Rebuilding Lower Manhattan for the Creative Age:

Implications for the Greater New York Region

Prepared for the Regional Plan Association and the Civic Alliance

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Introduction

This report is meant to inform the work of the Civic Alliance, especially its Economic Development Working Group, as well as others involved in rebuilding Lower Manhattan. Near the end it gives a list of ten recommendations, but does *not* include detailed analysis of the area nor highly specific advice on what should be done there. What it mainly offers is a big-picture view that may be useful, during the planning process, as a framework for thinking about Lower Manhattan in the context of the Greater New York region — as well as in the context of broader trends in our economy and society.

The report draws from concepts and analysis in my new book *The Rise of the Creative Class,* now coming off the presses at Basic Books. I have added an analysis of the greater New York region (or CMSA: Consolidated Metropolitan Statistical Area) and its various sub-regions (PMSAs: Primary Metropolitan Statistical Areas), based on the unique set of regional growth indicators developed for that book. And I have pored through a series of papers on Lower Manhattan put out thus far, from last December's Conference Board report to the recent Preliminary Findings of the Economic Development Working Group. I have tried to tune my own paper to address the scenarios and other issues raised in the latter. .

Before getting into the meat of the analysis, I'd like to insert a personal note. The World Trade Center tragedy affected me deeply, and I contacted Bob Yaro of the RPA immediately to tell him I would do whatever I could to help with this process. I am a native of this region. I was born in Newark and raised in a nearby working class suburb in southern Bergen County, where the towers were visible from our main street — I watched the towers being constructed while in junior high. My dad worked in an eyeglass factory in Newark's Ironbound section; my mom worked at the *Newark Star-Ledger*. My brother and his family still live in Hoboken. I was an

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undergraduate at Rutgers College, before taking my PhD in City and Regional Planning at Columbia University. So while I am by no means an expert on the New York economy, I feel I know the region and its culture fairly well, and hope to contribute whatever I can to the process you are spearheading.

The Preliminary Findings of the Economic Development Working Group reflect an emerging consensus that's very much in line with my own thinking and conclusions. Thus my paper is offered in the spirit of support rather than criticism or massive re-direction. What I will mainly try to do here is deepen your understanding, perhaps spur some fresh insights, and give you some additional conceptual tools and empirical information to work with as you evaluate alternatives and refine your plans. I hope you find this to be of some use. And please consider this a draft for further discussion and refinement in light of your comments.

In its draft summary, the Working Group outlined three possible scenarios for the future of Lower Manhattan:

- A scenario in which Lower Manhattan undergoes a gradual evolution to a broader mix of industries and activities but regains most of the financial services employment that it lost as a result of September 11.
- A second alternative that assumes a smaller finance sector and more rapid growth in professional, business services and technology firms, education, research and other non-finance industries.
- A third scenario that assumes the most rapid diversification of Lower Manhattan, with particularly strong growth in residential, tourist and cultural activities.

The Working Group notes that financial services are already decentralizing away from Downtown for economic and security reasons, and that continued diversification of Lower Manhattan is "both likely and desirable" — in part because other, emerging industries have the potential to take root and grow rapidly; in part because the people who start and staff these new businesses tend to like the dense, rich interplay of urban street life that such a development pattern brings. Indeed this trend, too, is already under way. Given Lower Manhattan's role as a transit hub, the Working Group also recommends top priority for rebuilding and improving mass transit to inter-link the region. The report notes that "urban sub-centers" outside Manhattan are growing and should be nourished as decentralization proceeds, and that regional thinking is essential in all aspects of the process.

Drawing on themes and measures advanced in my new book — which sees regional economies in light of the broader transformation of the U.S. economy as a whole — I largely concur. I find the first scenario highly unlikely, and in fact probably unnecessary for the future economic success of the region. Although the financial services industry is large and important and will remain so, New York has many other strengths in the new "creative economy" toward which the nation as a whole is moving. Greater New York and its constituent sub-centers are evolving as a multi-nodal creative region. As I will show, the greater New York region is home to nearly 3 million creative workers and is one of the few regions ranking consistently high, across the board, on my various measures of creative strength and potential.

The remainder of this report is organized as follows. The next few pages outline my general approach to regional growth and describe the unique indicators that my colleagues and I use. Those who are familiar with my work, and are more interested in my findings as they apply directly to Greater New York, may want to skip ahead to page 7, which delves into analysis of the region as a whole and at its constituent sub-centers. The closing sections, from page 14 on, discuss the implications of my approach and analysis for the New York region in general and Lower Manhattan in particular.

Economic Development in the Creative Age

My approach to regional development starts from the premise that creativity is the key to economic growth. Human creativity — the ability to generate and implement new ideas — has long been the decisive source of economic growth and competitive advantage. The great economist Joseph Schumpeter noted this long ago when he credited the vitality of capitalism to the "perennial gales of creative destruction" that swept through the system. What is truly new about our economy today is that in the decades since World War II, creativity has become not just perennial but ongoing and pervasive. Trends such as the growth of R&D funding and venture capital, plus the continuous-improvement methods now used in many industries, have conspired to give us an economy in which rapid and constant innovation is the standard.

Creativity, as I have come to understand it, means more than technical innovation, knowledge or information. Its economic role goes beyond concepts such as the information age or knowledge economy. For creativity is multidimensional and composed of three inter-related and mutually reinforcing types: technological creativity, economic creativity and cultural creativity. All three types are required for economic growth. Also, a creative environment requires openness to diversity, in order to attract creative people of all types and stimulate creative interplay. A creative habitat has "low entry barriers for people" and enables all three types of creativity to take root and flourish.

Regions that grow in prosper today are the ones that provide just this kind of habitat. They may have dominant big firms, specialized high-tech industrial sectors and world-class universities, but these commonly cited factors are not sufficient to serve as the key. The successful regions are places where creative people gravitate and gather, in a conducive setting, to generate and implement a constant flow of new ideas — new products and services, new firms, new and better ways of doing things within the existing firms.

For a simple and rather blatant example, compare two large regions: Seattle and Detroit. Both have major research universities. Thirty years ago, both had dominant industries — aerospace in Seattle, the automotive industry in Detroit — that were very technically sophisticated, but mature and non-growing. Since then, Seattle has enjoyed new growth in a host of industries that didn't even exist 30 years ago — from software production, biotechnology and Internet services to coffee house chains — while Detroit has been notoriously unable to generate much of anything new. Explaining such differences has been the focus of my research and of my new book.

One step to understanding the success of the economic winners is to recognize the values, preferences and behaviors of the predominant social force of our age: the growing numbers of creative workers whom I define as the Creative Class. Members of the Creative Class engage in work whose function is to “create meaningful new forms.” The core of this new class includes scientists and engineers plus various types of designers, artists and writers, as well as social and business researchers, policy-makers and others. Their jobs entail creating new forms that are widely useful and readily transferable. The Creative Class also includes “creative professionals” such as financial analysts, lawyers, physicians and higher-end managers, plus growing numbers of skilled technicians in many fields. These people engage in creative problem solving: they apply complex bodies of knowledge in unique ways to fit the situation, exercising a great deal of judgment and autonomy.

- Altogether, the Creative Class now includes some 38.3 million Americans, roughly 30 percent of the entire U.S. workforce — up from just 16.6 percent in 1950 and only 18.7 percent as recently as 1980.

These people are indeed the key assets of our economy, and a driving force in the success of cities and regions, because they are idea generators. Mobile and usually affluent, I find them migrating to certain regions and avoiding or deserting others. They are actively looking for places that provide a creative habitat. They do not merely follow jobs to places. Their location choices are based to a large degree on their lifestyle interests, which extend far beyond the standard “quality-of-life” amenities that many mayors, business leaders and economic developers continue to think are so important. The rise of this new class alters the rules of the economic development game.

Rethinking Regional Growth

The traditional economic development formula centers on the use of financial incentives to attract and retain companies, because, the logic goes, companies create jobs and people go where the jobs are. More recently, cities and regions have latched onto “high-tech” economic development models by building high-tech office parks and in some cases starting or supporting venture capital funds to breed new companies from university technologies. Both approaches have been proposed for Lower Manhattan. Some have argued that financial incentives are required to lure companies back and restore the district’s status as the world’s leading financial center. Others suggest that the district become a breeder of new technology-based companies, envisioning it as a center for the biotechnology industry, for example.

My research suggests that neither approach is efficacious, because they fail to recognize and act on the principles that condition economic growth and development today. The key factor in this age is people—talented, skilled and creative people. And these people are mobile and can choose to locate in places that offer both exciting economic and lifestyle opportunities. As Hewlett Packard CEO Carley Fiorina once told this nation’s governors: “Keep your tax and financial incentives, we will go where the highly skilled people are.” In a curious reversal, instead of people moving to jobs, companies are now moving to or staying in places that have the skilled people. The new formula for success thus lies in creating diverse, open and supportive environment that can attract these creative people. This is the formula that the planning effort for Lower Manhattan should take into account and which the Working Group report, of all the many planning efforts, begins to point toward.

My approach to regional growth revolves around the *3Ts of economic development:* Technology, Talent, and Tolerance. Each is a necessary but by itself insufficient condition for economic growth. To attract creative people, generate innovation, and stimulate economic development, a place must have all three. The 3Ts explain why cities like St. Louis and Pittsburgh fail to grow despite their deep reservoirs of technology and world-class universities: they are not sufficiently tolerant and open-minded to draw and galvanize top creative talent. The interdependence of the 3Ts also explains why cities like Miami and New Orleans do not make the grade even though they are lifestyle meccas: they lack the required technology base. The most successful places—the San Francisco Bay Area, Boston, Washington DC, Austin and Seattle—put all 3Ts together. They are truly creative places.

How does this approach compare to others? There are several explanations for regional growth. As noted, the conventional "firm-driven" view holds that regional growth comes from attracting companies or building clusters of them and thus generating jobs. Then there is the "social capital" theory of Robert Putnam, which views economic growth as a product of social cohesion, trust and community-connectedness. The "human capital" theory, advanced by economists like Nobel Prize winner Robert Lucas of the University of Chicago and Edward Glaeser of Harvard University, says that concentrations of human capital drive regional growth. But it begs the question: Why do creative people cluster in certain places?

My Creative Capital theory argues that regional economic growth is driven by creative people (the holders of Creative Capital), who prefer places that are stimulating, provide lifestyle options as well as economic opportunities, and are diverse, tolerant and open to new ideas. Places with diverse mixes of creative people are more likely to generate useful new combinations. Greater and more diverse concentrations of creative capital thus lead to higher rates of innovation, high-technology business formation, job generation and economic growth.

Robert Cushing of the University of Texas has undertaken independent research to test the latter three theories. He built statistical models to determine the effect of their factors on population growth (a well-accepted measure of regional vitality) between 1990 and 2000. To do so, he included separate measures of education and human capital; occupation, wages and hours worked; poverty and income inequality; innovation and high-tech industry, and creativity and diversity for the period 1970-1990. He found that areas with high levels of social capital on Putnam's measures, such as Birmingham, Alabama, score low on innovation and experience low rates of growth. Conversely areas with below-average marks on Putnam's test, such as the San Francisco Bay Area, tended to do well on innovation and grow rapidly. Thus Cushing finds that social capital theory provides little explanation for regional growth. Both the human capital and creative capital theories grade out superior to it. In fact, he finds creative communities and social capital communities moving in opposite directions. Creative communities are centers of diversity, innovation and economic growth; social capital communities are not. Cushing found that the creative capital theory (based on indicators to be explained shortly) produced formidable results, concluding that the "creative capital model generates equally impressive result as the human capital model and perhaps better."

Many cities and regions, too, are now beginning to discover that low material costs such as taxes or transportation no longer guarantee regional economic prosperity. Rather, economic growth comes from having an abundant supply of creative people of all sorts—and an underlying commitment to diversity or what we refer to as low barrier to entry for people. To summarize the key points:

- Regional growth and development in this economy comes from attracting creative people in an open-minded, diverse, stimulating environment, so that they can create new things. Members of the Creative Class are in fact gravitating to regions that provide the settings they prefer. As my research shows, people, especially skilled creative workers, move to (or stay in) a region not just for employment, but for a variety of lifestyle reasons as well. Then, in a reversal of the old paradigm, companies move to — or are started in — the places where the creative people are.

- This creativity-based model of economic development has important implications for Lower Manhattan, many of which are in line with the Working Group's report. It suggests that is counter-productive to use financial incentives to lure firms back into the district or to try to use public funds to invest in whole new technology-based industrial sectors. Rather, it emphasizes the development of broad "quality of place" amenities and lifestyle assets, and the creation of a ***people climate*** that can and will attract creative people of all types. It also emphasizes doing all of this in a way that is open to diversity of both economic activity and of people, and of the need to invest in transit and other forms of connectivity that can link the region's evolving creative sub-centers.

Regional Growth Indicators

My research has centered around using several key indicators to examine regional economic growth. Let me summarize them briefly, before applying them to the New York region.

High-Tech Index: A basic and widely used measure for high-technology industry is the Techpole rating, developed by Ross DeVol and his colleagues at the Milken Institute. I have adopted it and simply renamed it, for greater clarity, the High-Tech Index. The measure was initially presented in the Milken Institute study *America's High Tech Economy*, and Milken Institute researchers graciously made the data available to my team for the period 1978-2000. This Index defines high-tech to include a range of industry sectors from computing and electronics to pharmaceuticals and research-and-testing services. It measures the relative size of a region's high-tech economy (in dollars of revenue) as a share of both the national high-tech total, and the region's own overall economy. The former comparison favors big regions and the latter small ones; blending the two in one Index gives a balanced measure of a region's vitality in high-growth high-tech industries.

Innovation Index: The Innovation Index is a measure of patents granted in a region over the period 1990-1999, per 10,000 population. It is based on data from the U.S. Patent and Trademark Office.

Gay Index: This index is based on research by Gary Gates, now at the Urban Institute in Washington DC, along with his colleagues Dan Black, Seth Sanders, and Lowell Taylor. The Gay Index measures the over- or under-representation of coupled gay people in a region relative to the U.S. as a whole. The fraction of all such U.S. gay people who live in a given metropolitan area is divided by the fraction of the total U.S. population who live in that area. The resulting number is a ratio: a value over 1.0 says that a region has a greater-than-average share of gay couples, while a value below 1.0 suggests that gays are under-represented. The Gay Index has been calculated for major metro areas across the US in 1990 and 2000, and is based on the decennial U.S. Census. My research suggests that it can be read as a general indicator of diversity and tolerance, and thus (by extension) a region's openness to differences and new ideas. The Gay Index is very strong predictor of high-tech growth, as measured by the High-Tech Index.

Other diversity measures that I use are the Melting Pot Index (percentage of foreign-born people in a region's population) and the Interracial Index (percentage of interracial couples).

Bohemian Index: This measures the concentration of professional artists, writers and performers in a region relative to the national average. The Bohemian Index is meaningful in several ways. Cultural offerings such as music, theater and visual arts are a strong draw for creative workers, and the Bohemian Index directly measures a region's level of cultural amenities by counting the producers of those amenities. Also, in some places, the arts and entertainment are themselves significant industries. Finally, a flourishing arts scene seems to suggest that a region values and supports creativity in all its forms — technological and economic as well as artistic and cultural. The Bohemian Index is strongly associated with high-tech-industry concentration and innovation (measured by the Innovation Index), and as Robert Cushing has found, it correlates exceptionally strongly with regional population growth — a good indicator of overall regional vitality.

Creativity Index: As a combined measure of the three Ts, and one that reflects both creative outcomes and growth potential, my colleagues and I use a factor we call the Creativity Index. It is a mix of four measures: (1) Creative Class (i.e., creative workers) as a percent of the region's total workforce, (2) the High-Tech Index, (3) the Innovation Index, and (4) diversity (measured by the Gay Index). Regions with a high Creativity Index are leading or emerging Creative Centers.

The Greater New York Region as a Creative Center

With this background in hand, let's take a look at where the Greater New York region stands. To do so, I compare the New York Consolidated Metropolitan Statistical Area to other to large regions (CMSAs and MSAs) on my various indicators (see Tables 1-3). There are 49 regions in the United States with a population over 1 million. Generally speaking the New York region stacks up well on my core measures of creativity.

Total Creative Employment: The New York region has more than 2.5 million creative workers, by far the most of any large region, as the top-15 list in Table 1 shows.

Table 1: Total Creative Employment

Rank	Region	Total Creative Workers
1	**New York**	**2,688,810**
2	Los Angeles	1,984,700
3	Washington-Baltimore	1,458,580
4	Chicago	1,389,160
5	San Francisco	1,211,520
6	Philadelphia	927,090
7	Dallas-Fort Worth	825,390
8	Detroit	776,540
9	Boston	746,230
10	Houston	691,600
11	Atlanta	641,700
12	Minneapolis-St. Paul	578,520
13	Seattle	561,730
14	Denver	451,070
15	Miami	440,450

On my multi-factor Creativity Index, the greater New York region ranks 9th of 49 large regions with a score of 962. The elite group on this overall measure is shown in Table 2.

Table 2: The Creativity Index

Creativity Index Rank	Region	Creativity Index Score
1	San Francisco	1057
2	Austin	1028
3	Boston	1015
4	San Diego	1015
5	Seattle	1008
6	Raleigh-Durham	996
7	Houston	980
8	Washington	964
9	**New York**	**962**
10	Dallas-Fort Worth	960
11	Minneapolis-St Paul	960
12	Los Angeles	942
13	Atlanta	940
14	Denver	940
15	Chicago	935

Greater New York scores consistently highly on the subcomponents of the Creativity Index, as Table 3 will show. This reinforces its status as a broadly creative region.

- Greater New York ranks in the top 15 on 3 of the 4 core subcomponents of the Creativity Index — 12th in Creative Class concentration,13th on the High-Tech index, and 14th on the Gay Index. The New York region scores a respectable 24th on the Innovation index (measured as patents per population). Only two regions, San Francisco and Seattle, go four for four.

- In terms of high-tech industry the New York region scores higher than one might think. Its 13th place rank puts it just ahead of the vaunted Raleigh-Durham Research Triangle, and far ahead of emerging high-tech areas like Denver and Minneapolis.

Table 3: Creativity, Technology and Diversity

Each subcomponent column gives raw score plus (rank) out of 49 large regions.

Creativity Index Rank	Region	Creative Class %	High-Tech Index	Innovation: patents per 10k pop.	Diversity: Gay Index
1	San Francisco	34.8% (5)	8.81 (1)	134.3 (2)	2.01 (1)
2	Austin	36.4% (4)	2.71 (11)	125.7 (3)	1.19 (16)
3	Boston	38.0% (3)	7.18 (2)	69.4 (6)	1.04 (22)
4	San Diego	32.1% (15)	2.67 (12)	62.1 (7)	1.46 (3)
5	Seattle	32.7% (9)	5.24 (3)	40.1 (12)	1.32 (8)
6	Raleigh-Durham	38.2% (2)	2.48 (14)	79.0 (4)	1.00 (28)
7	Houston	32.5% (10)	1.86 (16)	36.6 (16)	1.24 (10)
8	Washington-Baltimore	38.4 % (1)	4.83 (5)	25.9 (30)	1.22 (11)
9	**New York**	**32.3% (12)**	**2.49 (13)**	**34.1 (24)**	**1.21 (14)**
10	Dallas-Fort Worth	30.2% (23)	4.51 (6)	36.6 (17)	1.26 (9)
11	Minneapolis-St. Paul	33.9% (6)	0.80 (21)	73.5 (5)	0.97 (29)
12	Los Angeles	30.7% (20)	5.05 (4)	27.6 (29)	1.42 (4)
13	Atlanta	32.0% (16)	4.26 (7)	25.4 (31)	1.33 (7)
14	Denver	33.0% (8)	0.17 (38)	44.3 (10)	1.17 (18)
15	Chicago	32.2% (14)	3.06 (9)	33.2 (26)	1.02 (24)

The Greater New York region also scores highly on another measure of creativity, the Bohemian Index, the relative concentration of artists, writers and performers in a region. Though not part of the combined Creativity Index, it is, as noted earlier, a potent indicator in its own right.

- New York CMSA ranks second on the Bohemian Index out of 49 large regions, behind only Nashville MSA—and New York's cultural scene is far more diverse.

- New York is one of just a few large regions — Boston, San Francisco and Seattle are the others — ranking top-10 on both the economically-focused Creativity Index and the culturally-focused Bohemian Index.

These findings indicate that the New York region as a whole is emerging as one of the nation's leading creative regions. It will continue to evolve as a broadly creative region of which financial services is one important component. Given trends which indicate the decentralization of financial functions away from Lower Manhattan (for combined economic and security reasons), these findings further support the Working Group report and other studies which suggest that planning and strategic investments be undertaken in the context of a broader evolution of Lower Manhattan away from its historic concentration in financial services, toward a more broadly creative environment.

New York and the East Coast Creative Corridor

Compounding this, the New York region is emerging as the interlay node in a broader East Coast "Creative Corridor" which stretches from Boston to Washington DC. This Creative Corridor accounts for more than 5 million creative workers, some 15 percent of the entire Creative Class. In addition to New York at 9th, Boston ranks 3rd, Washington DC ranks 8th, and Philadelphia ranks 17th on the Creativity Index. This East Coast Creative Corridor does not (yet) have quite the concentrations of creative activity found in the West Coast corridor, which stretches from Seattle through San Francisco and Los Angeles to San Diego.

But the East Coast corridor with New York as its hub is larger, with higher populations and more total creative workers, and it is more compact: only 200 miles from New York to Washington DC or Boston; much of this is connected by rail as well as air and highway links. The East Coast complex *functions* as a ***creative meta-region*** more than the West Coast corridor does, and appears capable of functioning as one even more so.

It is important that the planning process for Lower Manhattan recognize the role of New York in this meta-region and undertake the rail, transit and other investments that strengthen and reinforce that role. That means placing a high priority on inter-regional as well as intra-regional (high-speed) rail links throughout the corridor connecting New York to creative complexes from Boston to New Haven in the northeast as well as Princeton, Philadelphia, Baltimore and Washington DC to the south. There are likely to be considerable payoffs to seeing New York as a critical node in this broader creative complex, and for undertaking strategic and policy decisions that leverage and reinforce that role.

New York as a Multi-nodal Creative Center

Let's now turn attention to what is happening inside the Greater New York region. To get a better look at its composition, my research team and I calculated our core creativity measures for the sub-centers (or PMSAs) that make up the region. We then ranked them in comparison to the 313 PMSAs nationwide for which reasonable comparable data are available.

Based on this, I find that the sub-centers that make up the greater New York appear as nodes in a network, each with its own mix of creative facets and strengths. The whole thrives because of its parts, and has the potential to thrive even more.

Table 4: Creativity Index and Creative Class for New York Sub-centers
(Rankings are out of 313 PMSAs nationwide)

Sub-center	Creativity Index	Creativity Index Rank	Creative Class %	Creative Class Rank
New York City *	1068	24	33.8%	20
Nassau-Suffolk	947	47	29.7%	84
New Haven-Meriden	1037	27	30.4%	61
Duchess County	1047	25	33.6%	22
Newburgh	662	134	25.8%	198
Bergen-Passaic	892	57	28.2%	127
Jersey City	826	76	28.9%	100
Newark	1094	14	31.7%	43
Middlesex-Somerset-Hunterdon	1094	14	35.3%	13
Monmouth-Ocean	915	53	29.6%	88
Trenton	1094	14	38.5%	6

Overall Creativity: Table 4 above presents scores and ranks on the overall Creativity Index and Creative Class percentages for major New York sub-centers. Briefly put:

- Six of the 11 sub-centers that comprise the Greater New York region break the 1000 barrier on the Creativity Index. New York City, New Haven, Duchess County, Middlesex-Somerset-Hunterdon, Trenton, and Newark, once deemed the nation's poster child for urban decay. Long Island and Monmouth-Ocean are in the 900s. No sub-center even comes close to scoring in the lower half, out of 313 PMSAs nationally, on the Creativity Index.

- Six of the 11 sub-centers also have Creative Class concentrations of 30 percent or more. Furthermore, there is an area of heavy concentration stretching from Newark through Middlesex and into Trenton, New Jersey. Trenton with 38.5 percent of its workforce in the Creative Class is among the nation's leaders. New York City and Duchess County also have above 30 percent of their workforces in the Creative Class occupations.

- New York City with a score of 1068 on the Creativity Index serves as the center and locational hub for this broad multi-nodal complex.

Proceeding to the Creativity Index subcomponents and other measures of creativity on the following pages, the good news continues and similar themes emerge.

* The New York City PMSA includes Westchester, Rockland and Putnam Counties.

Table 5: High-Tech and Innovation Indexes for New York Sub-centers

Sub-center	High-Tech Index	High-Tech Rank	Innovation Index	Innovation Rank
New York City	3.66	8	18.3	143
Nassau-Suffolk	1.41	28	27.3	100
New Haven-Meriden	1.40	29	41.2	51
Duchess County	0.25	71	131.4	7
Newburgh	0.01	216	23.7	117
Bergen-Passaic	0.51	51	36.6	58
Jersey City	0.07	111	11.8	201
Newark	2.42	21	55.9	28
Middlesex-Somerset-Hunterdon	3.64	9	93.3	13
Monmouth-Ocean	0.81	37	47.7	40
Trenton	0.29	65	98.4	10

As before, New York City PMSA includes Westchester, Rockland and Putnam Counties, and rankings are in comparison to 313 PMSAs nationwide.

High-Tech Industry and Innovation: These are two of the most important creative economic outcomes. As Table 5 shows, the New York region contains vigorous pockets of high-tech industry and innovation.

- Two of the sub-centers—New York City and Middlesex New Jersey—rank in the top ten out of 313 PMSAs nationwide on the High-Tech Index.

- Two others --Duchess County and Trenton, New Jersey -- rank on the top ten on the Innovation Index.

- Three additional sub-centers—Newark, Nassau-Suffolk and New Haven — score in the top 10 percent of high-tech regions, while Newark also does so on the Innovation Index.

- This suggests a reasonably powerful high-tech corridor stretching from New York City through Newark, Middlesex, and Trenton, New Jersey, and extending up into southwestern Connecticut as well. Again, New York City and by extension Lower Manhattan function as the locational hub for this multi-nodal complex.

Diversity: Tables 6 and 7 turn to a variety of demographic indicators of tolerance and openness to diversity. As we have seen, openness to diversity increases a region's capacity to attract creative people and generate creative economic outcomes.

Table 6: Gay and Bohemian Indexes for New York Sub-centers

Sub-center	Gay Index	Gay Rank	Bohemian Index	Bohemian Rank
New York City	1.53	5	2.20	3
Nassau-Suffolk	0.87	85	1.07	69
New Haven-Meriden	0.93	66	0.95	110
Duchess County	0.82	97	NA	271
Newburgh	0.96	56	NA	268
Bergen-Passaic	0.79	116	1.33	30
Jersey City	1.51	6	1.18	46
Newark	0.95	58	0.98	95
Middlesex-Somerset-Hunterdon	0.79	115	1.05	74
Monmouth-Ocean	0.70	165	0.87	126
Trenton	0.92	69	1.39	21

Key findings from Table 6:

- New York City and Jersey City score exceptionally high on the Gay Index. They rank 5th and 6th respectively, out of 313 PMSAs nationwide, on this key measure of diversity and openness.

- New York City scores extremely highly on the Bohemian Index. Trenton and Bergen-Passaic, New Jersey also rank in the top 10 percent of regions on this potent measure of cultural creativity and attractiveness. Other sub-centers score above or near the 1.00 mark and rank well.

And as Table 7 on the next page shows:

- New York City ranks highly on the Melting Pot Index (which measures the percent foreign born), as do Jersey City, Bergen-Passaic, and Newark. This New York-New Jersey corridor remains a magnet for new immigrants and a cauldron for ethnic diversity

- Surprisingly, none of the New York sub-centers score particularly highly on the Interracial Index, which measures the percentage of interracial couples.

- In short, the New York sub-centers score well in terms of tolerance and diversity, with a diversity corridor roughly from New York City through Jersey City, Newark and into Bergen and Passaic counties in New Jersey. Again, New York City and by extension Lower Manhattan serve as center and locational hub for this diversity complex.

Table 7: Melting Pot and Interracial Indexes for New York Sub-centers

Sub-center	Melting Pot	Melting Pot Rank	Interracial Index	Interracial Rank
New York City	30.5%	6	3.7%	114
Nassau-Suffolk	12.7%	36	1.5%	212
New Haven-Meriden	9.1%	50	2.4%	159
Duchess County	NA	267	NA	286
Newburgh	NA	252	NA	134
Bergen-Passaic	21.1%	12	7.8%	43
Jersey City	35.4%	2	3.9%	107
Newark	18.0%	16	2.3%	164
Middlesex-Somerset-Hunterdon	14.5%	28	2.0%	181
Monmouth-Ocean	8.9%	51	2.0%	179
Trenton	10.7%	39	2.1%	176

As the statistics confirm, the Greater New York Region is a multi-nodal Creative Center. It scores highly in terms of overall creativity, has substantial pockets of the Creative Class, and also scores highly on high-tech and innovation as well as diversity.

At the center of this are New York City and lower Manhattan, which function as the hub of a multifaceted creative complex.

These findings support the Working Group recommendation to "strengthen the linkages between Lower Manhattan and the rest of the region to support the development of urban sub-centers." The findings for the different sub-centers also provide clues for which areas might be most important to connect to Downtown — in particular the existing high-tech corridor stretching from New York City through Newark, Middlesex and Trenton, New Jersey and extending northeast into New Haven, Connecticut. These connections should include high-bandwidth telecommunications along with more traditional transit infrastructure.

Implications and Recommendations

In my research both the New York economy and Lower Manhattan appear as part of a broader transformation of the U.S. economy, away from an older-style organizational or service economy to a new, more innovative and creative economy. To restate key findings thus far while also beginning to get more specific:

- The Greater New York region is among the nation's leading Creative Centers. On my multi-factor Creativity Index it ranks 9th among the 49 largest regions in US —ahead of major competitors such as Los Angeles and Chicago and not far behind the top-ranked San Francisco Bay Area. The New York region's size (over 2.6 million members of the Creative Class) makes it even more formidable.

- The Greater New York region is the hub of a broader East Coast Creative Corridor stretching from Boston to Washington DC, which is the nation's largest creative complex.

- Internally, the New York region functions as a multi-nodal creative complex, with New York City as its hub. Lower Manhattan is instrumental here.

- With regard to Downtown, my findings generally concur with the Economic Development Working Group's conclusion that Lower Manhattan's economy will continue to diversify. They indicate that the first scenario is unlikely and that some combination of the second and third scenarios will come to define Downtown.

- They further suggest that Downtown is likely to evolve in two parallel, intertwined roles: as a creative district in its own right, and as a key hub in the region's creative network.

The next section focuses on those intertwined roles, making a series of observations and recommendations.

Lower Manhattan as a Creative District / Creative Hub

Generally speaking, my findings and analysis support the emerging consensus on remaking Lower Manhattan as a mixed-use, live-work-learn-play development with less high-rise financial concentration. This makes sense for several reasons.

First of all my research, focus groups and interviews nationwide indicate that many creative workers strongly prefer the mixed-use type of urban setting, both for living and working. They are drawn to stimulating and experiential creative environments. They gravitate to the indigenous street-level culture found in Soho, the Village, and parts of Brooklyn and Jersey. They look for places with visible signs of diversity — different races, ethnicities; sexual orientations, income levels or lifestyles. Lower Manhattan with its proximity to creative and ethnic communities already is becoming a cauldron for this kind of diversity. And as Jane Jacobs argued in her landmark study of just such a neighborhood, the chance interplay and casual encounters that result are highly conducive to new creative enterprises, including those not foreseen or consciously cultivated by planners.

Downtown could even supplant Midtown as the region's "designated meeting place" for creative activities. One might say that Midtown currently plays this role by default, largely because it has more amenities and is easier to get to. But Midtown is a high-end business district and more recently, with the transformation of Times Square, a corporate-entertainment district. While Lower Manhattan has been *perceived* as a specialized financial center, it has the advantage of being located virtually at the crossroads of the region's diverse creative centers—stretching from Soho and Tribeca into Greenwich Village, and across to Brooklyn on one side and Hoboken and Jersey City on the other, with their thriving artistic and music communities. These places are adjacent to (and connected to) Downtown more so than to Midtown.

Moreover, Downtown has for decades been New York's "cheaper business district," which by definition makes it open to wider variety of uses. One key question: Can these advantages be leveraged, to turn Downtown into a central creative center, by providing easier access and more amenities? Or would improvements hike real estate prices so much that it loses this advantage? In any event, Lower Manhattan has the strategic location and proximity that make it the natural creative hub for the region.

The key to Lower Manhattan lies in leveraging this trend, to make it as diverse and stimulating a district as it can be, connected to other creative centers, and a place of choice for the members of the Creative Class. I now offer some modest suggestions for consideration, most of them squarely in line with the thrust of the Working Group's preliminary recommendations. These are offered not as a list of "musts" or "to-dos" but in the sprit of stimulating creative thinking about strategy.

Instead of trying to pick winners, give ideas a place to breed. My findings support the Economic Development Working Group's recommendation that redevelopment efforts not be tied to firm-specific incentives. Rather they should be broadly directed to supporting the underlying conditions for creative growth. In my view it would also be a mistake to try to transform the area into a high-tech center by betting the farm (or a big part of it) on any new industry, such as biotechnology. The greater New York region already has established clusters of high technology, such as in central New Jersey and around major scientific and medical centers. Also, planners should generally avoid or make only limited use of the practice of trying to "pick winners," i.e., putting a great deal of resources into emerging industries or technologies that appear hot at the time. This has not been very successful in other regions. Emerging fields may grow more slowly, or evolve in quite different directions, than anticipated. And spectacular growth can come from unexpected quarters. Before the software industry came along, few experts even thought of software as a product to be packaged and sold. Few predicted the biotech boom or the commercial Internet. No one knows what the next big thing will be. The best general policy is to build a broadly creative environment, conducive to the formation and adoption of new ideas.

Nourishing the typical high-tech startup is by no means the only form of creative growth. Real estate costs in the rebuilt area downtown will likely be too high for high-tech incubators, or for the kinds of startups that must burn a lot of money up front on R&D while generating little cash flow. However, new enterprises conceived from the interplay and buzz of Lower Manhattan can take root in other parts of the city and region that offer lower-cost loft or storefront space. *Think of a revitalized Downtown as an idea generator, and the urban sub-centers as incubators.*

Meanwhile, other forms of technology-intensive business could flourish Downtown — especially those that can build off, spin off from or relate to the existing concentration of financial services. The financial services industry itself has become a creative sector. New York's present mayor is a classic example of a creative person who found a new niche in this turbulent industry, and built new enterprises by mixing technology with financial expertise. A multifaceted mixed-use environment that attracts more such people could in fact be the best bet for ensuring that the financial services industry remains dynamic and adaptive here. It also makes sense to consider design-intensive and highly creative professional services (such as architecture, advertising, engineering, some computer services) and other sectors that would benefit from similar physical and intellectual environments.

Higher education offers many cards to play. One major Working Group recommendation is to “develop Lower Manhattan as a higher education center.” My studies across the U.S. show that higher education is a potent asset in more ways than regional planners often realize. Universities are valuable not only as technology generators but as talent magnets and as breeders of diversity, tolerance and creative interplay. In all these ways, they act as a crucial infrastructure for the Creative Age.

The New York region is blessed throughout with great research universities, superb colleges and other such institutions. Huge numbers of faculty members, researchers, scholars and intellectuals live in the region, particularly in areas bordering Lower Manhattan. Thus it makes sense not only to bolster the research and higher-education presence here, but to think of Lower Manhattan as a node in the multi-center higher-education network. Various university and research consortia already are being formed or proposed. Perhaps new kinds of alliances can take root in Downtown. Think tanks or institutes in any of a number of multidisciplinary fields might be considered. Open to leading scholars and practitioners, they would create hubs of activity and synergize the creative contributions of many currently scattered actors, helping to forge a broad creative community throughout the region

Consumer activities and amenities are an important part of the mix. Lower Manhattan must be seen as a center for consumption as well as production. As shown in research by the economist Edward Glaeser and the sociologists Richard Lloyd and Terry Nichols Clark, the new city is becoming defined more and more as a city of consumption, experiences, lifestyle and entertainment: creative workers “increasingly act like tourists in their own city,” write Lloyd and Clark. This means thinking of Lower Manhattan as a diverse, integrated live-work-learn-play community where the distinctions between them all begin to blur. Retail is part of this strategy as is lifestyle in general. Century 21 (the discount designer store) is already a major destination. Lower Manhattan is quite close to the rapidly expanding commercial corridor of Soho and adjacent neighborhoods. The area has seen substantial growth in hotels and visitors, particularly in Soho and Tribeca. And clearly, as the Working Group points out, the World Trade Center site is emerging as perhaps the New York region’s most important tourist destination. Hotel infrastructure, lifestyle amenities and shopping must certainly be considered in any long-term development strategy.

Amenities are necessities, not luxuries. My research interviews suggest that it makes sense to invest in the public amenities that attract creative workers, and also enable the private sector to meet the amenity needs of this group by providing cafes and similar establishments. Members of the Creative Class prefer active, participatory forms of recreation and have come to *expect* them in urban centers. Along with street-level culture — the teeming blend of cafes, galleries, small music venues and the like, where one can be a participant-observer — they enjoy active outdoor sports. This includes “just-in-time” outdoor exercise blended into a busy schedule: running at lunch hour, getting outdoors during a couple of spare hours on a Saturday or Sunday, biking to work, or taking the bus and rollerblading home. If planning for Lower Manhattan can include provision for these activities, such as parks and bicycle/foot lanes, they will be powerfully attractive not only to Creative Class residents but to anyone who visits, uses or lives in the area.

Housing is a must. My findings support the Working Group's recommendation to reconsider housing and zoning codes in light of the need for more housing and conversion of extant buildings to residential or mixed uses. Although rents and housing prices will be high, affluent creative workers should gladly pay enough even to help subsidize lower-income residents. Lifestyle is very important to these people and Lower Manhattan looms as a most desirable place to be.

Heed the time factor. Many creative workers also like urban mixed-use live-work districts because they save time — just about everything you need is close by. In a creative economy, time is the only non-renewable resource and it is a precious one. As my research and that of others richly documents, professional Creative Class workers often suffer by far the most from the time crunch now afflicting all Americans. The old paradigm of urban high-rise office clusters for workers living in bedroom communities entails a long commute, and may eventually fade for that reason alone. Growing numbers of creative workers will no longer tolerate time-wasting commutes. In a massive national survey of information technology workers by *InformationWeek*, commuting distance was ranked among the *most important* job attributes by about 20% of respondents —outscoring items such as bonus opportunities and financial stability of the firm. Regions that find ways to cut their "time overhead" may well enjoy a competitive advantage in the future.

Connectivity matters. Because of the need to save time for people, rebuilding and improving public transit must be a priority not only in and out of Lower Manhattan but elsewhere. Creative growth *will* occur in "urban sub-centers" and in far-flung corners of the region. Not everyone will live down the block from the office, or work at home, or do every meeting by teleconference. Travel among various regional nodes may indeed grow, due to the ever-shifting nature of alliances among people and firms in a turbulent creative economy. My focus groups and interviews indicate that Creative Class people value connectivity very highly, wanting both to save time and to get from point to point on a 24-7 basis. Fast transit — and seated, hands-free transit, to allow work or rest while commuting — is of course the ideal. In New York this should include both rail and water transit.

For the past several years, the financial district has been expanding across the river into Jersey City and adjacent areas, where Goldman Sachs and other companies are building state-of-the-art facilities. Since September 11, more have joined the trend. Rather than try to buck the trend, I would think of it as an impetus to connect heretofore neglected, disconnected or disadvantaged areas to the Lower Manhattan hub and to the Greater New York economy. There is a powerful opportunity to bring Newark into the mix as well as Jersey City, Hoboken, Brooklyn and other areas. The Working Group finds region-wide cooperation to rebuilding Lower Manhattan. It calls for such measures as a moratorium on financial incentives to lure firms across state boundaries, and the sharing of regional revenue streams. My research suggests that all these are essential not only to get infrastructure rebuilt, but to enhance the long-range competitiveness of the entire region.

Greater New York's sheer size is one of its advantages in the creative economy. It is geographically big enough to hold a huge number and great diversity of creative minds, and big enough to offer people a wide range of options in choosing a kind of place to live or to locate a business. But size can only be fully capitalized upon if size is managed well. Big companies in recent years, to stay competitive, have worked incessantly at breaking down internal barriers and linking people together to become more nimble and responsive. A similar imperative holds for regions. In the U.S. there are a number of great, sprawling creative regions. All have the benefits of size along with the inefficiencies: the long commutes and traffic delays, the subregions and people isolated or left out of the game. The regions that can reduce those inefficiencies will come to the fore.

A New Convergence Point? Lower Manhattan's central location in the region raises some intriguing possibilities as to its future business role. Could it become a designated meeting point, where people from various nodes in the network converge as needed? Or to conduct specific types of face-to-face business regularly? What kinds of facilities might this function require; what planning measures would support it? Here again, the key is to envision Lower Manhattan's role as idea generator and creative hub.

Conclusion: New York in the Long View

The greater New York economy is among the most dynamic in world history. It has evolved and remade itself numerous times over the centuries. Lower Manhattan has consistently been a hub for these economic transformations. In early times, the region evolved into a major center for trade and commerce in an agricultural-based economy. By the 18th and19th centuries it became a center for manufacturing innovation, technology and industrial production. With the onset of the 20th century—and the coming of the great "organizational age" — the region's economy evolved once again into a center for corporate headquarters, high-level business services, and especially finance.

Each time, sweeping transformations in the region's economy have registered themselves in equally sweeping changes in the built environment. Nowhere has this been more evident than in lower Manhattan, which has evolved from a trading center, to a manufacturing center and ultimately the world's leading financial center, the physical apex of the organizational age. In the past, the region and particularly its physical hub have become the trendsetters for the growth and development of each new epoch. New York, it seems, has been an incubator of ideas, technologies, organizational processes and talent that define each new age. And over time, functions of the previous age decentralize and fan out from the urban core to make way for the new — as agriculture and manufacturing once did, and as large organizations and their functions have been doing recently. The process continues.

Entering this new age, the potential for Lower Manhattan and the region is tremendous. New York has the opportunity, out of its tragedy, to become the paragon of the 21st-century Creative Center. The best ways to harness human creativity, by firms and by regions, have not yet been discovered. Everywhere I see managers and civic leaders learning as they go. While the state of the art is still evolving because the new age is still emerging, my findings suggest three keys:

- Rebuilding Downtown mainly with financial-service office towers seems sub-optimal in light of trends in the regional and national economy. The city has many emerging creative strengths to be nurtured, and the urban-tower-cluster development model appears outmoded for the working and living patterns of the creative economy: Manhattan may well have all the major high-rise towers it will ever need.

- A more likely future is mixed-use live-work development, but tilted neither to high-tech nor to tourism.

- Rebuilding public transit with a markedly *improved* system — in Lower Manhattan and elsewhere — is crucial, both for practical reasons and for the creative future. New creative centers are booming (and will boom) throughout the region. These must be interlinked far better than at present. Lower Manhattan, as the nexus of a fast transit network, could have future business functions not yet envisioned.

New York has led the way into previous ages. It has been the world capital of the organizational age. It has made a marvelous transition, thus far, to rank among the early pace-setters in the creative age — which is not easy, as many great cities (and societies) fall by the wayside when the requirements for greatness change.

More challenges lie ahead as the creative age unfolds. One fork looming in the road, for instance, is this: Economic and social divides have been growing throughout America. They can continue to grow, or vastly more people can be integrated into the creative economy — so that the masses of people, not just thirty percent of the workforce, enjoy the rewards of exercising their creativity at work. That would be a truly humane economy and a truly productive economy. What steps are required to take such a path? There is no better place than New York to find out.