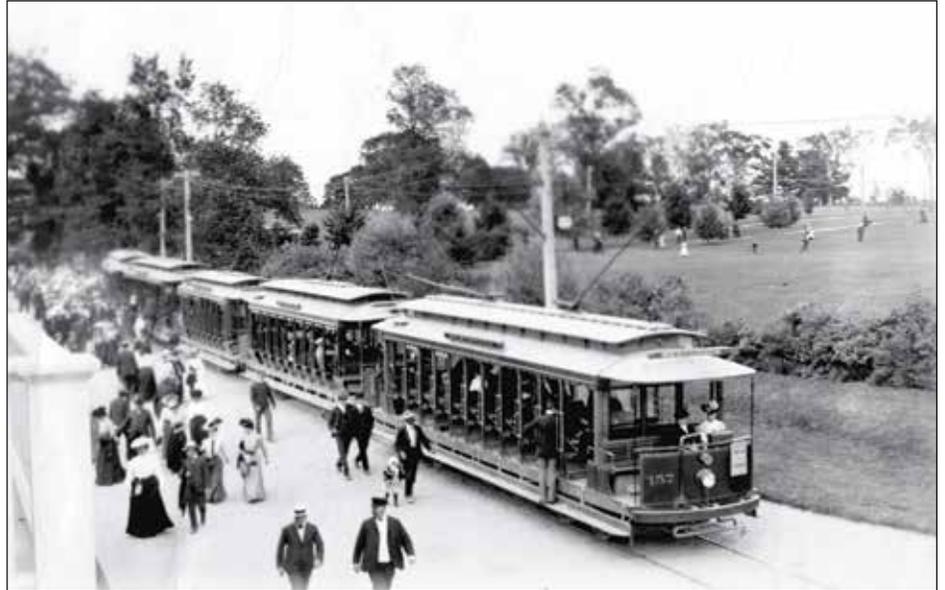
Researchers visited Chattanooga TN; Cedar Rapids IO; Rochester NY; and Grand Rapids MI – all cities that have revitalized since the Great Recession of the late 2000s. Their goal was to help guide organizations that fund projects in specific geographic areas, referred to as "place-based funders," that play an important role in helping residents of growing regions to access broader economic opportunity.

They learned that revitalization in these places tends to proceed along two distinct paths: an "arc of growth" and an "arc of opportunity." They conclude that broad community prosperity lies in recognizing that dynamic growth alone does not naturally lead to broad opportunity. Connecting growth to opportunity requires place-based funders to advance policies, make investments, and develop programs with the greatest care and consideration.

* See <https://chicagofed.org/Home/region/community-development/community-economic-development/Looking%20for%20Progress%20Report>

People and Place

These trolley cars are lined up awaiting the close of the open air theater performance at River-ton Park trolley resort, July 1902. The front car is No. 157 built for the Westbrook Division by J.G. Brill Co. of Philadelphia under order No. 10981 dated March 18, 1901. Collections of Maine Historical Society



Greater Portland, Then and Now

Just as Portland had its beginnings on King (now, India) Street, Greater Portland began in what is now called Portland, a place with a long tradition of responding well to crisis. For nine hours in 1775, a British fleet bombed the town of Falmouth, as Portland was then known, leaving three-fourths of its buildings in ashes. Within a few years the community was back on its feet as a major trading and fishing center, with a new motto – *Resurgam*, “I shall rise again.” The Munjoy Hill Tower, built in 1807, symbolized the heroic comeback of that era.

In 1866, a major fire destroyed 1,800 homes and left 10,000 citizens, some forty percent of the city’s residents, homeless. Civic leaders took the opportunity to rebuild the peninsula – largely in the form we see today – with handsome, fireproof Victorian homes and brick commercial buildings, public water and sewer systems, paved streets, and public parks.

After the prosperity of World War II ship-building, Greater Portland entered another crisis. The wartime boom had ended. People were leaving the east coast and heading south and west toward rising industrial cities and Arizona sunshine. At the 1949 Deering High School graduation, newly elected U.S. Senator Margaret Chase Smith spoke to the graduates about the road to opportunity open to them in Maine. The valedictorian, Walter Mattson, who would later become president of *The New York Times*, responded by saying that he personally was taking

the road to opportunity, all right; he was getting on the Maine Turnpike headed south, looking for a job in Connecticut. In the following decade, for the first time in 200 years of recorded history, Portland lost population.

In 1967, the City of Portland, the Chamber of Commerce, and the Portland Renewal Authority, deeply concerned about the city’s downward slide, hired internationally-known Victor Gruen Associates to prepare a revitalization plan and strategy for the city. Gruen noted that while the Portland peninsula was then the largest employment center in the region, it lacked the auto access and parking lots of competing sites outside the city center. The consultant also highlighted the city’s housing problem – too few people wanted to live on the peninsula; as a consequence housing was deteriorating to the point that almost a third was classified as substandard by the recent U.S. Census.

This was the beginning of the automobile era. The consultants were evaluating Portland’s competitiveness with regard to its access for automobiles – and found the city, itself, wanting. They were not wrong in their analysis. In fact, car use would grow by ten times in Greater Portland in the coming half century. In 1969, soon after the Gruen report, Jordan Marsh opened a department store at the Maine Turnpike exit in South Portland, and the Maine Mall was born. Portland would continue to lose population for several more decades, going from 77,600 in 1950 to just 61,600 in 1980.

If the Gruen analysis was correct, the proposed plan was in some ways disastrous. It recommended that large swaths of the peninsula be razed – in all, 1,275 housing units, and 2.2 million square feet of commercial space. It proposed to fill the cleared space with widened highways, ten new parking garages for 8,000 cars, nearly 4 million square feet of suburban-style commercial development, and 1,800 new housing units.

Some of the plan did come to pass, of course. Evidence is seen today in the widened roadways along Spring and Franklin streets and in the public housing at Kennedy Park; fortunately, much of the plan did not. Exchange Street, for example, was proposed to be restricted to warehousing and industrial uses, a quite different vision from today’s bustling district.

Today’s takeaways from Portland’s Victor Gruen experience include:

- All planning and policy solutions appropriate to a given time and place have unintended consequences in the long-term, to be addressed anew under changed conditions;
- The automobile was seen as the solution to Portland’s economic distress of the 1960s; and, in fact, it did extend the city into neighboring communities and helped create the highly integrated Greater Portland economy we enjoy today; and
- Into the indefinite future the automobile will remain a

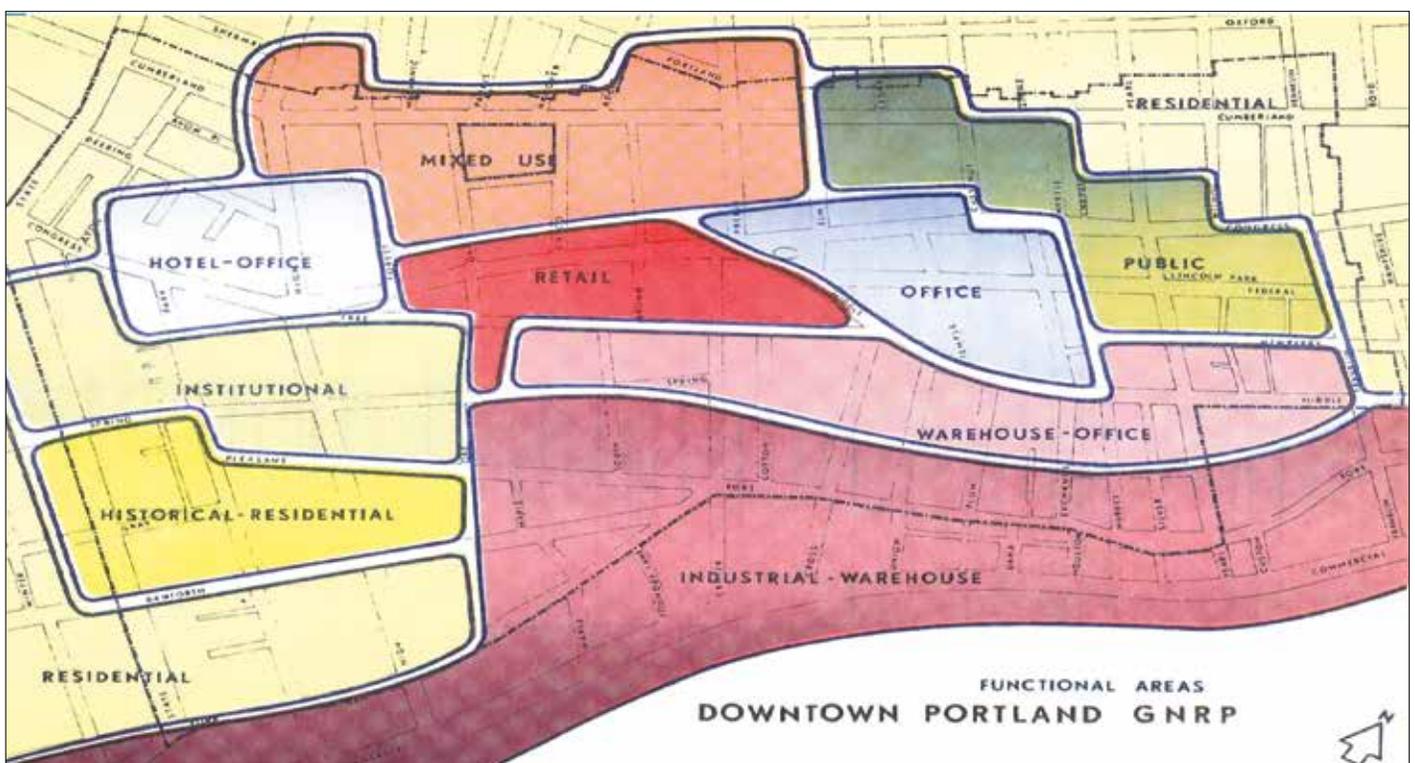
partial transportation solution, but it can no longer be viewed as *the* solution. It is now a problem in need of a complementary public transit system if the region is to grow sustainably.

Today, Portland and the region it drives face a new historic challenge. It is a challenge that arises not from fire or loss or outmigration, as has been true in the past. Today’s challenge is born from an excess of popularity. Many people want to visit and live and work in and around Portland; but unless the way people live and work and travel change dramatically, the new people cannot be accommodated with the old.

If the new people cannot be accommodated, the Greater Portland region, and the state of Maine as a whole, will be consigned to an era of workforce shortages, declining incomes, declining tax revenues, and a loss of cultural vitality. If the new people *can* be accommodated, Greater Portland will together reach new heights as a relatively small but world-class urban place in the 21st century, with a visibility and influence far beyond what it had in the golden ages of its past.

But how can growth be accommodated without traffic jams, inflated housing prices, parking shortages, and infrastructure breakdowns? It will take a whole new way of living, working, traveling, and governing ourselves. This new way is the subject of this report.

Gruen Plan Recommended Land Uses



A New Narrative for the Region?

As the goal of this research, we have been asked, “What are the region’s needs? What are the obstacles to sustaining the economic prosperity it enjoys today? And, how may we best address these?” We have approached these questions through the framework of what is today known as “sustainable” development.

Much about Maine has changed since the 1960s when John F. Kennedy served as our 35th President. Americans then generally were celebrating the domestic achievements of the post-World War II national economy. The pent-up demand of two decades of depression and war produced general prosperity in the nation that was unprecedented in human history. Education, housing, and highway construction led the way, as GI’s returned from national service to create the baby-boom and be educated in unprecedented numbers by the GI Bill; and the National Defense Highway Act led to the interstate highway system that would permanently alter the face and character of American life.

A visitor to Maine 50 years ago, however, encountered a different, hardscrabble place outside the American mainstream – one grappling mightily with accelerating problems of industrial decline, widespread and visible poverty, and chronic fiscal stringency. Maine’s traditional manufacturing industries, save pulp and paper, were under massive and deadly assault from the South’s cheaper labor, energy, and transportation costs; farm acreage was in seemingly irreversible decline; disaster was impending in the commercial fisheries from the arrival of foreign factory ships on traditional fishing grounds; and the poultry industry was about to founder on its own rising costs, environmental outrages, and ineffectual management practices.

Maine in the 60s enjoyed a generations-old reputation as an exporter of young people who, after military service, would labor a lifetime in Connecticut factories and others across the nation, to save money enough to “come home” for retirement; as a source of regionally inexpensive land, labor, and energy on which its mill towns and cities had been built; and as a quaint, safe, and serene haven for summer refugees from the cities of the Northeast and their own, growing populations and problems of neglect.

Today, with the advance of new technologies and the globalization of traditional industries, this static image of Maine has been overtaken by events. Maine has been *transformed* by the events of the past 50 years, and we have come into a new world, a new time – a new political-economic era, if you will. This new era, like previ-

ous eras in Maine history, will require of us new ways of thinking and new ways of organizing ourselves as a community if the values and culture we cherish are to endure.

It may help to recall that since European settlement, Maine has persisted through three distinct political-economic eras. The first and harshest extended from the early 1600s through the 1780s, a time of sparse and insecure settlement – on places like Damariscove and Richmond islands, on the Pemaquid peninsula, and in York and Falmouth, today’s Portland. These settlements were characterized by a largely coastal economy, foreign market domination of our products, and various defensive compacts for sheer survival of these scattered communities. We even went so far at the time as to join Massachusetts!

The second period followed the creation of the United States and its putting to rest the governance and security questions; after all, it is hard to invest one’s life and fortune when it is not clear just *who* is in charge, and that disputes may be resolved peacefully! Within a generation Maine’s population increased ten-fold, from some 30,000 persons to more than 300,000, and Maine became a state on its own. What then followed has been characterized as Maine’s “Golden Age” of agriculture and cottage industry, extensive settlement up the great valleys of the Saco, Androscoggin, Kennebec, and Penobscot rivers, and the growth of our highly decentralized and individualistic local governments.

The third period, beginning after the Civil War and lasting through most of the 20th century, was a period of industrial rise and decline, of what has been called “managerial capitalism” that was capital intensive, largely urban, highly centralized and hierarchical in nature, and increasingly over time non-Maine in its ownership and control. Its corporate structure was largely replicated in the state government that grew during this time; and its filthy industrial processes eventually drove people from our cities onto a now-sprawling suburban landscape.

Several “operating principles” of economic development gained sway in this era, generally embraced by Maine’s political elites: first, that more and bigger is generally better; second, that community development will naturally follow from economic development, regardless of its quality; third, that the economy and the environment may, at best, be held in a “balance” that would not kill us in the end; fourth, that whatever social and environmental problems exist are in fact the corporate managers’ responsibility, and not our own, personally; and, finally, that the public and private sectors were uneasy allies at best, if not natural enemies!

Today we are come into a new, fourth era – in need of a new organizing principle, a *new* narrative to continue our development as a community of people.



Westbrook Riverplaza, courtesy of Tyler Kidder, GrowSmart Maine

Some Findings to Remember

Our findings are informed by original research by Catherine Reilly deLutio and Michael LeVert of 45 North Research, Inc. (see Appendix A) and by John Dorrer, a regional expert in workforce development matters (see Appendix B), and by numerous meetings with business leaders, municipal officials, residents and workers from the Greater Portland Region. Focus group sessions have been held with the Economic Development Directors in Greater Portland, business leaders in technology firms, “remote” workers, and low-income residents. A survey of Greater Portland Regional Chamber members also informed the findings.

In addition, over the last several months we have held numerous meetings with individual leaders from the Greater Portland Council of Governments (GPCOG), the United Way, Focus Maine, the Maine Community Foundation, the Greater Portland Chamber, and Metro Greater Portland Transit District. We attended meetings with business and municipal leaders sponsored by the USM Economic Development Planning Advisory Committee, GPGOG, and the Maine Innkeepers Association and the Maine Restaurant Association. And finally, we reviewed surveys conducted of more than 2,000 Portland neighborhood residents and comments from new Mainers captured in the CEI report, *Building Maine’s Economy: How Maine Can Embrace Immigrants and Strengthen the Workforce*. Here are our findings:

1 Triumph of the City. Cities drive national and regional growth today. Despite increases in the ability to communicate and trade over long distances, cities have prevailing and enduring influence over the world economy today. Just 600 cities worldwide account for three-fifths of global economic product. As economist Edward Glaeser points out, “cities... are the nodes that connect our increasingly globalized world.”⁴ Today and for the foreseeable future, Maine’s essential and indispensable node is Portland and the surrounding region.

2 The City & The Region. Greater Portland is Maine’s urban engine of economic prosperity. The region accounts for less than three percent of the state’s land area but is home to one-fifth of its population and one-fourth of its jobs. Forty percent of Maine’s job growth since the Great Recession has occurred in Greater Portland. In the public sector, the region contributes nearly one-third of Maine’s General Fund through sales and income tax revenue.

3 The Workforce Challenge. Greater Portland’s workforce is likely to decline by 5,000 workers by 2034. As residents age and many Baby Boomers retire, the workforce is expected to shrink 3%, even as the overall population increases 8%. If that occurs, existing businesses will have ever-more difficulty finding workers and few new businesses will locate in the region.

⁴ Edward Glaeser, *Triumph of the City*, Penguin Books: New York, NY, 2011.

4 Need for New Residents. Greater Portland can maintain its economy if it attracts enough new residents to backfill the retiring Baby Boomers. Economic models show doubling the rate of in-migration would maintain and slowly grow the region’s workforce by 4% through 2034. That growth rate would essentially maintain the current level of economic activity.

5 Business Growth. Expanding Greater Portland’s economy will require attracting and retaining even more working-age residents. If the region gained 1,500 working-age residents per year, its workforce would grow 10% by 2034. That would help existing businesses expand and attract new businesses. In the past, that rate of growth occurred through natural population growth. Now the challenge is to continue the trend through in-migration.

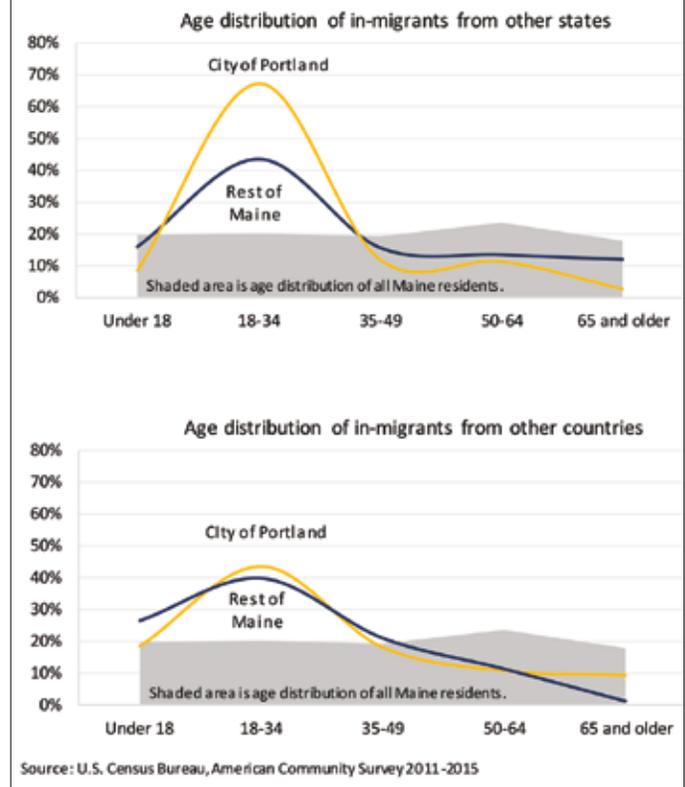
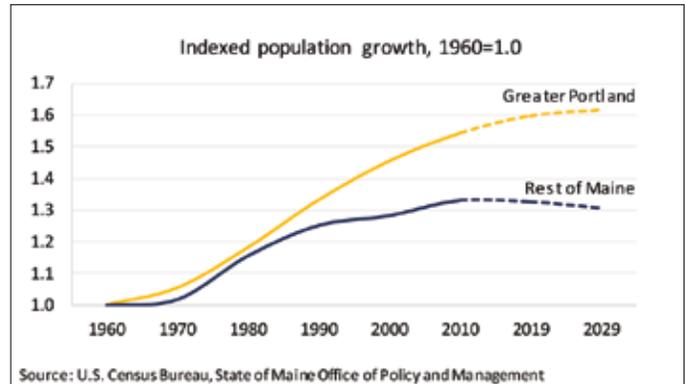
6 Need for Diversity. Greater Portland has a history of attracting young, skilled, diverse residents. The region is the top destination of young, educated people moving to and within Maine. An influx of international migrants has filled local schools and brought even more talent. Fully half (49%) of recent international arrivals have a bachelor’s degree or higher.

7 Workforce Housing. Affordable housing has been critical to attracting new residents and fueling local business growth. Accommodating future growth will require more residential development, particularly of multi-family housing units.

8 Greater Portland Synergy. Portland and its surrounding communities co-exist in a mutually beneficial and reinforcing economic relationship. It is one from which all may benefit even more through increased collaboration and cooperation to address the chronic challenges they face, namely: workforce development, workforce housing, public transit, public revenues for needed investments, good urban design, and protection of a shared quality of life and place, their greatest economic attractant.

9 A Workforce Crisis. Many organizations in Greater Portland are growing, but underlying this is concern that the workforce is aging and there are not enough young workers with the right experience and expertise to replace these workers when they retire. Workforce shortages present a looming crisis that is not being addressed with the urgency required.

10 Foreign Immigrant Issues. Foreign immigrants represent a potential pool of potential workers. Many are college-educated and entrepreneurial, but many encounter challenges with language, transportation, credentialing, discrimination, and lack of familiarity with the US culture and employment practices. Many also perceive problems with employers’ abilities to communicate with and to trust new workers.



11 Lack of Critical Mass. Greater Portland lacks critical mass in most industry sectors, and depth in the workforce, especially in technical fields, compared with larger cities. This discourages potential employees from coming to Maine, because they wonder how they may advance their careers without uprooting their families, when there are too few firms in their field in the region. They are also concerned about limited opportunities for a “trailing” partner or spouse. Meanwhile, firms are hesitant to relocate here because of the lack of depth in the workforce. It is a vicious cycle with too few firms discouraging workers from locating here, and too few workers discouraging firms from locating here.

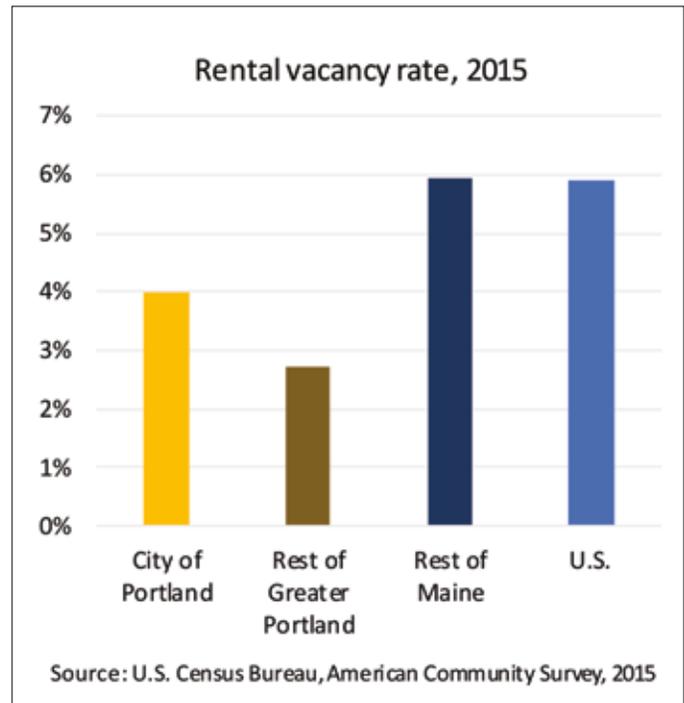
12 Perverse Incentives. The need for population increase and more jobs are not effectively aligned with the motivational incentives for local government. Local governments have strong incentive to increase the property tax base but little comparable incentive to increase the number of jobs. The state benefits from an increase in jobs with the income and sales tax, while local governments are limited to their property tax base, and businesses in the digital age require less square footage for employees. The school funding formula is a disincentive to localities to increase the school-age population, even as Maine needs to attract more families with children.

13 Tourism & Hospitality. The hospitality industry faces serious challenges in attracting seasonal workers. The federal government's reluctance to issue H2B visas is curtailing normal operations in some inns and restaurants that have inadequate numbers of housekeepers, cooks, and wait staff. High school and college workers leave too early because secondary and post-secondary schools start classes before Labor Day.

14 Tech Firms. Technology firms find that potential employees are attracted to the region's quality of life and place. A number of these firms have locations outside of Maine, in part to attract technology talent in these locations. If they are unable to expand in Maine due to worker shortages, they will expand in these other locations. Firms are frustrated by the lack of interaction with universities and would like closer partnerships in preparing students for the workplace and in continuing education programs for employees. They seek a stronger balance in the education of potential employees between mastery of technical skills and soft skills such as writing, teamwork, and interpersonal communication.

15 Remote Workers. Greater Portland residents who work remotely or at-a-distance are typically attracted to the region for its quality of place and life. The proximity to Boston is an attractive feature of Greater Portland, but they find it inconvenient to get readily to Boston. Challenges for these workers include limited broadband, commercial flights at odd times, limited opportunity for promotion within their firms, and difficulty getting their next job because firms do not hire remote workers they don't already know.

16 Workforce Development Fragmentation. The public university system is very important to all businesses with whom we spoke; and most, especially in the technology sector, would like to see more purposeful engagement with the public university for socializing, networking, and professional development purposes; and for faculty to gain better understanding of employers' needs. Current efforts to address workforce development issues are fragmented, with no one organization respon-



sible for identifying the needs of employers and coordinating the many organizations educating and training the region's future employees.

17 Low-income Workers. Some from low-income backgrounds in Greater Portland are underemployed, and move from one low-paid job to another. These need post-high school certificates and degrees, but find that the daytime class schedules at USM and SMCC are often an obstacle for working parents. The lack of affordable child care is a problem, as well.

18 Urban Densification. Most Portland neighborhood residents feel that housing is too expensive, and support the concept of higher-density housing next to neighborhood and village centers. But they only support such housing if issues of parking and traffic are dealt with – in other words, if there is a strong public transportation system that will reduce the need for cars.

19 Public Attitudes. There is widespread complacency and resistance to change among the general public. "Why should we change anything now when things are going so well?" And some Maine people are not perceived as welcoming to those who come to the state with new ideas and ambitions.

20 Fragmentation of Regional Efforts. A number of promising regional development efforts are underway within organizations that are independent of one another in terms of overall mission, staffing, and funding sources. Their careful and continuing integration, as well as greater public accountability, will best advantage prospects for sustainable prosperity across the region.



Brunswick Landing, courtesy of Midcoast Regional Redevelopment Authority

Pursuing Sustainable Prosperity *Together*

The Maine economy is today in the throes of an often painful, structural transition, the outcome of which is uncertain but not entirely unclear. For much of the 20th century Maine distinguished itself from the nation with its commodity-based agricultural/industrial economy; today, it shares with the nation a largely service- and knowledge-based economy, and competes nationally and globally for the skilled workers necessary for sustainable development.

For much of the 1990s and into this century, it appeared that unbridled greed might offer a guiding narrative for the nation as a whole, “and the devil take the hindmost.” Today, we ask, “Is sustainable development the new narrative Maine needs?” First and foremost, sustainable development means a break once and for all with the ancient mindset that has pitted economic opportunity against the environment, and placed human and community concerns

on the sidelines in the struggle for “progress” and “a better life.”

A commitment to sustainable development, in itself, does not resolve the continuing conflicts that emerge among economic, environmental, and social values. It does, however, force these matters onto the table for discussion, and test whether existing processes for resolving conflicts are adequate to the task. In its 1997 report, the President’s Council on Sustainable Development recognized:

- the inter-dependence among economic, environmental, and social well-being;
- it means practicing it where we live our daily lives – in *sustainable communities* of people; and
- it involves a shift away from thinking separately about the economy, the environment, and community,



as if all three were not intimately and ever-lastingly connected. This is the basis for what is known as the “3-legged stool” of sustainability, illustrated above.

Students at the Muskie School have studied nations like Canada, New Zealand, and the Netherlands; North American cities like Toronto, Seattle, San Diego, Austin, Jacksonville, Chattanooga, and Burlington; island and mainland communities here in Maine; and private businesses – companies like Guilford Industries of Maine – that have organized serious, ongoing sustainability efforts. They have learned several useful principles of sustainable development:

⁵For an extended discussion of the origins and practice of sustainable development, see Richard Barringer, “Maine Transformed: An Introduction,” in *Changing Maine, 1960-2010*, Tilbury House Publishers, Gardiner ME, 2004.

- First, it is *not* just old wine in a new bottle, but a fundamentally new and different way of thinking about the world and how it works when it is healthy, fair, and just. Not a “magic bullet” or a substitute for private markets, it is new way of understanding the market economy, its important role in society, and its requirements as a long-term generator of both private wealth and public good;
- Second, and as is now well-understood in Maine’s island communities, it starts from a profound and simultaneous commitment to *economic viability, environmental integrity, and community vitality* – which are not to be balanced against one another, but to be effectively married in a single, enduring approach to life and its vicissitudes;
- Third, there is no one road to sustainability. It requires flexibility, creativity, and adaptability to changing market, environmental, and social conditions – that is, *resilience*, or the ability to absorb and respond effectively to unexpected change, shock, and surprise; and
- Fourth, the most direct way *into* the unbroken economy-environment-community circle has traditionally been seen as economic growth, regardless of its quality: more jobs will kick the system into action. We have come to believe that effective and lasting access to the system is gained first and foremost through increasing community vitality and competence. That is, as economist Robert Putnam has argued, social capital *precedes* rather than follows upon general economic prosperity.⁵

We believe that Maine is well-suited to this way of building our shared future. Maine people share the core values of sustainability, namely, longstanding habits of industry, thrift, innovation, adaptation, and pragmatism; a deep and abiding respect for nature and its own requirements, which long pre-dates modern environmentalism; and perhaps above all, mutual trust and lifelong devotion to community, fairness, and democratic decision-making. Now, the task is to marry these in development policy!

Greater Portland

In 1878 the Maine Legislature chartered the state's third Normal School in Gorham, to train the region's teachers. The Town of Gorham then raised some \$42,000 in taxes and a subscription for the handsome, new building now known as Corthell Hall, home to USM's noted School of Music. The first term of the Western State Normal School commenced in January, 1879, with eighty-five students enrolled. Since then, thousands of men and women from Maine and beyond have received a high quality, affordable education. Corthell Hall, USM Gorham campus, courtesy of USM



The Issues and Recommendations

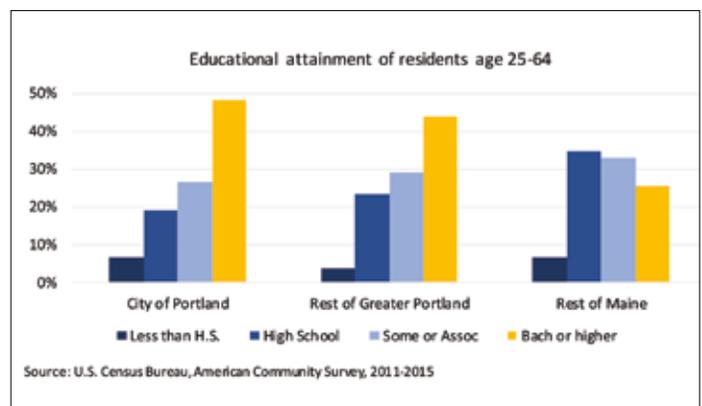
Workforce Development

In its recent “scorecard on state economic climate,” CNBC rated the 50 states on the education level of their workforce, the numbers of available employees, and the states’ demonstrated abilities to retain college-educated workers. Unhappily, CNBC rated Maine *50th* among all the states.⁶

John Dorrer, Maine’s pre-eminent analyst of workforce issues, describes this situation as “a true crisis” for Greater Portland and all of Maine. “Business-as-usual approaches will not suffice to deal with this crisis,” he asserts; “it must be addressed on a larger scale, with a greater sense of urgency than current initiatives.”

In Appendix B to this report, Dorrer observes that over the last five years the economy of the Greater Portland region has happily shown consistent employment growth, diversification of industries, and solid income gains. Prospects for continuing regional prosperity, however, are threatened by slow labor force growth and tight labor markets. Reports of employer difficulties finding qualified applicants to fill available job openings are persistent, and hamper business expansion plans.

Hiring difficulties are common across all industries and occupational categories, and are particularly problematic for the high skill/high wage jobs essential for future regional growth. At the entry level, employers have increasing difficulty recruiting, hiring, and retaining workers with basic employability, communication, and problem-solving skills. Maine’s aging population, combined with slow population growth will continue to have depressing effects on the region’s labor supply and the ability of employers to find qualified workers.



As “baby boomers” retire over the next ten years, large numbers of highly skilled and experienced workers will leave the labor force in waves. Replacement of aging workers will pose a formidable challenge across most key industry sectors. Absent bold and coordinated workforce development strategies designed to attract and increase the supply of skilled workers, the Greater Portland region will increasingly fall short of its economic potential, and quite possibly contract.

To ensure that the needed workforce is available in sufficient numbers and with the right skills, significant investments and elaborate coordination among multiple actors and institutions are required. For too long, workforce development has occurred across fragmented education and training silos, with minimal employer coordination and structured feedback.

⁶ See “America’s Top States for Business 2017: A scorecard on state economic climate” at <http://www.cnbc.com/2017/07/11/americas-top-states-for-business-2017-overall-ranking.html>

To this end, Dorrer offers a comprehensive and strategic framework for workforce development in Maine and the region. Details of each strategy are spelled out in Appendix B.

- **Strategy 1:** Ensuring a Strong Foundation for All K-12 Students.
- **Strategy 2:** Recruitment and Skill Development for Unemployed Adults and Youth, Discouraged and Sub-employed Workers, and Marginal Workers Capable of Higher Levels of Productivity.
- **Strategy 3:** Attraction and Retention of More College Educated and Highly Skilled Workers to Greater Portland.
- **Strategy 4:** Employer Leadership and Cooperation on the Demand Side of the Labor Market.
- **Strategy 5:** A Regional Post-Secondary Education Compact, to assure needed, new approaches to collaboration among these institutions and between institutions and employers.

Above all, Dorrer urges creation of a standing and dedicated “institutional platform” to bring together employers and education and training providers on a continuing basis, to do the sorely needed, collaborative work of workforce-building. He estimates the cost of the platform at some \$1 million, for a four to five-year period to prove its value. It would be initially developed with philanthropic support and, if successful, maintained over time through an assessment on employers and institutional members.⁷

Among other functions, the platform would convene an annual Workforce Summit, conduct joint research and evaluations, serve as a clearinghouse, and seek harmonization of educational and workforce development strategies and investments.

Recommendation I

*We recommend creation of a **Workforce Development Center at USM’s Muskie School/Cutler Institute**, to address Maine’s workforce crisis. The Center would provide a convener, to bring together employers and education/training organizations, identify needs and shortcomings, and create alignment between educational outcomes and employer needs. Among its other activities, the Center*

⁷ We envision an initial planning grant request to the Alford Foundation, the Lumina Foundation, the JP Morgan Foundation, and the Gorman Foundation. Other Maine organizations would be asked to contribute funding through the Maine Community Foundation.

⁸ *The Brookings Institution. Charting Maine’s Future: An Action Plan for Promoting Sustainable Prosperity and Quality Place*, Washington DC, 2006, pp. 6, 96, 99.

would conduct workforce research, program evaluation and assessment, and longitudinal surveys to track program graduates in the workforce.

Quality of Place

The 2006 Brookings Institution study of Maine’s economy asserted that, “after painful industrial restructuring and amid surprising negativism,” Maine is in fact poised for a new era of economic prosperity if it “focuses its limited resources on a few critical investments.” Brookings advocated a three-fold strategy of investing in product and service innovation, streamlining government at all levels, and revitalizing our towns and cities while protecting our rural landscapes.

With regard to the last element, Brookings observed,

“Accessible wild places and tranquil country farms, human-scaled Main Streets and working waterfronts: these are what differentiate Maine from other places and in many respects drive its economy. Yet these assets are at risk. Development is encroaching on Maine’s coastal (waters) and inland lakes, limiting access. Rising land prices are motivating farmers to sell out. And closer in, the state’s longstanding centers — its regional hubs and their downtowns — cannot often enough stem the flow of suburbanization to truly revitalize themselves. These centers like the green landscape cry out for investment. And so Maine should protect these assets and invest in them as sources of economic advantage.”⁸

In 2007, the Governor’s Council on Maine’s Quality of Place, created to explore the implications of this assertion, affirmed through research and outreach that “Maine’s principal advantage in today’s global competition is in fact our *Quality of Place*. We have majestic mountains, unbroken forests, open fields, wild rivers, pristine lakes, a widely-celebrated coast, picturesque downtowns, lively arts and culture, and authentic historic buildings. We must learn to think of these as part of the basic infrastructure of Maine’s future prosperity.” Sustaining Maine’s Quality of Place,” the Council argued, “will require a level of attention to the built environment equal to the resources devoted to preserving Maine’s natural environment.

Accessible wild places and tranquil country farms, human-scaled Main Streets and working waterfronts: these are what differentiate Greater Portland today from other places and attract others to this place and drive our economy. Yet these assets are at risk, and so Maine should protect and invest in them as sources of economic advantage.

For all its challenges, the Greater Portland region is the pre-eminent and acknowledged economic engine of



The main pier at Migis Lodge, courtesy of Migis Lodge

Maine. It is also a place of exceptional natural beauty with a renowned arts and culture community, a distinguished historical and architectural heritage, a fledging entrepreneurial community, and long-standing traditions of civic engagement and collaboration. These are all placed-based, vital assets upon which to build a more sustainable economy.

During this period of rapid development, the issue of quality urban design requires particular attention. Greater Portland must pay careful attention throughout to matters of good urban planning, design, and investment, learning from other successful metropolitan regions – places like Boston, Minneapolis, and Austin, where tourism, the arts, and educational institutions have played major roles in their recent revitalization

Renowned author Jane Jacobs urges regional planners and developers to create dense, mixed-use neighborhoods that bring together housing, businesses, shops, cultural venues, green space, and pocket parks to create lively neighborhoods where residents may walk to shop, work, recreate, rest, engage with others, and visit places of interest. This increased density creates more households and commercial businesses on a relatively small footprint, with the added benefit of more people to support the property tax base, curb anticipated tax increases, and enlarge ridership for improved public transit.

In our earlier report, *Growing Portland: Not Whether*

but How, local architect Patrick Costin presented the concept of the “Half-Mile Neighborhood,” based on the notion that we should all be able to walk to basic services in our neighborhoods. Schools, parks and recreation, shopping, and public transportation should be accessible within one-half mile of where we live, an eight to nine minute walk. The Portland Peninsula offers this lifestyle, and we recommend its adoption throughout Greater Portland by strengthening the vitality of neighborhood commercial centers at intervals all along the Portland Area Comprehensive Transportation System (PACTS) Priority Corridors & Centers map (see Page 28 below).

This form of neighborhood life was common in cities before the automobile re-shaped the American landscape. Portland still has vestiges in historic neighborhood centers. Multi-story buildings integrating retail, business and residential occupancy will reinforce lively local character in neighborhoods that are now dominated by traffic thoroughfares.

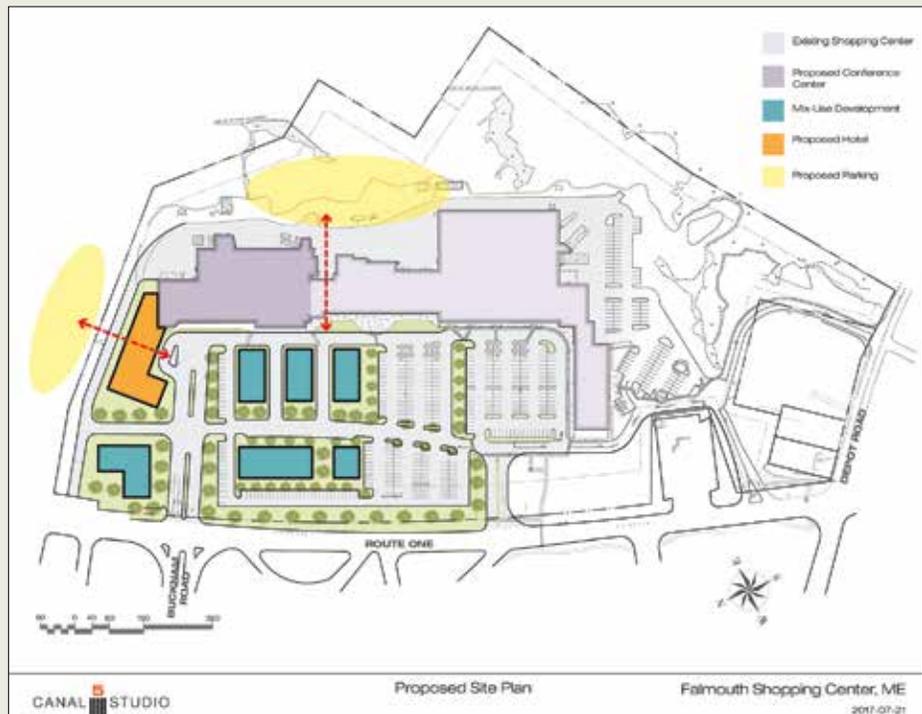
These commercial centers will slow traffic, increase pedestrian activity, and enhance the quality of life throughout the region. More mixed-use density will strengthen the economics of public transit that allows people to reduce their reliance on automobiles. Encouraging our historic urban roots to grow into Half-Mile Neighborhoods will create a region where automobiles recede and people come to the fore.

Re-purposing the Suburban Mall

Today, as personal tastes and shopping habits rapidly change, thousands of near-empty suburban malls dot the American landscape. The challenge of vacant and underperforming shopping centers confronts many southern Maine communities. Estimates on the share that might close or be re-purposed in the coming decade range from 15 to 50 percent.

Sixty years ago our own Victor Gruen (see pp. 8-9) designed the Southdale Center in Edina MN, which would become the national prototype for the traditional mall. Gruen, however, saw the mall as much more than a shopping center; he envisioned it as a new town center, a hub of apartment buildings, offices, a medical center, and schools and parks, all connected to public transit. This, he argued, would deliver a lively and colorful alternative to America's lackluster suburban sprawl. Years later, Gruen reported that he was in "severe emotional shock" to see shopping malls stranded amidst acres of parking lots.*

What if our suburban malls were to be re-invented and re-designed for today? What might we all gain? Canal 5 Studio architects Patrick Costin and Lodrys Gomez believe one solution is to re-develop them into mixed-use centers, much like the downtowns of the early 20th century. Integrating retail, hospitality, business and residential occupancies would reduce reliance on the automobile, and create more lively and livable space and transform place. Below, they offer such a re-purposed Falmouth Shopping Center on Rte. 1 at Bucknam Road in Falmouth, to include a needed, regional convention center and all that Gruen had originally in mind.



* See Malcolm Gladwell, "The Terrazzo Jungle," *The New Yorker*, March 15, 2004; and Amy Merrick, "Are Malls Over," *The New Yorker*, March 11, 2014.

The municipalities surrounding Portland are even more dependent on the automobile than is the city, itself. To get these communities to be less dependent on the auto will require a radical rethinking of the prevailing, suburban lifestyle. These cities and towns would best think about urbanizing their community centers with mixed-use development and keeping the areas outside the centers as rural as possible.

Otherwise, the Greater Portland region risks becoming one huge suburban-tract environment, save the Portland peninsula. This is quite what has happened to towns and communities surrounding many of the nation's cities. We call for a more creative approach, to combat the "uglification" of the Greater Portland landscape and its major thoroughfares. We argue to think intentionally about these communities and what their citizens would most desire, rather than leaving it solely to developers whose primary motive is profit, to dictate the future of the Greater Portland landscape.

Recommendation 2

*We recommend creation of a **Center for Good Urban Design** at USM in collaboration with the undergraduate Architecture program at UMA and the Portland Society for Architecture, to assist local communities in the principles and practice of urban design that will at once strengthen the region's economy, Quality of Place, and local neighborhoods. A good place to start in creation of such a center was made in 2011 in a proposal to the University of Maine System (see Appendix C).*

Public Infrastructure

Portland and its surrounding communities are among the oldest settlements in the country. Because of this, the region is burdened with aging infrastructure in comparison with the rest of the country – relatively old housing, sewer and water and gas and electric networks, roads, railways, and the like. An essential component of sustainable prosperity for the region is an aggressive infrastructure improvement program, to address a broad range of issues. Here, we concentrate on two, in particular.

High-Speed Broadband Capacity

The digital age has brought a new form of infrastructure, broadband telecommunication, that has become as essential as running water to many businesses, municipalities, remote workers, and private citizens.

Most of the Greater Portland region has some level of broadband service, but the quality of the service varies greatly from community to community, neighborhood to

neighborhood, and even block to block. Many communities have but one internet service provider, limiting choice and price options. Only a few have the high-speed fiber optic service required to receive and especially to send large data files.

Today, many governments and organizations routinely engage in video conferencing, the sharing of big data, cloud services to back-up files, video production, and "smart" building and facility controls. All require high speed internet; and as these organizations begin to rely on artificial intelligence, this service will only become ever-more essential.

Normal cable connections are typically capable of downloading 50 megabits of data, and of uploading just 5 megabits. But the timely transmission of large data records and images requires 1,000 megabits (a gigabit) capacity. Less than 1 percent of Maine businesses and households have internet connection at the 1 gigabit level. Sophisticated businesses and organizations such as colleges and medical facilities have individual fiber optic connections. These are readily available from local internet service providers, but are high in price. Service of 100 x 100 mbps up to 1000 x 100 mbps costs between \$800 and \$2500 a month.

Public schools and libraries in the region are served by the Maine School and Library Network (MSLN) that subsidizes the cost of service. The MSLN is funded by state and federal funds, and is run as a unit of the University of Maine. Close to 100% of schools and libraries in the region are receiving 100 x 100 mbps service under this program.

The good news is that the Maine Fiber Company has installed the backbone of this system from York County to the northern reaches of the state. But for a city or town to tap into it and achieve these high speeds requires multi-million dollar investments to lay the fiber optic cable – funds currently unavailable to most municipalities.

Private internet service providers are continually upgrading their infrastructure and services; but with data demand doubling every year, it is difficult for them to keep up. Copper phone lines and coaxial cable TV lines that have been re-purposed for internet service will eventually reach their service limits, advancing the need to invest in more fiber optic technology.

High speed broadband is increasingly essential to reduce the cost of public services and attract businesses and remote technology workers to the Greater Portland region. Businesses and workers are often attracted to Maine because of its appealing quality of life; but without reasonably priced high-speed connections, many cannot consider re-locating here. To sustain economic growth, funds must be identified to bring this important infrastructure to the region.

Case Studies: Some Best Practices

By Andrew Clark

Andrew Clark, graduate research assistant in USM's Muskie School of Public Service, here introduces a number of the many innovative efforts underway across the nation to address the issues identified as obstacles to Greater Portland's sustained prosperity. For more case studies, see Appendix #, pages 76-82.

Anchor Institution: Philadelphia, PA.

Economically competitive regions in today's technology-driven markets are well-served by growing their "anchor institutions." They are employment centers, cultural attractions, and innovators in their fields. Two such institutions have emerged as particularly beneficial. Forward-looking "Eds and Meds," or higher education centers and major medical facilities, have invested in their communities as well as themselves, as highly-educated workers and migrants concentrate nearby.

Since the late 1990s the University of Pennsylvania has been investing in its once-blighted neighborhood surroundings. Its West Philadelphia Initiative promotes a safe and clean environment, supports workforce housing, engages in commercial development, builds economic inclusion, and invests in public education.

Between 1990 and 2010, the population of the neighborhood increased, the racial composition diversified, crime rates and poverty declined, and economic and commercial development grew. By most metrics, the initiative has been successful in making University City a premier Philadelphia neighborhood.

In Portland, two major institutions find themselves in rapidly changing settings. The University of Southern Maine is separated from the central business district by I-295 and an unwelcoming pedestrian environment. A recent report envisions higher density and an improved public realm along this corridor as part of the



A row of stately townhouses in a Philadelphia neighborhood. Bev Sykes photo

natural growth of Portland's urban core. In another corner of town, Maine Medical Center sits on the divide of the Parkside, St. John/Valley, and West End neighborhoods. A significant proposed expansion could bring increased investment, mixed-use development, and a re-invigorated streetscape to this gateway to Portland's downtown.

For citations, see Page 81.

Transportation: Tacoma, WA.

As cities become increasingly attractive places to live, a growing burden is placed on transportation networks. Few planners deny the benefits of promoting alternative modes of transportation; but without incentives to encourage their use over private cars, little progress may be made. One such incentive is public Transit Signal Priority, or TSP. Beacons installed in transit vehicles communicate with traffic signals to request a green light, giving priority to transit over ordinary traffic.

Tacoma equipped 245 busses and 110 intersections along 6 major corridors with TSP technology. The program's effectiveness was measured by several metrics, including travel time, stop and signal delay, fuel savings, and air quality. Ultimately, TSP reduced transit signal delay by roughly 40 percent and provided significant economic benefit, estimated at \$14.2 million annually.

Greater Portland's METRO saw record ridership numbers in 2016, with 1.81 million riders, a 15 percent increase over the previous year. The agency is actively expanding the Breez service, so that what once went from Portland to Freeport will now be expanded to



Dense, mixed-use neighborhoods are the charming alternative to suburban sprawl. Image from NACTO, "Urban Street Design Guide

Brunswick. In town, several routes on major commuting corridors like Forest, Washington, or Brighton Avenues could benefit from improved signal coordination. These major corridors each see in the area of 20,000-24,000 vehicles per day. Many of the drivers might be tempted to switch to transit if the system could more reliably and quickly deliver passengers into the heart of the city.

For citations, see Page 78.

Public Transportation



Across the world, strong public transit allows cities and regions to grow while reducing traffic congestion and increasing air quality. It significantly reduces families' transportation budgets, putting dollars back into local economies; provides greater public safety, with lower rates of accidents and injuries than the auto; offers independence to seniors and persons with disability; and helps lower-income residents access job markets. Along with good urban design, it brings people together to foster community and collaboration. Modern bus rapid transit (BRT) systems combine the cost advantages of the bus with speed, capacity, and punctuality, along with improved ticket systems and constant passenger information updates. Photo courtesy of Systra, Metz, France

Prior to creation of the nation's interstate highway system and the coming of the automobile age in the 1950s and 60s, Maine people used public transportation for much of their movement and travel within and between our major cities. Portland, Lewiston, Bangor, Augusta, and many other communities had electrified trolley systems to be enjoyed for a nickel. Indeed, when Henry David Thoreau left Concord MA in pre-Civil War times to visit the Moosehead region and the West Branch of the Penobscot River, he did it all by public transportation – first steamship, then horse carriage, and finally paddle-driven canoe.

Today, as the era of the personal automobile peaks in the face of changing technologies, tastes, and interests, public transportation in Maine is the neglected stepchild of state's transportation system. Yet, throughout the developed world, public transit is a hallmark of successful cities and regions. What will it take to bring Greater Portland into alignment in this regard, given Mainers' long romance with the personal automobile, which we tend to treat as our forebears did their horses, with the greatest care and affection?

It is best to begin by acknowledging that asset management of the current road system and public safety will remain state priorities for some time to come. Too much has been invested over two generations to neglect this asset; and more remains to be done, both to undo parts that no longer serve safely and to make needed improvements.

State Per Capita Transit Funding FY 2012

Jurisdiction	Per Capita Dollar Support
Massachusetts	\$183.22
Connecticut	\$115.01
Oregon	\$34.17
Vermont	\$10.92
Iowa	\$4.16
West Virginia	\$1.50
Mississippi	\$0.54
Maine	\$0.40
New Hampshire	\$0.32
50 State National Average (as of 2007)	\$45.66

(ASSHTO, Sources of State Funding for Public Transportation, Washington, D.C., n.p. and AASHTO, Sources of State Funding for Public Transportation, Washington, D.C. 2010, n.p.)

Beyond this recognition, several factors will determine the extent to which we may anticipate getting out of our cars and going to work, shop, recreate, and enjoy life by means of safe, reliable, timely, and regular public transit.

Already Greater Portland Metro is slowly expanding service on both a regular and experimental basis throughout the region, and works with the half-dozen other regional service providers to expand coverage. This is a beginning that will best be increased through:

1 Dedicated funding. The state is prohibited by a constitutional provision from spending gasoline tax revenues on public transit, the result of which is its truly anemic state support. Maine spends a meager 40 cents per capita annually on transit, while Massachusetts spends \$183.22 and Vermont, \$10.92. The state average, as of 2007, was \$45.66. Phoenix AZ decided its people needed and wanted public transit, dedicated a portion of its sales tax to its creation, and today enjoys a modern system of trams and buses;

2 System integration and modernization. The Greater Portland region is today served by fully seven transit agencies, four in buses, with minimal coordination. A single bus system would provide greater efficiency, consistency, and capacity. And modernization of the bus fleet and fare collection system would make its use both more attractive and less expensive;

3 Good Urban Design. Efficient transit is possible only along well-established routes with sufficient ridership to be economical. This means more dense, vertical, and mixed-use development along feeder routes and at neighborhood nodes within walking distance of transit users; and

4 Institutional Users. Metro and USM will soon initiate “The Huskie Line” connecting Gorham, Westbrook, and Portland in an arrangement that would best be replicated by the region’s other large and potential institutional users – Maine Medical Center, Mercy Hospital, UNE, SMCC, MECA, etc. – doing for public transit systems what “Eds and Meds” are doing to strengthen them throughout the nation and the world.

Recommendation III

We recommend that legislation be introduced in the Maine Legislature to enact a 0.5 percent local option sales tax in Cumberland County to be used exclusively for investment in regional infrastructure, including broadband service, public transit, affordable housing, trails development, and related utilities. The fund would best be administered by the County in collaboration with GPCOG. This might best be proposed as a demonstration project that, if successful over a period of five years, might be extended to other counties.

Some Noteworthy Regional Initiatives

Numerous initiatives are now underway, addressing one or more of the three legs of sustainable development, and as such are especially deserving of widespread and continuing support.

GPCOG

For some fifty years the Greater Portland Council of Governments (GPCOG) has served as a trusted and neutral convener of municipal leaders, elected officials, and other stakeholders; a resource to member municipalities and

catalyst for regional collaboration and consolidation; and a connector to federal and state funding, to public-private partnerships, and to philanthropic investments. Today, under the leadership of Executive Director Kristina Egan, GPCOG has embarked with its members and partners on a new and shared aspirational vision for the region:

“The Greater Portland and Lakes Region is thriving economically, socially, and environmentally. We have a diverse local economy that builds on the region’s natural assets and traditions, hosts a vibrant entrepreneurial ecosystem, and provides opportunities to people in all parts of the region. Communities have diverse housing, transportation, and communications choices to meet the needs of all ages. Our world-renown rivers, lakes, coast, forests, and farms are protected and continue to be a key part of daily life, drawing many new residents to the region. Residents are prospering and have an inherent sense of regional pride and identity.”⁹

In pursuit of this vision, GPCOG plans in the coming months and years to develop and aid in implementing a “true” regional development plan. “This will reflect existing local and regional plans and community input, and identify strategies to strengthen our economic competitiveness, transportation network, resiliency, and ability for residents to age in place; (and) will integrate the region’s long-range transportation plan (Destination 2040) and the Comprehensive Economic Development Strategy (CEDS).”¹⁰

GPCOG firmly intends to spend the time needed to bring together recent efforts around issues of regional land use, location of housing and jobs, transportation, natural and historic resource protection and preservation, and climate adaptation; then to work as a resource with member communities and public, private, and third-sector partners to attract and catalyze new investment in regional growth, and to assure the plan’s effective implementation and success. It is a bold and most promising undertaking.

PACTS

Meanwhile, the Portland Area Transportation System (or, PACTS, co-located with GPCOG, under John Duncan, Director) includes portions or all of eighteen regional communities and seven public transportation providers. PACTS’s excellent, long-range plan, *Destination 2040*, envisions “a transportation system that will be coordinated with land use decisions promoting compact livable development that preserves community character while retaining open and natural spaces, which enhance the natural and human environments.” Realization of this compelling vision throughout the “Priority Centers & Corridors” identified in *Destination 2040* will

⁹ Note: Cumberland County accounted for 27 percent of Maine sales tax revenues in 2016, or some \$5.5 billion. An additional levy of one-half percent on these sales would yield \$27.5 million in annual revenues.

¹⁰ See Greater Portland Council of Governments, *Strategic Plan*, May 2017.

greatly strengthen both the region's Quality of Place and its economic attractiveness and well-being (see the map on page 28).

Destination 2040 argues persuasively that "Like many regions in the U.S. and worldwide . . . , the way in which we live and move around in greater Portland is changing," driven by both innovations in technology and shifting demographics. It finds that:

- Congestion and modal conflicts will only worsen if current development patterns, practices, and investments continue;
- There is significant support for expanded transit service throughout the region, especially among younger and older residents;
- Transit's role in addressing current and future mobility problems is growing and requires an increase investment; and
- Securing the funds needed to meet the region's identified transportation needs may be the biggest challenge facing decision-makers as *Destination 2040* is implemented.

The Creative Economy

The arts and culture are key drivers of successful cities everywhere as critical attractants to new workers, residents, and visitors; and are central to Greater Portland's creative economy prospects. According to the Portland Regional Chamber's recent *Economic Scorecard*, some 27 percent of Portland's economy and 24 percent of the region's economy depend on creative occupations, including arts and culture, architecture, design, engineering, law, media, software, and related fields.¹¹

Despite this, there is evidence that the creative economy is losing momentum today, amidst growing pressure on the arts and culture core of Portland. Recent interviews conducted by CivicMoxie, a Boston-based consulting firm, for Creative Portland as part of the organization's strategic planning, indicate that the lack of affordable space to work, practice, and perform, the scarcity of venues to exhibit work, and the relatively stagnant membership and audience attendance for events creates increased pressure on arts, cultural, and creative initiatives in the city.¹²

There is little tangible commitment to arts and culture and the creative economy in Portland's new comprehensive plan, and a clear outline of goals and steps needed for success is critical at this time. Why? There is no single, celebrated arts district with consistent signage, maps, and websites to guide visitors; confusion and mixed messages over branding; a dearth of affordable work and performance space with no incentives for its development; and widely-perceived public transportation/parking issues – all of which undermine both the relevance and vibrancy of the creative sector.

To date, the lack of a regional plan and the insular nature of surrounding communities has made working together difficult, though there are signs of new collaborations especially through GPCOG and the Portland Regional Chamber. *Creative Portland*, the city's official arts organization, recently began the process of developing an inclusive, city-wide vision for the arts and culture in Portland.

The goal is to elevate the important contributions of the arts and culture into the fabric of the city, to identify top priorities and set policy direction so the city, major arts organizations, businesses, artists, and entrepreneurs may collaborate to ensure future growth and prosperity.

The planning process has already identified several areas of focus, to:

- Identify and celebrate the arts district and ensure visibility for the many geographic centers for arts and culture in the city,
- Focus on cultural tourism to better serve visitors,
- Address parking and transportation issues,
- Advocate for affordable live & work space, and
- Consolidate resources by building connections among related organizations.

We strongly applaud this planning effort as sorely needed, and urge that it be extended to the regional level, perhaps in partnership with GPCOG and the Portland Regional Chamber.

It is important to recall a central message of the highly successful 2004 Blaine House Conference on the Creative Economy, which documented the importance of the creative economy to all of Maine, and warned that arts and cultural communities often sow the seeds of their own destruction. Trouble often occurs when culturally vibrant places become popular for the upper middle class to live and enjoy, bringing prohibitive increases in rental costs and the forced relocation of artists to less expensive locales – as, off the Portland peninsula to Westbrook, Biddeford, Sanford, and others places they may then enrich.¹³

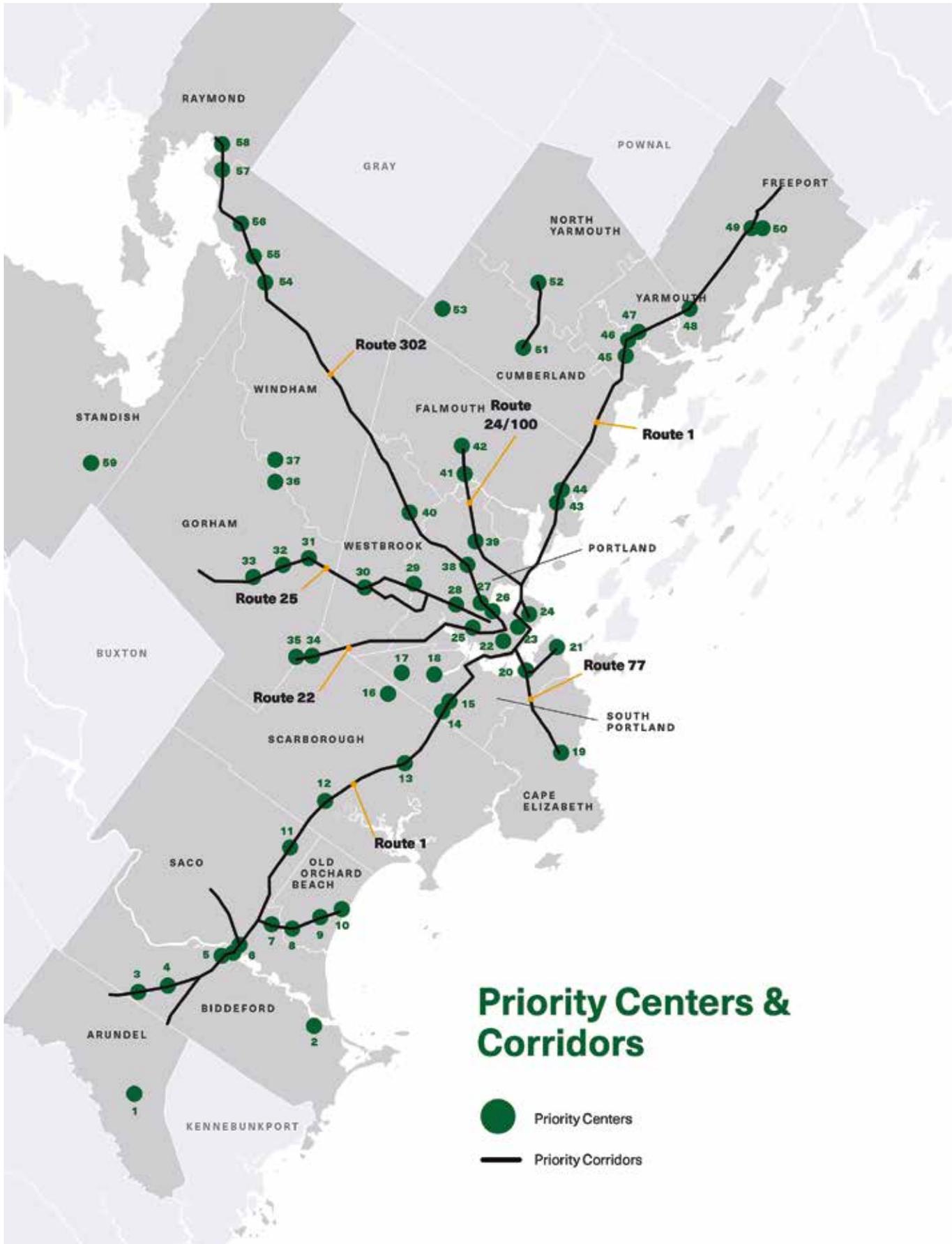
Focus Maine and GPEDC

Two business attraction efforts are of especial note. Co-chaired by Michael Dubyak and Andrea Cianchette Maker, Focus Maine is a promising private sector initia-

¹¹ See http://www.portlandregion.com/uploads/2/5/8/0/25808280/pccc_econ-score15.pdf

¹² *Creative Portland*, "Cultural Plan Phase 1 Summary: Laying the Groundwork," July 2017

¹³ See Richard Barringer et al., *The Creative Economy in Maine: Measurement & Analysis*, Southern Maine Review, USM, July 2004.



PC&C map, courtesy of PACTS



Happy Girls. Photo courtesy of the United Way of Greater Portland

tive with a focused approach to growing three high-potential industries. It sees the possibility of encouraging Boston pharmaceutical firms to locate manufacturing facilities in southern Maine; and have identified the need for agriculture and aquaculture firms to have nearby processing plants to efficiently move their products to market.

Meanwhile, the cities of Portland, South Portland, and Westbrook, and the towns of Falmouth and Scarborough have created the Greater Portland Economic Development Council (GPEDC) to jointly engage in promotion and business attraction. Cooperation among the five communities is a positive recognition that economic development is better achieved through regional collaboration and coordination than a go-it-alone approach. Under the leadership of Portland's Greg Mitchell, the GPEDC has shown promise especially in retention and expansion of businesses, but lacks the funds and a dedicated staff to move the attraction effort vigorously ahead.

Thrive 2027

Finally, a singular third-sector partnership is that created by the United Way of Greater Portland. Under the leadership of Liz Cotter Schlax it has gathered some 150 community partners under the banner of *Thrive 2027*. Through a community-wide goal-setting process aided by experts, this exciting social service initiative has set three goals for a stronger community, each with an empirical outcome and benchmark measures to account for progress.

In its outreach across the region, United Way found that “while greater Portland is a great place to live and work, not everyone is doing well. Too many kids do not read at grade level; too many people cannot afford basic necessities, including housing; and too many people are dying

early. The consequences are staggering, both economically and socially. Nearly one-third of third-graders do not read at grade level; more than half our neighbors lack sufficient resources for housing and other necessities; and adults with major mental illness die 14 to 32 years younger than the general population.”

In some ninety community conversations, United Way asked, “What kind of community do we want?” And, “What would make a difference?” From these conversations, three region-wide goals emerged:

- Every child has quality early learning experiences beginning with birth – *by 2027, 78% of children read proficiently at the end of 3rd grade (up from 71% in 2015-16)* ;
- Individuals and families have the education, employment opportunities, and resources to achieve financial stability – *by 2027, 70% of households pay less than 30% of their income on housing (up from 65% in 2014)*; and
- Children, adults, and communities have the resources and opportunities to achieve optimal health status – *by 2027, 4,569 years of potential life lost per 100,000 people (down from 5,076 in 2014)*.

Thrive 2027 is led by a distinguished goal-setting council and panel members from across the region's public, private, and not-for-profit sectors who report annually to the community on progress toward these goals. It, again, is a most promising and well-developed element in a regional sustainable development strategy.

We strongly recommend that each of these efforts – GPCOG's proposed regional development plan, PACTS' *Destination 2040*, Creative Portland's planning effort, Focus Maine and GPEDC, and the United Way's *Thrive*

2027 be resourced fully, monitored carefully, and supported throughout the region as complementary sustainable development efforts.

Leadership and Accountability

These are but a few examples of the many efforts underway in the Greater Portland region to address compelling and at times competing challenges to sustained prosperity – in workforce size, education, and development; in housing and transportation; in climate adaptation and broadband development; in the arts, culture, and urban design; in relieving property tax pressures; in increasing social justice; and, in economist Charlie Colgan’s words, in learning to become a more “urban” region without sacrificing its remarkable quality of life and place.

It is widely recognized today that these large and complex challenges are intimately related and connected, one to another, and in need of integration as goals, if the outcomes are to be intentional and consistent with long-standing public values respecting economic growth, environmental integrity, social justice, and public accountability. There exist today a host of energetic and valuable efforts underway to address these challenges, many with supporting organizations of varying missions and capacities behind them.

The problem with such effort is that the varying and complex goals of different organizations may not be achieved by any single one of them, acting alone; they require vigorous coordination and integration across the many organizations involved that have come together to pursue shared goals in the public interest.

At the local and state levels of Maine government, there exist elected bodies whose role it is to identify and comprehend such complex matters, to address these in ways that respond to public needs and values, and to assure the accountability of outcomes to their citizens – these are our many City and Town Councils and the State Legislature. What is lacking in Greater Portland’s efforts to achieve sustained prosperity, we find, is an institutional framework or setting wherein fragmentation among the many, ongoing efforts may effectively be organized and coordinated, and their public accountability assured.

How to attain such responsibility and accountability is an overriding question facing the region and its ambitions to achieve sustainable prosperity. We live in disruptive and unsettled times, under the influences of new and “smart” information technologies, a global economy, aging demographics, and changing lifestyles. Markets shift, traditional industries struggle to adapt, and entrepreneurial opportunities emerge – as do the compelling and widespread issues of workforce development, affordable housing, public transportation, inadequate public revenues,

and threats to Maine’s and the region’s quality of life.

While much of Maine hurts for want of job opportunities, Portland and its surrounding communities prosper in a close, symbiotic relationship of mutual dependence and shared need and interest. Each workday tens of thousands of commuters enter the city, most all in single-occupant cars; each evening and weekend, thousands more arrive to enjoy its arts, culture, sports, recreation, and dining resources. The compelling question before the region – and before all such metropolitan regions in Maine – is how it may sustain the prosperity it today enjoys.

In focus groups and interviews with public, private, and third-sector leaders across the region, we find a strong sense of cautious optimism and commitment to addressing the challenges we share. We have seen the heroic efforts of local citizens and regional planners, housing developers, private charities, and others, to move the region forward in the face of public impatience and occasional anger with the pace of change. What is lacking is not caring, concern, and civic effort; but, we believe, effective authority and accountability at the regional level to move forward in a purposeful and effective manner.

“Business as usual” and fragmented efforts will not suffice to address the challenges we face. The time is come to take the region’s growth and development to a new level. The efforts of GPCOG, PACTS, GPEDC, Creative Portland, Thrive 2027, Focus Maine, Greater Portland Metro, and the multitude of other individuals and organizations laboring in the cause need to be empowered to achieve their missions and goals. It is time for efforts in the cause of sustained prosperity, broader opportunity, and enhanced Quality of Place to be made more integrated, more intentional, more aspirational, and more accountable.

In 2008 the people of Cumberland County created a special charter commission, to examine the need for a new charter similar to those recently adopted by Aroostook and Knox counties, giving them greater “home rule.” In November 2010 the people again voted to adopt a new Cumberland County Charter, enabling the County to widen its scope of services, to seek and secure federal funding for these wider purposes (as it now does for Community Development Block Grants), and to assist cities and towns with the delivery of needed services. It is time for the cities and towns of the region to recognize and honor that sustained prosperity is, in fact, a regional responsibility, not one of each community on its own resources.

In a 2015 strategic planning memorandum to GP-COG’s Board of Directors, former Executive Director Neal Allen surveyed the history and prospects of the organization, its financial underpinnings, and the trends and challenges facing the Greater Portland region. He asked, What strategies and investments should we as a region be

considering in developing public policies and implementation systems needed to address the region's key challenges and issues?¹⁴

After reviewing several out-of-state regional organizations for perspectives that might be useful to GPCOG's strategic future, Allen concluded that, "While GPCOG has a long history of solid service and accomplishments, (today's risk) factors threaten the sustainability of the agency under its traditional structure and mission." After the most careful thought, he addressed what might be the next, best step in the evolving relationship among GPCOG, PACTS, and Cumberland County Government.

Allen recommended "Change: A Different Perspective for the Region," closing with the statement that, "The merits of our organizations coming together either through a carefully prescribed legal agreement such as an Inter-local Agreement or even a merger or hybrid merger are far more compelling than indefinitely maintaining the status quo. I believe the future will bear this out." Today, Allen believes, "the situation is just ripe for a fully integrated effort."¹⁵

In the past, people have recognized the need for coordinated and publically accountable leadership, but have tiptoed around the controversial topic of how to accomplish this. The rapid pace of change in Greater Portland today, and the need for decisive action on a number of regional fronts, makes this a topic that may no longer be denied.

RECOMMENDATION 4

We recommend creation of adequate and effective regional authority to address the critical issues of economic and community development, workforce housing, transportation, broadband telecommunications, energy, brownfields, and human services; and that the capacities of GPCOG, PACTS, the Greater Portland Economic Development Council, the Greater Portland Metro, and Cumberland County be combined in some form for this purpose.

Communications

The recommendations in this report require public understanding and support for their implementation and success. It is unclear at this point how great a regional identity exists among the citizens of Greater Portland, and how much awareness there is of the critical challenges facing the region. A reliable, regional survey of opinion would be of great assistance in setting priorities and designing a strategy to move the region forward across the spectrum of challenges it faces.

Properly done, such a survey would create the foundation for a privately-funded communications strategy and plan to inform the general public and mobilize support for



Making good decisions. Photo by Lynne Boyd, courtesy of Common Good Ventures and Good Group Decisions, Inc.

a concerted, sustainable development strategy, organized and mobilized by identified leadership. Such a strategy has produced demonstrable results in such far-flung places as Seattle WA, Chattanooga TN, and St. John NB.

RECOMMENDATION 5

We recommend creation of a rigorous communications and public information strategy, funded by private and philanthropic sources and delivered by the Portland Regional Chamber, to:

- Raise awareness of the need for sustainable development that honors its economic, environmental, and community foundations, as well as the abiding advantages of good urban design;
- Identify Quality of Place as a critical asset for the region and an attractant to new residents, workers, and businesses; and
- "Brand" Greater Portland as a whole, as "Portland Aspires" or something such, much as has been done by Saint John NB and its surrounding communities under the successful banner of "Enterprise Saint John."¹⁶

¹⁴ Allen identified these as: Quality and accessible pre-K, higher education, and workforce development; Sustainable Economic Development; Housing – Affordable rental & home ownership; Assimilation of new Mainer populations; Aging population; Transportation systems and options; Funding for public services and infrastructure investment; Leveraging southern Maine's "political power" potential; Community and regional planning; and Climate change. See Neal Allen, *White Paper Perspective of GPCOG & Regional Opportunities*, to the President & Members of the GPCOG Executive Committee, dated May 15, 2015

¹⁵ Personal communication, July 24, 2017.

¹⁶ See *St. John NB: From Decay to Prosperity* at <http://efc.muskie.usm.maine.edu/pubs.html>

Greater Portland Maine’s Urban Economic Engine

45 North Research, Michael LeVert and Catherine Reilly deLutio, Principals

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About 45 North:

45 North Research, LLC provides custom analysis, public policy development, and organizational strategy to Maine leaders. Founded by former Maine State Economists Michael LeVert and Catherine Reilly deLutio, 45 North produces high quality research in compelling formats that connect with target audiences. To learn more, visit www.45northresearch.com, or call 207-808-1045.

Many thanks to John Dorrer for his experienced and insightful advice in the development of this analysis.

Summary of Findings

Cities drive national and regional growth. Despite increases in the ability to communicate and trade over long distances, cities have prevailing and enduring influence over the world economy. Today, just 600 cities worldwide account for three-fifths of global GDP. As economist Edward Glaeser points out, “cities... are the nodes that connect our increasingly globalized world.”¹ Today and for the foreseeable future, Maine’s essential and indispensable node is Portland and the surrounding region.

Greater Portland is Maine’s urban engine of economic prosperity. The region accounts for less than 3% of the state’s land area but is home to one-fifth of its population and one-fourth of its jobs. Forty percent of Maine’s job growth since the Great Recession has occurred in Greater Portland. In the public sector, the region contributes nearly one-third of Maine’s General Fund.

Greater Portland’s workforce is likely to decline by 5,000 workers by 2034. As residents age and many Baby Boomers retire, the workforce is expected to shrink 3%, even as the overall population increases 8%. If that occurs, existing businesses will have more difficulty finding workers and few new businesses will locate in the region.

Greater Portland can maintain its economy if it attracts enough new residents to backfill the retiring Baby Boomers. Economic models show doubling the rate of immigration would maintain, and slowly grow, the region’s workforce by 4% through 2034. That growth rate would essentially maintain the current level of economic activity.

¹ Edward Glaeser, *Triumph of the City*, Penguin Books: New York, NY, 2011.

Expanding Greater Portland's economy will require attracting and retaining even more working-age residents. If the region gained 1,500 working-age residents per year, its workforce would grow 10% by 2034. That would help existing businesses expand and attract new businesses. In the past, that rate of growth occurred through natural population growth. Now the challenge is to continue the trend through in-migration.

Greater Portland has a history of attracting young, skilled, diverse residents. The region is the top destination of young, educated people moving to Maine. An influx of international migrants has filled local schools and brought even more talent. Fully half (49%) of recent international arrivals have a bachelor's degree or higher.

Affordable housing has been critical to attracting new residents and fueling local business growth. Accommodating future growth will require more residential development, particularly of multifamily housing units.

Greater Portland covers less than 3% of Maine's land area and is home to 1/5 of its residents.

Introduction

Greater Portland² accounts for less than 3% of Maine's land area but is home to 290,000 residents, more than one-fifth of its population.^{3, 4} There are 150,000 jobs in Greater Portland, nearly one-quarter of jobs statewide. The region's cultural and commercial heart is Portland, Maine's largest city – nearly as large as the combined populations of Lewiston and Bangor, Maine's second and third largest cities.⁵

The numbers alone suggest Greater Portland's importance to the state's economic well-being, but they tell only half the story. As other regions of Maine face population decline and the loss of traditional industries, Portland is slowly growing. If this pattern continues, Portland's contribution to the state's economy will become even greater and more critical.

This white paper examines the economic relationships among Portland, the Greater Portland region, and the state of Maine. The first section describes the relative size, characteristics, and growth rates of these areas. The second section presents four growth scenarios for Greater Portland. The analysis shows the potential economic impact to the state and region if population growth in Greater Portland accelerates, holds steady, or declines.

The authors wish to thank workforce development analyst John Dorrer for his experienced and insightful advice in the development of this report.

² The geographic delineations of "Portland" used by various data sources differ greatly. Throughout this paper, "Portland" refers to the City of Portland; "Greater Portland" refers to the City of Portland plus surrounding Cumberland County. In reality, the flow of residents, workers, and commerce connected to the city's economy extends well into northern York County. However, most data sources do not provide enough detail to construct results for that region. Therefore, the statistics of Greater Portland's regional and statewide significance presented in this paper are likely *underestimates*.

³ U.S. Census Bureau, American Community Survey (ACS), 2015 one-year estimate

⁴ According to the U.S. Census Bureau, Maine's land area is 30,854 square miles; Cumberland County is 846 square miles.

⁵ ACS, 2015.

Just 600 cities
worldwide
generate 60%
of global GDP.

The Present

Across the world today, cities drive growth.

First, a few words about the economic role of cities. Throughout human history, cities have been the site of important advances in science, technology, commerce, culture, and the arts. The proximity of large numbers of people with diverse knowledge, skills, and experiences generates new ideas, inspires new inventions, creates new markets, and generally stimulates economic activity.⁶

Cities create opportunities for “agglomeration economies” – the economies of scale that occur when similar businesses locate near each other. Collectively, they can build better supply chains, generate and attract more knowledge workers, learn from each other, advocate for public policies, and share industry-specific infrastructure. The proliferation of craft breweries in Southern Maine is an example of agglomeration. There is a large body of research on the positive effect of agglomeration on economic growth.⁷

Richard Florida popularized the idea of a new “creative class” of highly skilled, highly mobile individuals who are attracted to cities with favorable amenities such as a favorable climate, outdoor recreation opportunities, and cultural attractions.¹⁵ In an economy that rewards skills and innovation, cities with those attributes tend to enjoy greater economic activity. Quality-of-life amenities are notoriously difficult to quantify, but one common measure is tourism – the number of people who visit a region for leisure and recreation. With over five million visitors per year, the Greater Portland region scores high on this measure.⁸

⁶ Edward L. Glaeser, Heidi D. Kallal, Jose A. Scheinkman, and Andrei Shleifer, “Growth in cities,” *Journal of Political Economy*, 100(6), 1992.

⁷ Stuart S. Rosenthal and William C. Strange, “Evidence of the nature and sources of agglomeration,” *Handbook of Regional and Urban Economics*, 2004.

⁸ Maine Office of Tourism, “2015 regional tourism impact estimates: Greater Portland and Casco Bay,” <https://visitmaine.com/assets/downloads/>. Accessed April 20, 2017.

Because of these dynamic forces, it is estimated that just 600 cities worldwide account for fully three-fifths of global GDP.⁹ Cities will likely always dominate the world economy. However, some analysts foresee the next wave of growth occurring not within the world's crowded megacities like New York and Los Angeles, but in smaller cities like Providence, Rhode Island; Boise City, Idaho; Madison, Wisconsin; Quebec City; and perhaps, with thoughtful planning and careful investments, Portland, Maine.¹⁰

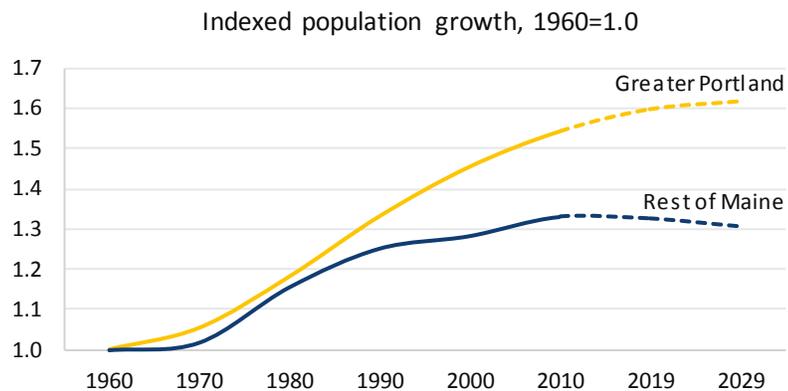
⁹ Richard Dobbs, Sven Smit, Jaana Remes, James Manyika, Charles Roxburgh, and Alejandro Restrepo, "Urban world: Mapping the economic power of cities," McKinsey Global Institute, March 2011.

¹⁰ Ibid.

Greater Portland is home.

With 67,000 residents, Portland is Maine's largest city, nearly as large as Lewiston and Bangor combined.¹¹ Greater Portland, which extends beyond the city's core into surrounding communities, is home to 290,000 residents, fully one-fifth of Maine's population.¹²

Since 2010, Greater Portland's population has increased by 10,500 residents.¹³ About half are international arrivals, one-third have migrated from elsewhere in the U.S., and the rest (16%) is the result of natural population increase (births outnumbering deaths). The importance of immigrants to Greater Portland's growth cannot be overstated. Nearly half (45%) of individuals who move to Maine from another country locate in Greater Portland; of those, over half locate within Portland.¹⁴



Source: U.S. Census Bureau, State of Maine Office of Policy and Management

The rest of Maine lost nearly 7,000 residents from 2010 to 2016.¹⁵ Deaths outnumbered births in thirteen of Maine's sixteen counties, and the outflow of residents to other states exceeded the inflow by several thousand. Without Greater Portland, Maine's total population would have declined since 2010.

¹¹ U.S. Census Bureau, American Community Survey (ACS), 2015.

¹² ACS, 2015.

¹³ U.S. Census Bureau, Estimates of the Components of Resident Population Change: April 1, 2010 to July 1, 2016, March 2017 ("Components").

¹⁴ ACS, 2011-2015.

¹⁵ Components, 2010-2016.

Nearly half of all new housing units in Maine are permitted in Greater Portland.

These trends are likely to continue. The State of Maine's current population projections show Greater Portland growing 2.3% from 2014 to 2034 and the rest of Maine declining 3.0%.¹⁶ Recent building activity supports this forecast. In 2015, nearly half (46%) of all new housing units permitted in Maine were in Greater Portland.¹⁷

The city of Portland's housing stock is distinctly different from the rest of Greater Portland and Maine, and has facilitated its growth. First, the city has many more multi-unit structures. Fully 58.5% of housing structures are multi-unit buildings, while 41.5% are one-unit ("single family") homes.¹⁸ In Greater Portland and the rest of Maine, the percentage of multi-unit structures is just 15.8% and 17.5%, respectively.

Further, the city of Portland has a relatively high percentage of renters. Most of its housing units (57%) are occupied by renters, compared to 24% in Greater Portland and 28% in Maine.¹⁹ Despite the prevalence of rentals in Portland, in 2015 the median rent was identical to the rest of Greater Portland, \$1,003 and \$1,000, respectively.^{20, 21} Both locations were more expensive than elsewhere in Maine (\$792). However, the higher incomes of Greater Portland residents meant rents accounted for a similar proportion of their income as renters elsewhere in Maine.

Housing analyst Frank O'Hara has noted the direct link between the availability of rental units and population growth. He points out that Maine had net *in-migration* of people under 35 in the 1970s and 1980s when it added 50,000 rental units.²² Then some communities began discouraging the development of multifamily housing and federal support for affordable housing declined.²³ In the 1990s, Maine added just 8,000 apartments and experienced net *out-migration* of young people.²⁴ O'Hara observes that many communities, "...have chosen to try and slow growth by adopting policies that discourage or prohibit multifamily housing... This is a formula

¹⁶ State of Maine, Office of Policy and Management, population projections through 2034, November 2016.

¹⁷ U.S. Census Bureau, Building Permits Survey, 2015.

¹⁸ ACS, 2015.

¹⁹ ACS, 2015.

²⁰ These figures do not reflect differences in rental-unit size or quality

²¹ ACS, 2015.

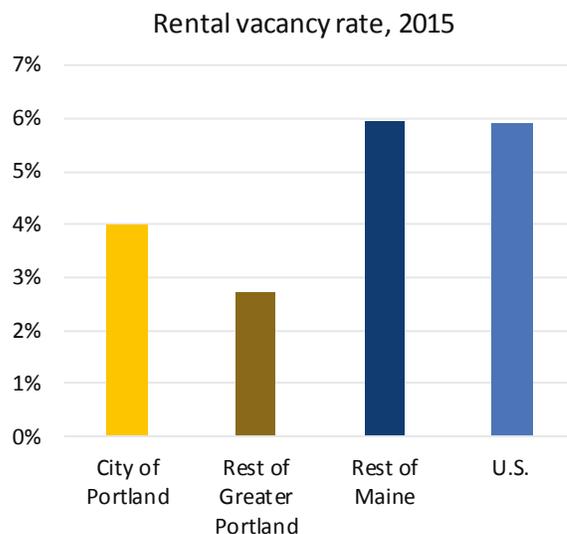
²² Frank O'Hara, "Housing for a changing Maine: It's not working!" in *Changing Maine: 1960-2010*, ed. Richard Barringer, Tilbury House, Gardiner, Maine 2004.

²³ *Ibid.*

²⁴ *Ibid.*

that, if allowed to continue over time, will choke the economic growth of southern Maine, which in turn will reverberate throughout the entire state economy."²⁵

Greater Portland's rental market is notably tight, even by national standards. The chart at right shows the average rental vacancy rate (the percentage of rental units available for rent at any given time). The city of Portland's vacancy rate is 4.0%. The rest of Greater Portland's is even lower, just 2.7%. That is less than half the rate for the rest of Maine and the U.S. (both 5.9%). Anecdotal evidence suggests that finding affordable rental units in Portland is difficult; low vacancy rates support that observation.



Source: U.S. Census Bureau, American Community Survey, 2015

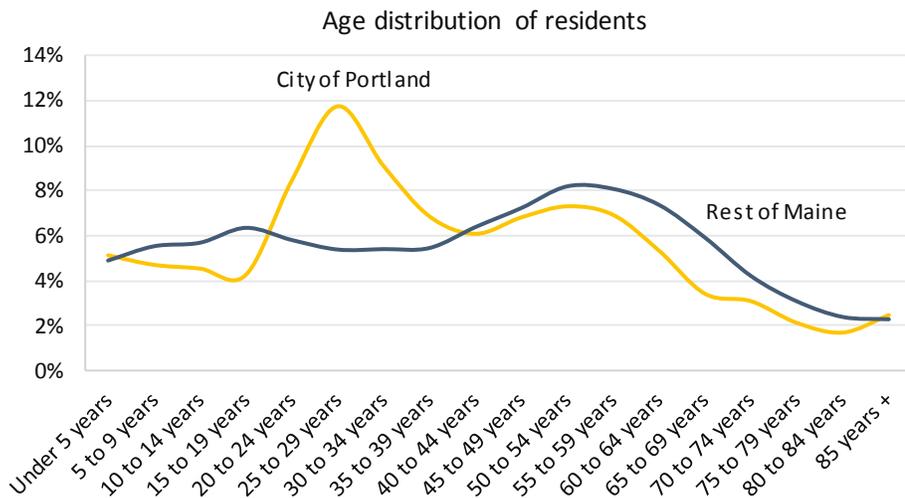
A final distinction of Portland housing stock is its age. Over half (53%) of the city's housing structures were built before 1950, compared to 25% and 30% elsewhere in Greater Portland and the rest of Maine, respectively.²⁶

²⁵ Ibid.

²⁶ ACS, 2015.

Greater Portland is young.

Like cities across the globe, Portland is a magnet for young people. Fully one-third of 20- and 30-year-olds who move to Maine from another state locate in Greater Portland; of those, more than half locate in the city of Portland.²⁷ The chart below shows the age distribution of residents in Portland and elsewhere in Maine. The city has a distinctly high portion of Millennials and Gen-Xers; 29% of its residents are between the ages of 20 and 34. In the rest of Maine, that proportion is just 17%.

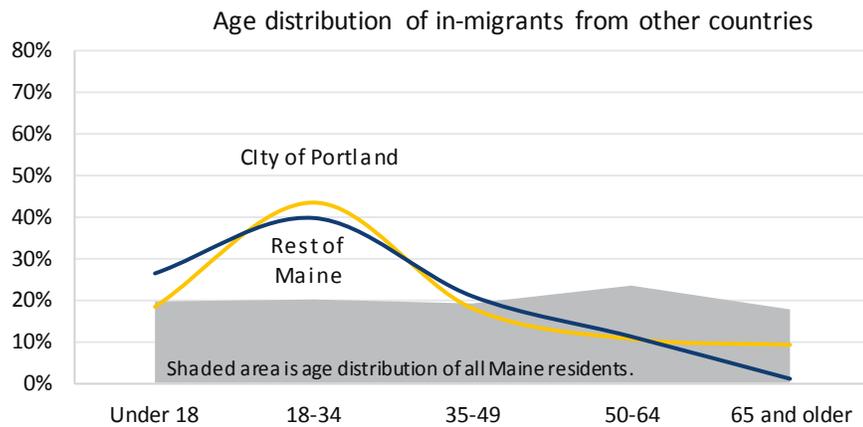
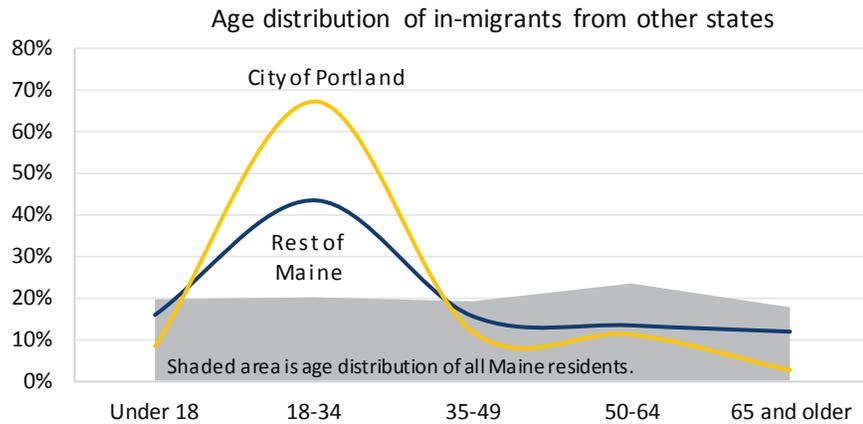


Source: U.S. Census Bureau, American Community Survey 2011-2015

By comparison, Maine has a high portion of Baby Boomers. The crest in Maine's age distribution curve represents a wave of older residents who move closer to retirement each year, with few younger residents available to replace them. The youth of Portland's citizenry contributes to economic growth through the higher proportion of working-age residents starting and expanding businesses, attracting prospective employers, and working to support young families.

New arrivals to Portland are notably younger than established residents. The following charts show the age distribution of in-migrants to Portland and Maine from elsewhere in the U.S. and from other countries.

²⁷ ACS, 2011-2015.



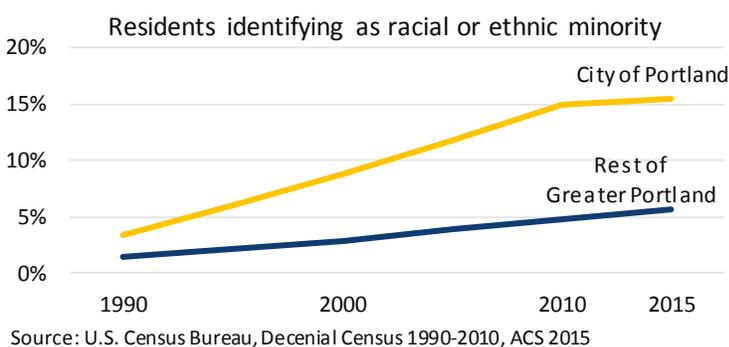
Source: U.S. Census Bureau, American Community Survey 2011-2015

Many young people who settle in Portland eventually migrate to the city's suburbs to raise families. From 2010 to 2014, Cumberland County experienced a net gain of residents from all but two Maine counties: neighboring Sagadahoc and York.²⁸ In those coastal counties just east and south of Cumberland County, the flow of people arriving from Cumberland exceeded the reciprocal flow of people moving to Cumberland. While the age of those residents is unavailable, anecdotal evidence suggests they may be young families moving to the backyards, beaches, and schools outside of, although not far from, the city center. In this way, Portland serves as a gateway to the rest of Southern Maine.

²⁸ ACS, 2010-2014.

Greater Portland is diverse.

Like much of the U.S., although unlike much of Maine, the city of Portland's population is becoming more diverse. In 2015, 15% of residents identified as a race or ethnicity other than white alone.²⁹ That's more than double the portion in surrounding Greater Portland (6%) and three times the portion of the rest of Maine (5%). Moreover, the city's diversity has increased 77% since 2000.³⁰ The chart below shows the growing diversity of the region's residents.



On average, minority populations are younger and have larger families, so their presence in Greater Portland has lowered the region's age profile and increased its growth rate. Furthermore, many new immigrants are professionals with advanced educations. Fully half (49%) of Greater Portland's foreign-born residents who are not yet naturalized citizens have a bachelor's degree or higher.³¹

The youthfulness of Portland's diverse residents is most apparent in the city's public schools. In a state where just 9% of public school students are non-white, 41% of students in the Portland Public Schools are a racial or ethnic minority.³² Four of Portland's sixteen schools are now minority-majority, meaning students from racial and ethnic minorities outnumber white students.^{33,34} This diversity also appears in nearby South Portland and Westbrook, where several schools have 20%-30% minority

²⁹ ACS, 2015.

³⁰ ACS, 2015, and U.S. Census Bureau, 2010 Decennial Census.

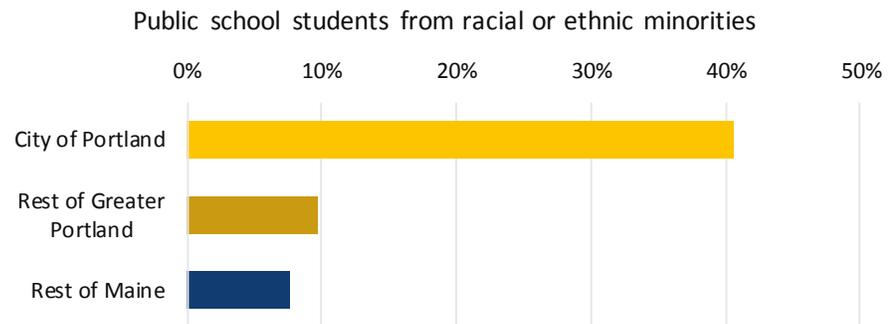
³¹ ACS, 2011-2015.

³² U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), Public Elementary/Secondary School Universe Survey Directory Data, 2014-2015.

³³ CCD, 2014-2015.

³⁴ In 2014-2015, there was just one other majority-minority school in Maine, located in Lewiston.

enrollment, and in Brunswick and Yarmouth, with a handful of schools with over 10% minority students.³⁵ While other regions of Maine face declining enrollments and school closures, Greater Portland's diverse population is keeping its classrooms full.

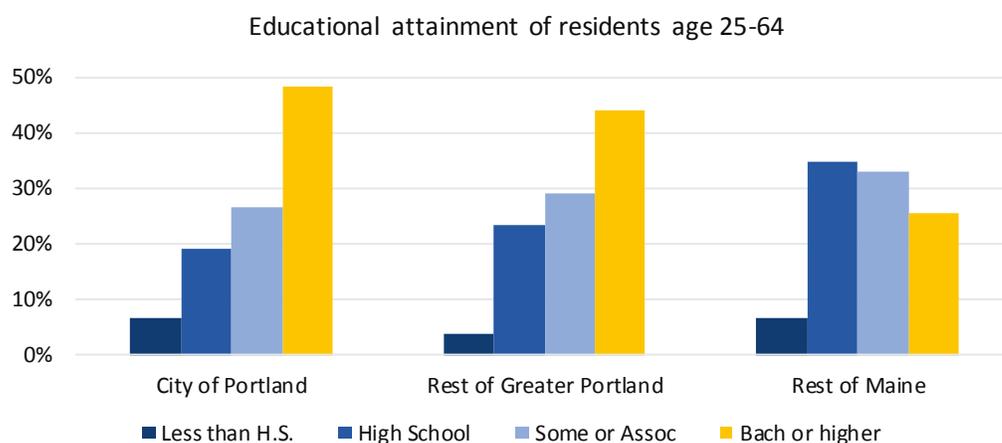


Source: U.S. Department of Education, National Center for Education Statistics, 2014-2015

³⁵ CCD, 2014-2015.

Greater Portland is skilled.

Increasingly, today's employers require training and education beyond a high school diploma. In the words of Harvard economist Edward Glaeser, "There is no such thing as a successful city without human capital."³⁶ In this environment, Portland stands out for the portion of its working-age residents – nearly half – with a bachelor's degree or higher. That is fully two-thirds higher than the rest of the state (48% compared to 29%).³⁷ For every 1,000 residents, the city of Portland has 290 bachelor's degrees while the rest of Maine has 137.



Source: U.S. Census Bureau, American Community Survey, 2011-2015

A rich body of academic research documents the correlation between skilled workers, population growth, and job growth. In "The Rise of the Skilled City," Glaeser and Albert Saiz calculate that doubling the number of bachelor's degrees per capita in a city increases growth over the next decade by 4%.³⁸ In another paper, Glaeser considers the case of Boston: "In 1980, Boston was a declining city in a middle-income metropolitan area in a cold state... Twenty years later, Boston... is the eighth richest metropolitan area in the country ranked by per capita income..."

³⁶ Glaeser, 2011.

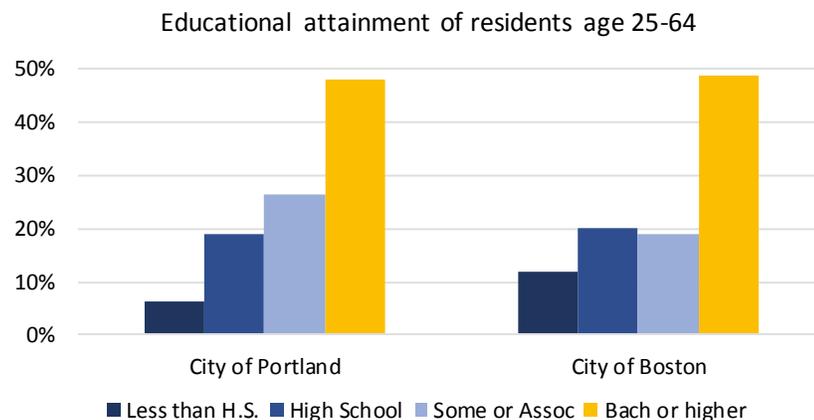
³⁷ ACS, 2011-2015.

³⁸ Edward L. Glaeser and Albert Saiz, "The Rise of the Skilled City," National Bureau of Economic Research, working paper 10191.

Since 2009, forty percent of Maine's job growth has occurred in Greater Portland.

[Boston's] skill base, which is most strongly related to the educational history of the region, enabled Boston to become a successful city in the information age."³⁹

It is compelling to note that the city of Portland's level of degree attainment is similar to Boston's. From 2011 to 2015, Boston had just half a percentage more residents with bachelor's degrees (48.7% compared to 48.2% in Portland).⁴⁰ This comparison does not address field of degree or degree quality, nor the number of degrees in the cities' respective suburbs. Nevertheless, it points to the potential power of Portland's educated citizenry.



Source: U.S. Census Bureau, American Community Survey, 2011-2015

Greater Portland is jobs.

The size and skill level of Greater Portland's population combine to form Maine's largest job market. In 2015, Greater Portland was home to 150,000 jobs.⁴¹ That's 23% of the state total – nearly one in four. Those numbers will likely grow. Forty percent of Maine's job growth since the Great Recession has occurred in Greater Portland.⁴²

³⁹ Edward L. Glaeser, "Reinventing Boston: 1640-2003," Harvard Institute of Economic Research, discussion paper 2017.

⁴⁰ ACS, 2011-2015.

⁴¹ U.S. Bureau of Labor Statistics, Current Population Survey (CPS), 2015.

⁴² CPS, 2009-2015



Source: U.S. Census Bureau, LEHD

The city of Portland is the heart of the region's job market. Its local workforce totals about 35,000 but the number of jobs is double, nearly 70,000.⁴³ On any given workday, about 50,000 individuals commute into Portland while a smaller number of city residents, about 16,000, leave for workplaces outside the city. About half of inbound commuters live within 25 miles of the city, roughly from Kennebunk to Brunswick and inland to Naples.⁴⁴

Greater Portland's growth largely has been fueled by its skilled workforce and its industry mix. Compared to the rest of Maine, the region has a high concentration of business and professional services and less employment in manufacturing and natural-resource based industries, which have struggled in recent decades.

Greater Portland is home to half of the state's jobs in finance and insurance (51%) and management (47%), and over one-third of jobs in administration and support services (34%); information (39%); real estate (42%); and professional, administrative and technical services (43%).⁴⁵ As a seaport with rail connections, Portland also has a disproportionately high percentage of the state's transportation and warehousing



Source: U.S. Census Bureau, LEHD, 2014

⁴³ LEHD, 2014

⁴⁴ LEHD, 2014

⁴⁵ U.S. Census Bureau, Longitudinal-Employer Household Dynamics Program (LEHD), 2014

*More than
one-third of
Maine wages
are paid in
Greater
Portland.*

jobs (35%) and wholesale trade (40%). With the arrival and growth of the Icelandic shipping company Eimskip, these numbers have potential to grow.

Greater Portland is earnings.

Portland's skilled workforce and favorable industry mix have generated many high-paying jobs. While Greater Portland accounts for 23% of Maine's jobs, the proportion of wages is even higher, 34%.⁴⁶ Over one-third of Maine residents with jobs paying \$100,000 or more per year live in Greater Portland.⁴⁷

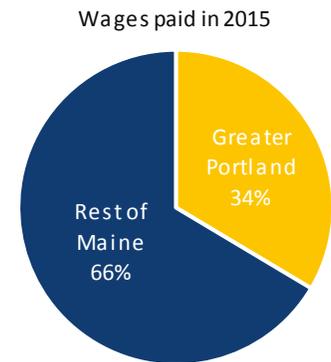
On a per capita basis, the difference is striking. In 2015, wages and salaries earned by workers in Greater Portland equaled \$32,171 per resident.⁴⁸

Elsewhere in Maine that figure was half as much, \$16,842, and the gap is growing. Since 2010, average annual wage growth has been 3.1% in Greater Portland, compared to 2.4% elsewhere in Maine.⁴⁹

Three factors converge to create this difference: 1) due to non-urban pay scales, worker qualifications, and industry mix, jobs in the rest of Maine tend to pay less than jobs in Greater Portland; 2) the rest of Maine has more retirees who add to the resident count but are not working or not working full-time; and 3) the rest of Maine has more residents who are unemployed and, likely, underemployed.

Broader income measures that include non-wage income – such as benefits, investment earnings, and pensions – show a similar picture. In 2015, 27% of total personal income in Maine was generated in Greater Portland.⁵⁰ Since 2010, average annual growth of total personal income in Greater Portland has been 3.3% compared to 2.2% elsewhere in Maine.

The region's prosperity results in a poverty rate well below the state average (9.7% compared to 14.0%), although the city of Portland's rate is slightly higher (15.5%).⁵¹ This concentration of poverty within a region's urban core occurs throughout the U.S.



Source: U.S. Department of Labor, QCEW, total covered employment

⁴⁶ U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages (QCEW), 2015.

⁴⁷ ACS, 2011-2015. Based on full-time, year-round workers.

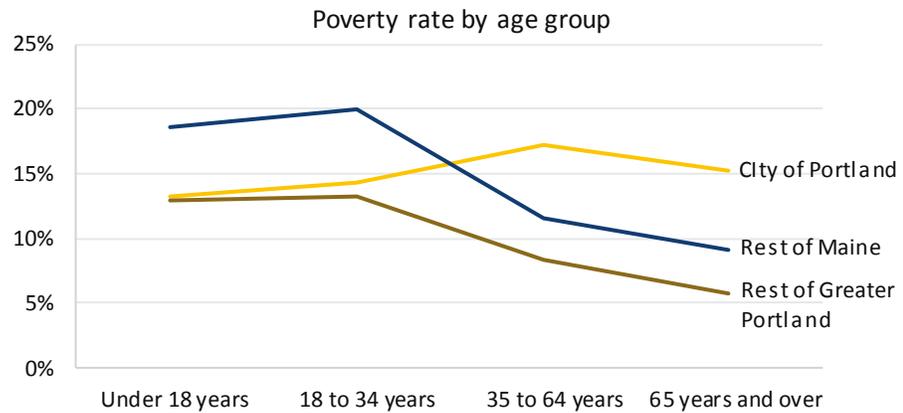
⁴⁸ U.S. Bureau of Economic Analysis (BEA), Table CA4: Personal Income and Employment by Major Component, accessed April 3, 2017.

⁴⁹ QCEW, 2009-2015.

⁵⁰ BEA

⁵¹ ACS, 2015

Research suggests that low-income residents seek access to public transportation, more affordable housing, social services, and employment opportunities found in urban places.⁵² The chart below shows that compared to the rest of Maine, Portland has a lower percentage of children in poverty and a higher percentage of poor residents age 35 and older.

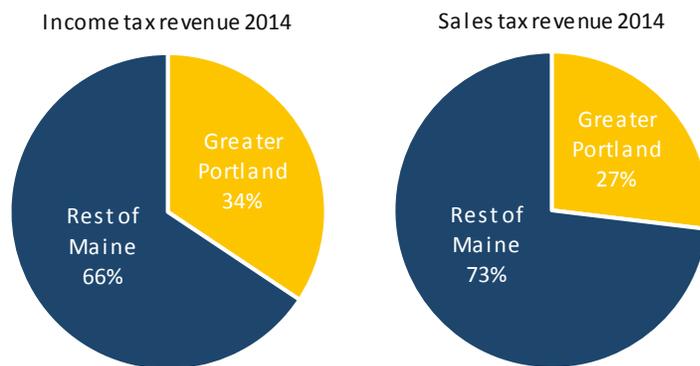


Source: U.S. Census Bureau, American Community Survey 2015

⁵² Edward L. Glaesar, Matthew E. Kahn, and Jordan Rappaport. "Why do the poor live in cities?" Harvard Institute of Economic Research, discussion paper 1891, 2000.

Greater Portland is tax revenue.

Just as Greater Portland generates wealth and opportunity for private-sector individuals and businesses, it supports Maine's public sector. In 2014, the most recent year for which complete data is available, Greater Portland generated 34% of Maine's income tax revenue and 27% of sales tax revenue (31% of combined income and sales tax revenue).⁵³



Source: Maine Revenue Services

Income and sales taxes constitute 84% of the state's General Fund.⁵⁴ Smaller sources of General Fund revenue include the corporate income tax (4%), cigarette tax (4%), and insurance premium tax (2%).⁵⁵ Assuming the region's contribution to those and other General Fund revenue sources is at least equal to its contribution to income and sales taxes, it is safe to conclude that Greater Portland generates nearly one-third (31%) of Maine's General Fund.

The latest data on taxable retail sales confirms that estimate. In 2016, 26% of Maine's retail sales tax revenue was collected in Greater Portland and 8% came from the city of Portland.⁵⁶ An even larger portion of restaurant and lodging tax revenue came from those locations: 30% and 13%, respectively.

⁵³ Authors' calculations based on data from Maine Revenue Services on income tax revenue by town for the 2014 tax year, and retail sales for the 2014 calendar year.

⁵⁴ Maine State Legislator Office of Fiscal and Program Review, "Compendium of State Fiscal Information," January 2017.

⁵⁵ Ibid.

⁵⁶ Authors' calculations based on statistics for taxable sales from Maine Revenue Services, Office of Tax Policy Research, released March 10, 2017.

Snapshot

The following table provides a snapshot of the preceding findings on a per capita basis.

	<i>City of Portland</i>	<i>Rest of Greater Portland</i>	<i>Rest of Maine</i>
<i>Population*</i>	66,872	223,105	1,039,351
<i>Per 1000 residents...</i>			
<i>Residents age 20-34[†]</i>	290	160	170
<i>Residents age 65+[‡]</i>	130	170	180
<i>Residents of racial or ethnic minorities[‡]</i>	150	60	50
<i>Bachelor's degrees *</i>	290	236	137
<i>Jobs *</i>	947	444	355
<i>Residents in poverty*</i>	155	97	140
<i>Wage and salary earnings per capita*[§]</i>	--	\$32,171	\$16,842
<i>Transfer payments received per capita*[§]</i> <i>(primarily Social Security, Medicare, Medicare, Veteran's benefits, etc.)</i>	--	\$8,344	\$10,019
<i>Total income per capita*[§]</i>	--	\$52,298	\$40,149
<i>Income tax revenue by capita**</i>	\$1,314	\$2,041	\$1,118
<i>Retail sales per capita[‡]</i>	\$24,470	\$17,422	\$15,168
<i>Est. retail sales tax revenue per capita[‡]</i>	\$1,346	\$958	\$834

*2015, [†]2011-2015, [‡]2016, **2014

[§]These statistics are not available for the city of Portland; the city is included in "Greater Portland."

Understanding Greater Portland's economic future is essential to understanding Maine's future.

The Future Workforce

Given the importance of Greater Portland to Maine's economy, understanding its future workforce is essential to understanding the state's future. This section presents four scenarios of Greater Portland's growth over the next two decades, under differing assumptions about in-migration. Collectively, they reveal how variations in the region's ability to attract and accommodate new residents will impact the economy. The appendix describes the methods and data used to create the scenarios. 2034 is the year of analysis because it is the year for which the State of Maine has its latest population projections.

Today's Starting Point

The following table summarizes the starting point for analysis. Today, there are roughly 236,000 people aged 16 and older living in Greater Portland. Of these, 162,000 are in the labor force and 155,000 are employed. The estimated household earnings for the region are \$7.4 billion, and the revenue generated from sales, income, and property taxes is \$565 million.⁵⁷

Population	236,000
Labor Force	162,000
Employment	155,000
Earnings from Work	\$7,416,000,000
Tax Revenues	\$565,000,000

2034 Baseline Projection: Current Trends Continue

The Baseline Projection is the State of Maine's current projection for Greater Portland's population in 2034, based on current patterns of births, deaths, and migration. This scenario models the outcome of these patterns continuing unaltered through 2034, with no policy changes. The only change included in this scenario

⁵⁷ The figures cited here and in the scenarios below are calculations based on labor force participation and employment rates and estimates of earnings by age cohort. As such, they vary slightly from numbers reported earlier in this report. See the Methodology section for details.

(and in all others) is an increase of labor market participation among older residents, which is predicted by many labor economists.⁵⁸

In this scenario, Greater Portland's working-age population increases by almost 8% (18,000 residents) in 2034. Eighty percent of the projected increase (14,000 residents) comes from in-migration, and a quarter of new arrivals are age 75 and older. When combined with the aging of existing residents, this significantly alters the age distribution of the region's population.

These projections show the number of employed people age 65 and over increasing by 7,700 and the number of employed people age 16 to 64 falling 12,400. The net result is a loss of 4,700 jobs. This reduces earnings by \$231 million (an average of roughly \$49,000 per worker) and decreases state and local tax revenue by \$18 million (an average of \$4,000 of taxes paid per worker).

	Change from today	
	Value	Percentage
Population	+18,000	+7.6%
Labor Force	-5,000	-3.1%
Employment	-4,700	-3.0%
Earnings from Work	-\$231,000,000	-3.1%
Tax Revenues	-\$18,000,000	-3.1%

2034 Scenario 1: In-migration Stops

Scenario 1 alters the baseline population projections by assuming that migration into Greater Portland stops.⁵⁹ Without in-migration, this scenario projects population growth of just 1,700 between today and 2034 and 16,000 fewer residents compared to the baseline scenario.

Like the Baseline Projection, population, labor force participants, and jobs are expected to increase for people over age 64 (a net gain of 7,400 jobs). However, a significant decrease of residents aged 20 to 59 and a resulting loss of 22,000 workers in those cohorts far outweigh the gains in the older cohorts. Compared to today, this

⁵⁸ See U.S. Bureau of Labor Statistics, "Labor force projections to 2024: The labor force is growing, but slowly," *Monthly Labor Review*, December 2015.

⁵⁹ Two age cohorts with net out-migration in the Baseline Projection are unchanged in this scenario.

scenario projects a loss of 15,400 labor force participants and 14,600 fewer jobs. That results in \$694 million less in earnings and \$53 million less in state and local taxes.

	Change from today	
	Value	Percentage
Population	+1,700	+0.7%
Labor Force	-15,400	-9.5%
Employment	-14,600	-9.4%
Earnings from Work	-\$694,000,000	-9.4%
Tax Revenues	-\$53,000,000	-9.4%

2034 Scenario 2: In-migration Doubles

Scenario 2 is more optimistic. It assumes twice as many people in every age cohort move to Greater Portland as current projections.⁶⁰ “Double migration” generates a population increase of 18,000 compared to the Baseline Projection, and an increase of 36,000 compared to today. However, since many of today’s migrants are age 75 and older, doubling their numbers has limited employment effects.

Doubling migration results in slightly more economic growth compared to today and the Baseline Projection. There are 8,200 more employed residents over age 65, which offsets the loss of 2,200 younger workers. Compared to today, the “double migration” scenario projects 6,200 more labor force participants, 6,000 more jobs, \$259 million more in earnings, and \$20 million more in tax revenues.

	Change from today	
	Value	Percentage
Population	+36,000	+15.3%
Labor Force	+6,200	+3.8%
Employment	+6,000	+3.9%
Earnings from Work	+\$259,000,000	+3.5%
Tax Revenues	+\$20,000,000	+3.5%

⁶⁰ The two age cohorts that are projected to have net out-migration in the Baseline Projection have no net migration in this scenario.

2034 Scenario 3: More Working-age Migrants

Scenario 3 is the most optimistic scenario and assumes that 24,000 more in-migrants between the ages of 20 and 34 move to Greater Portland compared to the Baseline Scenario. This represents 1,500 new residents each year for 16 years and is divided equally among the three cohorts in that age range. In aggregate, these 24,000 new residents are only 6,000 more than in the “double-migration” scenario, but the age distribution is younger and the resulting workforce significantly stronger. Compared to today, this scenario results in 42,000 more residents, 15,700 more jobs, an additional \$498 million in earnings, and \$38 million more in tax revenues.

	Change from today	
	Value	Percentage
Population	+42,000	+17.7%
Labor Force	+15,700	+9.7%
Employment	+14,900	+9.6%
Earnings from Work	+\$498,000,000	+6.7%
Tax Revenues	+\$38,000,000	+6.7%

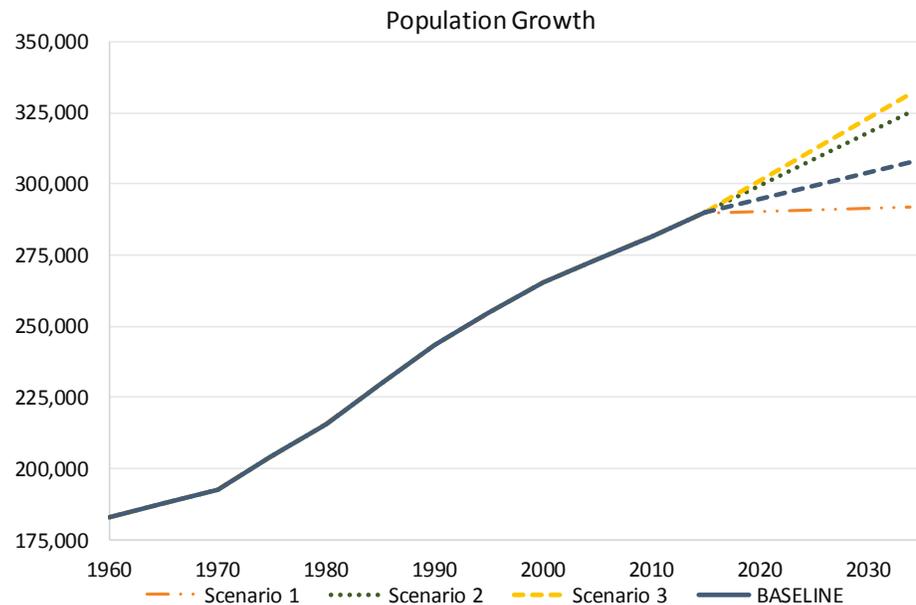
Observations

The scenarios described above show a path forward to continued economic growth through in-migration and higher rates of labor force participation. If Greater Portland attracts a steady flow of working-age residents to backfill the retiring Baby Boomers – for example, 1,500 new people per year – businesses will have the workforce they need and the economy will grow. 1,500 more residents per year represents an annual population increase of just over half a percent. To put this in perspective, Greater Portland has averaged 1,500 or more new residents per year in every twenty-year period since 1930 except one.⁶¹ Since 2000, the region gained roughly 1,600 people per year. In the past, much of the increase was natural population

⁶¹ Cumberland County grew by an average of 1,837 residents per year from 1930 to 2010. The only 20-year period when annual population growth averaged less than 1,500 was 1950-1970, when it grew by 1,166 per year.

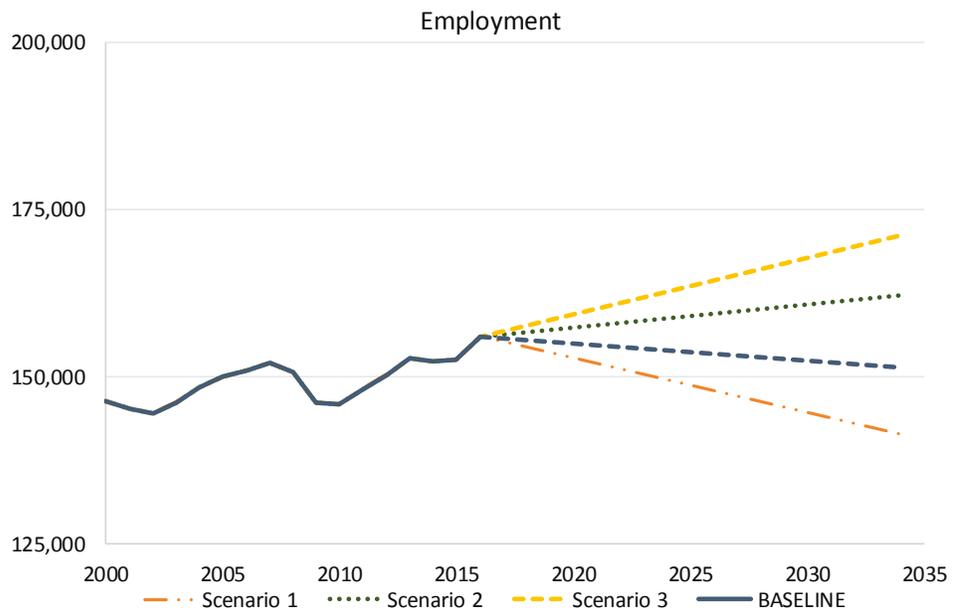
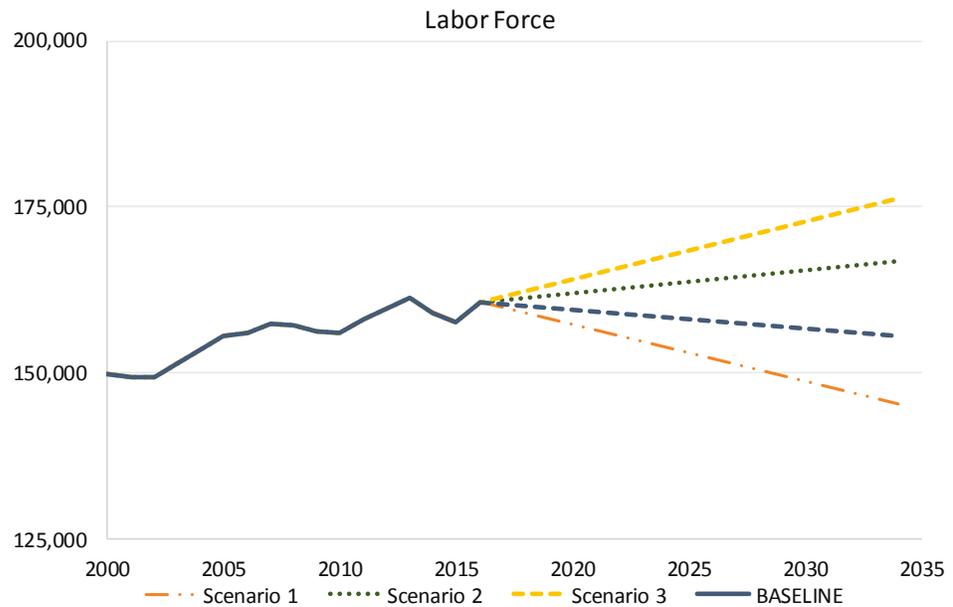
growth (births outnumbering deaths). The challenge today is to continue this trend through in-migration.

The chart below shows the population growth projections for each of the scenarios in the context of historical population growth. Scenarios 2 and 3 forecast growth above the baseline projection and consistent with the historical trend.



The scenarios reveal the cracks in the foundation of Maine’s primary economic engine. If Greater Portland fails to attract young workers, it will have thousands fewer workers and jobs, and millions less earnings and tax revenue. Already, businesses are clamoring for more skilled workers. If over the next 16 years the labor force declines by 5,000 to 15,000, as in the Baseline Projection and Scenario 1, many businesses will be unable to find the workers they need and unable to expand; some may close or move, and few new businesses will locate in Greater Portland.

Two charts below illustrate the stark differences between the scenarios. Scenario 3 projects strong economic growth and a healthy Greater Portland economy. The gap between Scenario 3’s projections and the projections for the other scenarios show **the choice Greater Portland faces: attract people to grow the labor force and economy, or stagnate, with corresponding weak or negative economic growth.**



One of the interesting learnings from these scenarios is that, as Scenarios 2 and 3 show, the attraction of younger, working-age residents more directly addresses Greater Portland's labor force challenge than the attraction of older residents. Over the years, there have been periodic initiatives to attract retirees to Maine. While this analysis does not consider all the benefits associated with more retirees, it illustrates

that **Greater Portland has a labor force shortage, and attracting younger, working-age residents is the most effective way to solve it.**

A final observation from these scenarios is that economic growth is highly sensitive to labor force participation rates. In an aging and slowly growing population, slight changes in participation rates can have outsized impacts on economic growth. The two scenarios that show economic growth (Scenarios 2 and 3) do so not solely because of migration but also because older workers continue to work longer than they do today. The scenarios show that if current residents remain in the labor force longer, the Greater Portland economy will be stronger.

Methodology

A custom model of the Greater Portland economy was created based on historical patterns of labor force participation, employment, earnings, and taxes for residents age 16 and older. These measures of economic activity were calculated by age cohort for the present (based on 2015 population estimates) and the future (based on current population projections for 2034). Three additional scenarios were created by altering the in-migration assumptions of the current projections. The measures used in the model are described below.

Population: All population figures are for the residents age 16 and older. Present estimates by age cohort are from the U.S. Census Bureau's 2015 American Community Survey one-year estimates for Cumberland County. Estimates of Cumberland County's 2034 population are from the Maine Office of Policy and Management (OPM). OPM projects population changes using a cohort-survival model that estimates fertility and survival rates by age and gender, as well as in- and out-migration.

Labor Force Participation Rate: The labor force participation rate (LFPR) is the percentage of working-age residents actively engaged in the labor market by either working at a job or looking for a job. According to the Bureau of Labor Statistics, participation rates are highest for people ages 20 to 54 and then taper off. Very few people remain in the labor force after age 75. Based on the growing trend of people remaining in the workforce later in life, each scenario assumes that participation rates increase 5% for those ages 60 to 64 and 10% for those over age 64.

Employment-to-Population Ratio: The employment-to-population ratio is the percentage of the working-age population that is employed. Conceptually, it can be thought of as a function of the labor force participation rate and the unemployment rate. The ratios for each age cohort are from the U.S. Census Bureau's 2015 American Community Survey one-year estimates for Cumberland County. Like labor force participation, each of the scenarios assume employment-to-population ratios increase 5% for those ages 60 to 64 and 10% for those over age 64.

Labor Force: The labor force represents the number of people either working or looking for work. It is calculated by multiplying the labor force participation rate by the population.

Employment: Employment represents the number of people with jobs. It is calculated by multiplying the employment-to-population ratio by the population. The scenarios are not intended to predict the business cycle, so maintaining a constant unemployment rate is appropriate and allows for comparison across scenarios. Because the underlying data is from 2015, when the unemployment rate was slightly higher than today, all the scenarios have an unemployment rate of approximately 4.2%.

Change in Earnings from Work: Earnings from work for each age cohort was estimated through a two-step process. National earnings by age cohort from the Bureau of Labor Statistics was used to create an index of earnings by age. (Earnings by age cohort was not available for Maine residents.) This index reflected steadily rising average wages for ages 16 to 64, then a moderate reduction in average wages for workers over age 64. The index was then applied to the average earnings for Cumberland County from the Maine Department of Labor (\$47,506 in 2015) to derive Cumberland County earnings by age cohort. This approach implicitly assumes that the national distribution of earnings by age is similar to the Maine distribution. For all scenarios, the change in earnings for each age cohort is calculated by multiplying the average earnings in the cohort by the change in employment. All earnings figures are in 2015 dollars to allow for comparison.

Change in Tax Revenue: In each scenario, the impact on tax revenues is calculated by multiplying the change in earnings by effective tax rates from Maine Revenue Services (MRS) for income, sales, and property taxes. Income taxes reflect taxes paid only on earnings from work. Sales taxes reflect taxes paid only by residents of Greater Portland. Effective tax rates were not available by age cohort so the aggregate change in earnings was multiplied by the total effective tax rate for all ages for each category of taxes. (MRS did estimate tax rates separately for the population under and over age 65; however, there was concern about the accuracy of these estimates and the added complexity had little effect on the results, so the effective tax rates for all ages was used.) Effective tax rates were only available for the entire state. All tax figures are in 2016 dollars to allow for comparison.

Note:

To see detailed results by age-cohort for the three projections under varying in-migration assumptions to the region, go to *Greater Portland: Maine's Urban Economic Engine* at www.45northresearch/publications

Workforce Development in the New Economic Era

By John Dorrer

I. Overview

The economy of the Greater Portland region has shown consistent employment growth, diversification of industries, and solid income gains over the last five years. The region continues to lead the way in shaping Maine's economic future. Prospects for the continuation of long-term regional prosperity however are threatened by slow labor force growth and tight labor markets. Reports of employer difficulties finding qualified applicants to fill available job openings are becoming more persistent and hampering expansion plans of business and industry.

Hiring difficulties are common across all industries and occupational categories. These are particularly problematic for employers attempting to fill the high skill/high wage jobs essential for future regional growth. At the entry level, employers are having more difficulty in recruiting, hiring and retaining workers with basic employability, communication and problem-solving skills. Already, the inability to fill jobs is adversely impacting overall economic growth, tax receipts, and the attraction of new employers to Maine.

Maine's aging population combined with slow population growth will continue to have pressing impacts on the region's labor supply and the ability of employers to find qualified workers. (Center for Workforce Research and Information, July 2016) As "baby boomers" retire over the next ten years, large numbers of highly skilled and experienced workers will leave the labor force in waves. They represent a highly educated workforce and most have had long -term job tenure with the same employers.

Replacement of aging workers will pose a formidable challenge across most key industry sectors.(Center for Workforce Research and Information, July 2016) Absent bold and coordinated workforce development strategies designed to attract and increase the supply of skilled workers, the Greater Portland region will increasingly fall short of its economic potential, and quite possibly contract.

II. A Strategic Framework for Workforce Development

A highly skilled and competitive workforce represents the single most important asset for continued growth and innovation of the Greater Portland regional economy. (Funders Network and Federal Reserve Bank, 2017) To ensure that this workforce is available in sufficient numbers and with the right skills, significant investments and elaborate coordination among multiple actors and institutions are required.

For too long, workforce development has occurred across fragmented education and training silos and with minimal employer coordination and structured feedback. The result is a growing mismatch between what education and training institutions produce and what employers need.(Barkanic,2016) There is now widespread agreement that more deliberate planning and coordination is essential if we are to effectively align education and employment.

A durable framework for workforce development must account for dynamic environment that includes shifting demographics, rapidly changing terms of economic competition, and a steady march of technological innovation re-defining the very nature of work. (Business Higher Education Forum, 2010) These accelerating forces constantly redefine workforce requirements and demand more of our labor market institutions. Regions that master the interplay of these powerful forces will stand-out under intense global and regional competition.

Multiple efforts have been launched to address workforce development challenges across the State and in Greater Portland. These must be recognized and carefully evaluated. Exemplary models should be strengthened and replicated. They must be better coordinated and organized as a supply chain for human capital. Promising workforce development initiatives must be brought to scale. Resources in short supply require added public and private investments.

Following are the five essential workforce development strategies for the continuing growth and innovation in the Greater Portland regional economy.

Strategy 1:

Ensuring a Strong Foundation for All K-12 Students

To the extent that students are not adequately prepared as they exit the K-12 system, learning and performance at the post-secondary level and in the workplace will be compromised. (National Conference of State Legislatures, 2014) Their prospects will be limited and the region's employers will be handicapped.

Key to the development of a skilled and competitive regional workforce is a high performance K-12 educational system. For students to succeed in post-secondary education and the workplace, they will need progressive academic skills in reading and math to become effective communicators, analysts, problem-solvers, and self-motivated lifetime learners. (Commonwealth Corporation, 2013) Students will need to develop mastery of technology tools and facility with systems to function in sophisticated learning and workforce environments. (Burning Glass Technologies and General Assembly, 2015)

High levels of academic achievement must not be limited to students attending schools in select, elite communities. Instead, we must be insistent that students across the region benefit from high performance schools and are exposed to rigorous curricula. Certain communities with high concentrations of immigrant populations, a future source of labor supply, will require extra investments to overcome limited English language skills and cultural barriers if we are to fully capitalize on these new-found human assets. (Dickstein, et al, 2016)

Business and post-secondary leaders must continue to play both a critical and constructive role in working with the K-12 system if we are to transform it. Key interactions include:

- Development of high academic performance standards with easy-to-understand assessment systems, ensuring that students are fully qualified to move from one level to the next.
- Comparisons to international performance benchmarks, ensuring the region's students are globally competitive.
- Expansion of project-based and collaborative learning opportunities that mirrors contemporary work environments, for the purpose of gaining higher level skills and competencies
- Formal communication and feedback linking K12 and post-secondary institutions and employers, to assess student readiness to assume higher levels of academic work, career training, and employment.

- Joint reviews of curriculum content by employer/educator teams to assess relevance to demands of the workplace.
- Rigorous validations of graduate skills for those entering the job market conducted by post-secondary institutions.
- Pervasive use of internships where students can test their skills and abilities in the labor market they are about to enter; where teachers and employers may build relationships and feedback mechanisms for better academic and employment alignment.
- Stronger recovery and support systems that prevent students from dropping out and keep them connected to a program of study tailored to their needs and qualifications.
- More widespread and intensive participation of managers and executives on school boards, review panels, and oversight bodies to guide K-12 education.

Strategy 2:

Recruitment and Skill Development for Unemployed Adults and Youth, Discouraged and Sub-employed Workers, and Marginal Workers Capable of Higher Levels of Productivity.

Even with low levels of unemployment, thousands of potential workers throughout the region remain unemployed and sub-employed, or are discouraged and out of the labor force. (Center for Workforce Research and Information, September 2016) Often, such workers lack basic employability skills and the higher levels of technical skills needed in today's labor market even for entry-level jobs.

The current job training and adult education system is a patchwork of underfunded programs with confusing eligibility and participation rules. Resources fall short in relation to needs. Employers lack awareness and confidence that such programs can solve their workforce problems. Stronger coordination and oversight of job training and adult education programs is needed, along with increases in funding to ensure that thousands of idle and marginal workers are effectively prepared as productive members of the regional workforce.

A particular challenge for job training and adult education program in the region is to better serve the needs of newly arrived immigrant groups that must have mastery of English language skills along with immersion training in skills essential for entry-employment. A concentrated focus on those unemployed, sub employed and out of the labor force could add significant numbers to the region's shrinking labor pool. (Krause and Sawhill, 2017)

To attract and train this group of individuals, coordinated efforts between job training organizations and employers will be key and must include:

- Aggressive outreach and recruitment campaigns targeted to long term unemployed individuals, discouraged workers that have been out of the labor force for some time, idle young people, the homeless, disabled and incarcerated individuals returning to communities. (Center for Workforce Research and Information, September 2016)
- Development and delivery of more intensive employability development and social adjustment services essential for making these groups employable must be incorporated with income support, and housing and social services.
- Employers must provide greater access to private sector work experience, tryout-employment, on the job training, and internships for these individuals to become socialized to and qualified for demanding work environments.
- Employers and funders of these services must demand improved alignment and coordination between adult education in basic academic skills and job training/vocational programs for teaching job skills.
- Disincentives to work must be eliminated. Review and revisions of income support and housing assistance programs, to ensure that income earned from employment does not immediately eliminate eligibility for those returning to work.

Strategy 3: **Attraction and Retention of More College Educated and Highly Skilled Workers to Greater Portland.**

Above average growth rates in jobs that require a post-secondary education for Maine and the region indicate increasing demand for a more highly educated workforce. (Carnevale, Smith and Strohl, 2013) At the same time, high rates of impending retirements particularly for professional, technical, and managerial workers require formidable replacements.

For the Greater Portland region, high-skill, high-wage industries such as healthcare, finance, and the professional services will be particularly impacted by retirements. The failure to effectively recruit and replace this critical segment of Maine's workforce will have drastic consequences not only for future growth but there could be serious economic reversals as firms relocate or expand outside the region.

Efforts to convince more college graduates to stay in Maine upon completing their education must be strengthened, including making more intensive use of internships as a key strategy to capture this critical asset for employment

entry. At the margins, the recent arrival of college-educated immigrants, often significantly underemployed, represents another potential source that could add to Maine's workforce. (Dickstein, et al, 2016) But, this will not be enough to satisfy current and expected levels of demand.

More aggressive strategies are needed to attract, recruit and integrate college educated, highly skilled workers to Maine (Brownstein, 2015) Beginning with those born and educated in Maine and now working across the U.S., there is a potential pool of educated and experienced professionals that may be targeted to return and advance their careers here.

Others attracted by Maine's lifestyle and recreational amenities could be recruited if they found career and earnings opportunities commensurate with their expectations. (Miller, 2014) Limited efforts have been launched to use the forgiveness of educational loans as part of a strategy to attract college educated workers to Maine. Loan forgiveness programs introduced by the Alford Foundation and aimed at workers with skills in science, technology, engineering and math show promise for expanding the skilled labor pool.

Proposals for attracting college-educated workers are not new or particularly innovative. They have simply lacked scale and not been carried out on sustained basis. The enormity of Maine's workforce challenges will not be solved as long as we continue on this course. A comprehensive, well-funded public-private partnership must organize a long term campaign if we are to grow Maine's population and workforce through skill based migration. (Cortright, 2014) Focus of such a partnership must include:

- Sustained public/private investments in promoting the region's quality of life and place, and recreational and cultural amenities in urban settings where large numbers of young people are concentrated.
- Expanded financial incentives that provide for student loan reductions and forgiveness in return for making commitments to locate for extended periods of time. (Efforts of the Alford Foundation should be closely monitored and more widely replicated if proven effective)
- Assistance with securing affordable housing including interest subsidies and tax credits to ensure young workers and their families locating here are not overly burdened by housing costs.
- Employer cooperation in providing access to job and career opportunities to trailing spouses and partners impacted by relocation.
- Employer promotion of pathways for career advancement and earnings progression to entice skeptical candidates.
- Post-secondary institution demonstration of the availability of and access to credit, non-credit and, degree programs for working adults.

Strategy 4: **Employer Leadership and Cooperation on the Demand Side of the Labor Market**

The region's employers continue to face difficulty in attracting workers with the requisite skills and qualifications. Opportunity structures, occupations, career paths, and work content are more volatile than ever as rapid technology innovation, global competition, and the quest to remain competitive are constants. (McKinsey Global Institute, 2017) Educational programming and curriculum content are severely challenged to keep up with these changes.

Workers themselves are often victimized as their skills become outdated and they are displaced from their jobs. The longer workers are separated from productive work environments, the more difficult and costly it becomes to make them employable. Employers must explore new ways of protecting and enhancing human assets in a tight labor market environment.

Increasingly, employers need to cooperate rather than simply compete with each other in creating and maintaining a positive labor market environment. Such cooperation must first and foremost extend employer outreach to working with schools at all levels on a consistent basis transmitting information on the changing nature of work. Prospects of tight labor markets for some time to come suggest that workers can no longer be treated as a disposable commodity. Cooperative, employer-driven efforts to sponsor worker retraining and reemployment will ensure the maintenance of a higher caliber regional workforce.

Some of the largest employers in the Greater Portland region are collaborating in attracting and growing the supply of knowledge workers. Cooperative efforts such as those advanced by Focus Maine, an employer led economic development initiative, are promising.

Key areas for employer action and cooperation include:

- Sharing job performance requirements, hiring standards, human resources policies and practices between small, medium and large employers, for the benefit of building a distinctive regional labor market culture, appealing to job seekers across industries and occupations.
- Communicating more consistently with education and training providers about skill needs and hiring requirements, including feedback loops to assess the qualifications of newly hired graduates
- Organizing clearly defined points of labor market entry, career ladders, and pathways for advancement across firms and industries
- Developing more cooperative employer-based training opportunities to enhance the qualifications and

promotional prospects of the workforce, including the use of apprenticeship models, skills certifications, and tuition assistance.

- Assistance for employers, particularly small and mid-size firms, in assessing their preparedness for coping with an aging and retiring workforce.

Strategy 5: **A Regional Post-Secondary Education Compact**

Economic growth and innovation depends on an educated and skilled population. Post-secondary education and training assumes an extraordinary role in shaping the competitiveness of regions. (Bush and Lonsdale, 2017) Public universities, private colleges and universities, community colleges and proprietary career training institutions enrolling thousands of students make up an elaborate post-secondary education delivery system across the New England region.

A hundred miles to the south of Portland is one of the nation's highest concentrations of universities and colleges, with over 200,000 students enrolled annually. The prospects for recruiting college-educated workers would appear strong. Yet, employers consistently report having difficulties filling critical jobs or finding applicants whose skill sets match their needs. (Business Higher Education Forum, 2012)

The Greater Portland region's post-secondary institutions confront significant challenges, including a declining pool of K-12 enrollments across the State. There are also formidable retention problems as large numbers of enrollments fail to graduate and more students are inadequately prepared for college-level work, requiring remediation efforts. Further, the rising costs of a college education along with increasing student debt serve to discourage enrollment and college completion.

Post-secondary programs and curriculum content must be designed to cultivate student skills and competencies essential for success in the workplace and to support regional growth. (Business Higher Education Forum, 2013) Educators and employers must work together if they are to arrive at more satisfactory outcomes. (Business Higher Education Forum, 2009) Employers must decide what is best learned in the workplace and how these lessons are conveyed. Educators must be careful to ensure their program content imparts skills and competencies that readily carry across industries and work settings.

The process is a complex undertaking requiring exceptional commitments from both sides. Rapidly shifting technology applications, changing workplace cultures and expectations, and shorter life cycles of industries add an unprecedented dynamism to this process. The enormity of this challenge is beyond any single institution to manage

alone. New approaches to collaboration among institutions and between institutions and employers are required.

- Effective alignment among K12, Adult Education, and Post-Secondary Institutions in preparing a highly skilled workforce and offering access to skill development, certifications, and post-secondary degrees focused on career and earnings advancement.
- Development and maintenance of a cooperative institutional platform that joins employers and education and training providers together for purposes of assessing workforce needs, worker performance capabilities, and the overall efficacy of the labor market
- Adoption of longitudinal data systems tracking student entry and progress in the labor market, including ana-

lyzing relationships between academic performance and career and life progress.

- Regular audits of program of study and curriculum content to ensure responsiveness to employer needs including routine validation of graduate skills for those entering the job market.
- More pervasive use of internships where students can test their interests, skills, and abilities in the labor market they are about to enter; and where instructors and employers can build relationships and feedback mechanisms for better academic and employment alignment.
- Better recovery and support systems that prevent students from dropping out and stay connected to a program of study tailored to their needs and qualifications.

The Colorado Example



Photo courtesy of the University of Colorado at Boulder

To prepare students for the 21st century workforce, states are looking to create seamless systems of education that begin supporting students to be college- and career-ready from their first day of school. This requires alignment, coordination, and communication among several education and workforce sectors. Colorado is one state moving the needle to strengthen their pipeline by getting these sectors to work together, aligning policy and programs to guide students to success. Boulder and Colorado Springs are two places for Greater Portland to examine in depth.

At National Conference of State Legislatures' 2013 Spring Forum, leaders from Colorado spoke to participants about what Colorado is doing to strengthen the connections between K-12, college, and workforce sectors, and where more work needs to be done. Some of the policy areas discussed included aligning standards and assessments between K-12 and higher education, developing longitudinal data systems and processes to share information, creating a statewide

education master plan, and creating career pathways and sector partnerships to connect education to jobs.

Lieutenant Governor Joseph Garcia is the executive director of the Colorado Department of Higher Education. Before his appointment by Governor John Hickenlooper in January 2011, Garcia was president of Colorado State University-Pueblo and energized the campus by considering nontraditional solutions to longstanding issues. Garcia provided an overview of the state's plan to connect their sectors in meaningful ways to enable better communication and use data to ensure students are moving through the education pipeline successfully. He sat down with NCSL staff to discuss these initiatives and how state legislators are supporting this work.

For the interview with Lt. Gov. Joe Garcia as well as CO's enabling legislation, go to <http://www.ncsl.org/research/education/video-education-pipeline.aspx>

- Make more use of the adult and continuing education system to prepare entry level workers with employability skills; to respond to the unique challenges of immigrant populations seeking to enter the workforce; and to refer students unable to perform in post-secondary systems because of deficiencies in basic skills
- A combination of dynamic skill building, certificate, and degree programs aimed at adults in the workforce seeking to advance their career and earnings prospects must be in place and easily accessed. Programs must be evaluated by employers and graduates to determine relevance and utility, and their results, widely shared with prospective students.

III. A Proposal to Address Systemic Regional Labor Market and Workforce Development Needs

Maine’s and Greater Portland’s demographic and labor market conditions today are unprecedented. They conditions will not be easily reversed and require sustained strategies to avoid loss of jobs and economic decline. There are significant opportunities with the potential for positive short and long- term impacts in expanding and strengthening the region’s workforce.

A number of individual initiatives to impact the region’s workforce quality and supply have been launched and show some promise. These must be better coordinated and need to be more fully exploited if we are to get the necessary results. Most of all, promising strategies must be scaled and adequately financed if they are to make measureable impacts on workforce inadequacies.

We no longer have the luxury of tinkering on the margins, and no individual strategy will be enough. Nothing less is required than a full and sustained mobilization on all these strategic fronts by all the stakeholders in the regional economy.

Even the best strategies are pointless if there is no commitment to implement, evaluate, and improve upon them. Workforce development today occurs in multiple, disconnected settings and systems. These systems operate in political and market environments. They are governed under idiosyncratic rules and financed under a confusing array of funding streams. Competition for students and funding has more often dominated over collaboration in this institutional setting.

These characteristics have contributed to a slow pace of reforms and inadequate progress. As a result, there

are many advocates for workforce development but there is no institutional owner. This proposal calls for the creation of a new collaborative space for the stakeholders of workforce development to come together and share needs, ideas, practices, and capabilities in service to building a stronger regional economy. (Business Higher Education Forum, 2012)

Communications between employers and education and training systems have tended to be largely anecdotal, informal, and irregular. If the region is to achieve better results and greater impact from the loose affiliation of education and training providers, a systemic solution will be required. (Institute for the Future, 2017)

To support a high-performing workforce development system and greater labor market efficacy, the development and maintenance of a dedicated institutional platform that brings employers and education and training providers together on a standing basis should be pursued. Such a platform may be initially developed with philanthropic support and, if successful, maintained over time with an assessment of fees paid by employers and institutional members. Functions to be performed on this platform include:

- Regular convening of a Workforce Summit, a broad spectrum of the region’s employers with K12, adult education, and post secondary education and training providers, to assess the state of the workforce and labor market challenges impacting the region.
- Joint research and assessments of future job needs, skill requirements, worker stocks and flows, and the forces re-defining the nature of work in the region.
- Effective coordination and avoidance of duplication in developing courses, programs of study, and degree programs sought by the region’s employers
- Service as clearing house for making the regional labor market more transparent for employers, job seekers, and educators.
- Operation of a region-wide, one-stop-shopping internship system serving employers and institutions alike.
- Research and evaluation using institutional databases, longitudinal studies, and employer sources to develop deeper analytics for assessing the workforce development system and regional human capital investments. (Pena, 2017)
- Periodic assessment of the regional capacity to determine strengths and weaknesses of the workforce development systems.
- Harmonization of economic and workforce development strategies and investments including their contributions to advancing regional prosperity.

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Job Creation and Quality of Place: Community Planning & Design at UMA/USM

Note: The following is slightly adapted from a Strategic Investment Fund proposal submitted to the University of Maine System for the academic year 2012-2013. It failed of funding at the time due to the financial exigency extant at USM. Its authors include Richard Barringer, Charles Colgan, and Jack Kartez of USM and Eric Stark of UMA. It is offered here, with the added collaboration of the Portland Society for Architecture, as the basis for a new proposal to the University of Maine System and Chancellor James Page from USM President Glenn Cummings and UMA President Rebecca Wyke, possibly for funding through the Maine Economic Improvement Fund (MEIF); and for another to private philanthropic sources for matching funds.

The University of Southern Maine and the University of Maine at Augusta together request Strategic Investment Funding in the amount of \$560,000 over four years to strengthen Maine's Quality of Place, job creation, and economic development prospects through creative teaching, student engagement, and outreach, across campuses, professional disciplines, and the Maine landscape.

Strategic Context

The Maine economy is today in the throes of a painful, structural transition, the outcome of which is uncertain but not entirely unclear. For much of the 20th century Maine distinguished itself from the nation with its commodity-based agricultural/industrial economy; today, it shares with the nation a largely service- and knowledge-based economy, and competes nationally and globally for the skilled workers necessary for sustainable development.

The 2006 Brookings Institution study of Maine asserted that, "after painful industrial restructuring and amid surprising negativism," Maine is in fact poised for a new era of economic prosperity if it "focuses its limited resources on a few critical investments.... Accessible wild places and tranquil country farms, human-scaled Main Streets and working waterfronts: these are what differentiate Maine today from other places and in

many respects drive its economy. Yet these assets are at risk... and so Maine should protect these assets and invest in them as sources of economic advantage" (emphasis added).

In 2007, the Governor's Council on Maine's Quality of Place, created to explore the implications of this assertion, affirmed through research and outreach that "Maine's principal advantage in today's global competition is in fact our Quality of Place. We have majestic mountains, unbroken forests, open fields, wild rivers, pristine lakes, a widely-celebrated coast, picturesque downtowns, lively arts and culture, and authentic historic buildings. We must learn to think of these as part of the basic infrastructure of Maine's future prosperity."

"Sustaining Maine's Quality of Place," the Council argued, "will require a level of attention to the built environment equal to the resources devoted to preserving Maine's natural environment. The University of Maine System has traditionally supported programs related to natural resources; it must now help students and citizens learn how to design and shape our landscapes, buildings, neighborhoods, and communities."

The Governor's Council urged the University of Maine System to designate community planning and architectural design as a "critical discipline" within the 2008 UMS Agenda for Action; to develop related education, research, and outreach capacity; and to enhance the undergraduate architectural studies program at the University of Maine at Augusta and the professional community planning and development program at the University of Southern Maine.¹

In their 2010 report, *Making Maine Work: Critical Investments for the Maine Economy*, the Maine Chamber of Commerce and Maine Development Foundation asked, "How many states have Maine's assets? How many have the oceanfront, mountains, colonial houses, art colonies, wilderness, islands, ski resorts, historic theaters, and small farms?... We need to use and protect

¹ See *Charting Maine's Future: An Action Plan for Promoting Sustainable Prosperity and Quality Places*, Brookings Institution, Washington DC, Nov. 2006; and *Quality of Place and Job Growth: A New and Needed Maine Investment Strategy*, Second Report of the Governor's Council on Maine's Quality of Place, Augusta, May 2008.

these assets as tools for economic development.... The state must implement the new Quality of Place legislation that requires state, regional, and local organizations to work to identify, protect, invest in, and market our most important assets, both natural and built.”

Developing the capacity to help meet this critical need will require both an inter-campus effort and innovative approaches to its organization and delivery. The University of Southern Maine and the University of Maine at Augusta together request Strategic Investment Funding to strengthen Maine’s Quality of Place and economic prospects through creative teaching, outreach, and student engagement across professional disciplines and the landscape. We do so in furtherance of the strategic imperatives of the University of Maine System and both our universities.

Specifically, we address the imperative stated in UMS’ New Challenges, New Directions Initiative of November 2009: “In these times of new educational and economic challenges, we are now called upon to think more creatively, work differently, and achieve more.... More than ever, the University of Maine System must play a critical role by serving more students more efficiently, strengthening a state economy which is becoming increasingly based on knowledge, research, and high-level skills, and supporting a society that depends on a well-informed and engaged citizenry. To be successful, we must work together more as a system rather than simply as a collection of seven separate universities.”

At USM, we undertake this initiative to advance the core goals expressed in the 2009 strategic plan, Preparing USM for the Future, 2009-2014, Namely, those of (1) serving the needs and aspirations of 21st Century Maine, (2) making student success a core USM priority, and (3) providing distinctive graduate and professional training critical to the needs of 21st century Maine.

At UMA, the initiative is integral to the strategic plan 2011-2014, Transforming Lives: Educating Our Students for the Global Workplace, and “our overriding goal as an institution to transform the lives of our deserving students through commitments to student access, academic quality, innovation, student service, and community.”

Program Description

This initiative will expand significantly the capacity of the two campuses (and eventually all willing and able campuses of the University of Maine System) to provide

coordinated academic programs, continuing education, research, and outreach in fields related to the landscape and the built environment.

There are currently two robust academic programs within the UMS focused on these matters:

- Bachelor of Arts degree in Architecture (B.A. in Arch.) at UMA that offers undergraduate preparation for careers in architecture; and
- Master’s degree in Community Planning and Development (CPD) within USM’s Muskie School of Public Service, a graduate professional degree for students interested in economic and community development.

These programs afford a strong foundation of learning at the undergraduate and graduate levels, and have additional research and outreach assets that will be incorporated into a collaborative program to strengthen the Maine landscape and built environment on a continuing basis. UMA recently opened a new center in downtown Augusta (the Gannett building) for its B.A. in Arch. Program. The Muskie School’s CPD program incorporates a number of centers funded by federal and state sources that will provide additional capacity and resources.²

Evidence of need for this UMS initiative at the “ground level” is offered by the numerous projects that B.A. in Arch. and CPD faculty and students have completed with community partners in Old Orchard Beach, Saco, Biddeford, Portland, Lewiston, Hallowell, Augusta, and other Maine towns and cities. Students from both programs have collaborated in some these projects, and the two faculties plan additional collaborative projects for AY 2011-2012. Maine communities have made requests for help with neighborhood and regional development plans, new libraries and community centers, Main Street revitalizations, pedestrian bridges, and renovation of civic buildings and sites.

Building on the recent and successful UMA-Muskie collaboration in Portland’s East Bayside neighborhood that resulted in two substantial grants, one private and one federal, this initiative will begin in AY 2012 with a for-credit Workshop for students and faculty from UMA and Muskie to work together with local officials and citizens on a challenging planning and design issue in the city of Augusta.

Program Goals and Elements

The goals of this initiative are to:

- Increase student enrollments, tuition revenues, and retention and graduation rates, and at least break-even financially within four years;
- Give USM and UMA a distinctive and competitive

² Including the New England Environmental Finance Center, the Casco Bay Estuary Partnership, the Maine Center Business for & Economic Research, and, with the University of Maine, the Center for Tourism Research & Outreach and the Sustainable Solutions Initiative.

advantage in attracting and retaining students who are interested in shaping the Maine and New England landscape and built environment in sustainable ways.

- Provide students with regular, challenging, and experiential opportunities beyond the classroom to engage them directly in the challenges facing Maine communities in planning and designing their future landscape and built environment;
- Engage students across the separate academic disciplines of architecture and planning, and so enhance their professional credentials. This combination of architecture and planning at the undergraduate and graduate levels will be unique in New England among public institutions of higher education; and, so, will be NEBHE-eligible;
- Serve the pressing needs of Maine communities for assistance in shaping the future of their landscape and built environment, with possible focus in early implementation on a core value such as strengthening civic spaces, sustainability, or quality of place;
- Be an attractant to private and philanthropic sector donors with an interest in the built environment and a stake in Maine's Quality of Place.

Five elements will be developed:

1. Articulation agreement(s) between UMA and USM will establish an accelerated process for students in the B.A. in Arch. program to gain conditional admission to the CPD master's program and complete courses that will count toward both the graduate and undergraduate degrees, enabling students to complete both degrees in a foreshortened period.
2. A new Community Design Center (CDC) in UMA's Gannett building in downtown Augusta, with a mission to deliver a wide variety of experiential learning opportunities for students in architecture and planning; and to serve as the nexus for collaborative research and outreach to Maine communities. Some forty such CDCs exist at universities across the nation, none now in northern New England;³
3. Increased faculty capacity in architecture and community design;
4. Faculty and new course development in sustainable architecture, urban and landscape design, historic preservation, and green building techniques; and development of related certificate programs (as in Sustainable Communities, Quality of Place, etc.) and in-service professional education; and
5. Incorporation of distance learning elements across the shared curriculum.

Outcomes

- Creation of a strong identity for the UMA/B.A. in Arch. and Muskie/CPD programs, one that is unique among public institutions in New England, and that is articulated, cross-disciplinary, experiential, and oriented toward sustainability and quality of place;
- Creation of the first and only, university-based Community Design Center (CDC) in northern New England, with a prestigious and influential Advisory Council appointed by the presidents, and becoming self-supporting within four years;
- Increased enrollments in both programs and, based on evidence from CDC's elsewhere, especially among non-traditional architecture and planning students; and strengthened credentials in the job market for graduates of both programs;
- Increased service to Maine communities, strengthening their quality of place and job creation opportunities; and
- Increased engagement by UMA and USM with a broad array of private, public, and philanthropic interests in Maine and beyond.

Collaborations

The initiative represents a full partnership effort among the Portland Society for Architecture, UMA, and USM, with the intention to engage other UMS campuses as they are willing and able. We have already reached out to Great Portland Landmarks and its new Center for Architecture and Preservation, which is strongly supportive and suggests that the proposed CDC will have strong appeal to the Maine philanthropic community. Other potential collaborators will be approached, some to sit on the CDC Advisory Council, including the American Institute of Architects/Maine, Associated General Contractors of Maine, GPCOG, GrowSmart Maine, KVCOG, Maine Association of Planners, Maine Community Foundation, Maine Development Foundation, Maine Farmland Preservation Trust, Maine State Chamber of Commerce, and Maine Housing.

Project Schedule

- AY2011-12: Conduct a year-long, for-credit Workshop for students and faculty from UMA and USM to

³ Including Auburn, Ball State, Catholic U., Kansas State/Kansas City MO, Kent State, Louisiana Tech, Mississippi State, Penn State, Tulane, U. of Louisville, U. of Minnesota, and U. of New Mexico, Virginia Tech, Washington State/Spokane, and Yale U. An outstanding video on the Auburn Rural Studio and its work may be viewed at <http://onthejobtv.org/site/2011/01/show-310/>; and a recent press release from the UNM Design Planning Assistance Center is at <http://www.news-bulletin.com/nb/index.php/news/4253-architecture-students-set-sights-on-downtown-belen.html>

work with local officials and citizens on a challenging planning and design issue in Augusta.

- Spring 2012: Competitively recruit a full-time research faculty member in architecture and community design on a four-year contract, a joint UMA-USM appointment, to direct the CDC in Augusta, with half-time teaching and half-time center-direction responsibilities. (The Muskie School recently amended its Faculty By-laws to allow joint faculty appointments across the UMS, as well as professional “practice faculty,” and adopted formal guidelines for their appointment.)
- AY 2012-13: Develop articulation agreement(s) between UMA and USM to accelerate student progress through the combined bachelor’s/master’s program in architecture and planning, and incorporate distance learning elements across the shared curriculum.
- AY 2012-13: The CDC opens in the Gannett building in Augusta with teleconferencing facilities installed, a strategic plan developed, programming and marketing established, an Advisory Council recruited and appointed, outside funding sources identified, on-line application for services developed, a faculty/practitioner review panel established to evaluate applications, and the experiential course work of the CDC begun.
- AY 2012-2016: Faculty and new course development proceed in the areas of sustainable architecture, urban and landscape design, historic preservation, and green building techniques.
- Sept. 2014: Mid-point progress report to the Presidents and Chancellor, detailing achievements of the partnership, their costs and benefits.
- Sept. 2016: Final report to the Chancellor, the partnership is self-supporting.

Requested Investment

UMA and USM jointly request SIF support in the amount of \$560,000 over the four-year period, as follows:

- 12-month appointment for Joint Research Faculty appointment in architecture and community design/ CDC Director on a four-year contract: \$420,000 with benefits.
- Faculty, course, and certificate development over four years, including adjunct faculty: \$75,000.
- Marketing and CDC operations over four years: \$35,000.
- One-time acquisition and installation of teleconferencing facilities in the Gannett building, in year one: \$30,000.

(Note: Table 1 below contains a rough, yearly budget map for the request that indicates both SIF and anticipated external funding, and campus assignment for its expenditure.)

University Match

UMA and USM will provide administrative and academic oversight of the initiative, as well as clerical, office, and IT support for the CDC. At the end of the SIF four-year funding period, UMA and USM will assume responsibility for its ongoing support, direction, and institutionalization as a Maine and UMS asset.

Revenue and Expenditure by Source (Proposed)*

Category	Year	Funding Source		Expenditures by	
		SIF	External	UMA	USM
Faculty	1	\$120,000		\$120,000	
	2	\$120,000		\$120,000	
	3	\$120,000		\$120,000	
	4	\$60,000	\$60,000	\$120,000	
<i>Subtotal</i>		<i>\$420,000</i>	<i>\$60,000</i>	<i>\$480,000</i>	
Course Development & Adjuncts	1	\$25,000		\$12,500	\$12,500
	2	\$25,000		\$12,500	\$12,500
	3	\$15,000		\$7,500	\$7,500
	4	\$10,000		\$5,000	\$5,000
<i>Subtotal</i>		<i>\$75,000</i>		<i>\$37,500</i>	<i>\$37,500</i>
Design Center Operations	1	\$5,000		\$3,000	\$2,000
	2	\$5,000		\$3,000	\$2,000
	3	\$2,500	\$5,000	\$4,500	\$3,000
	4	\$2,500	\$5,000	\$4,500	\$3,000
<i>Subtotal</i>		<i>\$15,000</i>	<i>\$10,000</i>	<i>\$15,000</i>	<i>\$10,000</i>
Marketing	1	\$5,000		\$2,500	\$2,500
	2	\$5,000		\$2,500	\$2,500
	3	\$5,000		\$2,500	\$2,500
	4	\$5,000		\$2,500	\$2,500
<i>Subtotal</i>		<i>\$20,000</i>		<i>\$10,000</i>	<i>\$10,000</i>
Technology	1	\$30,000		\$30,000	
Totals	1	\$185,000		\$168,000	\$17,000
	2	\$155,000		\$138,000	\$17,000
	3	\$142,500	\$5,000	\$134,500	\$13,000
	4	\$77,500	\$65,000	\$132,000	\$10,500
	4 yrs.	\$560,000	\$70,000	\$572,500	\$57,500

* Note: The numbers presented here were calculated in 2012 dollars.

Greater Portland Chamber Survey Results

Note: The survey was designed, and the results reported here were compiled by Joseph McDonnell from seventy three responses. The following cover-note accompanied the survey to its members: "The Portland Regional Chamber has partnered with the Portland Society of Architecture, Creative Portland, and USM's Muskie School to develop a case for growth within the Greater Portland region. We ask you to take a few minutes to help us identify the obstacles our members are encountering in growing their organizations. Feedback from the survey will help the Chamber and our partners work together to address the obstacles identified. Thank you very much."

1. Thinking about your organization's strategic objective for growth within the Greater Portland region – that is, growing your number of employees, customers, services, revenue and earnings – would you say...

- a. Growth is a high priority for your organization? 68%
- b. Growth is a moderate priority for your organization? 27%
- c. Growth is a low priority for your organization? 4%

2. What would you say is the single most significant obstacle to the growth and expansion of your organization within the Greater Portland region? Please check only one item.

- a. Workforce related issues, including housing 33%
- b. Competition/market limitations 37%
- c. State/local government issues (taxes, infrastructure, transportation, funding) 16%
- d. Facility limitations 7%
- e. Other, please explain: 6%

3. What are the one or two most important things that the Chamber, state/local government, or educational institutions might do to help you grow your organization within the Greater Portland region? (Sample of most frequent responses)

- a. Advocate for small as well as big business
- b. Attract talent (professionals, trades) and make the region attractive to young professionals
- c. Bring in new business
- d. Advocate for better business climate/reduced

taxes

- e. Bring cities and towns together to provide common services and business attraction
- f. Promote the Maine brand (attract more tourists)
- g. Bring groups together (dialogue between business, government, and local universities is broken)
- h. Work with SMCC/USM/K-12 to deliver better workforce
- i. Keep us informed/ provide forum for networking
- j. Clean up downtown Portland to be attractive to tourists/residents/businesses

4. In thinking about the workforce issues in your organization, which of the following employee groups present your greatest challenge? Please check only one item.

- a. High skilled technical employees 18%
- b. Entry level knowledge workers 18%
- c. Low skilled employees 5%
- d. Support personnel 4%
- e. Professionals 15%
- f. Mid and upper level managers 8%
- g. Other: 6%
- h. This issue is not a problem for our organization. 22%

5. Which of the following issues present your greatest challenge to growing your organization? Please check only one item.

- a. Recruiting qualified employees 44%
- b. Paying a competitive salary/wage 23%
- c. Training employees to improve their skills 1%
- d. Retaining employees 5%
- e. Retirement of highly qualified employees 3%
- f. Housing for employees 1%
- g. Other: 1%
- h. This issue is not a problem for our organization. 22%

6. To what extent are the regional education institutions providing your organization with qualified applicants?

- a. They are meeting our needs in providing qualified applicants to a great extent; 7%
- b. They are meeting our needs in providing qualified applicants to some extent; 29%

- c. They are not providing our organization with qualified applicants 38%
- d. This issue is not relevant to our organization 26%

7. To what extent are the regional education institutions providing on-going training for your employees?

- a. They are providing on-going training for our employees to a great extent; 4%
- b. They are providing on-going training for our employees to some extent; 16%
- c. They are not providing on-going training for our employees 44%
- d. This issue is not relevant to our organization 36%

8. What might be the one or two things that would help you to deal with your workforce issues? (Sample of most frequent responses)

- a. Job fairs
- b. Affordable housing
- c. Professional development
- d. Deeper pool of talented candidates (IT, Health care, Sales, Professionals)
- e. Continuing Education
- f. Workers with a work ethic
- g. Keeping college grads in Maine

9. Do you have any suggestions or comments regarding economic growth within the Greater Portland Region? (Sample of most frequent responses)

- a. Create a better climate for business
- b. Reduce taxes
- c. Grow the population
- d. Regional strategy/cooperation for business attraction, retention, housing etc

- e. Balance between development and keeping residents happy
- f. Subsidies for start-ups in business and non-profits
- g. Streamline regulation/approval process
- h. Housing
- i. Attract more talent
- j. More support for education system

10. To assist with data analysis, please indicate the number of employees in your organization.

- a. Greater than 1,000-- 3%
- b. 500-999 --8%
- c. 100-499—28%
- d. 50-99—10%
- e. 25-49—11%
- f. 10-24—15%
- g. Less than 10—25%

11. Which of the following best describes your organization? Please check only one item.

- a. Banking/Insurance 10%
- b. Construction/ Real Estate 8%
- c. Government/ Education/Social Service 11%
- d. Health Care 6%
- e. Hospitality/Tourism/Food/Entertainment 10%
- f. IT 1%
- g. Manufacturing 1%
- h. Professional and Business Services 29%
- i. Telecommunications/Media 3%
- j. Utilities/ Warehousing/ Wholesale/Retail/ Transportation 14%
- k. Non-profit 8%
- l. Other: Marine 1%

Some Best Practices

By Andrew Clark

Andrew Clark, graduate research assistant in USM's Muskie School of Public Service, here introduces a number of the many innovative efforts underway across the nation to address the issues identified as obstacles to Greater Portland's sustained prosperity.

Immigrant Integration



Louisville residents celebrate their diverse heritages during the 2016 Welcoming Week. Louisville Metro Government Office for Globalization photo

Louisville, KY.

As the foreign-born population grows in metropolitan regions across the nation, Louisville has sought ways to integrate its burgeoning immigrant community into a stagnating workforce. In 2011, Mayor Greg Fischer created the Office of Globalization, with a three-pronged mission to assist new Americans to achieve self-sufficiency and success; to enhance and encourage multi-culturalism; and to engage in economic development through global economic outreach.¹

¹ See louisvilleky.gov/government/globalization.

² Greater Louisville, Inc. "Welcoming Immigrants for Community and Economic Growth". December 2016.

³ World Affairs Council of Maine. "Celebrating Immigration". June 2015.

The city's Global Louisville Action Plan² (GLAP) embraces strategies to integrate, empower, and attract immigrants, each with a number of specific actions to connect foreign-born residents with the larger community, and foreign-born entrepreneurs to business development opportunities. This "shared baseline of knowledge" aims to position Louisville as a welcoming and thriving 21st century city.

A similar local initiative by the World Affairs Council of Maine and the Maine Immigrant Rights Coalition encourages Portland to aspire to a welcoming community for immigrants. With the number of immigrants residing in the Greater Portland area now approaching 10,000, Maine leaders are recognizing the importance of incorporating this population into its aging workforce.³

Housing

Portland, OR.

Portland's Housing First program is an approach to housing assistance that prioritizes rapid access to permanent housing and additional support services as needed.⁴ Most homeless individuals do not require long-term services, so after a personal crisis, Housing First provides temporary security and stability without conditions.⁵

The Housing First approach showed cost savings of over \$15,000 per individual after one year. Average annual healthcare costs decreased from \$42,000 to \$17,000 per person; the number of homeless individuals living unsheltered, by 39 percent; and the number of chronically homeless individuals, by a full 70 percent.⁶

Homelessness in Portland, ME is a visible problem. According to a January 2016 point-in-time survey, there were nearly 500 homeless individuals in Portland, a 5 percent increase from 2015 and a steady rise going back to at least 2009.⁷ Two Housing First-model properties have opened recently, while developers cite a lack of resources to make significant progress on the issue. As cuts to shelters and other assistance programs leave fewer resources for more people, a vulnerable population finds itself even more so.



Public green space in Portland, Oregon. M.O. Stevens photo

Seattle, WA.

Central to housing issue across the nation is soaring demand for city life and a tepid response in housing development. As more and more people squeeze into a constrained supply of homes and apartments, housing crises have sprung up in cities like San Francisco, New York, Seattle, and many others. Increasingly, real estate is held in speculation, one form of which is short-term renting that can be many times more lucrative than renting to a full-time tenant.

The Seattle City Council outlined three goals⁸ as it considered policy alternatives to regulating short-term rentals, to:

- Balance the economic opportunity created by short-term rentals with the need to maintain supply of long-term rental housing stock available at a range of prices.
- Ensure a level playing field for individuals and companies in the short term rental market; and,
- Protect the rights and safety of owners, guests, and neighbors of these units.⁹

The Council chose to limit potential hosts to two units: their primary residence, plus one additional dwelling unit. Hosts will need a short-term rental operator's license, to show proof that the unit being rented is the operator's primary or secondary residence, and that the unit is up to code.

Portland, ME has recently been experiencing a housing crisis. The Portland Press Herald's series, "No Vacancy"¹⁰ found an increasing affordability gap that strains renters' finances and forces longtime residents to search for housing in more affordable places.



The popular Pike's Peak Market in Seattle. Daniel Schwen photo

⁴ For more information, see www.pdxhfs.org/housing-first.

⁵ See www.endhomelessness.org/pages/housing_first.

⁶ National Alliance to End Homelessness. "Community Snapshot: Portland and Multnomah County". June 2007.

⁷ Maine State Housing Authority, "Point in Time Survey: Conducted January 26, 2016". 2016.

⁸ For more information, see www.seattle.gov/council/issues/regulating-short-term-rentals.

⁹ Office of Councilmember Tim Burgess. "Regulating Short-Term Rentals Policy Brief". April 2017.

¹⁰ Richardson, John, et al. "Welcome to Portland: No Vacancy". *Portland Press Herald*. November 2015.

Transportation

San Francisco, CA.

Most cities do not price on-street parking in line with demand, so hourly rates are often far too low. This has the ill-effects of incentivizing driving into the city's densest areas, cruising for a free spot, and further congesting the streets. Demand-priced parking dynamically adjusts parking rates to reflect changes in demand for parking at different times of the day and on different city blocks.

Since 2011, San Francisco's SFPark has moved hourly rates up and down in accordance with a target occupancy rate of 60 to 80 percent. If the occupancy of a particular block is above 80 percent, demand is high and rates are raised. If the occupancy is below 60 percent, demand is low and rates are lowered. This way, the system adapts to the changing spatial and temporal demands for parking.¹¹

Assessment of the program's effectiveness shows that under-occupied blocks went from below 30 percent occupancy to 67 percent, while over-occupied blocks went from above 90 percent to 68 percent. Parking spaces were more effectively used on a neighborhood basis. This is considered a success when the goal of the program is to maximize occupancy rather than revenue.¹²



Parking meters that utilize mobile technology allow users to check availability and pricing of parking on the go. Tony Webster photo

On-street parking in Portland ME might be structured similarly. In the busiest parts of town – the Old Port and downtown – demand-priced models could be implemented to reflect the demand for parking. This also depoliticizes parking policy, as the occupancy rate guides decision-making. Technology advances also make the process easier. Drivers may look up rates, receive text messages when the meter is about to run out, and add more time from their mobile devices.

Tacoma, WA.

As cities become increasingly attractive places to live, a growing burden is placed on transportation networks. Few planners deny the benefits of promoting alternative modes of transportation; but without incentives to encourage their use over private cars, little progress may be made. One such incentive is public Transit Signal Priority, or TSP. Beacons installed in transit vehicles communicate with traffic signals to request a green light, giving priority to transit over ordinary traffic.¹³

Tacoma equipped 245 busses and 110 intersections along 6 major corridors with TSP technology. The program's effectiveness was measured by several metrics, including travel time, stop and signal delay, fuel savings, and air quality. Ultimately, TSP reduced transit signal delay by roughly 40 percent and provided significant economic benefit, estimated at \$14.2 million annually.¹⁴



A busy urban arterial is reimagined with prioritized transit. Image: NACTO, "Transit Street Design Guide"

Greater Portland's METRO saw record ridership numbers in 2016, with 1.81 million riders, a 15 percent increase over the previous year.¹⁵ The agency is actively expanding the Breez service, so that what once went from Portland to Freeport will now be expanded to Brunswick. In town, several routes on major commuting corridors like Forest, Washington, or Brighton Avenues could benefit from improved signal coordination. These major corridors each see in the area of 20,000-24,000 vehicles per day. Many of the drivers might be tempted to switch to transit if the system could more reliably and quickly deliver passengers into the heart of the city.

¹¹ For more information, see sfpark.org.

¹² Pierce, Gregory and Donald Shoup. "Getting the Prices Right: An Evaluation of Pricing Parking by Demand in San Francisco". Luskin School of Public Affairs, UCLA. April 2013.

¹³ For more information, see Transit Signal Priority: A Planning and Implementation Handbook at nacto.org/docs/usdg/transit_signal_priority_handbook_smith.pdf.

¹⁴ Smith, Harriet, et al. "Transit Signal Priority: A Planning and Implementation Handbook". May 2005.

¹⁵ METRO Greater Portland Transit District. "METRO Marked Fifty Year Anniversary with Record Ridership". January 2017.



Where an elevated highway once stood has been reanimated as multi-modal boulevard. Tobias Kleinlercher photo

San Francisco, CA.

Completed in 1959, San Francisco's Embarcadero Freeway was a double-deck elevated segment of highway running for a mile along the shore of San Francisco Bay. The concrete structure at its peak carried more than 60,000 vehicles per day, and was a physical and visual barrier between the downtown and the waterfront. When the structure was damaged in the 1989 Loma Prieta earthquake, elected officials saw the opportunity to forgo reconstruction in favor of tearing it down. In 1991, the freeway was removed and replaced with a ground-level boulevard.¹⁶

In the years following the boulevard, known simply as The Embarcadero, evolved into a multi-modal complete street, serving cars, busses, transit, bicycles, and pedestrians. The surrounding area has enjoyed a rejuvenation as an attraction to both visitors and residents. The Embarcadero provides opportunities for shopping, dining, and simply sitting and enjoying the sights of the city and bay, all while effectively and safely transporting its varied users.¹⁷

Interstate 295 through Portland ME might enjoy a similar fate. At present I-295 runs along the western edge of the peninsula, cutting off neighborhoods to the west like Libbytown, Oakdale, and East Deering. It also separates the Bayside neighborhood from the Back Cove, a popular recreation site. The corridor is fairly redundant from a regional perspective; through-traffic could be diverted to I-95, just west of town, and the Falmouth Spur, just north. Several hundred acres of land would become available for development, and the urban fabric of downtown could begin to expand into the surrounding neighborhood centers.

¹⁶ Seattle Department of Transportation. "Urban Mobility Plan Briefing Book". January 2008. See Ch. 6, "Case Studies in Urban Freeway Removal".

¹⁷ For more information, see "San Francisco: Removal of the Embarcadero Freeway" at www.streetfilms.org/lessons-from-san-francisco.

St. Paul, MN.

A key challenge to urban growth is balancing economic development with quality of life. With space so limited in dense city centers, economically unproductive land uses are dis-incentivized, transportation networks become strained, and diversity of community is washed away by gentrification. Authenticity reflects the cultural and historical values of a city – its spirit, character, and sense of place. The people, culture, and the built and natural environments all contribute to this authenticity of place¹⁸

St. Paul, Minnesota, billed as “the most livable city in America”, is home to an 8 80 Vitality campaign, so named because its citizens hope to build a city that is comfortable for the 8 year-old child and the 80 year-old grandmother, and everyone in between.¹⁹ The 8 80 advisory team drafted St. Paul’s “Working Principles for Vibrant Places and Spaces,” including:

- Ensure St. Paul puts people first;
- Encourage vitality through investment, private and public alike;
- Create accessible places where people want to connect and spend time;
- Promote healthy living; and,
- Celebrate the city’s cultural diversity.²⁰



Bike lanes are a central strategy of St Paul livability campaign. This bike lane in Vancouver is protected from traffic by handsome planters. Paul Krueger photo

What might an 8 80 approach look like in Portland, ME? Expanding open-streets events like the popular “Sundays on the Boulevard” to other neighborhoods. Promoting and expanding the Farmers’ Markets. Calming traffic in important pedestrian areas like the Old Port, Longfellow Square, and Congress Square. Offering more downtown events like the popular Old Port Fest. Linking and expanding the city’s network of green spaces. As Greater Portland grows it will be critical to remember why so many have chosen to make this home in the first place.

Cincinnati, OH.

Traditional use-based zoning codes are a root cause of the suburban development pattern seen across the country. Because these codes focus so heavily on use rather than form, it is difficult to construct the charming neighborhoods seen in so many pre-World War II cities and towns. Re-focusing on form guides developers towards what an urban area should ultimately look like, and frees them from concern of use, allowing vibrant, mixed-use neighborhoods to gain hold.

Cincinnati implemented a Form-based Land Use Code in an effort to curtail suburban development patterns and to prioritize revitalization of existing neighborhood centers. Key to its approach was to adopt codes incrementally, on an individual neighborhood basis. Planners and citizens began by identifying and prioritizing roughly 30 walkable neighborhood centers.²¹ Residents were then asked to express their desires respecting neighborhood change. It could be maintained (protected and enhanced), evolved (through small, incremental investments), or



Dense, mixed-use neighborhoods is the charming alternative to suburban sprawl. Image: NACTO, “Urban Street Design Guide”

transformed (through major redevelopment efforts). In this way, the citizen involvement tailored the process to specific goals.²²

Portland ME implemented its first form-based code zone in a similar way. Residents of the India Street neighborhood, in response to looming development opportunities, organized and worked with the City to create the India Street Form-Based Code Zone. The incremental approach has allowed planners to effectively pilot test the new system before moving to other areas of the city. Form-based code zones will be politically less challenging, and likely to create better-tailored results, if they are encouraged to do so on a neighborhood-basis in response to local residents.

¹⁸ International Downtown Association. “Maintaining Authenticity of Place”. 2016.

¹⁹ For more information, see www.stpaul.gov/departments/planning-economic-development/creating-vibrant-places-and-spaces-saint-paul/8-80-0

²⁰ Walljasper, Jay. “A Vital, Vibrant City for Everyone”. February 2017.

²¹ For more information, see www.cincinnati-oh.gov/planning/planning-projects-studies/form-based-code.

²² Cincinnati, City of. “Bridging Cincinnati’s Form-Based Code and the Comprehensive Plan”. 2012.

Anchor Institutions

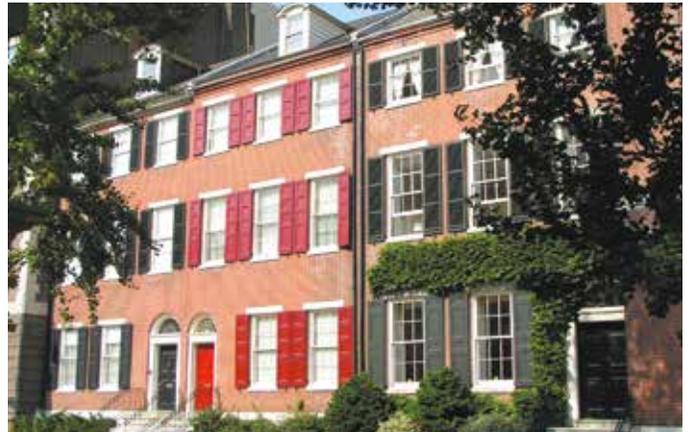
Philadelphia, PA.

Economically competitive regions in today's technology-driven markets are well-served by growing their "anchor institutions." They are employment centers, cultural attractions, and innovators in their fields. Two such institutions have emerged as particularly beneficial. Forward-looking "Eds and Meds," or higher education centers and major medical facilities, have invested in their communities as well as themselves, as highly-educated workers and migrants concentrate nearby.²³

Since the late 1990s the University of Pennsylvania has been investing in its once-blighted neighborhood surroundings. Its West Philadelphia Initiative promotes a safe and clean environment, supports workforce housing, engages in commercial development, builds economic inclusion, and invests in public education.

Between 1990 and 2010, the population of the neighborhood increased, the racial composition diversified, crime rates and poverty decreased, and economic and commercial development grew. By most metrics, the initiative has been successful in making University City a premier Philadelphia neighborhood.²⁴

In Portland, two major institutions find themselves in rapidly changing settings. The University of Southern Maine is separated from the central business district by I-295 and an unwelcoming pedestrian



A row of stately townhouses in a Philadelphia neighborhood. Bev Sykes photo

environment. A recent report²⁵ envisions higher density and an improved public realm along this corridor as part of the natural growth of Portland's urban core. In another corner of town, Maine Medical Center sits on the divide of the Parkside, St. John/Valley, and West End neighborhoods. A significant proposed expansion could bring increased investment, mixed-use development, and a re-invigorated streetscape to this gateway to Portland's downtown.

Cambridge, MA.

The Massachusetts Institute of Technology is working to re-invigorate the nearby Kendall Square, through its re-development as mixed-use neighborhood. The school plans to increase the vibrancy and diversity of the entire area with new housing, retail, research, open space, and cultural attractions. Community visioning exercises have helped identify five priorities for development:²⁶

- Housing for graduate students and the general community, accommodating a range of incomes;
- Retail, reflecting the area's unique character, attractive to students, residents, and visitors, alike;
- Open space, for active programming and recreation;
- Historic integration, honoring the square's historic heritage; and
- Innovation space.²⁷

The University of Southern Maine, with campuses in both Portland and suburban Gorham, is a major resource for the region. As Portland continues to grow, it is in the best interest of both the City and the university to forge closer partnerships. So doing could raise the profile of the university within the community, allowing for better access to education, employment, professional opportunities, and cultural activities.

Low cost wayfinding in Raleigh encourages residents and visitors to see more of the city on foot.



MIT's Kendall Square Initiative will breathe new life into the public space in the area. Nick Allen photo

²³ Ehlenz, Meagan. "The Power of Eds and Meds". Penn Institute for Urban Research, University of Pennsylvania. July 2014.

²⁴ For more information, see www.universitycity.org.

²⁵ IBI Group, Inc. "Transforming Forest Avenue". June 2012.

²⁶ Kendall Square Initiative, "Establishing Priorities" at <http://kendallsquare.mit.edu/planning/priorities>.

²⁷ For more information, see kendallsquare.mit.edu.

VI. Tactical Urbanism



Tactical urbanism leverages inexpensive treatments to, occasionally, dramatic effect, as achieved with this public art installation in Montreal. Eric Sehr photo

Raleigh, NC.

Tactical urbanism is about taking action in little ways to make our streets better. This can range from art installations to pop-up parks to painting crosswalks when public works departments can't or won't.

Raleigh's Matt Tomasulo noted that despite some walkable central neighborhoods, the city remained an auto-dominated. He took it upon himself to produce 27 high-quality plastic wayfinding signs to encourage drivers out of their cars and to direct pedestrians to local landmarks. As the action was unsanctioned by the City, the signs were taken down. The

parties then worked to find a creative solution: Matt donated the signs to the City, and the City affixed them to utility poles, bypassing regulations that would otherwise prevent their display.²⁸ The signs were appreciated by the locals and even got the director of planning wondering, "Did Matt do something wrong, or are our codes out of date? Are our rules now an obstacle?"²⁹

Greater Portland is home today to a thriving community of young people, artists, immigrants, retirees, and tourists. As it grows, it will be important to protect and promote the reasons that so many have chosen to make it home. Public art installations, fresh sidewalks, temporary bike lanes, guerrilla gardening, pop-up parks, and more are ways that community members can directly involve themselves in inexpensive and creative solutions to urban problems. We can't advocate for unsanctioned or dangerous installations, but we can encourage the conversation, "Are our rules now an obstacle?"

²⁸ For more information, see walkyourcity.org.

²⁹ Pfeifer, Laura. "The Planner's Guide to Tactical Urbanism". 2013.

“Cities are the way of Maine’s future. Maine must embrace that reality. Maine’s rural character might distinguish us from other states, but its urban areas will more likely than not drive its growth. These urban areas need strong advocates who can make the case for policies that help it along.”

Bangor Daily News editorial, September 4, 2015



“This city will show how development can serve our needs, not victimize us.”

2017 State of the City Address by Mayor Michael Hancock of Denver CO,
where city and county services are consolidated

We live in disruptive and unsettled times, under the influence of new and “smart” technologies, a global economy, aging demographics, and changing lifestyles. Markets shift, traditional industries struggle to adapt, and entrepreneurial opportunities emerge – as do the compelling and widespread issues of workforce development, affordable housing, public transportation, inadequate public revenues, and threats to Maine’s and the region’s quality of life. Business as usual and fragmented efforts will not suffice to address these challenges. The time has come to take the region’s growth and development to a new level. It is time for efforts in the cause of sustained prosperity, broader opportunity, and enhanced Quality of Place to be made more integrated, more intentional, more aspirational, and more accountable.