GLOBAL METRO SUMMIT

DELIVERING THE NEXT ECONOMY

CONFERENCE GUIDE
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INTRODUCTION

On behalf of the Deutsche Bank's Alfred Herrhausen Society, the London School of Economics, and the Brookings Institution, we welcome you to the Global Metro Summit in Chicago. This Summit is the culmination of years of research devoted to uncovering the true potential of cities and metropolitan areas across the globe. It comes at an important moment in time as we continue to reel from the global economic crisis with the economies of entire nation states in transition and political leadership in turmoil. Yet, in the midst of this crisis a growing number of leaders are rising above the pessimism to reinvent their metropolitan economies while challenging the policies that undermine the value of cities and metros.

We have designed this Global Summit to give cities and metros from different regions of the world, and in different stages of recovery, a place to share insights on their efforts to economically transform themselves during tumultuous times. To do this thoughtfully, we took great pains to learn from our past, while remaining grounded in the present and keeping an eye to future possibilities.

The London School of Economics explored how cities and metros that intentionally re-made themselves in the past have influenced their performance in the present. LSE conducted fine-grained research of four cities (Barcelona, Munich, Seoul, and Torino) that dedicated the last 15 to 20 years to transforming their economic base to meet changing global forces. This research has deciphered what it takes to get there: making the necessary commitment of time by staying the course, aligning national and state priorities and resources to local strategies, and establishing new intellectual and physical networks.

A joint effort between LSE, Brookings, and Deutsche Bank Research investigated how cities are faring in the present to offer new insights into the future. The partnership conducted new research that carefully analyzed and dissected thousands of pieces of data to understand the performance of 150 cities and metros in today's global economy. Our findings confirm that the worldwide downturn and nascent recovery are shifting the metro map of economic growth away from European and U.S. cities toward cities in Asia and Latin America.

Lastly, *the Brookings Metro Program focused on the future by suggesting how to deliver the next economy through metropolitan areas.* The Metro Program has developed a national vision for the "next" American economy: driven by exports, powered by low carbon, fueled by innovation, rich with opportunity, and led by metropolitan areas. To stimulate transformative bottom-up approaches to this vision, Brookings worked in partnership with three U.S. regions (Cleveland-Northeast Ohio, Minneapolis-St. Paul, and the Seattle-Puget Sound area) to apply private sector "business planning" to these regional economies. The result is market-driven analysis and catalytic strategies to position these metros for federal, state, and philanthropic investments and partnership.

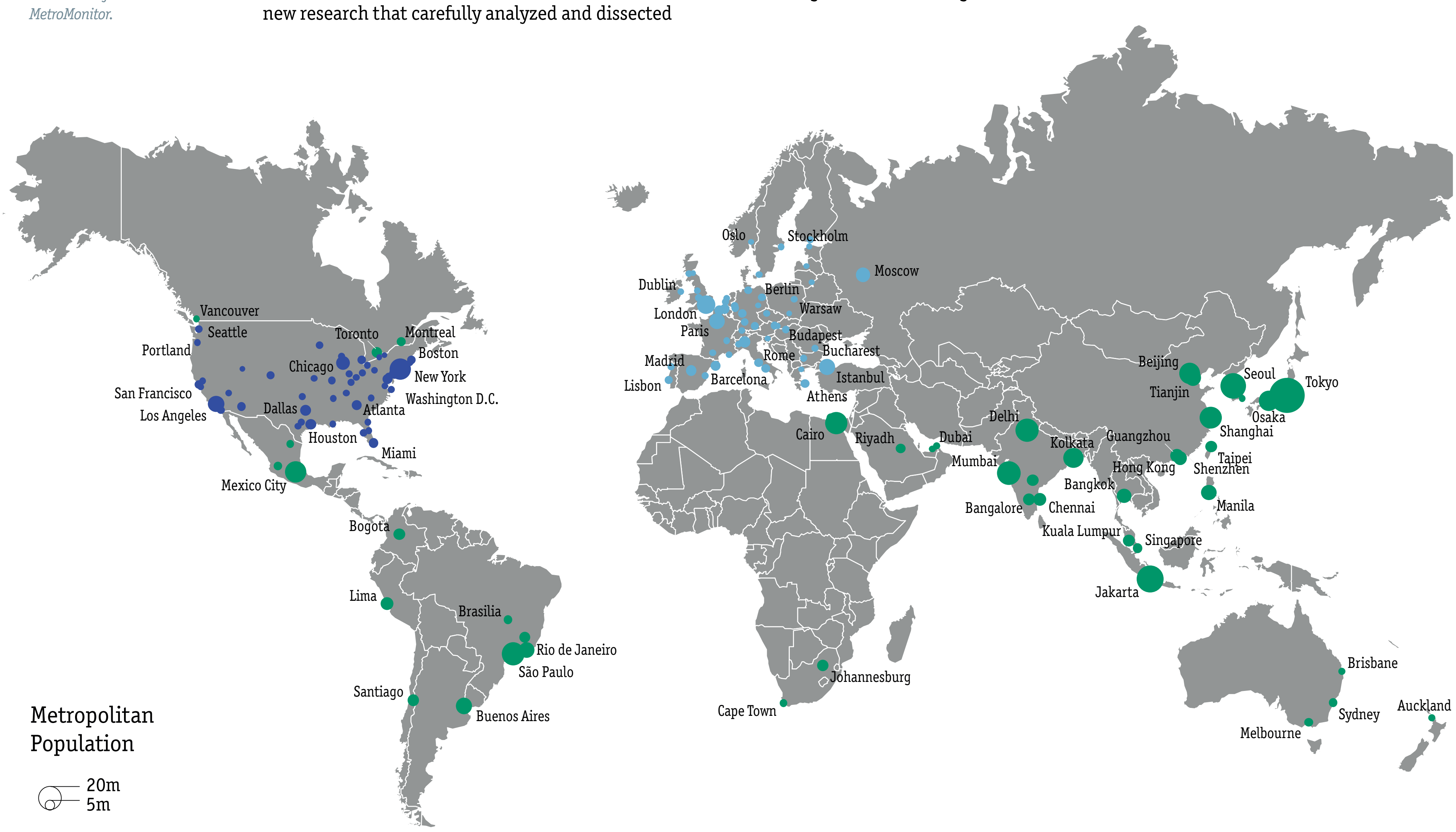
The notion that we are no longer a world of nation-states but a network of cities, metropolitan areas, and regions—communicating, networking, advancing—is understood by a growing number of political, philanthropic, business, and academic leaders. Now is the time for our world's leaders to re-think their individual agendas and invest in these areas in an effort to support and sustain economic recovery at the global scale.

Wolfgang Nowak, Managing Director, Alfred Herrhausen Society

Ricky Burdett, Director, LSE Cities, London School of Economics and Political Science

Bruce Katz, Vice President and Director, Metropolitan Policy Program, The Brookings Institution

Below
More than 50 percent of the world's population lives in cities and metropolitan areas. This map shows the 150 global metros analyzed for the *Global MetroMonitor*.



DELIVERING THE NEXT AMERICAN ECONOMY

Amid a sluggish recovery and a rancorous political climate, the United States is desperately searching to create jobs in the near term and retool the economy for the long haul. As Dorothy found in the Wizard of Oz, the answers surprisingly lie no further than home, or, more precisely, the top 100 cities and their environs—the major metros—where most Americans live, work, and play.

If we unleash the energies that concentrate in our metros, we can compete with anyone. Our largest 100 metropolitan areas constitute a new economic geography, seamlessly integrating cities and suburbs, exurbs and rural towns. Together, they house two-thirds of our population, generate 75 percent of our gross domestic product (GDP), and disproportionately concentrate the assets that drive economic success: patents, advanced research and venture capital, college graduates and PhDs, air, rail, and sea hubs.

This intense concentration is the magic elixir of modern economies. It explains why Silicon Valley and Boston lead the world in technological innovation, why San Diego and Indianapolis are global players in life sciences and why Wichita, Kansas and Portland, Oregon specialize in advanced manufacturing and exports.

This dynamic holds not only for the U.S., but across the globe. The rise of Brazil, India, and China is a direct product of their rapid urbanization and the growth of super-sized metro economies like Shanghai, Mumbai, and São Paulo.

We mythologize the benefits of small-town America, but it's *major metros* that make the country thrive. Why? When cities collect networks of entrepreneurial firms, smart people, universities and other supporting institutions in close proximity, incredible things happen. People engage. Specializations converge. Ideas collide and flourish. New inventions and processes emerge in research labs and on factory floors. New products and new companies follow. Henry Cisneros, former U.S. Secretary of Housing and Urban Development, likes to say: "Cities are places where two plus two equals five."

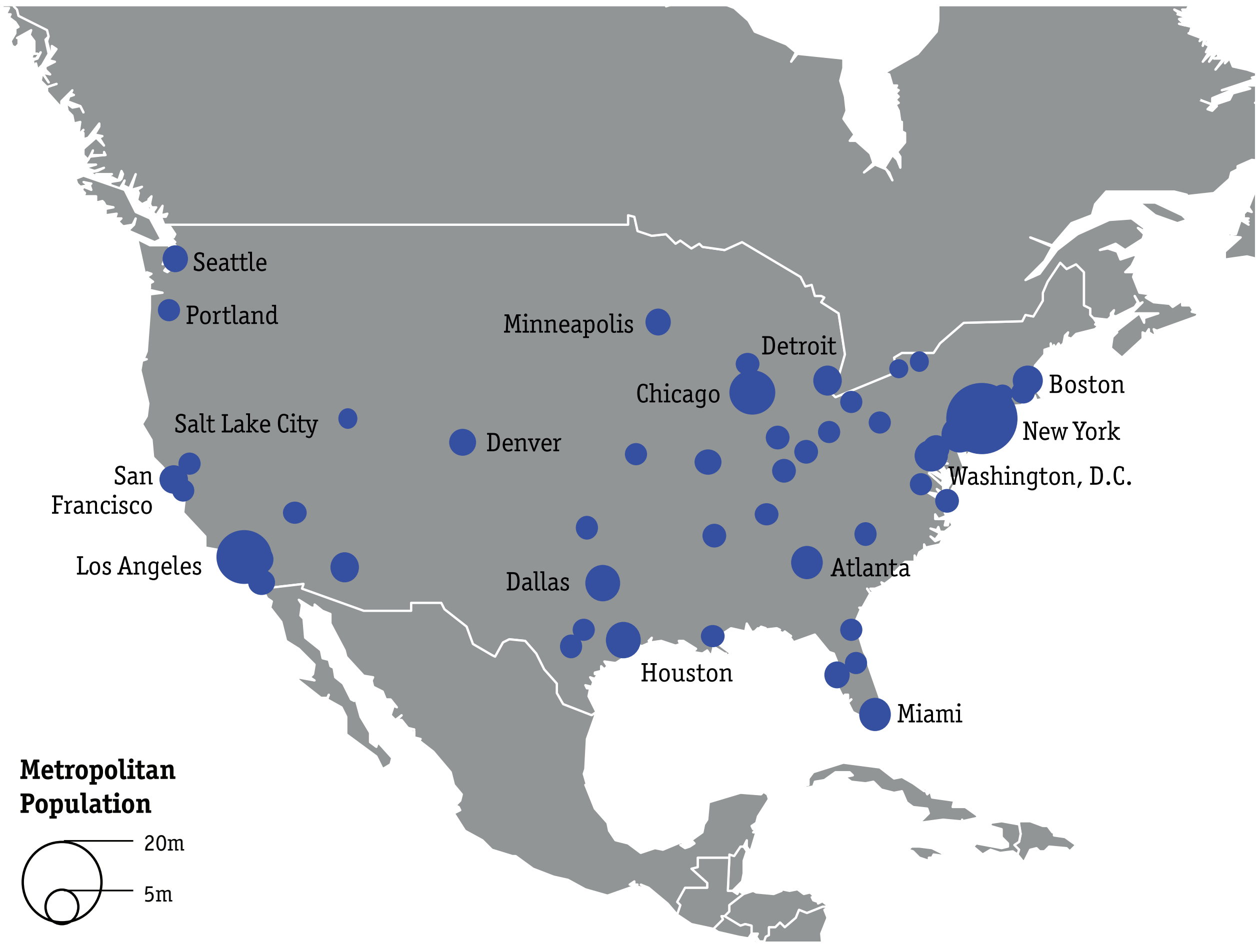
The U.S. needs its metro powerhouses as it makes a painful transition from an economy powered by debt, speculation, and excess consumption to one where we grow in productive, sustainable, and inclusive ways. A chorus of business leaders, such as *Bill Gates, Andy Grove,* and *Jeff Immelt*, as well as leading economists, have called for a new American economy. It's an economy driven by exports that takes advantage of rising global demand. It's powered by low carbon, to lead the clean energy revolution. It's fueled by innovation to spur growth through ideas and rich with opportunity, to reverse the troubling, decades-long rise in income inequality.

By making smart investments and managing for growth, as opposed to maintenance, our major cities and metro areas can lead this transformation. The San Diego region shows how. In 1985, an energetic non-profit organization, CONNECT, sprang up to link the scientists and inventors at top research institutions—including UC San Diego, the Salk Institute, and the Sanford Burnham Medical Research Institute—with investors, advisors and support services to commercialize their new ideas.

The inventive brew that CONNECT fermented has made San Diego home to a cluster of life sciences and technology companies such as Qualcomm, Biogen Idec, Life Technology, and Gen-Probe. New York City has its eye on San Diego's success, and announced its own undertaking in February. "When we emerged out of the period when the defense industry left San Diego, CONNECT was there. They helped to create eight clusters of technology that have been employment drivers in San Diego, and we've been able to build on that ever since," says San Diego mayor Jerry Sanders. In terms of jobs, the region's technology sector has fared better in this recession than its broader economy.

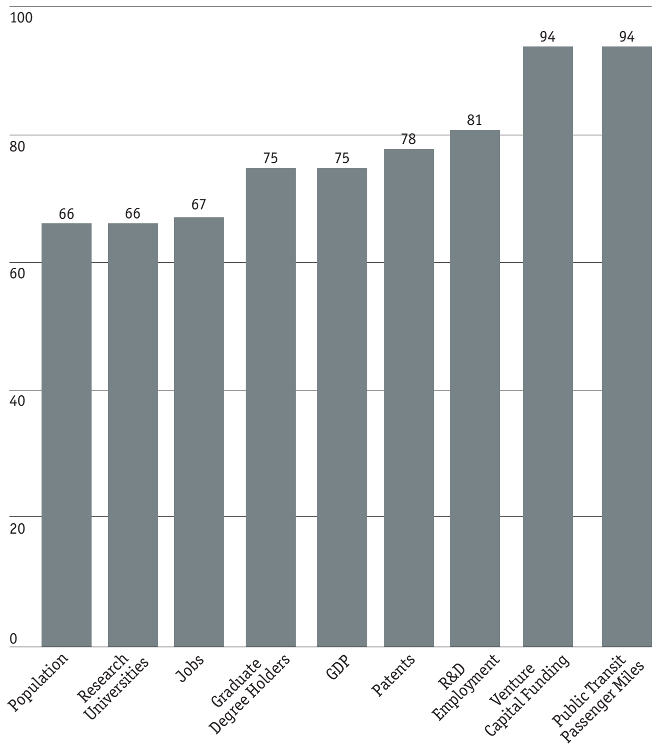
Yet America has been slow to recognize, and build on, the power of our metropolitan economic engines.

For decades, the federal government has treated cities like disaster zones, pursuing an "urban policy" devoted to



Right
More than two-thirds of the U.S. population lives in metropolitan areas. This map shows the 50 U.S. metros analyzed for the *Global MetroMonitor*.

Percentage of the U.S. Economic Activity in the Top 100 Metropolitan Areas



Right
The country's economic activity is disproportionately concentrated in metropolitan areas.

subsidized housing and urban renewal schemes rather than creating policies that, for example, support powerful and promising industry clusters. There has been improvement under the Obama administration, but old habits die hard, and legacy interventions still get more support than new approaches.

If the federal government is outmoded, states are often openly hostile to their major cities. Greater Chicago contains 67 percent of the residents in Illinois but generates 78 percent of the state's economic output. But Illinois has pursued transportation and infrastructure policies that divert tax revenues from Chicago to subsidize inefficient investments in the rest of the state.

By contrast, our competitors understand that prosperity in this century will come via the distinct assets and attributes of their metro engines. Mumbai, Shanghai, and São Paulo are investing in wholesale change through advanced research, renewable energy, modern ports, high speed rail and urban transit in the metros that drive their economies. We must do likewise.

Here's how:

First: Stop refueling the old economy's bad habits. Why, for example, provide huge tax subsidies for consuming more and more expensive housing? Incredibly, the amount the government forgoes from the mortgage interest deduction is projected to grow from $79 billion in fiscal 2009 to $150 billion in 2015. What if we capped these expenditures at the current level, and directed half of the savings to reducing the federal deficit and the other half, some $35 billion a year, to efforts that grow exports and create jobs?

Second: Start investing to help American businesses innovate and have access to a world class infrastructure to connect them with global markets. For example, the federal government can invest in new Energy Discovery Institutes to develop breakthrough technologies like solar power that's cheaper to generate and deliver than fossil fuels. Washington should also create a National Infrastructure Bank, to help finance projects that are too complex to be funded in conventional ways and too important to defer. Think port infrastructure in global trade gateways like Los Angeles, or freight corridors in and around Chicago.

Finally, let's challenge every metro area to meet and exceed the national goal of doubling exports. Instead of subsidizing businesses to move across municipal lines—a complete waste of taxpayer dollars—cities and suburbs need to team up with businesses to devise export initiatives that build on regional competitive advantage. We can't as a nation double exports unless our metros and their businesses (large and small) do.

America's cities are the nation's centers for talent, capital and innovation. They are our hubs for trade, commerce and migration. With the market-based incentives and the proper business climate, they can be unparalleled engines for the next spurt of American growth and prosperity. If our political leaders can put aside rancor, habit and outdated ideas about what kind of nation we are, and should be, we can find success not over the rainbow but in our very own metros.

Bruce Katz, Vice President and Director, Metropolitan Policy Program, The Brookings Institution

A version of this article recently appeared in *Time* magazine.

THE GLOBAL METROMONITOR

The global financial crisis of the late 2000s precipitated an economic downturn of such magnitude and reach that many now refer to the period as the "Great Recession." According to the International Monetary Fund, global economic output, which had grown at an annual rate of 3.2 percent from 1993 to 2007, actually shrank by 2 percent from 2008 to 2009. A precarious economic recovery is now underway.

Aggregate views of the global economy, however, mask the distinct experiences of its real hubs—major metropolitan areas. Metro areas are economically integrated collections of cities and their surrounding areas, and are centers of high-value economic activity in their respective nations and worldwide. And because metros form the fundamental bases for national and international economies, understanding their relative positioning before, during, and after the Great Recession provides important evidence on emerging shifts in the location of global economic resilience and future growth. The *Global MetroMonitor* examines data on economic output and employment in 150 of the world's largest metropolitan economies, located in 52 countries, from 1993 to 2010, and makes the following findings.

The Global Economy Is Metropolitan-led

The 150 metropolitan economies profiled in the *Global MetroMonitor* exhibit highly diverse stages of development. Their per capita measures of Gross Value Added (GVA) range widely, from under $1,000 in Hyderabad and Kolkata, to roughly $70,000 in San Jose, and Zurich.

What is consistent about these metropolitan areas, however, is their function as locations for high-value economic activity in their respective nations and world regions. Nearly four in five boast per capita Gross Value Added (GVA) measures that exceed averages for their nations. This is particularly true in rapidly emerging areas of Eastern Europe and Asia, where major metro incomes exceed those for nations by average margins of at least 80 percent.

As a result, these metro areas punch above their weight in national and global economic output. In 2007, they accounted for just under 12 percent of global population, but generated approximately 46 percent of world GDP.

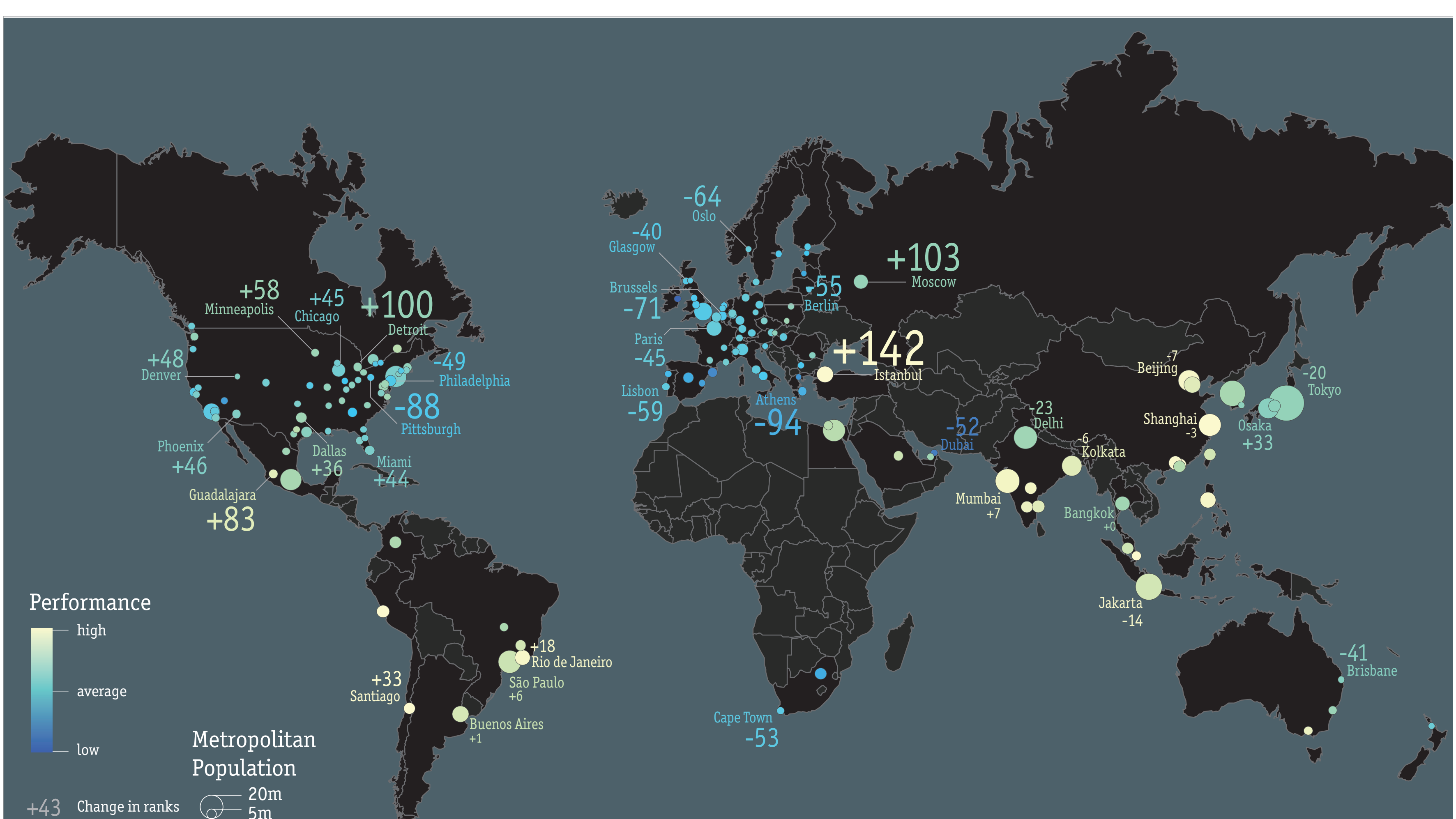
Downturn and Recovery Are Shifting Growth

Virtually no place completely escaped the effects of the global financial crisis and ensuing economic downturn in the late 2000s. Yet impacts across the 150 global metropolitan areas were highly uneven, as illustrated through the *Global MetroMonitor's* focus on the employment performance of these places during three distinct economic periods from the past two decades.

Pre-recession

Between 1993 and 2007, roughly half of the metro areas that achieved the strongest growth in income and employment were located in rising nations of Asia, Latin America, and the Middle East that benefited from new heights of global economic integration. Metro areas such as Shenzhen and Bangalore roughly tripled their income, and employment in Singapore and Belo Horizonte grew by more than half over the 14-year period.

Portions of the world's more industrialized regions, including the United States and Europe, also registered strong metro performers during that time. Eastern European metros such as Sofia and Krakow, as well as Dublin in Western Europe, achieved rapid growth in income. In the United States, Las Vegas, Phoenix, and Austin posted major employment gains over the same period. Overall, however, U.S. metros on average ranked slightly behind their European counterparts, and well behind their counterparts in the rest of the world, on economic performance through much of the 1990s and early- to mid-2000s.



Below
Performance during recovery and change in ranking: from recession to recovery period
U.S. and European metros were greatly weakened by the recession, while most Asian and Latin American metros were impacted far less.

Recession

The negative impact of the global economic downturn, commencing in 2008, was widespread among the 150 metro areas. Seven in eight lost either employment or income in at least one year between 2007–2008 and 2009–2010.

But for several global metropolitan areas, the late 2000s marked more of a temporary slowdown than a Great Recession. The top metro performers for the most part experienced no decline in either employment or income from 2007 to 2010. Fully 28 of the 30 top-ranked metros during that period were located outside of the United States and Europe, with China accounting for the top five. Australian metros (Melbourne, Brisbane, and Sydney) registered strong performance, due to their important economic linkages with stable East Asian economies. Latin American metros proved resilient as well, with Lima, Buenos Aires, Bogotá and three Brazilian metros ranking among the top 30.

By contrast, many of the metros in the United States and Europe that flew highest before the recession experienced tremendous falls. Dublin, Madrid, and the three Baltic capitals (Riga, Tallinn, and Vilnius), along with Las Vegas and Riverside in the United States, moved from the top 30 spots pre-recession to the bottom 30 spots during the recession. These regions exhibited significant asset bubbles in the 2000s, as evidenced by the fall in home prices in their respective nations in recent years. Overall, the Great Recession appeared to hit U.S. metros hardest, while it improved the relative position of metros outside the United States and Europe.

Recovery

The most recent year, from 2009 to 2010, appears to have further strengthened the relative economic standing of metro areas in the rising nations of Asia, Latin America, and the Middle East. Of the top 30 ranked metros, a diverse group of 29 was located outside the United States and Europe. China and India alone accounted for ten, Latin America registered seven, and the Middle East recorded four. Most of these metros posted annual growth rates of at least 2 percent in employment, and 5 percent in income, in the first year of worldwide recovery.

While the recession hit U.S. metros harder than their European counterparts, the recovery seems slower to take hold in European than American metros. Metros along Europe's western, eastern, and northern peripheries, from Porto and Valencia, to Thessaloniki and Sofia, to Helsinki and Stockholm, anchor the bottom 30 economic performers from 2009 to 2010. Meanwhile, several U.S. metros that suffered severe declines during the recession, such as Detroit and Cleveland, posted significant rebounds in their rankings on the strength of robust output growth, even as Atlanta and Las Vegas await signs of growth.

The upshot: The past two decades have seen lower-income metro areas in the global East and South "close the gap" with higher-income metros in Europe and the United States, and the worldwide economic upheaval has only accelerated the shift in growth toward metros in those regions of the world.

Other Factors Shape Metro Performance

Beyond indicating economic opportunities within broad world regions and different stages of development, metros' recent performance also reflects intrinsic factors such as their industrial base, and the impact of national fiscal, monetary, and trade policies.

First, the presence and magnitude of certain industries within metro areas related strongly to economic performance, though these differed by period and world region. Metros with high shares of their output in *construction* performed much better than average in the pre-recession period, particularly in the United States, but much worse than average in the recovery, particularly in Western Europe and other high-income regions. Before the recession, *energy and manufacturing* was associated with strong performance of lower-income metro areas, particularly in China and the Middle East, and weaker performance of U.S. metros. And high output in *non-market services*, such as government, health, and education, was a boon for European and American metros in the recession, signaling that those industries remained relatively healthy amid market turmoil.

Second, national context does matter. In any given period, roughly half to three-quarters of metro economic performance was associated with respective national economic performance. The analyses above point to distinct economic dynamics across U.S. metros that made their recession generally deeper than in other world regions, but that may also account for the stronger rebound some U.S. metros are posting compared to their European counterparts. Examining national economies alone, however, overlooks the important variations in metro performance that separated nearby metros such as Leipzig (#77) and Berlin (#144) in the pre-recession period; Abu Dhabi (#16) and Dubai (#97) during the recession; and Cleveland (#49) and Buffalo (#120) in the recovery.

As global metro areas emerge from the shadow of the Great Recession, they also find themselves in markedly different places along their own growth trajectories. Many in Asia and Latin America were scarcely affected by the recession at all, or have posted a full recovery. Several in the United States and other high-income regions have rebounded to their prior employment or income level, but not yet both. About half of the 150 continue to lose ground on one of the key measures, in most cases employment, and the bulk of these metros are in Western Europe and the United States. A small handful of metros, most in Europe, continued to decline in employment and income through 2010 as the recession raged on.

The *Global MetroMonitor* thus portrays a world economy whose continued transition will be driven in large part by the distinct experiences of its powerful network of major metropolitan economies. As metropolitan leaders worldwide confront the challenges and opportunities that accompany continued global economic integration, and many seek new growth models to replace the old ones, the shifting metro map points toward an emerging array of productive, metro-based economic relationships that could drive regional and national prosperity in the decades to come. On the following page, 150 of the largest metropolitan economies worldwide are ranked by their performance before, during, and after the Great Recession.

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METRO PERFORMANCE

BEFORE, DURING, AND AFTER THE GREAT RECESSION

The *Global MetroMonitor* ranks 150 of the largest metropolitan economies worldwide on their combined employment and income growth in three periods: pre-recession (1993 to 2007); recession (year of minimum growth 2007 to 2010); and recovery (2009 to 2010). Metropolitan economic performance is also analyzed within the context of broad world regions. The table below ranks metro areas by their performance in the recovery period, demonstrating differences among metros in the United States, Europe, and other parts of the world.

Metro areas outside the United States and Europe, especially emerging lower-income Asian and Latin American markets, dominate the list of strongest economic performers in the early stages of worldwide recovery. Some U.S. metros are bouncing back from a deep recession with increasing incomes, though most continue to shed employment. Europe accounts for most of the weakest metro performers, reflecting the impacts of the debt crisis in early 2010 as well as the rapid decline of housing-bubble markets in Spain, Ireland, and portions of Eastern Europe.

RECOVERY 2009–2010		PRE-RECESSION 1993–2007	RECESSION YEAR OF MINIMUM GROWTH 2007–2010
1	Istanbul	44	143
2	Shenzhen	1	4
3	Lima	16	11
4	Singapore	18	33
5	Santiago	41	38
6	Shanghai	8	3
7	Guangzhou	3	2
8	Beijing	4	1
9	Manila	34	24
10	Rio de Janeiro	100	28
11	Hyderabad	15	14
12	Mumbai	24	19
13	Bangalore	7	9
14	Melbourne	47	22
15	Guadalajara	69	98
16	Kolkata	39	10
17	Chennai	31	12
18	Tianjin	12	5
19	Buenos Aires	60	18
20	Jakarta	123	6
21	Taipei	53	39
22	Belo Horizonte	42	27
23	Kuala Lumpur	17	37
24	Riyadh	129	21
25	São Paulo	70	31
26	Austin	25	40
27	Montreal	74	45
28	Alexandria	36	8
29	Cairo	37	7
30	Hong Kong	72	48
31	Bogotá	46	25
32	Brasilia	95	20
33	Seoul	32	26
34	Mexico City	88	66
35	Bangkok	150	35
36	Virginia Beach	92	42
37	Washington	85	36
38	Krakow	23	13
39	Dallas	71	75
40	New Delhi	30	17
41	Monterrey	58	124
42	Baltimore	109	89
43	Abu Dhabi	5	16
44	Minneapolis	98	102
45	Sydney	76	30
46	Detroit	147	146
47	Moscow	9	150
48	Nashville	61	129
49	Cleveland	135	131
50	Seattle	79	60
51	San Antonio	78	32
52	Tokyo	143	72
53	Charlotte	65	141
54	St. Louis	133	68
55	Bratislava	26	52
56	Warsaw	38	15
57	Boston	94	92
58	Nagoya	146	109
59	Busan	89	29
60	Osaka	149	93
61	Houston	91	84
62	Cincinnati	118	118
63	Toronto	67	82
64	Brisbane	27	23
65	Bucharest	29	73
66	Memphis	107	121
67	Salt Lake City	48	123
68	Phoenix	20	114
69	Richmond	103	90
70	Bridgeport	110	91
71	Louisville	139	110
72	San Diego	43	112
73	Providence	105	103
74	Tampa	83	120
75	San Jose	73	142

METRO WORLD REGION

- UNITED STATES
- EUROPE
- REST OF THE WORLD

Source: Oxford Economics, Moody's Economy.com, and Cambridge Econometrics data. Some values based on forecasted estimates, please see Data and Methods section in the *Global MetroMonitor* for further details.

RECOVERY 2009-2010		PRE-RECESSION 1993-2007	RECESSION YEAR OF MINIMUM GROWTH 2007-2010
76	Oklahoma City	132	46
77	New York	90	88
78	Miami	66	122
79	Prague	33	50
80	Toulouse	52	44
81	Columbus	111	104
82	Chicago	115	127
83	Milwaukee	141	135
84	Denver	64	132
85	Orlando	40	119
86	Marseille	84	43
87	New Orleans	148	107
88	Vienna	122	49
89	Dusseldorf	126	85
90	Jacksonville	80	125
91	Auckland	55	55
92	Vancouver	63	95
93	Lyon	93	63
94	Hamburg	127	61
95	Sacramento	50	115
96	Paris	114	51
97	Lille	104	54
98	Oslo	106	34
99	Leipzig	77	65
100	Copenhagen	101	99
101	Zurich	142	58
102	Portland	45	139
103	Torino	137	105
104	Cologne	131	81
105	Budapest	57	86
106	Rome	116	67
107	Riverside	28	130
108	Stuttgart	134	113
109	Munich	102	76
110	Milan	120	111
111	Berlin	144	56
112	Lisbon	96	53

RECOVERY 2009-2010		PRE-RECESSION 1993-2007	RECESSION MINIMUM YEARLY GROWTH 2007-2010
113	Frankfurt	130	83
114	Ljubljana	81	106
115	Edinburgh	62	70
116	Los Angeles	82	137
117	Cape Town	75	64
118	Vilnius	13	147
119	Glasgow	86	79
120	Buffalo	117	69
121	Hartford	138	101
122	Kansas City	124	59
123	London	68	100
124	Helsinki	59	138
125	San Francisco	112	133
126	Rotterdam	125	71
127	Philadelphia	119	78
128	Rochester	136	77
129	Pittsburgh	128	41
130	Stockholm	87	108
131	Birmingham	121	117
132	Amsterdam	113	74
133	Brussels	97	62
134	Manchester	108	96
135	Naples	140	94
136	Sofia	10	80
137	Indianapolis	99	126
138	Tallinn	21	149
139	Atlanta	56	136
140	Oporto	145	87
141	Athens	19	47
142	Madrid	22	134
143	Johannesburg	54	116
144	Riga	11	148
145	Valencia	49	140
146	Las Vegas	14	128
147	Thessaloniki	51	57
148	Barcelona	35	145
149	Dubai	2	97
150	Dublin	6	144

LEARNING FROM GLOBAL METROS

A number of European and Asian cities have demonstrated sustained growth over the past three decades, notwithstanding the current economic crisis. Breaking free from historical dependencies, they overcame challenging crises to show progress in economic development. LSE Cities carried out in-depth research of four metro regions in the European Union and Asia, focusing on Munich (Germany), Torino (Italy), Barcelona (Spain) and Seoul (South Korea), to identify the processes, governance arrangements and interventions through which progress has been achieved. The aim is to provide U.S. leaders with valuable resources as they respond to the challenges posed by the current global financial crisis. The main policy lessons are illustrated below, followed by a summary of each global success profile.

Policy Lessons

The four metros offer insightful lessons on successful programs and policies that fundamentally transformed their economy. Though none have been perfectly successful, each has made decisive progress and set the groundwork for future growth, trade, and job creation. We have observed a number of key insights from the European and Asian metros.

An Intentional Government with Partners

The metros demonstrated the essential role of local and regional government (the tier between municipal and national levels) in sustaining and leading, economic development with national and business partners. Examples include:

Achieving vertical and horizontal alignment
A shared vision between Torino and Piemonte enabled them to win significant funding from the European Union

Delivering integrated strategic planning
Torino's new strategic plan helped promote economic diversification in parallel with a revitalized master planning framework

Establishing metropolitan and regional coalitions of public, private, and civic organizations
Munich's Future Bavaria Program invested in knowledge infrastructure and public venture capital

Creating effective intermediary bodies, including public-private partnerships
Barcelona Activa helped create a business incubator and provide seed capital funding to local firms

Establishing innovative public finance vehicles
Finpiemonte Partecipazioni, a public investment holdings company, invested in Torino and its region

Introducing effective metropolitan level government
Seoul realigned central and metropolitan government priorities

Effective governance and partnerships, as demonstrated by these metros, has helped improve the business climate, increased interest by international organizations and firms, and provided the necessary consistency and stability to realize long-term projects.

Internationalization and Trade

All four metros have developed programs to accelerate the internationalization of their economies over the past 30 years, including:

Trade and export promotion through public sector-led programs
Torino's "From Concept to Car" program has delivered new contracts and real jobs

Attracting foreign investment and international institutions
China is now investing significantly in the expansion of the Port of Barcelona

Using international events to spur new international interest
All four cities hosted Olympic Games and continue to organize global gatherings

Supporting internationalization programs among key metro organizations
Politecnico di Torino has significantly increased its international students

The impact of these activities can be seen in the increased number of foreign-owned companies, high- and medium-skilled immigrants, foreign tourists, students and convention visitors.

Innovation and Entrepreneurship

The framework for economic development in the EU and Asia has emphasized the transition to a "knowledge-based" or "knowledge-led" economy. This includes using innovation in processes and products to modernize traditional industries and support entrepreneurship to grow new knowledge-intensive sectors and firms. Described below are a number of such efforts:

Delivering an innovation-led economy through strategic planning
The Munich Cluster program promoted 19 hubs for biotechnology, energy, and environmental technologies

Promoting entrepreneurship
Barcelona and Torino set up business incubators and seed capital funds

Modernizing manufacturing industries and diversifying supply chain activities
The Politecnico di Torino re-tooled and diversified the automotive sector

Promoting investment into cutting-edge science and technology facilities and infrastructures
The Barcelona Economic Triangle now includes three major employment hubs

Re-using industrial land for centers of innovation and technology
Seoul designed the Digital Media City in a former landfill

This modernization has promoted local firms into national and international markets, fostering economic diversification, catalyzing local market revival, and re-orienting traditional manufacturing in emerging sectors.

Human Capital and Quality of Place

In our four metros, the human capital and quality of place agendas have merged with the knowledge economy, attracting new people and talent. To deliver human capital systems, the four metros have been:

Building and developing human capital
Torino successfully upgraded local skills and provided a local supply of university graduates for the new economy

Creating new amenities and quality places
All four cities have pioneered urban improvement projects, from Seoul's rediscovery of its underground river to Barcelona's regeneration of its waterfront

Revitalizing city centers
Torino upgraded its public spaces, removing cars and introducing public art

Supporting talent attraction and retention
The "Do It In Barcelona" campaign and Seoul's reinvention of the Guro district as a major fashion and IT factory hub

The four metros possess a more competitive and better-skilled workforce than they did 20 years ago, with a core set of competencies in both traditional and emerging productions and services. In addition, improvements to the quality of place have successfully attracted international talent and innovative companies.

Green Economy

The metros have understood the unique opportunity of shifting towards a green economy and combining environmental sustainability with new business opportunities, job creation and a more resilient metro economy. The initiatives to advance the green economy include:

Creating national renewable energy policies which are adopted and implemented locally
Germany's feed-in tariffs unleashed unprecedented levels of renewable energy investments

Promoting green economy approaches to sustain economic growth and job creation
Automotive firms in Torino re-oriented their production towards environmental machinery and services

Investing long-term in highly profitable green energy solutions
Munich's city-owned utility company invested strategically in wind and solar energy in Germany and internationally

Expanding green transport infrastructure
All metros continue to invest in rail and high speed rail infrastructure; Seoul and Munich are implementing trials for electric vehicle infrastructure

While data on the impact of green economy policies is only just emerging, lessons from the four metros suggest that green economy initiatives can help sustain employment, grow new markets for business, and improve the quality of life.

Conclusion

The European and Asian examples have pursued different initiatives through an integrated approach, taking action on all five fronts and setting themselves on a path to longer-term success. The case studies suggest that metros that adopt aspects of these five areas—an intentional government with partners, internationalization and trade, innovation and entrepreneurship, human capital and quality of place, and the green economy—will be rewarded in the future.

In the next section, the metros and their programs are defined and highlighted.

MUNICH
STAYING AHEAD ON INNOVATION

POPULATION IN 2010: 3,389,659 • EMPLOYMENT IN 2010: 1,961,927
GROSS VALUE ADDED (GVA) PER PERSON IN 2007: $53,619

Munich is a leading German metropolitan region for high-tech activity, with a powerful innovation system. It is, arguably, Germany's Silicon Valley—with dominant positions in electronics and advanced manufacturing—and is famous for the "Munich Mix" of sectors and company sizes, including world-leading firms like BMW, Siemens, and MAN. Capital of the state of Bavaria, Munich today is one of the top performing cities in Germany, Europe's strongest economy and the fourth largest economy in the world.

The Challenge

By the mid 1990s, Munich's competitive position was under threat. The recession of 1993–1994 dealt a heavy blow to Munich's export-oriented industries and the end of the Cold War triggered a rapid drop in demand in the defense and aerospace industries. German reunification and globalization both threatened to shift growth away from Munich and Bavaria, towards Berlin and to other countries moving up the value chain. City leaders feared that Munich's era of growth might have ended.

Leadership and Intentionality

The Bavaria state government responded strongly to these threats, initiating new strategies to promote innovation and stimulate long-term growth. All state governments in Germany are leading actors in economic development, but the state of Bavaria's decision to sell government-owned shares worth €2.9 billion in order to finance its innovation initiatives made it particularly powerful and effective. City and state governments have provided political stability, enabling Bavaria's visionary leaders to invest in crucial metropolitan infrastructure and universities. A cadre of technically-educated personnel in public agencies ("geeks in government") has also helped to drive change.

The institutional strength of Munich and Bavaria more generally played an important part in the metro's successful recovery.

Institutional thickness to propel innovation. With over 55,000 R&D full time equivalent positions, 13 universities, and an abundance of government-financed research centers, Munich has become a model of "institutional thickness." The profound level of connections between the business, university, and research community is one of Munich's most valuable assets.

Strong service-manufacturing nexus. The region's economic strength and capacity to innovate has further been linked to a particularly strong "service-manufacturing nexus"—a key characteristic of Germany's economy which is centrally based on interacting knowledge-intense services with advanced, knowledge-intense industries.

Interventions

The Bavarian state government initiated a series of programs to stay ahead on innovation, beginning with the Offensive Zukunft Bayern (Future Bavaria Initiative) in 1994 which led into the High-Tech Initiative in 1999 and the Cluster Program in 2006.

The Future Bavaria Initiative. This program had three overlapping activities: investments in "knowledge" infrastructure, knowledge transfer, and a "public venture capital," and high-tech firm formation. Funded through the sale of government-owned shares in a range of enterprises, this €2.9 billion initiative included over 80 projects including the construction of eight new polytechnic colleges and helping over 450 innovative (but risky) start-ups through subsidies and low interest loans.

The High-Tech Initiative. This program concentrated its support on various key technologies, including life sciences, ICT, environmental technology and mechatronics. The HTI was also funded through the sale of government-owned shares, raising €1.35 billion, and built on four "pillars": the expansion of world-class high-tech centers, "technology concepts" for all regions, and a state-wide program of start-up promotion and technological infrastructure.

The Cluster Program. This program was initiated with limited funding but with a highly targeted approach of supporting maturing clusters. The program manages 19 specific clusters, such as biotechnology, energy, and environmental technologies, to support collaboration between firms, researchers, and venture capital.

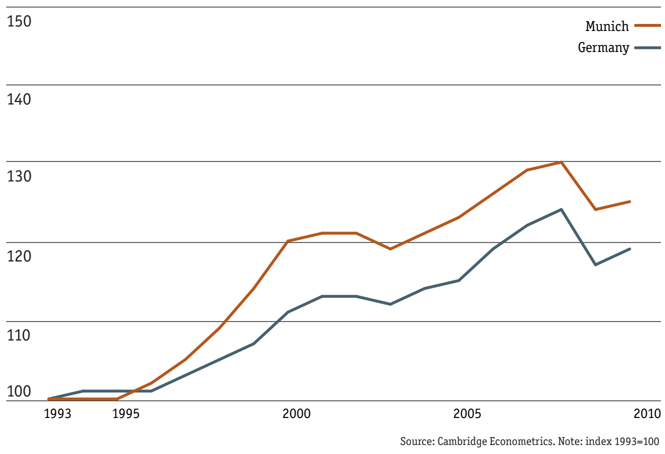
Results

The results culminating from these and other efforts have been impressive. Munich has strengthened its presence in science and advanced manufacturing, for example, with output related to transport equipment more than doubling since 1990. At the same time, Munich is diversifying into new activities, notably biotech and increasingly, "cleantech" activities such as green energy and low-carbon vehicles with a three-fold increase in patents related to climate change mitigation over the last 20 years.

Innovative activity in the metro rose markedly during the 1990s, especially in ICT, biotech, and green industries. Munich's share of patents in Germany has grown from 11 per cent in 1980 to 13 per cent 2007, the third largest in Germany. 2008 economic output per capita has doubled since 1991 (from €32,078 to now €64,625) and is now comfortably above regional and national averages.

In general terms, Munich's success story can be summarized by four key success factors. First, deep connections between public, private and third sector actors—"institutional thickness"—have produced a clear sense of common purpose, and long term, focused policy interventions. Second, consistent state-led policies have supported and advanced economic clusters and innovation. Third, Munich's economic diversity and some world-beating firms have provided economic resilience and helped to spark new ideas. Fourth, the state and the city of Munich invested in the assets that matter, notably in human capital (via public education) and infrastructure (such as the new airport).

Munich
GVA per person (income) 1993-2010, indexed against 1993 levels



Source: Cambridge Econometrics. Note: index 1993=100

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Munich has consistently outperformed the national average in income since the mid 1990s. It suffered a significant drop in income during the recession but is now recovering.

TORINO
RECLAIMING AND DIVERSIFYING LOCAL STRENGTHS

POPULATION IN 2010: 2,286,985 • EMPLOYMENT IN 2010: 1,047,407
GROSS VALUE ADDED (GVA) PER PERSON IN 2007: $30,067

Torino has been automaker Fiat's stronghold for decades, earning it the title, 'the Italian Detroit'. Capital of the region of Piemonte (Piedmont), Torino was the heart of the industrial triangle that drove Italy's economic miracle in the 1960s and 1970s. From facing acute crisis just twenty years ago, Torino's auto sector adapted and recovered, and the city diversified into new sectors, like design and aerospace. As post-industrial cities around the globe struggle to remake themselves, the story of Torino offers useful insights about reclaiming and diversifying local strengths.

The Challenge

The oil crisis of the mid-1970s and increasing global competition led Fiat to restructure its supply chains, with a negative impact on the local manufacturing-based economy. 100,000 jobs were lost in the 1980s alone. As Fiat restructured its research and training activities and successive mayors failed to take effective control, Torino faced the prospect of an institutional and economic vacuum.

Leadership and Intentionality

Torino's adaptation was driven by entrepreneurial public and private actors. The restructuring of Fiat proved challenging for its suppliers, and yet many of them emerged more efficient and competitive internationally. The local Union of Industrialists and political institutions worked alongside manufacturers to help firms adapt to new conditions and enter new markets.

As Fiat concentrated transformation internally, other institutions emerged to nurture Torino's burgeoning expertise and attract international industry. Bank foundations accelerated innovation and R&D, and invested in new cross-sectoral institutions. The Politecnico di Torino, the city's major university, modified its courses, relocated to the heart of the city and worked with public and private actors to bring in international firms and research centers.

Devolved national power galvanized momentum for Torino in the early 1990s, as Mayor Castellani initiated two major planning processes. The strategic plan linked the changes in the city's auto sector to a new vision for Torino as a globally-oriented, innovative and diversified economy, supported by a new city masterplan that reconfigured Torino's industrial core. City and regional governments enabled the changes pursued by other economic actors to accelerate, flourish and spread.

Interventions

Attracting financial investment through collaboration. Collaboration between Torino and Piemonte brought in funding from the EU: €2.5 billion from the EU Structural Funds (publicly co-funded locally) since 1989 and €3.3 billion from the European Investment Bank since the mid-1990s.

Reclaiming industrial areas for the new economy. The new masterplan enabled Torino's industrial artery and railway running through the center of the city to be reclaimed. This 'Spina Centrale' (central backbone) and four brownfield sites are being redeveloped into mixed-use neighborhoods, and linked back to the urban fabric through new transport infrastructure, including Torino's first metro line and a high-speed link to Milan and central Europe.

Bridging the gap. Torino's bank foundations and the Politecnico bridged the gap between universities, businesses, and private capital by facilitating investment, innovation, and effective market entry.

The Politecnico reconfigured its courses for the new economy (e.g. automotive engineering, design), attracting foreign firms, students and talent back to Torino. Private firms have taken up positions in the city center campus, including GM Powertrain Europe and China's second largest car manufacturer, JAC. The Politecnico's business incubator 13P, jointly owned by city and regional governments and the Torino Chamber of Commerce, is a major contributor to Piemonte's emergence as the Italian region with the most university spin-offs.

Torino's bank foundations, Compagnia di San Paolo and Fondazione Cassa di Risparmio di Torino, play a crucial intermediary role between Torino's political system and the market place, accelerating innovation in sectors like sustainable mobility and ICT. Between 2001 and 2005, they invested €380 million in Torino, sponsoring new research and innovation institutes.

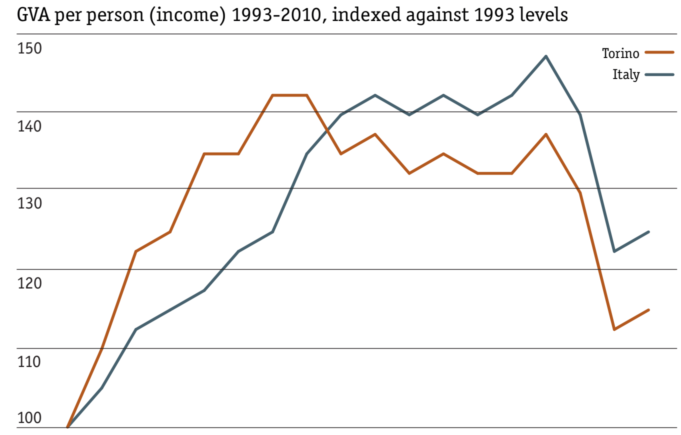
Supporting firms into new sectors and new international markets. The Unione Industriali di Torino, the Torino Chamber of Commerce and the Piemonte Agency for Investments, Exports and Tourism help new or struggling firms primarily in the automotive, ICT, mechatronics and aerospace sectors adapt and enter new markets. 'From Concept to Car' is a small but important initiative which helped 152 local auto suppliers secure €41.8 million in export sales from an investment of €4.8 million in 2003-2009.

Steering growth towards new economic sectors. In 2008, Piemonte set up twelve Innovation Poles in sectors like biotechnology, design and ICT. They align private firms with research centers as part of a shift towards a regional innovation system, attracting €90 million from the EU so far.

Results

Torino's efforts, mobilized by businesses, philanthropists, industry bodies, universities and city and regional governments, prevented Fiat's acute crisis and subsequent restructuring from devastating the city and wider region. This one-company town has diversified and survived. Between 1999 and 2007, unemployment decreased from 9 percent to 4.7 percent and GVA per capita increased by 15 percent. The design sector generates around €12 billion per year and employs 50,000 people, while the aerospace cluster has a turnover of €2.6 billion and 12,500 people. Torino has been hit hard by the global financial crisis, but the adaptability and resilience it has demonstrated over the past two decades stand it in good stead to continue to reclaim and diversify its local strengths as it recovers.

Torino
GVA per person (income) 1993-2010, indexed against 1993 levels



Source: Cambridge Econometrics. Note: index 1993=100

Left
Torino's income grew faster than Italy's in the last decade but has since performed worse than the national average. Its income has stagnated over the whole period.

BARCELONA
GLOBAL REPOSITIONING OF AN EMERGING METRO

POPULATION IN 2010: 5,511,680 • EMPLOYMENT IN 2010: 2,455,666
GROSS VALUE ADDED (GVA) PER PERSON IN 2007: $25,918

Barcelona has achieved an extraordinary transformation in its economy since the 1980s. The capital of Catalonia, the largest economic region in Spain, Barcelona successfully reinvented itself following nearly 40 years of General Franco's dictatorship, strengthening its position in Europe and attracting foreign investment, international entrepreneurs and tourists. While Barcelona has been hit hard by the recent financial crisis, it offers important insights into the fundamentals of urban economic transformation in a country that is Europe's fifth largest economy and the eleventh largest economy in the world.

The Challenge

Franco's death in 1975 heralded the beginning of democracy in Spain, but left Barcelona with a substantial legacy of economic problems, which were compounded by competitive pressure during the 1980s. By 1986, unemployment reached 21 percent and parts of the city fell derelict. The creation of the European Single Market in 1993 provided Barcelona with a unique opportunity for economic renaissance.

Leadership and Intentionality

Democracy brought a strong political mandate for change, seized by Barcelona Mayor Pasqual Maragall. Maragall initiated the city's first highly-participatory strategic planning process in 1988, creating a vision of Barcelona as the capital of the Mediterranean. The government of Catalonia became increasingly powerful in areas such as economic development, infrastructure, and land development. New agencies were created, combining public and private sectors in agile and effective companies and consortiums. This was especially important given the metro's fragmented governance, and effectively involved the dynamic private sector in Barcelona's transformation.

Interventions

City and regional governments and consortia drove forward a set of interconnected initiatives, mobilized by new governance models and a vision of Barcelona's future. These included:

Making the world take notice: For Barcelona, international promotion has been about much more than tourism. Mayor Serra's successful decision to bid for the 1992 Olympic Games shone a light on Barcelona and attracted the international investment needed to kick-start its transformation. Major urban redevelopments and investment in infrastructure have made the most of the city's coastal location, climate, and high quality of life, which the city now affords.

Stimulating entrepreneurship and moving into new sectors: Barcelona's attractive brand is now effectively leveraged to develop priority growth sectors, such as design, media, logistics and biotechnology, and to attract international entrepreneurs.

Barcelona Activa. In 1986, the city council founded Barcelona Activa, a pioneering local development agency. Its creation marked a step-change in Barcelona's approach to employment and economic development, positioning new entrepreneurship. Barcelona was one of the first cities in Spain to create a business incubator and seed capital funds, and the first city in Europe to develop an online business incubator. Barcelona Activa has been quick to respond to changes in technology and new markets, and is committed to a client-oriented approach, which combines both virtual and physical spaces for learning, networking, and collaboration.

Planning for new metropolitan growth and governance. The Barcelona brand is also being leveraged internationally across the metropolitan region through the Barcelona Economic Triangle, providing a taste of the benefits to come when Barcelona's forthcoming metropolitan agency kicks into action.

Barcelona Economic Triangle. This important metro-wide initiative is formed of three sets of clusters, each specializing in different aspects of the next economy. It includes BET in the Llobregat area with and aerospace and logistics focus, Valles area with its science and creative industries focus, and the 22@ district, a significant urban transformation project for the new knowledge economy. The combination of the three creates a metropolitan triangle for next metro economy, which brings together the municipalities and regional government with other players, and involves significant public investments.

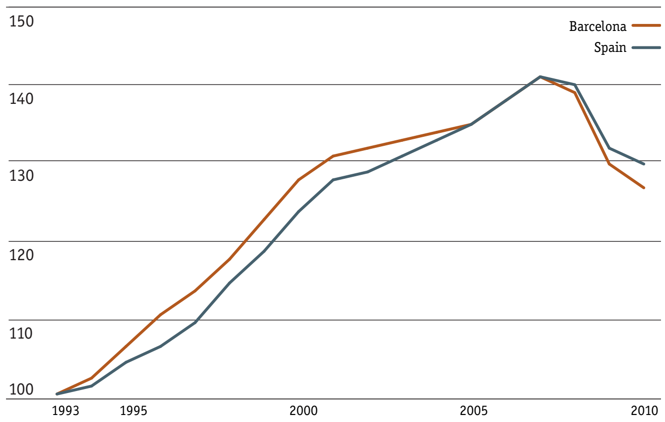
Results

The results of these actions are impressive. Catalonia has grown faster than Spanish and European averages over the past two decades. By 2007, unemployment in Catalonia had fallen to 6.5 percent, a significant achievement given its starting point in the 1980s. Over 8 percent of the working age population engage in some form of business creation activity each year, compared to the European average of 5.4 percent. Barcelona is now ranked as the fourth best city in Europe to do business.

Catalonia is Spain's leading export region, responsible for 27 percent of total Spanish goods exports. Medium-high tech exports now make up 51 percent of all industrial exports by value. The Port of Barcelona is one of the fastest growing ports in Europe, is well positioned in relation to emerging economies, having captured 38% of traffic between China and Spain, and benefits from the largest logistics cluster in southern Europe. Airport and rail capacity have also increased. The city has an operating high-speed rail link to Madrid and a link to France under development. These new infrastructures have allowed a massive increase in tourism. Tourist arrivals grew from 1.8 million a year in 1992 to over 6.7 million in 2008.

While the current global financial crisis has severely impacted Barcelona, it has a robust framework, a clear vision, and a myriad of actors to help it achieve the next stage in its transformation.

Barcelona
GVA per person (income) 1993-2010, indexed against 1993 levels



Source: Cambridge Econometrics. Note: index 1993=100

Left
Barcelona fared slightly better than Spain in the pre-recession period, but it has been affected by the recession more strongly. It is the only metro profiled that is still in recession.

SEOUL
ORCHESTRATING AN INNOVATION-LED ECONOMY

POPULATION IN 2010: 23,907,009 • EMPLOYMENT IN 2010: 11,887,826
GROSS VALUE ADDED (GVA) PER PERSON IN 2007: $21,372

With almost 30 years of double-digit growth and a string of technological breakthroughs captivating the global market, Seoul earned its reputation as a "miracle economy." Its growth and success can be traced back to central government's vision to transform the country into a global leader in exports. Success is also linked to the collaborative relationship between government and leading conglomerates, which allowed these firms to gain a significant share of global markets in a short time.

Seoul's economic transformation begins in the 1960s when South Korea's central government pursued a policy of export-oriented industrialization. A five-year economic development plan resulted in the growth of the textile and apparel industry as the leading sector in Seoul, marking its entry into the global marketplace.

The Challenge:

With Seoul increasingly tied to the global market, broader economic forces created a new level of uncertainty and vulnerability. Starting in 1970s, oil price hikes, rapid fluctuations in international interest rates, and an increasingly strong won (the Korean currency) boosted the costs of manufacturing goods. Seoul's export economy was undercut by other Asian competitors, encouraging South Korea to shift towards high tech production. These events galvanized new waves of central government policies, public-private partnerships, and initiatives by local government. The effect of the Asian financial crisis of 1997 ensured further sharpening of these policies and programs.

Leadership and Intentionality

South Korea's highly centralized government used its range of powers to orchestrate a competitive future. It identified new market opportunities; incentivized companies to enter specific sectors; promoted collaborative R&D projects in very specific industries; and identified and eliminated market redundancies. In short, the government virtually ensured all the conditions were in place for firms to thrive.

This included:

Advancing research and development in new and emerging sectors: Central government's impact on national industry is exemplified by its focus on the information and communication technology sector. The Electronics Industry Promotion Law increased investments in electronics research and swayed large companies to focus heavily on this sector. The central government also supported the creation of the Korea Institute of Electronics Technology (KIET), which conducted research into semiconductor design, processes, and systems.

Accelerating Market Entry with Public-Partnerships: The central government spearheaded the "Very-Large-Scale-Integration" (VLSI) research consortium when three major Korean semiconductor producers were making overlapping but redundant investments. With a clear vision to produce the world's next generation memory chip, government and private companies pooled their resources to accelerate R&D. Combined efforts not only brought the chip quickly to market, it laid the groundwork for a chip that became the world market leader just a few years later. Samsung, one of the Seoul companies supported by such policies, grew from virtually no global market share in memory chips in 1984 to just over 10 percent of the global market share in 1993.

Interventions

In the past decade, Seoul's economic successes have broadened in large part to a growing number of local actors taking part. Devolution, enacted in 1995, officially allowed locally-elected mayors and governors (at the regional level) to participate. Locally-driven efforts include:

Creating knowledge-based industrial clusters. Seoul city government has pursued an industrial policy known as the Creative Industry Promotion Program that promotes knowledge-based industries as the new engine in Seoul's economy. In 2007, the city government designated six industries as the new growth engines: tourism; design and fashion; digital content; conventions; research and development (R&D) in information technology (IT), nanotechnology (NT), and biotechnology (BT); and financial and business services. Each industrial strand is associated with a major new development project in Seoul to agglomerate related firms.

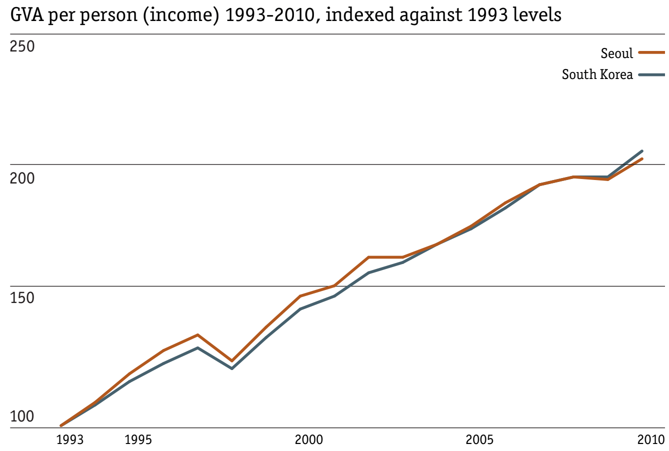
Transforming a former industrial park to a 'digital industrial complex' to advance high-tech industries. The Seoul city government redeveloped this aging former industrial complex in Guro into an urban high-tech industrial complex to nurture and advance high-tech firms. Within a decade, this newly named Seoul Digital Industrial Complex attracted more than 6,700 businesses, primarily consisting of small start-up venture companies, collectively employing more than 100,000 people and earning approximately $8 billion in revenue annually.

Transforming a waste facility into an "information city" to advance the media and entertainment industries. Seoul city government has realized Samgam Digital Media City (DMC), a state-of-the-art information city to nurture and advance the digital media industry. With a size comparable to New York City's Central Park, DMC is completely wired with sophisticated IT infrastructure and services. While still under construction, DMC has attracted several hundred digital media firms and houses over 25,000 employees.

Results

As of 2003, the capital region accounted for 55 percent of all manufacturing firms, 73 percent of total R&D institutions, and 77 percent of Korea's venture companies, and 88 percent of all headquarters of major large enterprises. While the industrial success of Seoul was clearly borne out of strong central government policies and regulations, Seoul's continued economic success thrives in part from partnerships and new policies intentionally designed to improve and support Seoul.

Seoul
GVA per person (income) 1993-2010, indexed against 1993 levels



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Seoul has very closely matched South Korea in terms of income, with a very strong growth pattern only broken by the Asian Financial Crisis at the end of the last decade.

METROPOLITAN BUSINESS PLANNING IN U.S. REGIONS

Amid the wreckage of the Great Recession, America needs to move toward a more productive next economy that will likely be more export-oriented, lower-carbon, and innovation-driven. Already, many increasingly sophisticated and self-starting metropolitan areas are taking the initiative to move in this direction on their own. Brookings' Metropolitan Business Planning Initiative is aimed at aiding and abetting their efforts.

Logic and Concept

The metro business planning concept stems from several critical realities. First, it reflects that in today's economy, prosperity primarily flows from market activity. Second, it follows from the fact that major market systems are primarily metro-based. And third, it acknowledges that regional economies need highly specialized plans for performance enhancement. The notion also responds to the concern that federal and state economic development policies and programs are still too top-down, overly siloed, and inflexible and hard-to-use by increasingly creative, data-driven metro actors.

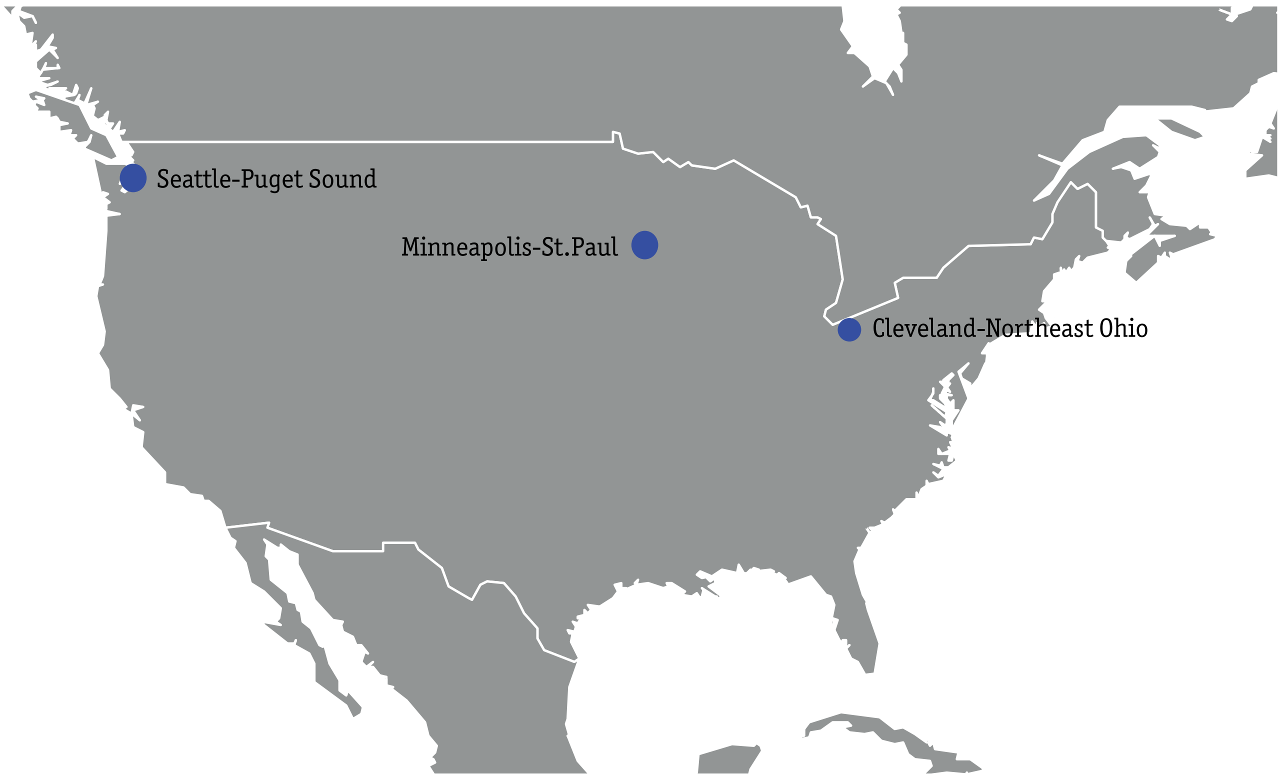
And so, in a vanguard of U.S. regions, robust consortiums of regional planning entities, local governments, business and civic groups, and assorted elected officials are coming together to craft metropolitan business plans for transforming the local economy. These metropolitan business plans adopt the same discipline of private-sector "business planning" to rigorously situate the market position of regional economies; detail emerging regional strategies for generating metro prosperity; and advance detailed development initiatives for catalytic interventions. By delivering—from the bottom-up—customized analysis of the market inputs, goals, and strategies necessary to improve regional economic performance, the plans will advance the state of regional economic development practice and help to recast federal-state-metro relations in the United States.

Implementation

Three metros are currently piloting the metropolitan business planning process and using it to better position themselves for successful growth in the next American economy. Cleveland-Northeast Ohio aims to transition "old" economy manufacturing companies to "next" economy pursuits; Minneapolis-St. Paul is making a push for a more entrepreneurial-oriented culture; and Seattle-Puget Sound seeks to be a leading region for the export of energy efficiency goods and services to the rest of the world.

In developing their plans, each metro has conducted rigorous market analysis of its local circumstances, grounded specific strategies in hard data, and worked through many of the implementation details of their chosen interventions. In each case, nearly a year's worth of community meetings, expert consultation, and problem analysis has yielded an interim work product that already includes scores of pages of market trend intelligence, extensive quantitative and qualitative analysis, and the preparation of unprecedentedly detailed development proposals complete with fine-grained design blueprints, specific operational information, financials, and return-on-investment estimates. In the future, each region will present its plan and featured intervention proposals to an array of federal, state, local, and philanthropic "investors" for possible engagement. Through their efforts, they are showcasing a new best practice, demonstrating the quality of regional strategy-making, and inverting the conventional top-down nature of federal-state-metro dealings.

Nor are the regional business plan metros only testing a bold new way to propose and implement a single transformative project. As is the case in the private-sector, the pilot metros will regularly revisit their plans to tune them to changing circumstances and new market realities and reshape strategies accordingly to best engage federal, state, and local policymakers/investors on their most current priorities. In that sense, the pilot metros are testing not just a way to develop single initiatives but instead a way to rethink the entire nature of intergovernmental relations as they respond to the increasingly volatile dynamics of the global economy. Going forward that entails the greatest promise of metropolitan business planning as it is now being invented.



SEATTLE–PUGET SOUND
CATALYZING THE REGIONAL ENERGY EFFICIENCY CLUSTER TO STAY AHEAD

POPULATION IN 2010: 3,459,231 • EMPLOYMENT IN 2010: 1,725,377
GROSS VALUE ADDED (GVA) PER PERSON IN 2007: $49,048

The Seattle-Puget Sound region remains one of America's most economically competitive, but continued prosperity will require metro leaders to expand beyond the area's current industry base to drive future growth.

The four-county Seattle-Puget Sound region in America's Pacific Northwest is anchored by cities, such as Seattle, Tacoma, and Bellevue. It is home to a globally connected, diverse, dynamic, and knowledge-intensive economy that, in 2008, registered at $187 billion (expressed as 2000 dollars). The region's current industry profile—developed over decades in information technology, aerospace, clean energy, and life sciences—has propelled excellent job growth and export intensity in recent years. Yet, various regional industries, including historic mainstays—such as forest products and fisheries, and even today's top-performers, such as IT and aerospace—have not generated strong productivity, and in some cases job, growth over the past decade. Seattle-Puget Sound's continued economic prosperity may therefore need to come from new, different sources of growth in the future.

To boost future prospects, Seattle-Puget Sound is using the metropolitan business planning process to strategically target the growth of its energy efficiency industry.

Out of approximately 22,900 cleantech jobs currently in Seattle-Puget Sound, 40 percent are already in fields related to building energy efficiency (EE), spanning all major industry aspects from design and components to energy services. The Puget Sound Regional Council, the region's metropolitan planning organization and regional economic development entity, views this existing strong industry concentration as a major economic development opportunity. For that reason, it has convened a wide cross-section of local government, business, trade association, venture capital, utility, research, and civic leaders to engage in the metropolitan business planning. Together, after 11 months of intense consultation, deep market analysis, and program design, they have settled on a strategy for turning the region's existing energy efficiency cluster into a leading export sector and key source of job growth to ultimately benefit overall regional innovation, entrepreneurship, and global competitiveness. Motivating these stakeholders are projections estimating that the U.S. EE market alone will expand to $700 billion by 2030; recognition that the region possesses strong competencies in related fields like IT and green building; and a shared desire to stake a claim as the world's leading EE services hub.

Seattle-Puget Sound's major catalytic initiative—the proposed Building Energy Efficiency Testing and Integration Center and Demonstration Network (BETI)—will help catalyze the growth of the region's EE cluster.

EE innovators in Seattle-Puget Sound (and elsewhere) face a challenge in commercializing new products and services because they have not sufficiently satisfied market demands for the testing, demonstration, and verification of new technologies in an integrated fashion. BETI—a project now articulated in dozens of pages of market analysis, well-defined operational ideas, and complete financials—will address this barrier to EE innovation. To do this, it will provide entrepreneurs and firms in Seattle-Puget Sound physical space in lab and real world settings to test, verify, and integrate promising products and services, as well as opportunities to connect to other resources for business, commercialization, export, and regulatory assistance. Through its suite of services, BETI will help alleviate some EE investor and buyer risks and take advantage of market trends to commercialize new products, grow customer bases, increase market penetration, and ultimately spur regional business growth and attraction to brand Seattle-Puget Sound as the leading regional EE hub.

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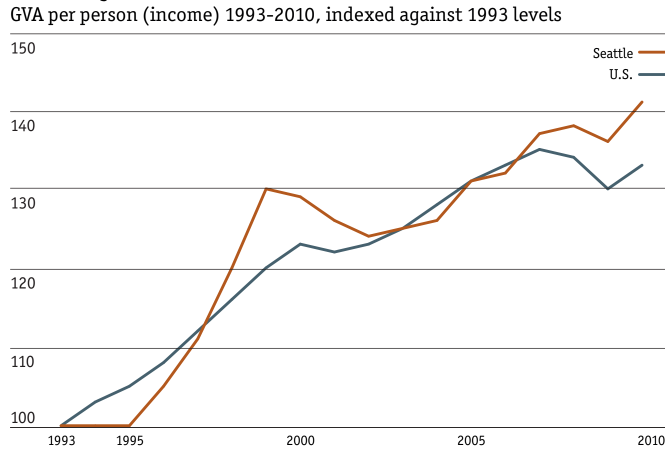
With detailed plans now in place, the Seattle-Puget Sound metropolitan business planning team is currently engaging with federal and state government leaders and other public, private, and civic stakeholders to form partnerships, seek funding, and advocate for specific policy reforms to get BETI off the ground and support successful implementation and operations in the future. Recently, the State of Washington's Clean Energy Leadership Council completed a comprehensive clean energy economic development strategy that identifies the BETI approach as one of the state's top opportunities for clean energy innovation. Already a "horizontal" regional partnership of governments and the private sector is moving to work "bottom-up" to make BETI—and transformation in the EE sector—real.

Seattle-Puget Sound
GVA per person (income) 1993-2010, indexed against 1993 levels



Source: Cambridge Econometrics. Note: index 1993=100

Left
Seattle's income grew much quicker than the national average in the last decade. It realigned with the U.S. after the end of the dot.com bubble and overtook the U.S. again during the recession.

CLEVELAND–NORTHEAST OHIO

TRANSITIONING OLD ECONOMY INDUSTRIES TO NEXT ECONOMY GROWTH

POPULATION IN 2010: 4,139,022 • EMPLOYMENT IN 2010: 1,913,039
GROSS VALUE ADDED (GVA) PER PERSON IN 2007: $33,558

Cleveland-Northeast Ohio is in economic transition and its successful reinvention will depend on redeploying historic assets to new competitive arenas.

Cleveland-Northeast Ohio is home to a $170 billion economy (as of 2008 in nominal dollars) that is anchored by the large Cleveland, Akron, and Youngstown metropolitan areas and encompasses several other smaller, but distinct, metropolitan, micropolitan, and rural areas. The region as a whole not only shares labor, capital, and supply markets but also a common history in steel, rubber, chemicals, and automotive assembly. Once a leader in this industrial/manufacturing-based economy, Cleveland-Northeast Ohio has seen its competitive advantages in this sort of production erode in the face of global competition. For decades, the region's manufacturing base has been contracting, and, in recent years, the area's productivity rate grew at less than half of the U.S. pace as it experienced some of the worst job losses in the nation. At the same time, Cleveland-Northeast Ohio's legacy of strengths in its existing skilled manufacturing workforce, multiple top-ranked research institutions, relatively high patenting rates, and strong exporting performance hold out a tremendous opportunity for turning the regional economy to new pursuits in growth markets like clean energy, biosciences, and advanced materials.

To speed economic transformation, Cleveland-Northeast Ohio is using the metropolitan business planning approach to better connect targeted older manufacturing firms to the regional innovation infrastructure.

Given the urgency to revitalize Cleveland-Northeast Ohio, The Fund for our Economic Future, a unique partnership of more than 50 regional philanthropies, along with the region's federally-funded Manufacturing Extension Partnership (MEP) affiliate, MAGNET, has convened an unprecedented collaboration of local governments, elected officials, businesses, civic leaders, research and education institutions, and engaged citizens to address regional challenges. Together, this group has embraced the discipline of "business planning" to strengthen the region's existing and emerging industry clusters, enhance governance coordination, foster entrepreneurship, and develop talented workers to meet current and future demand. Now, nearly a year's worth of community meetings, expert consultation, and deep analysis has yielded an interim work product that already includes scores of pages of market trend intelligence, extensive quantitative and qualitative analysis, and the development of a highly detailed change-initiative. An initial focus is the manufacturing sector, which still directly employs 17 percent of all workers in Cleveland-Northeast Ohio, indirectly drives over 45 percent of total regional employment, and contributes 18 percent to the state's gross domestic product. While manufacturing remains crucial to the regional economy, the sector has lost the innovative edge necessary to compete in the future economy. In particular, Cleveland-Northeast Ohio's estimated 1,600 small to mid-size manufacturing firms have typically focused on cutting costs to stay competitive rather than investing in their innovation capacity. It is a dynamic that must change.

Hence Cleveland-Northeast Ohio's major catalytic initiative: the proposed Partnership for Regional Innovation Services to Manufacturers (PRISM) will help transition older manufacturing firms to new high-growth markets.

Here, the challenge has been well defined. Many of Cleveland-Northeast Ohio's "traditional" small to mid-size manufacturing firms have lost much of their ability to pursue new opportunities after years of cutting costs to respond to competitive pressures rather than investing in innovation-boosting activities. Therefore, Cleveland-area business, civic, and government leaders have together designed PRISM as a well-planned intervention to attack that problem, and embedded their plan in dozens of fine-grained pages of specific operational information, yearly financials, and return-on-investment estimates. As called for in these plans, PRISM will with carefully tailored interventions help the region's small and mid-sized manufacturers better connect to and leverage the region's existing innovation infrastructure by providing them with hands-on business planning and management assistance, marketing insights and analysis, and links to other relevant regional resources. In terms of execution, the initiative will be directed by MAGNET, the MEP entity, which will augment its decades of experience helping manufacturers with new and expanded capacity in market research, analytic tools, and partnership management. With PRISM's high-quality assistance, many targeted firms in polymers, chemicals, and metals could translate well into such in-demand pursuits as global health, flexible electronics, transportation, and clean energy, among others.

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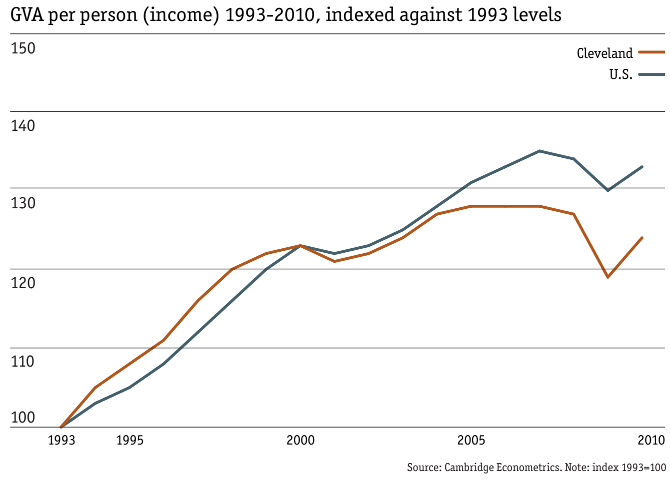
PRISM's implementation plan is ready to go, and a network of Cleveland-Northeast Ohio economic development and local government entities and officials is committed to helping the initiative effectively and efficiently execute its mission and services. The region's business planning team, including regional and local government officials, is now engaging with federal and state government leaders and other private and civic stakeholders to acquire the policy, funding, and programmatic support and flexibility necessary to successfully launch PRISM and sustain its operations over the long-run. In this way a new sort of bottom-up collaborative push is aiming to restructure business-as-usual.

Cleveland-Northeast Ohio
GVA per person (income) 1993-2010, indexed against 1993 levels



Source: Cambridge Econometrics. Note: index 1993=100

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Cleveland's income was overtaken by the national average at the start of the decade and has stagnated since then. The recession has further widened its income gap with the U.S.

MINNEAPOLIS–ST. PAUL
ACCELERATING INNOVATIVE ACTIVITIES IN THE ENTREPRENEURIAL ECOSYSTEM

POPULATION IN 2010: 3,303,125 • EMPLOYMENT IN 2010: 1,758,491
GROSS VALUE ADDED (GVA) PER PERSON IN 2007: $44,781

Minneapolis-St. Paul must leverage its significant assets to reestablish the region as a center for innovation, entrepreneurship, and economic growth.

The 13-county Minneapolis-St. Paul region in America's Midwest is anchored by the "Twin Cities" of Minneapolis and St. Paul. In 2008, it was home to a $164 billion economy (expressed in 2000 dollars). The region boasts a considerable economic engine, anchored by such assets as 21 major Fortune 500 companies; a highly-skilled workforce where 37.6 percent of the residents (a top-10 U.S. metro ranking) hold at least a college degree; and a research infrastructure with a patenting rate nearly double the U.S. average. Together these and other economic drivers fueled the region's success in the "knowledge economy" of the 1980s and 1990s, and propelled its advances in fields such as information technology, biosciences, medical devices, and financial services. More recent data points, however, indicate that the regional economy suffers from several gaps and missed opportunities and needs a boost. For example, while both wage and productivity levels were relatively high in 2008, their growth rates between 2002 and 2008 trailed national averages. And, despite a high patenting rate and a large number of venture prospects in the earliest phases of commercialization, few of these opportunities result in successful start-ups.

To reboot and renew a static regional economy, Minneapolis-St. Paul is using the metropolitan business planning process to build-up the region's entrepreneurial ecosystem.

Since 2002, Minneapolis-St. Paul has experienced declining shares of entrepreneurs and high-tech jobs. Further, data over the past two years shows that a low percentage of regional venture capital flows to "seed stage" or "first round" investments. To reverse such trends, an impressive team led by the two major cities, the regional council of mayors, a prominent CEO group, and involving other local and state government officials and business and philanthropic leaders last year adopted the business planning approach to support and accelerate entrepreneurship in the region. Now, after nearly a year's worth of community meetings, expert consultation, and deep analysis, the consortium's work has yielded a 60-page interim vision and strategy document loaded with extensive quantitative and qualitative analysis and the blueprint of a highly detailed change-initiative. One of the key strategies: introduce new capacity to the region's entrepreneurial infrastructure, as well as integrate and pursue other related economic development strategies, from strengthening noted industry and occupational clusters to improving academic-industry linkages and providing better information to private-sector decisionmakers.

Minneapolis-St. Paul's major catalytic initiative—the proposed Entrepreneurship Accelerator (EA) —advances a proven approach to accelerate the development of the regional entrepreneurial ecosystem and create innovative, high value opportunities.

Minneapolis-St. Paul currently suffers, after all, from a lack of resources to help regional entrepreneurs, particularly through the provision of expert business advice, hands-on assistance, and facilitated access to capital. Therefore, EA—as developed in collaboration with the nationally recognized entrepreneurship non-profit JumpStart—will fill these and other gaps through a continuum of resources and services designed to demonstrate the region's startup potential and attract a range of complementary resources. Included as a part of a broader regional entrepreneurship planning initiative, the proposed EA is modeled after other "best of class" accelerators and advanced through the business plan in painstaking detail. EA's proposed services will address business planning, mentorship, networking, talent attraction, and capital acquisition. Through its mentoring and venture-support activities EA will help high-quality ventures successfully make the leap between the earliest phases of commercialization and full market entry, thereby stimulating the development of innovative, high-growth companies, while simultaneously building up the region's entrepreneurial ecosystem to propel Minneapolis-St. Paul to the next level of regional prosperity.

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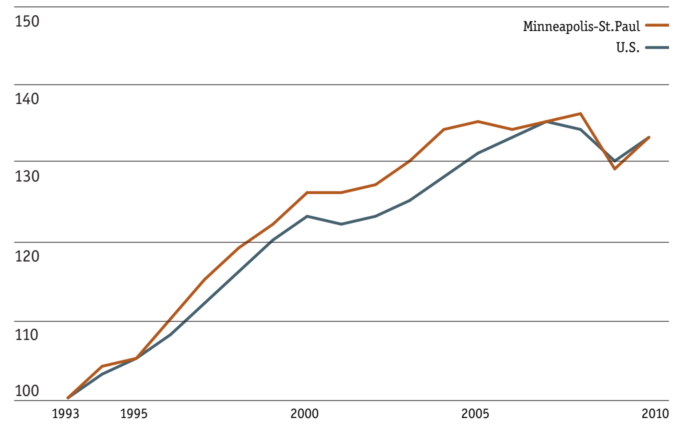
With funding already in place from the U.S. Economic Development Administration and various regional philanthropies, Minneapolis-St. Paul leaders are moving aggressively to complete a regional entrepreneurship strategy and fundraise for and execute priority ideas, like the EA. The region's business planning team is also in the process of interacting with federal leaders to seek new funding, form new partnerships, and request new types of programming to achieve all its long-term regional entrepreneurship goals. At the same time, other dimensions of the Twin Cities' multidimensional business plan are under development as well. In that fashion business planning is emerging as an important, far-reaching confluence point for multiple local government, regional, private-sector, and state leaders to engage in collaborative, bottom-up transformation work.

Minneapolis-St.Paul
GVA per person (income) 1993-2010, indexed against 1993 levels



Source: Cambridge Econometrics. Note: index 1993=100

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Minneapolis-St.Paul's income grew faster than the national average in the period before the recession. During the recession, it strongly mirrored national performance.

LSE CITIES LONDON SCHOOL OF ECONOMICS AND POLITICAL SCIENCE

LSE Cities is an international research centre at the London School of Economics and Political Science that carries out research, education, outreach and advisory activities in the urban field, supported by the Deutsche Bank. The recently established centre builds on the interdisciplinary work of the Urban Age Programme, extending its partnership with Deutsche Bank's Alfred Herrhausen Society for a further five-year period. LSE Cities continues LSE's century-old commitment to improving our understanding of urban society, by studying how the built environment has profound consequences on the shape of society in an increasingly urbanized world where over 50 percent of people live in urban areas.

LSE Cities' objective is to contribute to the creation of new knowledge and generate applied research on the interactions between the physical and social dimensions of cities. This will be achieved through of series of research programs, educational initiatives, and outreach projects that initially focus on the links between the design of cities—their buildings and spaces—and social well-being, the environment, and urban governance.

The graduate education branch of LSE Cities, the Cities Programme, offers both Master and PhD-level education, including an innovative series of public lectures and events, master classes, and seminars.

BROOKINGS METROPOLITAN POLICY PROGRAM

Created in 1996, the Brookings Metropolitan Policy Program provides decisionmakers with cutting-edge trend analysis, research and policy ideas that empower metropolitan areas to compete and prosper. The Program believes that future prosperity is dependent upon delivering a next economy that is driven by exports, powered by low carbon, fueled by innovation, rich with opportunity, and led by metropolitan areas—while simultaneously building smart, sustainable places that embrace demographic and economic change and technological advances.

To deliver on this promise, the Metropolitan Policy Program grounds its work in metropolitan areas and states to advance reforms that are tailored to the unique assets, attributes, and advantages of these disparate places. It then leverages up the most innovative policies and practices from these places to advance catalytic change at the federal level. The Program's research and policy development is informed by two networks of innovative corporate, civic, philanthropic, and political leaders—the Metropolitan Leadership Council and the Metropolitan Partners Network—who help to guide and advance systemic change both individually and collectively.

The Metropolitan Policy Program works to advance the larger goals of the Brookings Institution, a nonprofit public policy organization based in Washington, D.C. Its mission is to conduct high-quality, independent research and, based on that research, to provide innovative, practical recommendations that advance three broad goals: strengthening American democracy; fostering the economic and social welfare, security, and opportunity of all Americans; and securing a more open, safe, prosperous, and cooperative international system.

DEUTSCHE BANK'S ALFRED HERRHAUSEN SOCIETY

The non-profit Alfred Herrhausen Society is the international forum of the Deutsche Bank. Its work focuses on new forms of governance as a response to the challenges of the 21st century.

The Alfred Herrhausen Society seeks traces of the future in the present, and conceptualizes relevant themes for analysis and debate. It works with international partners across a range of fields, including policy, academia, and business, to organize forums for discussion worldwide. It forges international networks and builds temporary institutions to help to find better solutions to global challenges. It targets future decisionmakers, but also attempts to make its work accessible to a wide public audience.

The society is dedicated to the work of Alfred Herrhausen, former spokesman of the Deutsche Bank board of directors, who advocated the idea of corporate social responsibility in an exemplary manner until his assassination by terrorists in 1989. The Alfred Herrhausen Society is an expression of the Deutsche Bank's worldwide commitment to civil society.

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