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Progressive Planning

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Manufacturing: New Industries, Progressive Approaches?

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Occupy Wall Street

The Seventh Generation

"In our every deliberation, we must consider the impact of our decisions on the next seven generations."
—From The Great Law of the Iroquois Confederacy

Photo: Tom Angotti

Sites Speak Louder than Words

Occupy Wall Street in New York City

By Samuel Stein

Editor's Note: The next issue of *Progressive Planning* will focus on reclaiming public space at Occupy Wall Street, Tahrir Square and around the world from Chile to Spain. The following piece was written in mid-October 2011, as Occupy Wall Street was gaining momentum and movement participants were experimenting with new protest encampment sites.

Samuel Stein is a tenant organizer in New York City, and holds a Masters in Urban Planning from Hunter College

Occupy Wall Street is growing. What started on September 17, 2011 as an encampment of hundreds in one small park has turned global. On October 15th, demonstrations were held in 1,500 cities and 82 countries. In New York City, our numbers are growing, and momentum is building to expand to more sites around the city. As a formally leaderless movement without explicit demands, we are defined primarily by the spaces we create. What do our choices of venue say about our politics, our critique and our vision? The choice of our next sites will communicate more to the world than any list of demands ever could.

We began our movement in Liberty Plaza, a "Privately Owned Public Space" created through a mechanism

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On the Cover
Revere Sugar plant in Red Hook, New York City, before demolition.

Photo: © Tom Angotti

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INTRODUCTION TO THE

Special Issue on Manufacturing

By Jennifer Clark and Pierre Clavel, Issue Editors

MANUFACTURING has long been the focus for progressive reforms. But these reforms, pushed by labor in the 1930s and 1940s, did not particularly involve city planners, and the idea of "progressive planning" that emerged in the 1960s focused on community and neighborhood struggles over urban renewal, highway clearances and the depredations of real estate developers—not necessarily manufacturing. The question now is whether, with changes in manufacturing, and new initiatives from the Obama administration, progressives can make a contribution through the manufacturing sector, and whether professional planners can play a role at all. We asked a group of geographers and planners—academics and practitioners with track records looking at manufacturing—to give brief reports on issues that might interest readers of *Progressive Planning*.

But what might "progressive planning" mean when applied to manufacturing?

Tom Angotti, who has many years of experience as a practitioner and academic in New York City, and who helped with this issue as co-editor of the magazine, wrote us recently:

> As a progressive, I'm not out there doing PR work for the manufacturing community, nor do I cover over their bad social, labor and environmental practices. But I will and do defend them against pressures from real estate and government to move elsewhere. Here's why:
>
> - Jobs are better than service jobs and more likely to be unionized;
> - As urban planners, we recognize the value of mixed-use neighborhoods (many have high walk-to-work populations, and remember Jane Jacobs!);
> - Industries in our neighborhoods (unconsciously) block gentrification processes; they're often obstacles to condos that displace low-income communities of color;
> - Locally-owned manufacturing businesses help create viable, resilient communities; and
> - Industries are sometimes allies against huge public waste facilities fought by environmental justice activists.
>
> Angotti concluded, "Probably the biggest opposition we all face are the economic development planners whose main mission is to attract "jobs" by supporting and subsidizing upscale real estate megaprojects, zoning out industry and using urban renewal powers to get rid of industrial areas."

We do not disagree, but our own perspective, academic but not completely isolated, is to think of the problem in terms of professional practice that, broadly defined, combines problem solving on the ground with support from researchers and teachers,

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Pierre Clavel is a professor emeritus of city and regional planning at Cornell University. More about his work can be found at *www.progressivecities.org/author/pc29/*.

usually at universities. We see three main questions:

Does city planning have a vision for industry?

Can we see a professional vision, even a theory, of a good outcome for industrial policy? The city planning profession has projected a vision of the city that is at the very least orderly and well-designed, and perhaps "efficient" in terms of circulation and land use. Broader visions of equity emerged from housing and regionalist interests in the 1920s and 1930s, and an amplified practice came to prominence with the advocacy planning movement starting in the 1960s, as questions of race and inequality found their way into professional norms. Manufacturing was relevant in that it provided good jobs, but professional practice toward manufacturing was left largely outside the city planning profession. That vision of manufacturing was more restricted than it is now, narrowly focused on the sector or even the firm. What we now have is more of a focus on networks, extending to "supply chains," non-manufacturing sectors and research institutions. Thus changes are in store for the professional "vision" of what manufacturing is or might be.

Is there a constituency for our professional activity?

Advocacy planners found a constituency in urban neighborhoods, usually around housing or environmental justice issues, but usually this has not included manufacturing. In the past that was seen as "economic development" and left to the local business community. Labor sought to organize unions, but did not normally shift the concept of "development" or connect with the community-oriented concerns of progressive planners. More recently, this has changed, with labor developing wider coalitions: what bridges are emerging?

What methods can professionals use to serve their vision and constituencies?

These have often been missing, even in cases where the first two conditions are met. Economic developers who advocate for subsidies for any kind of manufacturing plant without analysis of the consequences is among the most egregious example, however, new methods may be emerging in tandem with updated visions.

Among the articles in this issue there is no definitive paradigm changer. What we have, though, are:

1) several hints about a new approach; and

2) some pretty grounded accounts about what is going on in several parts of the sector, in several places in the U.S.

The State of Manufacturing

All of our authors are writing in the context of dramatic reductions and restructuring to manufacturing and changes in its spatial distribution. The numbers are stark and mainstream opinion has tended to simplistically conclude that "manufacturing is dead." In the 1970s and 1980s, manufacturing employment, after decades of growth, leveled off in absolute terms in the 20 million range. It had already peaked as a percent of total U.S. employment, declining from 36 to 21 percent between 1970 and 1990. Since 1990 the decline has been precipitous: in 2009 , manufacturing employment stood at 11.6 million, just 10.1 percent of total employment. Membership in labor unions also declined among manufacturing workers, dropping to 10 percent (from 35 percent in 1979).

Still, some qualifying factors suggest effective (if limited in scale) local planning initiatives, including progressive ones.

There were always exceptions to the trend of industrial decline. In some localities and sectors, prospects remain encouraging. There was a spirited response to plant shutdowns in the 1970s and 1980s. Though it was often unsuccessful at saving jobs, it at least undercut claims of inevitability by investors and business owners. Activists and researchers could often attribute decline to firm strategies—decisions by corporate leaders that were not related to the viability of products. Thus, one CEO justified closing a Chicago steel plant because its mission was to "make profits, not steel." In other cases, activists identified management failure, such as the failure of automakers to consider product innovation in the face of changing market demand.

Some of the manufacturing losses were the expression of definitional changes, as management functions moved to firms and businesses outside the factory. While "manufacturing" appeared to decline, employment in "business services" rose when manufacturing firms moved many functions to the back office. Other changes were artifacts of productivity increases: less labor was required per unit of output.

There was a related definitional problem in the failure to include both pre- and post-production processes. Essential pre-production functions were reported in non-manufacturing categories such as financial services and research and development. In recent years, rapid innovation has occurred in both areas. Post-production is understood to include marketing, distribution and waste management. An expanded working definition of manufacturing now understands the pre-production, post-production and intermediate production processes as integrated across the economy rather than isolated in some distinct and perhaps anachronistic corner of it.

There were also fundamental changes in the structure of the manufacturing sector. In the establishment size data reported in *County Business Patterns,* we see that as employment declined over recent decades, it also shifted from larger to smaller units. From 1979, when manufacturing employment peaked, to 2009, employment in larger establishments (500 or more employed) fell from 9.0 to 3.2 million, while employment in smaller establishments dropped from 12.5 to 8.5 million. These numbers support the conclusion that large producers—called "original equipment manufacturers" (OEMs)—downsized and outsourced many functions and inputs to smaller establishments, many of them constituting "supply chains" to the OEMs. In 1979, with manufacturing employment still near its post-World War II peak, activity was relatively concentrated and 42 percent of jobs were in larger plants; by 2009 the figure was 27 percent.

Manufacturing strategies cross the sometimes stubborn boundaries of traditional planning practice and education: land use, housing and community development, environmental planning, economic development, and others.

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Is There a Progressive Planning Practice for Manufacturing?

The articles in this issue of *Progressive Planning* document these changes in structure and point to alternatives—new policy directions at the national level and a different professionalism at the grassroots. The articles fall into two broad categories: 1) discussions of what is happening and has happened from a national perspective as a matter of policy and progressive priorities (Christopherson, Clark, Doussard and Schrock); and 2) descriptions of what is happening on the ground, in specific cities and communities (Giloth, Rast, Crean, McCormick, Hum, Hoelzel and Leigh, Wolf-Powers, and Kelly). We think that both of these discussions are critical to what happens next in U.S. manufacturing. We also argue that neither the national nor the local operates in isolation. While progressive planners often look for, and find, ways to produce positive alternatives at the local level even when the national policy agenda pulls hard in the opposite direction, the restructured state of manufacturing requires an approach that is both local and national. Hence these articles present cases of what is working on the ground as well as the national policy landscape.

Particularly interesting is the way in which the local examples tend to be multifaceted in their orientation. In Atlanta, there is an explicit connection between sustainability, land use and the revitalization of manufacturing. In Philadelphia there are connections to workforce development programs to shore up and upgrade a specialized labor market. There are also explicit connections to innovation policy and the "high-tech" focus of public research and development institutions. In New York City there is an industry-

specific approach, recognizing the land use and labor market needs of targeted networks of firms.

In all these cases, the manufacturing strategies cross the sometimes stubborn boundaries of traditional planning practice and education: land use, housing and community development, environmental planning, economic development and so forth. These approaches are far more responsive to the facts on the ground in their communities and to national and state policy priorities that can provide strategic links to resources. These emerging strategies are also more cognizant of industry-specific supply chains and globalized product markets. In many cases, they demonstrate a sophisticated understanding of how production and industries operate at different levels. This sophistication is relatively new and reflects two generations of industry studies mobilized by scholars since the decline of manufacturing in the 1970s.

What these case studies do not indicate is a role for labor as an agent of change. In that sense our findings are a basket that is half full. There are new developments in the labor movement: the creation of worker centers, "high-road" initiatives in manufacturing, labor's support for initiatives in transportation and green industry and new community-labor coalitions that have emerged in the past decade or so. These suggest the need for further exploration in progressive planning practice and in *Progressive Planning.* P²

Seventh Generation:
OWS: Sites Speak Louder than Words

By Samuel Stein

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added to the New York City zoning code in 1961. The 1961 revisions were full of new ways to shape development in the city, prefaced on the idea that zoning could be used to transform the city's social as well as spatial patterns. One of these planning innovations, the "density bonus," allows developers to build more than would otherwise be permitted if they create an open space for public use. The spaces could be inside a building's lobby or outside on land owned by the developer. While some of the plazas created via the density bonus supported active street life, many were poorly designed and underutilized, becoming empty caverns among skyscrapers. Left-leaning urbanists have largely written off the program as a giveaway to developers and a retrenchment of the state as planner and provider of open spaces.

Occupy Wall Street's reclamation of Liberty Plaza turns this logic on its head. What was once seen as a boon to real estate capital is now a thorn in its side. Our presence signals to the city and to real estate that social movements will use any and all spaces available to the public, regardless of formal ownership. Claiming a Privately Owned Public Space as our initial home base created a posture for the movement that was critical of both capital and the state, and hostile to their collusion.

In the weeks following the initial encampment, we marched and met at various sites throughout the city. On October 15th, however, the movement formally flirted with spatial expansion beyond Liberty Plaza.

We marched along Broadway in Times Square, a stretch of street closed to traffic as a part of the Department of Transportation's (DOT) *Public Plaza Program*. Under Commissioner Janette Sadik-Khan, the city has closed several blocks to auto traffic and created paved public spaces. These plazas are designed as sites of consumption, with small tables and chairs suggesting an outdoor café. They are created by the city, and maintained by a local "sponsor" (often the owners of adjacent property). DOT's *Public Plaza Program* is the mirror image of the Department of City Planning's Privately Owned Public Spaces—two ways capital and government control and share responsibility for open space. Our reclamation of such spaces implies a critique of neoliberal urban planning; whether our critique ends there or extends to a comprehensive rejection of both capital and the state remains to be seen. The full potential of the site was not explored—we held what amounted to a timed rally, with a fairly clear beginning and ending—but we should

continues next page

reimagine the possibilities for future actions in these types of publicly owned, privately operated spaces.

On the same day, the movement branched out further to include more Privately Owned Public Spaces and one fully public site, owned and maintained by the city itself. In the Bronx, we held a General Assembly in Fordham Plaza (a Privately Owned Public Space), and turned the Brooklyn-bound 4 train into an open mike. In Greenwich Village, we gathered in Washington Square Park for a speech by post-colonial theorist Gayatri Chakravorty Spivak and a General Assembly to discuss the merits and limitations of staying in the park past closing. Like all of the city's public parks, Washington Square shuts down overnight. Staying in Washington Square Park past midnight would have meant certain arrest, but it would have posed a challenge to the state's limitations on the commons. Most participants chose to exit the park just before it closed.

The choice to move into a fully public park (as opposed to a public-private amalgam) would change the tenor of the movement significantly. Liberty Plaza, Fordham Plaza and Times Square represent the entanglement of capital and government. Moving to public spaces like Washington Square Park would represent a more direct engagement with the state than the movement has so far undertaken. It would imply that our target is as much the city administration headed by billionaire mayor Michael Bloomberg (or the state itself) as the investment bankers on Wall Street, and would project a very different message about the relationship between the people and the state.

The following night, we attempted to move into a space representing yet another form of public land use: a community garden. The space on Houston Street known as "First Park" is a publicly owned lot that is recognized by the city as a community garden. Last summer, the western portion of it was handed over to the Solomon R. Guggenheim Foundation and the BMW Corporation to run as an outdoor arts space until October 16, 2011. The foundation retained control of the space beyond the end of the demonstration period, however, creating a potential space for a second full-time Occupy Wall Street site. Expecting our mobilization, the police barricaded the entrance and shut us out of the space. The legal justification for this action is murky, at best. Though it remains unclear how suitable a space First Park may be, the target is symbolically significant: moving into First Park would be a reclamation of a public space rife with internal contradictions. The lot transitioned from a community garden to a corporate art project (on gentrification, of all things), and its future is uncertain. Expanding into First Park would be a strike against the outsourcing of public space, and the corporate underwriting of political art.

We have to move beyond Liberty Plaza, and we have to consider what messages different sites convey. If our movement moves indoors, where should we start? Inside public buildings, such as those on the campuses of the City University of New York or city administration offices? In wholly private buildings, including the headquarters of Wall Street's biggest firms? Or in one of the many indoor privately owned public spaces scattered throughout Manhattan?

[**Editor's note:** 60 Wall Street is one of these spaces that has now become a major home to Occupy Wall Street]

While we have so far rejected explicit demands, Occupy Wall Street communicates implicit messages in many ways: through our central organizing framework of participatory democracy and consensus; through our images and media presence (including signs, social media output and The Declaration of the Occupation of New York City); and, most importantly, through the symbolic meanings of our spaces. Each site of struggle suggests a different narrative about our movement. "Occupation," initially a tactic in the broader strategy of claiming a space to question the logic of capital, has now taken on a life of its own and become a de facto strategy. This movement is becoming as much about reclaiming public space as anything else. Occupy Wall Street's implicit demand is a return to public control and ownership over land, no matter its formal ownership structure or tenure. P²

Planners and Manufacturing

An Uneasy Alliance

By Robert Giloth

In my three-decade planning career, manufacturing has been declared dead multiple times only to be rediscovered alive and evolving and in search of skilled workers. Manufacturing still matters for multiple reasons. For myself and many other planners, manufacturing has always held more promise than real-estate-driven development as a component of city and regional well-being, and the past four years of deep recession underscores why this is so. Pleas for skilled workers have echoed amidst ongoing plant closings and relocations. For example, a recent study of Baltimore's regional economy by the Brookings Institution identified over 63,000 manufacturing jobs at firms that served as a source of export potential, innovation and economic opportunity for those with some college education.

Robert Giloth is vice president of the Center for Community and Economic Opportunity at the Annie E. Casey Foundation. He previously ran CDCs in Baltimore and Chicago and worked for the City of Chicago. He has written widely on economic and workforce development.

In this reflection, I share my own thinking and experiences about manufacturing and its importance for neighborhood and city growth. My interest goes back to working in the Pilsen neighborhood on Chicago's Southwest Side in the 1970s, where a tattered industrial base still hired local people and still faced basic problems of infrastructure, abandoned buildings and financing. This interest and knowledge was inspired by a planning studio project at the University of Illinois at Chicago that got us out into the field talking to business leaders. These early conversations shaped my interest in manufacturing and the potential for fashioning a common agenda with community residents, but it was a minority view; over the past three decades, many more planners have preferred to dream about high-end redevelopment and gentrification.

Today's Interest in Manufacturing

Today's renewed interest in manufacturing has several dimensions. First, trade imbalances and our sluggish economic recovery have underscored the need for the U.S. to sell more products and services abroad, especially to growing countries. Exporting brings new resources into the economy and manufacturers purchase from local and regional supply chains that support additional businesses and jobs. This export role has been a traditional focus for U.S. manufacturing and remains viable for many high value-added manufacturing products.

Second, there has been a perhaps overly optimistic belief in recent years that new economic activities within domestic markets could provide an expansion and retooling opportunity for U.S. manufacturing and prevent a flood of imports from abroad. Two areas in particular have received this attention: the green economy and transit. Shouldn't the U.S. be able to redeploy its manufacturing capacity and skills to build the component parts of and assemble windmills, solar panels, retrofit technology and train cars and engines? Why should Germany or Sweden or China out-compete the U.S. in our own backyard? Unfortunately, not all of this optimism has turned into reality, at least not yet.

Third, economic experts have equated more innovation in the

Local planners, however, rarely calculate the positive externalities of manufacturers, such as higher purchasing multipliers and the creation of good jobs. More often, industrial and labor advocates make the case when firms threaten to close or are in need of assistance. The equity dimensions of manufacturing—the quality of jobs and the accessibility of jobs in terms of education and geographic location of firms—are consistently favorable but frequently unrecognized.

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economy and society with long-run economic growth. While the U.S. cannot easily compete globally on wages, productivity improvements and process and product innovation build upon our university and research lab infrastructure and creative culture as well as our network of advanced manufacturers.

A fourth dimension of renewed interest in manufacturing concerns the skills gap. We all knew that retiring baby boomers would produce job openings in key manufacturing occupations like machining—this was happening before the Great Recession. What is paradoxical today is that manufacturers are still crying loudly about skills gaps and their inability to hire while layoffs and plant shutdowns continue. Some of this is about shortages for the most advanced skills, but some is no doubt about wages and benefits and the willingness of business to reinvest in the skills development of current employees. And there is the perennial problem of manufacturing having a bad name—dirty jobs, unsafe work environments and inevitable layoffs and shutdowns. What parents in their right minds would urge their children to make a career in manufacturing? The reality of and prospects for these new jobs, however, is quite different from common perceptions and the word needs to get out.

Finally, renewed interest in manufacturing has coincided with interest in and concern for older industrial cities and transitional, shrinking or legacy cities, which have lost much of their population and economic base. A part of the story of these places is certainly about what's next, but another important part of the story is how we can build upon the legacy of the manufacturing companies, skills and networks that remain. Turning around the auto industry in Detroit is a big example, but stories about building on the basics of manufacturing in Cleveland, St. Louis, Milwaukee, Chicago and Baltimore are perhaps more important. In other words, there is increased recognition about the intertwined destiny of older industrial cities and the manufacturing sector.

Manufacturing and the Planning Imagination

Despite renewed interest in manufacturing, over the past several decades local and regional planners have shown real ambivalence about manufacturing. On the one hand, planners have acknowledged the role of manufacturing in growing the economic base and its attendant multiplier effects. On the other hand, planners and local developers have focused much more attention on reconfiguring downtowns, building big infrastructure and attracting high tech in its various forms, with the occasional competition for a new plant—or more likely a corporate headquarters. In many places, the mantra "manufacturing is dead" has gone unanswered as a landscape of abandoned warehouses and industrial plants remind us that the old world of industrial giants has changed and that in many cases these old facilities are environmental quagmires or tantalizing prospects for upscale housing and neighborhoods.

While manufacturing may not have been top of mind for city planning visionaries until recently, local and regional operating departments and authorities still paid attention to and made investments in manufacturing. What many manufacturers needed was "bread and butter" planning and investment.

First and foremost, manufacturing plants clumped together or agglomerated across city landscapes in industrial districts, along rail lines, near airports, on waterfronts and in outlying districts. While many of the big, heavy industry plants have left or downsized, many small and medium-sized firms remain in industrial districts. They need common infrastructure, zoning changes, land assembly, environmental remediation, financing and tax assistance and workforce investment. In many places, these firms have banded together in councils to advocate for their districts or specific sectors and across regions.

In the old days, the interdependencies among firms—buying, selling, innovating, sharing talent—created dense networks of relationships among manufacturers, what today we might call sectors or supply chains. This density has thinned out, and in some cases lost its center of gravity, but much of it remains in older industrial cities. Moreover, many of these firms and interdependencies are now regional in scope, no longer centered in historic urban industrial districts.

A basic planning concept applied to manufacturing concerns externalities—the positive and negative spillovers from firm operations that are not accounted for directly by business. A lot of attention has focused on the negative externalities of manufacturing—environmental effects that pollute the air and water, traffic congestion, noise and smells. Public policy has pushed many firms to remediate these effects and to segregate in industrial districts with the appropriate infrastructure. Firms remaining in older districts adjacent to gentrifying residential zones have experienced pressure to change their ways or go away.

Local planners, however, rarely calculate the positive externalities of manufacturers, such as higher purchasing multipliers and the creation of good jobs. More often, industrial and labor advocates make the case when firms threaten to close or are in need of assistance. The equity dimensions of manufacturing—the quality of jobs and the accessibility of jobs in terms of education and geographic location of firms—are consistently favorable but frequently unrecognized.

Sectors, Neighborhoods and Workforce Partnerships

The mayoral administration of Harold Washington (1983–87) in Chicago took a special interest in manufacturing and ultimately created a number of model interventions in support of it. This interest was in part a response to the volatile times of deindustrialization and plant closings, especially in Chicago. But it also reflected the roots of many of the activist planners supporting Washington who had developed a critique of real-estate-led economic development and instead focused on jobs, neighborhoods and balanced development. I had the opportunity to work for Harold Washington on manufacturing issues for the city's Department of Economic Development and arrived with a similar mindset and experience.

Robert Mier, our economic development commissioner and a planning professor from the University of Illinois at Chicago, saw much of our industrial development work as being at the intersection of economic sector and neighborhood. On the one hand, manufacturing could be seen in terms of sub-sectors like steel or apparel, with specific, shared characteristics and needs related to markets, technology, public policy and human capital. Policy and practice interventions made more sense if directed to common industry problems and opportunities. On the other hand, these same manufacturing firms operated in real places that often contained a mix of manufacturing firms—for example, metal fabrication as well as food production—and encountered specific environmental challenges. We needed to work on both these fronts as well as understand the interplay between sector and place.

To address sectors we organized a number of industry task forces and invested with partners to organize additional task forces over time. The basic idea was to do some planning by sector—understanding the state of affairs and future opportunities for steel or apparel or printing or food production—and identifying

points of intervention that the City of Chicago could advocate for. These task forces were both forward looking and humbling—in terms of the changes rocking local industries and the limitations of local tools for interventions—but they were a way to understand the interconnections in the local economy and how they scaled regionally and globally. Regional economist Anne Markusen called this approach "building on the basics."

In terms of neighborhood manufacturing, we invested primarily in creating and supporting a more effective network of local industrial councils that would visit and organize manufacturers on a neighborhood basis. The hope was to obtain from these conversations with firms real-time information about impending plant closings, expansions, infrastructure requirements and bureaucratic bottlenecks. We also experimented with creating community/labor "early warning" networks to provide different types of information about firm activity, primarily the early signs of disinvestment, relocation or shutdown. The purpose in both cases was to increase the opportunity to intervene and make a difference.

A major overarching effort growing out of these close relationships with local manufacturers was a multi-year effort to protect industrial land, prevent industrial displacement when possible from speculative commercial and residential uses and make more coordinated investments in neighborhood industrial infrastructure. We made some progress on this front by increasing public awareness about the importance of manufacturing for Chicago and its neighborhoods, fighting ill-conceived zoning variances for new uses that threatened industrial areas and advocating for legislatively mandated industrial planning districts to tighten zoning, reduce speculation and improve industrial area investments.

The combination of these sector and neighborhood approaches led to neighborhood-based studies of manufacturing sub-sectors like screw machine businesses and metal fabricating. These studies in turn produced targeted manufacturing interventions and ultimately what we have come to call workforce or sector-based partnerships that customize workforce interventions for new and incumbent manufacturing workers. A premier example is JARC, the Jane Addams Resource Corporation, which has now grown to be regional in scope. Its core approach is to focus both on employers and workers and to integrate funders and workforce partners.

The Manufacturing Opportunity

We've learned again over the past several years that manufacturing is not dead and in fact has a lot of competitive strengths. While the economy will not be rebuilt on it alone, it is certainly part of the export and innovation strategy for the future. We have also realized that building upon the basics of new green industries to jumpstart new manufacturing growth is a long-term proposition. Finally, the skills shortages of today will only grow by the end of the decade as more retirements occur. All of these fronts present manufacturing opportunities. Planners need to be ready now to imagine how this important set of economic institutions and processes can support vibrant regional economies and cities of opportunity. P²

Suggested Readings on Manufacturing

The American Prospect, January 2010. Special issue on manufacturing covers a broad range of national issues.

Barry Bluestone and Bennett Harrison, *The Deindustrialization of America* (1982). First major progressive response to wave of plant closures starting in the 1970s.

Joan Fitzgerald and Nancey Green Leigh, *Economic Revitalization: Cases and Strategies for City and Suburb* (2003). Analysis of U.S. cases, industrial retention in Chicago.

Greg LeRoy, *The Great American Jobs Scam: Corporate Tax Dodging and the Myth of Job Creation* (2005).

Michael Piore and Charles Sabel, *The Second Industrial Divide* (1984). Manufacturing in transition from mass production to smaller units.

Joel Rast, *Remaking Chicago: The Political Origins of Urban Industrial Change* (1999). Chicago's "local producer strategy" through the 1990s.

Lowell Turner and Daniel B. Cornfield, *Labor in the New Urban Battlegrounds: Local Solidarity in a Global Economy* (2007). Labor adapts by working with local communities.

Josh Whitford, *The New Old Economy: Networks, Institutions, and the Organizational Transformation of American Manufacturing* (2005). Changes in the structure of manufacturing.

Job Creation Strategies to Accelerate the Return of U.S. Manufacturing

By Susan Christopherson

With a shift in the cost factors that drove the outsourcing and offshoring of American manufacturing, some companies are showing new interest in expanding their U.S. operations. An understanding of the origins of this trend is the first step in reestablishing manufacturing employment. We then must fine-tune the current robotic policy emphasis on innovation, job training and export barriers and commit to an industrial policy that is both regionally and technologically differentiated and meets the pressing needs of the most reliable job generators, especially U.S.-based, small and medium-sized, middle-technology firms.

Current Growth in Manufacturing

Despite the grinding recession, U.S. manufacturing exports have shown a steady upward trend since 2008. Furthermore, U.S. counties reliant on manufacturing jobs have out-performed the national average in employment gains. A weak dollar, rising transport costs, design and quality control issues offshore and more competitive wages and lower cost energy here at home have prompted manufacturers to reassess their location choices. How can the U.S. ride the wave of lower factor costs to expand manufacturing employment, and how might manufacturing become a more secure part of the economy?

Susan Christopherson is an economic geographer and professor in the Department of City and Regional Planning at Cornell University.

For the last thirty years, declining U.S. manufacturing employment has been rationalized as an inevitable transition to a service economy, and reassured by the apparent boom in housing and financial services; some policymakers bought into the idea that manufacturing in the U.S. was no longer necessary, and that manufacturing regions were in permanent decline. According to recent reports, however, U.S. factories added 250,000 jobs since the beginning of 2010—the first sustained increase in manufacturing employment since 1997. That amounts to 13 percent of the jobs lost during the Great Recession. When the housing and financial services bubble burst, interest in a more diversified economy revived, and now a small wave of job gains in the manufacturing sector has refocused attention on manufacturing.

Preeminent among the conditions underlying this new opportunity for creating manufacturing jobs is a weak dollar, driven lower over a ten-year period by increasing indebtedness. Another factor is an anticipated increase in transportation costs, especially important to manufacturers of heavy goods. Manufacturers are also coming to grips with the quality problems attendant to offshore production and—especially in the case of China—intellectual property issues. And just as other costs associated with outsourcing are rising, U.S. wages have become more competitive. U.S. manufacturing wages are at historic lows, including those for middle-skilled technical workers. Finally, the discovery of new shale gas supplies in the U.S. portends cheaper energy, and inputs for industries such as chemical production that underpin a wide range of other manufacturing endeavors. In combination, these factors have caused manufacturers, including foreign ones, to take a second look at locating their operations in the U.S. Foreign

manufacturing investment in the U.S. increased 19 percent in 2008 alone.

Problems with the Current Manufacturing Jobs Agenda

The predominant economic analysis has emphasized "innovation" as a source of job creation. In the U.S., however, innovation has come to be associated more with extracting financial returns through the sale of start-ups or intellectual property, and less with investment in incremental design and process innovation that creates new products or enhances efficiency in manufacturing. The hopes invested in innovative new industries as a job creation strategy have not been realized. The U.S. Bureau of Labor Statistics predicted in the 1990s that such industries would create 2.8 million jobs, while the actual number is in the tens of thousands.

The primary government prescription to create manufacturing jobs lies in solving labor supply and "skills mismatch" problems. This typically involves providing the unemployed with training to meet manufacturers' need for higher level skills. But since 2007, while effective unemployment has stood at its highest level since the Great Depression, there has been a continued shortage of "middle-skill workers" able to fill advanced manufacturing jobs. The other prescription to create manufacturing jobs is trade policy. Lifting export controls, and opening markets for corporations that do most of their manufacturing *outside* the U.S., may be important for strategic reasons, but there is little evidence that they create jobs in the U.S.

What is missing is a broader policy program that includes regional strategies to recapture jobs, and a differentiated approach to industries with varying technological intensity and input costs.

Why Regions Matter

To create U.S. manufacturing jobs fast, we must build on regional strengths—the remnants of supply chains and specialized knowledge in the original strongholds of U.S. manufacturing. Many metropolitan economies in the Great Lakes states have fared relatively well during the recession. Rochester, New York, for example, now ranks first nationally among mid-size city job growth leaders, and Genesee County third in food processing industry growth (a low- and middle-skill job sector) according to *Business Facilities* magazine. These more resilient city-regions have diversified economies, including advanced manufacturing industries, strong educational and health institutions and stable public sector jobs. Many have facilities that can be retrofitted and access to rail and water transport as well as trucks. They also lie within the geographic orbit of the major U.S. consumer and business markets. Although their manufacturing workforce has aged, there is still a reservoir of knowledge and skills to draw upon. And their educational institutions have technical training and engineering programs that can serve the needs of returning manufacturing enterprises and their suppliers.

What is needed is a fresh look at these resources and how they can be adapted to the needs of contemporary, globally-oriented manufacturing firms that are looking at total costs, not just labor costs.

Learning the New Location Calculus

Although manufacturing companies will continue to look for local or state government location subsidies, other factors are more significant: infrastructure, logistics and facilities, the quality of employees companies are able to attract and especially the efficiency, responsiveness and flexibility of the small and medium-sized enterprises (SMEs) in the supply chains they want to utilize.

According to organizations that consult with manufacturing companies or have conducted studies to assess their thinking about location decisions:

> "Manufacturers are beginning to recognize that many of the factors they previously based their offshoring manufacturing and supply decisions on most heavily, such as component price and transportation costs, have dramatically increased over the last few years—and those seemingly initial cost savings are no longer so big. "
>
> —The Manufacturing Institute

> "Since wage rates account for 20 to 30 percent of a product's total cost, manufacturing in China will be only 10 to 15 percent cheaper than in the U.S.—even before inventory and shipping costs are considered. After those costs are factored in, the total cost advantage will drop to single digits or be erased entirely.
>
> —The Boston Consulting Group

In an analysis of the full costs associated with location decisions, Mohawk Global Trade Advisors indicates that if companies look at the cost of offshoring under current conditions, it simply doesn't make sense for many of them.

Consulting firms are developing sophisticated metrics and programs to assess total costs and help companies make choices about plant location and the sourcing of inputs. The skills necessary to carry out a total cost analysis need to be taught to economic development practitioners and public officials if they are to have informed conversations about comparative costs with large manufacturers, help suppliers understand the cost calculations of their customers or help smaller companies assess their own sourcing alternatives.

What We Can Do Now

An effective job creation strategy should refocus on small and medium-sized, privately held companies and what they need to expand employment. Among the most important of these needs are access to capital, assistance in product and process innovation and more skilled workers.

The most immediate need is access to capital. With national and multinational financial institutions restricting their lending, it's time for federal policy to support *local* banks and credit unions with a commitment to lend to local businesses. The Small Business Administration's *Community Express* initiative supports lenders in making small business loans, and directs small business owners to management expertise.

To reorient innovation, we should strengthen the existing industrial support programs, such as Manufacturing Enterprise Partnerships (MEPs) and the Industrial Extension Services (IES) of land grant universities, giving them a wider intermediary role to coordinate training, industry export promotion and intra-industry networks that support design and product and process innovation.

As for increasing middle-skilled workers, the immediate steps recommended by manufacturers, unions, educational institutions and intermediaries include "earn to learn" programs (which also stimulate employment) and apprenticeships, not just training. States should reorient community colleges as a source of job-oriented credentials, not just as a stepping-stone to a four-year degree (and enable them to provide non-credit technical skills courses). Making those skills portable through "stackable" credentials and national credential systems would attract more workers and boost the capacity of U.S. manufacturing. Hiring incentives should target SMEs in potentially expanding manufacturing sectors. And as with innovation initiatives, useful workforce development requires closer collaboration between post-secondary educational institutions and regional associations of companies united by particular technologies, like the Rochester (NY) Regional Photonics Cluster.

Securing the Future

A commitment to rebuild manufacturing capacity in the U.S. would require tackling three major issues in the long term:

1. *Focus the innovation agenda on middle-technology industries.*

U.S. university research priorities are biased toward research that leads to revenue from intellectual property sales, rather than research that leads to more productive manufacturing industries. We need incentives for universities to pay more attention to design, product and process innovation in middle-technology industries, and more cooperative efforts between research universities and organizations, such as technical institutes, with closer ties to industry.

2. *Solve the health care cost problem.*

The elephant in the room is rising health insurance and health care expenditures. Unless these are addressed,

U.S. manufacturing will lose jobs to Canada because, despite higher wages and more stringent work rules, its national health care program lowers costs to firms.

3. *Strengthen the effectiveness of small and medium-sized industries in domestic supply chains, but also their reach into global markets.*

Provision of technically trained workers is necessary, but not sufficient, to rebuild U.S. manufacturing capacity over the long term. Small and medium-sized manufacturers have limited capacity to move beyond day-to-day pressures, inhibiting their ability to utilize information technology, analyze and move up the value chain or develop global markets for their products. Meeting that challenge will mean the difference between a quick bump in manufacturing employment and rebuilding an internationally competitive set of U.S. manufacturing industries that can continually re-invent themselves and adopt new technologies. To make the turnaround in manufacturing "stickier," we must build a regional and national infrastructure to support efficiencies that make outsourcing and offshoring for inputs both inconvenient and economically unattractive, create high-functioning technology-based supply chain "eco-systems" that serve multinationals, *and* develop SME-based industries capable of reaching global markets independently.

Time is of the essence. Because longer term initiatives require sustained public support and political will, we need to create jobs that demonstrate the potential of manufacturing now. But in the long term, the U.S. hold on manufacturing must rely not just on a tenuous advantage in factor costs, but on better quality control, customer responsiveness and inter-firm efficiency.

If we have a slight wind at our back, then it is a good time to stop fixating on driving down factor costs further by attacking unions or undercutting environmental protections, and instead focus on reinforcing the upward trend in manufacturing with more innovative, systemic, long-term initiatives. For too long, the U.S. was the "expensive" alternative for manufacturing, but that world is changing, and we need to change course to take advantage of new global conditions. P²

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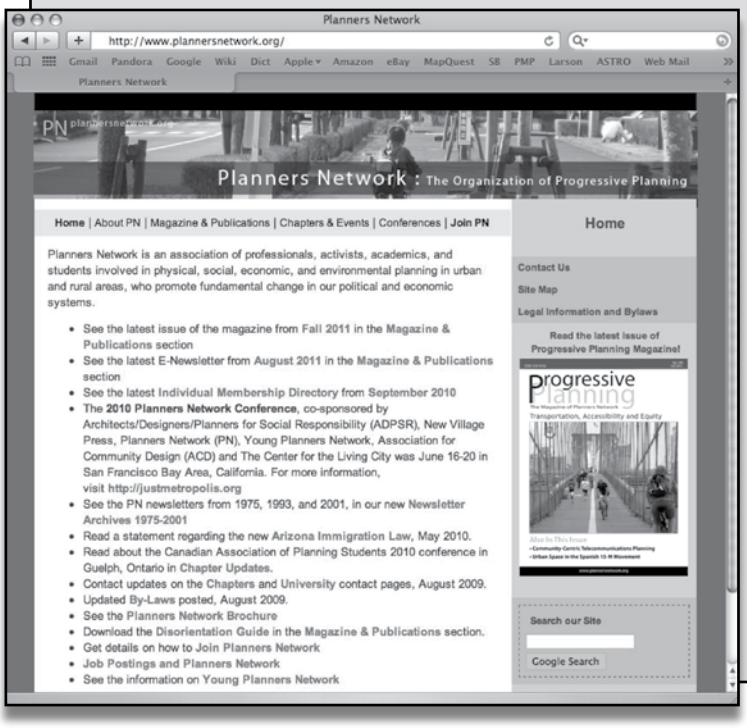

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Is There a Progressive Approach to Innovation Policy?

By Jennifer Clark

To many progressive planners, the idea of a progressive science and technology (S&T) policy seems anathema. Science and technology policy privileges a subset of firms and institutional stakeholders that are the recipients of too much public largess already. A reimagining of manufacturing policy requires looking again at *innovation* and what it means for the long-run viability of the neighborhoods and communities that constitute our regional economies. Innovation leads to adaptable, flexible and resilient local economies. Consistent innovation, deployed through a network of advanced manufacturers, presents the possibility of a sustainable production system capable of adapting over time rather than collapsing.

AMP: The New White House Initiative

As planners trained in economic and community development, we often look for federal investments in communities, neighborhoods and jobs to emerge from a series of usual suspects: the Department of Labor's Education and Training Administration (ETA), the Department of Commerce's Economic Development Administration (EDA) or the Department of Housing and Urban Development's Community Development Block Grant (CDBG) program. There is now, however, the *Advanced Manufacturing Partnership* (the AMP), which emerged from an unanticipated source—the White House Office of Science and Technology Policy (OSTP), an initiative dominated by "establishment" stakeholders. The AMP's budget was initially announced at $500 million, a significantly larger level of investment than the EDA's $40 million 2012 budget request or the CDBG or ETA budgets, which hover around $4 million annually.

During the summer of 2011, President Obama announced the AMP in a speech at Carnegie Mellon University. It came out of a recommendation by the President's Council of Advisors on Science and Technology (PCAST), a relatively little known advisory group made up of business leaders (CEOs and entrepreneurs), research professors, deans and presidents of major research universities. The AMP was charged with pulling together university, industry and federal government stakeholders to target investment in emerging technologies to create and support quality manufacturing employment. In the course of six months the AMP has developed into a policy process focusing considerable federal (read: executive agency) attention on stakeholder engagement and cross-agency cooperation geared toward bolstering U.S. manufacturing.

It is unclear where the AMP will lead in terms of concrete investment in jobs and quality work for communities and neighborhoods, however, it highlights a largely unnoticed move by the Obama administration to put S&T investment on the table in the debate about the renewal of U.S. manufacturing. In other words, a significant line of funding once restricted to R&D divisions of large firms, science-based federal agencies and research universities is now at stake in the debate about how to renew U.S. manufacturing. And the debate has shifted to a discussion of *how* to renew manufacturing, not whether to do so. These

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two subtle but significant moves by the Obama administration and its allies in the S&T community may prove to be quite significant.

What are the priorities of progressive planners and policymakers with regard to the significant federal investments in S&T policy? What does a progressive innovation strategy look like?

Reimagining Manufacturing Policy

Planners and policymakers who have remained engaged in manufacturing policy over the last thirty years have borne witness to an erosion of both public sector and private sector investment in production jobs across the federal, state and local levels. Two generations of planners have recorded the subsequent decline in neighborhoods and communities across large and small cities throughout the U.S. as manufacturing jobs—and the middle-class wages and benefits they represented—abandoned the landscape.

There have been relatively few breaks in this decline. While the national economy improved substantially during the Clinton administration, those gains were not significant enough to arrest the decline in real wages, nor did they redirect the narrative that manufacturing losses were simply a transition from an industrial to a knowledge economy—where new, better jobs were supposed to emerge. Manufacturing losses, seen as a labor supply problem, resulted in the policy response to retrain industrial workers to become knowledge workers. The unemployed would be reabsorbed into a robust new economy when they acquired new skills.

While the Clinton administration's record on manufacturing and trade policy lead to disappointment, there was some targeted investment in "managing decline" for hard-hit communities. This was based on a general understanding that the winners from trade may have to compensate the losers for some period of time. This compensation turned out to be inadequate, although the practice was in line with the policy proposals of many progressives.

The Japanese diplomat observes that the key difference between the U.S. and Japan is that Japan has an industrial policy and won't admit it whereas the U.S. has an industrial policy and doesn't even know it.

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Compared to Clinton administration policies, progressives have had more difficulty ascertaining the direction (and effect) of the Obama administration's priorities in manufacturing policy. This is, in part, due to the demands of the recession that distorted the preferred agenda of the administration as well as the constraints placed on federal investment by opposition leaders. Recent bilateral trade agreements with South Korea and Colombia alerted progressives to a familiar pattern of concession bargaining that undermines U.S. manufacturing.

The AMP process, however, reveals a different policy trajectory. First, there is a recognition in both the rhetoric and the policy proposals of the Obama administration that S&T policy *is* manufacturing policy. And second, there is no debate about the need to renew U.S. manufacturing. This administration does not push the narrative that the knowledge economy will replace middle-class jobs lost in the transition from the industrial economy. Rather, there is an emerging argument for advanced manufacturing which draws its competitive advantage from the skills of U.S. workers and the quality of U.S. innovation.

The argument that manufacturing *doesn't really matter* to the competitiveness and sustainability of the U.S. economy appears to be largely abandoned, even by those who once embraced it. This convergence on goals, however, should not be mistaken for consensus on the path to get there.

Is Innovation the Key to Industrial Policy?

There is an often-told story (recently repeated in the *New York Times Magazine*) about an exchange between a Japanese and American diplomat engaged in trade negotiations. The Japanese diplomat observes that the key difference between the U.S. and Japan is that Japan has an industrial policy

and won't admit it whereas the U.S. has an industrial policy and doesn't even know it. Progressive planners and policy analysts such as Ann Markusen, Bennett Harrison and Barry Bluestone made similar arguments about U.S. industrial policy in the 1980s.

National industrial policies carry with them clear implications for bilateral and multilateral trade. In general, industrial subsidies are considered an unfair trade practice. As such, national manufacturing policy is a delicate proposition. National innovation policies, however, trigger far less overt scrutiny and regional innovation policies draw even less attention. Subsidizing technology rather than industry is common practice in OECD countries (the Organization for Economic Cooperation and Development has thirty-four members, mostly developed nations). The de-linking of science, technology and innovation (STI) policy from discussions of production has significant advantages for policymakers. STI policies are seen as broad-based investments rather than as targeted corporate subsidies that may be scrutinized by citizens or trading partners.

Other industrialized countries have piloted and implemented large-scale national strategies coordinating national-level STI policies with advanced manufacturing firm networks at the regional scale. Examples include the European Union, Canada, Taiwan, South Korea, Singapore, Italy, France, Germany and many others. Although these countries implement their coordinated investments through a variety of institutional structures and intermediaries, there is increasing coordination between national STI policies and regional manufacturing networks.

Within the PCAST report that launched the AMP is the recommendation for a national innovation policy. This would be a substantial shift in direction. For almost twenty-five years the federal government has pursued an investment strategy that implicitly de-linked science and technology investment from economic and industrial development strategies. In effect, the PCAST proposal suggests that the U.S. leap-frog the controversial and long-standing question of a federal-scale industrial policy and move straight to a twenty-first century-style innovation strategy.

A Progressive Approach and the Policy-Making Process

The AMP process highlights the inherent tensions between an administration rooted in bottom-up community development practice and a policy arena long directed by well-insulated technical and scientific administrators trained in top-down, funding-driven, priority setting. The AMP has attempted to reconcile this tension by soliciting broad public input. This input comes in two forms. First, the AMP is actively soliciting public comments through various existing federal agencies (notably the Office of Science and Technology Policy). Second, the AMP asked its university partners to host a series of public meetings across the country (in Atlanta, Boston, Ann Arbor and the Bay Area).

Each public meeting, facilitated by the partner university in that locale, gathered input from participants in four subject areas:

1) technology;
2) workforce and education;
3) shared facilities/ infrastructure; and
4) policy.

Within each subject area, faculty and administrators from the partner universities, staff from the twelve partner companies and staff from the OSTP pulled together their knowledge and priorities to frame a workplan and recommendations.

While this effort leaves much to be desired in terms of diversity of stakeholders and engagement in real decision-making, it is an intentional effort to gather geographically diverse public input quickly. Implementation of the AMP's recommendations will require the buy-in of the S&T policy community as well as stakeholders in U.S.-based advanced manufacturing. In part, these meetings are an effort to alert these communities to potential changes to come and gather allies in those transitions.

Goals of a Progressive National Innovation Policy

So what are the elements of a progressive national innovation strategy? One key element would be a focus on small and medium-sized enterprises (SMEs). This is not because small firms are the job generators of the new economy (although they may be either temporarily or permanently), but

Photo: Tom Angotti

because SMEs are critical to a functional supply chain.

A progressive national innovation policy would be concerned with pushing technology down the supply chain, not simply transferring innovations to high-tech start-ups. This means modifying existing R&D institutions to provide technical assistance to SMEs on innovative production processes as well as on the design and prototyping of innovative products. These innovative processes include energy efficiency, life-cycle product design and adoption of better, greener, safer materials. R&D facilities should focus on international standards and certifications—environmental, labor, corporate codes of conduct, systems and logistics—the provide suppliers with increased credibility with end producers in a global supply chain. In addition, access to shared facilities and the technical assistance they provide should be free to SMEs, particularly small firms co-located with the R&D institution.

A second key element of a progressive S&T policy is the requirement that shared facilities become integrated into a workforce investment system, allowing for the broad training of workers on specialized equipment and with specialized production systems. This training would be delivered in partnership with the community college system. While university-based R&D facilities have long served as training grounds for graduate and undergraduate students enrolled in research universities, these facilities can and should be a resource available to a broader set of students and incumbent workers. An effective innovation policy would consider these career ladders. Again, it is worth noting that investment in a skilled and educated labor market almost never triggers trade concerns about subsidizes internationally or inter-jurisdictional competition domestically. This is particularly true if that training is technology-specific rather than industry- or firm-specific.

A third key element of a progressive S&T policy is to reframe the engagement of research universities in national and regional innovation systems. Universities are the best positioned institutional intermediaries to implement a progressive national innovation policy. Research universities are broadly distributed, have established research and educational capacities and house many of the existing R&D institutions and innovation programs. Under current conditions, however, universities act as revenue-seekers forced to compete for federal funds rather than neutral research and educational intermediaries that collaborate with other entities in the national innovation system. They are also forced to internally prioritize revenue-generating activities over an educational, service and outreach mission. For universities to serve the critical role of implementation intermediary in this national innovation system they simply must have the resources. P²

The Promises and Pitfalls of Planned Manufacturing Districts

Lessons from Chicago

By Joel Rast

In 1988 the City of Chicago initiated an innovative policy to curb industrial displacement in a rapidly gentrifying area on the city's Near North Side. That year, a 115-acre area between Clybourn Avenue and the Chicago River—the "Clybourn Corridor"—was designated as a Planned Manufacturing District (PMD). A PMD is a special zoning designation that places significant restrictions on the rezoning of industrial land as a way to protect industrial firms from encroachment by uses incompatible with manufacturing.

Since the Clybourn Corridor PMD was created in 1988, a total of fourteen additional PMDs have been established in industrial corridors throughout the city. In this article I examine how this approach to industrial retention began and how it has fared since its origins more than two decades ago. Can industrial land-use planning be an effective tool to preserve decent-paying jobs and mitigate the polarization of income and wealth caused by urban economic restructuring?

One of the most important conclusions we can draw is that it is extremely important to carefully plan the permitted uses in PMDs with an eye towards quality jobs that serve local residents.

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How PMDs Became City Policy

Given Chicago's response to industrial decline during the decades following World War II, it is somewhat remarkable that PMDs became city policy. Already by the 1950s, planners had begun mapping out a largely post-industrial future for the city in which a revitalized downtown would become the city's principal economic engine. Achieving this goal would require massive land use changes in the areas surrounding downtown, where 25 percent of land was devoted to industrial use. Planners called for a new emphasis on middle-income residential development that would, they argued, better complement the corporate and retail functions in the central business district. Blaming market forces, they insisted that central locations were no longer viable for manufacturers, warning against "futile and wasteful efforts" to retain them.

By the 1970s, as the decline of industrial jobs citywide accelerated, arguments about the death of manufacturing in Chicago increasingly became the conventional wisdom. Even so, a counter-narrative about the city's economic development path was emerging from within the city's neighborhood movement. As deindustrialization wreaked havoc on their neighborhoods, certain community development corporations (CDCs) began experimenting with industrial retention efforts. Out of these efforts, new ideas surfaced about the impact of public policy on the city's economic trajectory. For these groups, deindustrialization became linked not simply to market forces, but to policies that catered to downtown interests and neglected the needs of viable neighborhood manufacturers.

The city's political leadership at the time, aligned closely with downtown business, was unreceptive to calls by neighborhood leaders for more balanced economic development policies. The election of Harold Washington as mayor in 1983, however, created new political openings. Washington, an African-American congressman representing Chicago's South Side, was a progressive-minded political independent with close ties to neighborhood leaders, several of whom assumed prominent positions in the new administration. In a major departure from previous administrations, Washington's economic development plan called for "balanced growth" between downtown and the neighborhoods and greater attention to industrial development. Jobs, not real estate development, would become the City's new economic priority. A new program that funded CDCs to conduct industrial outreach, the Local Industrial Retention Initiative (LIRI), was quickly established.

One of the first CDCs funded through the LIRI program was an organization called LEED Council, which operated in a diverse but rapidly gentrifying area of the Near North Side. Through its industrial outreach work, LEED Council discovered that gentrification was beginning to encroach on a nearby industrial corridor. In 1983, developers obtained a zoning change to convert a former piano factory to residential lofts. More such projects quickly followed. This activity began to compromise the industrial integrity of the area. Land values soared. Because commercial and residential property can command prices up to three times as high as industrial property, real estate speculators began purchasing available industrial land. Soon manufacturers could not find affordable expansion space.

After studying the issue, LEED Council called for the creation of a PMD to stabilize industrial zoning in the area, a proposal which soon put the Washington administration's balanced growth policy to the test. The PMD idea was controversial, and support from the administration was not immediately forthcoming. PMDs challenged the conventional wisdom that manufacturing in Chicago was dead. It clashed with the vision of downtown redevelopment advanced by business leaders, which had long advocated the removal of manufacturing from the central area. It was opposed by the real estate community and the *Chicago Tribune,* which published a series of articles and editorials characterizing the PMD as anti-development. The debate over the PMD highlighted the clash between two development trajectories—downtown revitalization versus neighborhood industrial retention—and put the Washington administration in the position of having to choose between the two, something administration officials did not want to do.

When the Clybourn Corridor PMD was finally established in 1988, it was due in large measure to the organizing effort orchestrated by LEED Council. The multi-year effort to create the city's first PMD drew support from a diverse coalition of manufacturers, labor groups and neighborhood organizations. Building this coalition was a painstaking but necessary task, particularly given the hesitancy of Washington administration officials to take ownership of the initiative and shepherd it through the legislative process. As LEED Council's former director recalls, "Every step of the way, I would have to organize a broader base for [administration officials] to stand on to get them to take the next step." Ultimately, these actions gave sympathetic city officials the support they needed to move forward.

Do PMDs Create Jobs?

The majority of Chicago's PMDs have been in place for seven years or less, too short a time to meaningfully evaluate them. However, Chicago's first three PMDs—the Clybourn Corridor, Elston Corridor, and Goose Island—have each been in existence for more than twenty years. The latter two PMDs were created in 1990 in areas bordering the Clybourn Corridor on the city's Near North Side. Several years ago I had an opportunity to examine the performance of these three PMDs, and this is what I found.

In 1988 there were 6,588 jobs in the three PMDs combined; by 2004 the number had risen to 7,415, a net increase of 827 jobs. These three PMDs are contiguous to one another in an area that was poised in the late 1980s to transition from industrial to mostly residential. By establishing PMDs here the city intervened in the real estate market and abruptly halted this transition, preserving these areas as job locations. It can be said with confidence that but for the PMDs,

most of the jobs that exist here today would be gone.

So far so good. But let's probe a bit deeper and examine these jobs. It turns out that less than a third of them are actually manufacturing jobs. How could the majority of jobs in a PMD be non-manufacturing? PMDs allow a number of non-industrial uses deemed to be compatible with manufacturing, including postal services, utilities, warehousing and distribution, office and retail space (with certain restrictions) and construction, along with several other uses. For the designers of Chicago's PMD ordinance, allowing such uses was seen as providing some flexibility in redevelopment options without threatening existing industrial users. What the designers did not envision was the opportunity this would present for the transition of PMDs from industrial to mostly non-industrial districts.

Does it matter that a worker on Goose Island today is more likely to be employed in a warehouse than a manufacturing establishment? Maybe so. Backers of Chicago's first PMDs argued that they were necessary to preserve decent paying jobs and slow the growing polarization of income associated with the new service-based economy. As PMDs transition to mostly non-industrial uses, it is less clear they are performing this function. To take one example, average yearly earnings for stock clerks and order fillers—typical warehouse jobs—are $21,000, below the poverty threshold for a family of four. By contrast, production workers earn on average $34,000 annually, still not enough to comfortably support a family of four but at least well above the poverty level. To my knowledge, no longitudinal studies of labor market transition in the PMDs have been conducted. What we do know is that workers in these areas are, in many cases, adding less value today than they were twenty years ago, a development that limits their earning potential.

It would be unfair to suggest that Chicago's first three PMDs provide nothing but low-wage jobs. A notable exception is the Wrigley Global Innovation Center, a 200,000 square-foot research and development facility on Goose Island that employs 350 workers. Without the PMD, this facility would almost certainly not exist, at least not on Goose Island. Yet the high-paying, knowledge-intensive jobs it provides do little to mitigate the polarization of income caused by deindustrialization and urban economic restructuring, exactly the problem that PMDs were originally intended to address.

Lessons of Chicago's PMDs

What can we learn from the experiences of Chicago's oldest PMDs? *The most important lesson is that effective land use planning can prevent industrial displacement, but not economic restructuring.* Many traditional manufacturing activities are simply no longer viable in near-downtown locations, and PMDs cannot keep them there. To argue, however, that economic restructuring makes industrial land use planning and other retention efforts pointless is to throw the baby out with the bath water. What cities need instead is careful analysis to determine which manufacturing sectors and segments should be targeted for retention and which are less promising.

The creation of PMDs, combined with informed strategies for recruitment and retention of industrial firms, can be an effective job creation and preservation strategy. But what kinds of jobs do PMDs create and preserve? This is a question that, in their haste to take credit for new development deals in the PMDs, city officials in Chicago seem to have conveniently skirted. With manufacturing representing less than one-third of all jobs in the city's first three PMDs, the term Planned Manufacturing District has become something of a misnomer. Perhaps the mistake was to allow so many non-industrial uses in PMDs, or perhaps city officials should have simply been more discriminating in the deals they signed onto. Either way, the PMDs have clearly done less to preserve decent paying jobs for Chicago residents than their designers anticipated they would.

With PMDs becoming increasingly prominent in the City's arsenal of industrial retention tools, this would be a good time to make the quality of jobs—and their suitability for working-class city residents—a key criterion in evaluating new development deals. This principle was central to the vision of the designers of Chicago's first PMDs. It is worth revisiting. P²

In the Shadow of Real Estate, Linking Designers and Manufacturers in New York City

By Sarah Crean

As an economic development practitioner in New York, we operate in the enormous shadow of real estate pressures as we try to strengthen relationships between small businesses, artists and local residents. The discussion about the future of manufacturing in New York City has usually taken place within the limited, one-dimensional paradigm equating economic development with increasing real estate values. This paradigm has been pushed aside, at least for the time being, by the current recession, the crisis on Wall Street and the lack of jobs. City government may now be more aware that an overdependence on the financial and real estate sectors carries real risk for New York, although this is not entirely clear. Nonetheless, government has shown more interest in other facets of the local economy aside from real estate and they have been asking questions about how manufacturing actually works here. The task for local economic development practitioners is to help translate government's interest in manufacturing into true public sector leadership that will guide a more equitable, intelligent and comprehensive approach to the urban economy of the twenty-first century.

The New York Industrial Retention Network (NYIRN) is New York City's only non-profit advocate for local manufacturing in all sectors throughout the city. It has been one of the strongest advocates for a refocusing of local economic development policy. NYIRN started in 1997 at a time of enormous transition for New York City's local economy, and in 2010 it merged with the Pratt Center for Community Development.

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Manufacturing Decline

NYIRN's birth was spurred by the steady decline in New York's once mighty and highly diverse manufacturing base. Thousands of blue-collar jobs were lost while the finance and real estate sectors asserted their physical and ideological dominance. This dynamic had been well underway for almost two decades, but in the late 1990s we witnessed the closure of some of the last large-scale manufacturers in New York City, such as Eagle Electric in Queens and Farberware in the Bronx. What remained were literally thousands of small production companies, concentrated in industrial districts in Manhattan, Brooklyn, Queens and the Bronx.

From the outside, these thousands of small firms, with fifteen or twenty employees each, may have seemed like random survivors that were struggling to withstand the enormous financial and logistical pressures of producing in New York City. While many of them were struggling, they were also part of complex production chains, and perhaps more importantly, were often actively involved in the product development and innovation process. As the big factories closed for good, New York's historic role as an incubator and service center for product developers and designers became more apparent. This role cannot be taken for granted.

Much of NYIRN's work over the last decade and a half has focused on supporting the movement to defend the city's industrial districts and preserve affordable space for manufacturers and the firms that serve them. Because of the pervasive real estate pressures that manufacturers faced, NYIRN often had to operate within a crisis-oriented, almost defensive, mentality. We first began to interview manufacturers in order to better understand their situation in the real estate market, but as the years progressed we became more and

more focused on the supply chains within sub-sectors of manufacturing and asked more questions about the markets that these manufacturers serve. This increased our understanding of the situation and helped us to develop more nuanced responses to arguments made by some city officials and the real estate industry that manufacturing is no longer relevant to New York City.

Manufacturing Clusters Survive Real Estate Development

Major sub-sectors within manufacturing today include fashion, food, printing and graphic arts, building-related products and architectural details and interior furnishings. The production that remains is to a great extent tied to the local economy (serving local bakeries and restaurants, fashion designers, construction contractors, architects, etc.). We found many times that light manufacturers concentrated in neighborhoods like North and Southwest Brooklyn, Long Island City (Queens), Midtown Manhattan and the South Bronx had survived because their accessibility was an asset to their customers. Problem-solving on the production line could happen immediately, saving time and money.

Perhaps the most well-known example of New York's manufacturing clusters is the Midtown Manhattan Garment Center, which is still home to a unique concentration of small businesses covering every aspect of the apparel design and production supply chain—from the procurement, cutting, marking and grading of fabric, to sample making and finally to full production runs. Designers and product developers are regularly found in Garment Center sample rooms and factories, discussing fit and production problems with manufacturers and deciding on solutions.

Another interesting case study is North Brooklyn, where manufacturers, designers and artists intersect in a landscape transformed by a major rezoning in 2005 that led to significant new residential growth and the loss of many manufacturing jobs. North Brooklyn's manufacturing sector still exists for two primary reasons: to serve other sectors of the local economy through customized and quick-turn response (apparel, food, etc.), and to support the city's enormous construction and building trades. Goods manufacturing still takes place but is more limited. In addition, there is a deepening "green" overlay to much of the manufacturing taking place in North Brooklyn as in other neighborhoods, whether through processes or materials used, or both. Finally, there is a strong connection to the city's creative economy.

In 2009, NYIRN looked at "creative" businesses located in the North Brooklyn neighborhoods of Williamsburg, Greenpoint and Bushwick. This group consisted of manufacturers, artists and designers who were actively engaged in physical production, or design, or both. The manufacturers in the group served designers of specialized products, such as architectural details and furniture, and fine artists, by producing, for example, a component of an installation or special crates for shipment. There were multiple layers of activity with multiple feedback loops. Even if the artists had no direct need for production services, they had chosen to locate around manufacturers and designers working together, if only because manufacturing creates space for artists. But at the end of the day, these manufacturers, designers and artists had overlapping customers and markets: art buyers, museums, galleries and gift shops; architects and building contractors; product designers; interior and furniture designers; and other artists.

Despite the many examples of collaboration in North Brooklyn, information gathered in the interviews spoke to the need to continue to build linkages between all of the businesses that are part of the broader creative/industrial economy in the area. We found that while there was much that tied them together, it is impossible for hundreds of businesses, even when they are concentrated in one part of Brooklyn, to be fully aware of each other. This situation was especially understandable given the aftermath of the 2005 rezoning. Real estate pressures had disrupted older manufacturing networks, and new companies—designers, manufacturers and non-production businesses—continued to move in.

Both the disruption and potential for new synergies that we found in North Brooklyn are also present in other New York City manufacturing districts. Because so many specialized sectors—from industrial design to medical research—come together in New York, the city remains an incubator for new ideas and businesses. This is where the creative sector broadly defined most actively intersects with light manufacturing. As New York City defines itself more and more in terms of intellectual capital and intellectual production, skilled businesses that can manufacture physical products that can spur further innovation and development have a role to play.

Linking Designers and Green Manufacturers

Over the last decade, NYIRN and other economic development organizations have initiated programs to exploit opportunities found in New York's evolving economy and help local manufacturers better connect with potential markets. An important part of that effort is continuing to explore more effective ways to link product developers, designers and manufacturers.

NYIRN created and oversees *Made In NYC,* a marketing and branding program for local New York City manufacturers. *Made In NYC* developed an online database where potential customers can search for locally made items, especially green products. Designers can search for appropriate manufacturers by product type, but not yet by production process, which, when available, should yield many more useful leads for product development. NYIRN has been redesigning the website to make it more user-friendly for designers and product developers and to attract the rapidly growing base of consumers who want to learn more about locally made products. More than 800 local manufacturers, representing the wide array of specialties in New York City, are profiled on the website today. The *Made In NYC* logo is found on locally-made products, packaging and manufacturer websites.

NYIRN also created *Spec It Green,* a multi-year series of trade shows, educational forums and networking events for local manufacturers of green building products and potential customers. A recent *Spec It Green* event was a "speed dating" night in which architects, contractors and procurement officers could take turns meeting one-on-one with manufacturers of green building products. Another example of an initiative created to bring designers and producers together is *Showroom New York,* which is a project of the Garment Industry Development Corporation. *Showroom New York* provides business development, marketing and mentoring services to start-up fashion designers and helps them locate qualified local factories to make their creations.

Every introduction between a designer or product developer and a manufacturer has the potential to create economic value, which then ripples through the local economy. Even if a business relationship does not develop immediately, it often leads to other interactions and referrals down the road. When an order is placed with a local manufacturer, the benefits are felt close by—suppliers provide component parts, workers complete the order, mechanics maintain machinery, delivery people get the final product to the customer, and so on.

In the last year, NYIRN has begun to work directly with *NYDesigns,* a City University of New York–based economic development project that provides services to and communicates with a network of over 4,000 designers through its counseling and business incubation programs, events and outreach. Together with *NYDesigns,* we are examining key obstacles that prevent designers and manufacturers from working together and troubleshooting ways to address these issues.

NYDesigns has helped us to understand that design companies are interested in reducing manufacturing costs, but they may not necessarily take the time to understand the significant potential for cost savings when local manufacturers play a role in product development. The first challenge is to better target information about locally available production services to designers of products such as furniture, clothing and interior objects. The second challenge is that a designer's production run may not make sense for a manufacturer's bottom line. Each manufacturing run has a break-even point; most small design businesses submit much smaller order quantities than other types of businesses, the total cost of which may not meet the minimum profit margins acceptable to a manufacturer. Related to this is the manufacturer's perception that fabrication of a small design firm's small quantity of product could require a considerable investment of time, with no guarantee of larger orders or a steady supply of orders in the near future.

NYIRN and *NYDesigns* hope to look at the costing problem more closely by identifying likely designers and manufacturers that could be "matched" to the benefit of both parties, providing a venue and facilitation so they can meet and understand each other's needs, and by assisting them in working out the many complications that naturally arise in the process from design innovation to output of the final product. By facilitating these relationships, we expect there will be successful matches between designers and manufacturers, and our ability to provide services will be enhanced. P²

A Role for Manufacturing in the Real Estate Capital of the World?

Furniture and Apparel in New York City

By Lynn McCormick

with Efrain Borrero, Samantha Imperatrice and Rupesh Manglavil

As manufacturing declines in New York City, where officials often boast about attracting luxury condos and upscale real estate, there are surprising new opportunities for a transformed industrial sector. Advocates of industrial retention are holding back the tide and seeking new roles for manufacturing in the changed global and local economies.

Last year, I organized a graduate urban planning class on manufacturing's role in the New York City economy. Whether or not to retain manufacturing is a contentious issue in this city. Manufacturing jobs have seriously declined in recent decades (about 64,000 jobs were lost between 2002 to 2010). We wanted to know the extent to which these losses could be ascribed to real estate displacement pressures and gentrification or to the supposed obsolescence of manufacturing in our service-oriented economy. We investigated conditions for some larger manufacturing sectors—metal, wood, food, and furniture—through interviews and background research.

Our findings surprised us. Manufacturing still played an essential role in the local economy, but not for the reasons we anticipated. Instead of large firms that export huge numbers of products globally, we found many more that are quite small and make customized products for local service industries that politicians in global cities often target. As these design services industries are increasingly exporting and bringing wealth into the region, it is equally important, we believe, to provide supportive policies for their manufacturing suppliers. These should include land use policies that allow manufacturers to remain centrally located and workforce development policies to connect and train lower skilled workers for these jobs.

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Efrain Borrero, Samantha Imperatrice and **Rupesh Manglavil** are Hunter graduate students and conducted much of the furniture industry research as part of a class.

We also learned from the ideas of others in the class (**Sean Ansanelli, Israel Cruz, Martha Hart, Erin McAuliff, Sean Quinn** and **Ahmed Tigani**). *All conclusions and any errors, however, can be attributed solely to the authors.*

Manufacturing Retention in Global Cities?

The lesson from these cases is that manufacturing in global cities may be playing a different role than traditionally assumed, but one which is still critical to the local economy and its touted services sectors. We found that clusters of manufacturers, which had grown organically over time in certain neighborhoods, still remain. The larger manufacturers have gone or moved to lower cost regions, but smaller, niche manufacturers survive by serving downstream sectors that global city advocates support. In furniture manufacturing, many firms provide critical inputs to interior designers, architects and other design industries that export their services abroad and support local real estate development. In the garment industry, many manufacturing firms are essential to the high-end fashion design sector.

The city's land use policies appear to blindly support real estate speculation, new development and gentrification, but the manufacturers that serve this development are increasingly being displaced. Should this back end

of the supply chain disappear, it would also seriously erode the politically supported design industries.

Why Retain Manufacturing?

The debate on whether to retain manufacturing firms in our supposedly post-industrial era started in the 1980s when major manufacturing job losses occurred in many regions of the country. We were de-industrializing by sending manufacturing jobs overseas to countries with lower labor costs. Several prominent publications in this period initiated a debate, which continues today, on what to do about it. Daniel Bell in *The Coming of the Post-Industrial Society* argued that this transition didn't matter so much in that we were substituting higher skill-oriented service sector jobs for the manufacturing ones that we gave up.

Others, particularly Stephen Cohen and John Zysman in *Manufacturing Matters,* responded by saying we weren't really losing manufacturing itself, just manufacturing jobs, as our firms introduced new technologies (robots, for example) that replaced workers but also increased manufacturing productivity. Hence, manufacturing still deserved our attention. Activists and progressive economic development practitioners continue to point out that loss of manufacturing firms and jobs should be avoided since these jobs are often higher paying than many service sector jobs, unionized and offer an opportunity for lower skilled workers to advance into the middle class. Manufacturing firms have always been thought of as export-oriented and, therefore, a way for our country, and certain cities and neighborhoods, to bring in wealth from outside purchasers.

A Policy of Benign Neglect of Manufacturing

New York City enacted a manufacturing retention policy in 2005 that many applaud but see as insufficient. This policy drew inspiration from Chicago's Planned Manufacturing Districts (PMD), which have provided zoning protections and other incentives to centrally located manufacturing firms since 1988. PMDs serve those manufacturers (printers, prototype or smaller niche companies, for example) that require a central location to better serve their nearby customers whom they consult with frequently. Mayor Michael Bloomberg installed New York's Industrial Business Zone (IBZ) program in sixteen areas throughout the city where there are significant concentrations of manufacturing. Each area is served by a non-profit local development corporation, which contracts with the City to deliver technical assistance services. Manufacturers can also take advantage of tax incentives by locating within an IBZ area.

Although manufacturing retention advocates approve these measures by the Bloomberg administration, they also note the weakening of the IBZ office over time and fear its elimination. Initially located in the Mayor's Office with its own director and staff, the administration moved the IBZ office to the Department of Small Business Services, where a

single staff member oversees it along with several other initiatives. That the IBZ program has no legislative protection means it could easily disappear in the next administration.

At the same time, other mayoral policies conflict with the declared support for manufacturing. Determined to retain and enhance New York's position as a global city and financial capital of the world, the mayor and his economic development staff support other sectors that are seen as more appropriate to such a designation—finance, real estate and the creative/cultural industries (fashion, design, film, tourism)—and that face competition from other cities like Chicago and Los Angeles. The mayor views his recent 115 neighborhood rezonings as a way to encourage more real estate development. Many, however, argue that the rezonings cause rents to rise in industrial areas as property owners seek to convert their properties into luxury housing or other higher value uses. As one Brooklyn manufacturer said, "The landlord wants me gone. He is aggressively marketing space to offices. Noise and dustmakers like us will not be welcome. We are at the end of a seven-year lease with no automatic renewal. He has offered a three-month extension. They did offer a three-year lease on bad terms. We are moving to Massachusetts this summer."

Manufacturers That Remain: Furniture

We describe the furniture industry here to illustrate our major findings about how manufacturing can survive in the city's hot real estate markets. Large furniture manufacturers, we found, largely left the city in earlier decades due to rising rents and prior recessions. Small shops that produce customized products or low volumes of products and that serve other high-profile, downstream industries remain. As one manufacturer said, "I'm not a typical manufacturer . . . I'm an artisanal studio furniture maker." Another told us, "I specialize in prototypes for mass production—one-of-a-kind, custom work, or for other designers and architects."

Some shops export products—one company sold 90 percent of its custom work out of state. But often furniture makers serve local customers like architects and interior designers who remodel expensive homes, store interiors, high-end restaurants or other properties. One shop owner makes ". . . custom furniture . . . decorators and designers hire us to build the furniture they want. A designer is redecorating an entire home for a client."

When asked about their need to stay in the city, manufacturers responded in different ways, often citing the need to be close to their customers or close to others in the design-related professions for their supply needs and ideas. For example, one company owner in Queens who makes custom cabinetry and other installations for high-end boutique stores said, "Why am I in Long Island City? Because I am five minutes away. I can be at a client's place in 15 to 30 minutes. I like to go and see the space and talk to them about what they want."

Another owner, with mostly out-of-town sales, said he could move upstate, where the rents are lower, but would have trouble getting skilled workers. A disadvantage of being upstate, he said, is "lack of inspiration. I have to be somewhere where there's constant inspiration. I'm constantly looking at things. . . . For inspiration, it's good to be in New York."

Some of these small companies hire non-traditional factory workers. Said an owner in Queens, "[My employees] are all educated . . . with college degrees . . . with more educated workers I get better conversation. It's more expensive to hire them ($15 to $20 an hour), but their love for the craft is a life choice . . . I train them on the product line and the level of quality that I expect."

Others hire from a more typical, less educated population. Said one owner, "I train the people I hire. I find people that are good with their hands or have woodworking experience. It's hard to find skilled labor (people trained as woodworkers). There are a lot of immigrants . . . I train them to the level of work (that is, quality) that we need."

New York's furniture manufacturers are small, produce one-of-a-kind or customized products and focus on local markets. Many hire relatively highly educated workers. These features contrast with what we commonly think of as the manufacturing sector—large mass producers of goods for the global marketplace that depend on automation and robots in addition to production line workers. Yet, according to the Center for an Urban Future, even

though these small firms are not big players and do not bring in sizeable export dollars, they are a necessary ingredient for the city's design industries that do export. Mayors of "world-class cities" and others who ascribe to the vision of a post-industrial future like to support these design industries. Yet perhaps these industries cannot survive without a local manufacturing base that provides them with inputs. A similar situation faces New York City's garment industry.

The Remaining Garment Industry

The garment industry, which has produced the largest number of manufacturing jobs in New York City for many decades, has experienced a declining presence such that today it is only a fraction of its former size (dropping from 140,000 jobs in 1980 to about 26,000 today). The manufacturers that remain, however—those that sew clothing, cut the cloth and design the patterns—are critical to TV's *Project Runway* and the fashion industry that it represents.

Fashion is something Mayor Bloomberg wholly supports, but the city's policy has been undermining his support by pushing apparel producers out of Manhattan. The City legislated protected manufacturing zoning for its Midtown garment district in 1987 but it is now under threat of curtailment. This zoning makes it difficult to convert manufacturing to other uses. In 2007, local property owners and the Fashion Industry Business Improvement District that represents them petitioned the City to end these zoning protections. Soon, the City's Economic Development Corporation presented a new proposal to allow other uses in the district.

The City then approached the Council of Fashion Designers of America (CFDA) to secure its support for the garment center rezoning. This, however, helped catalyze a campaign in opposition. The designers want to retain manufacturers in the district. They started a *Save the Garment Center* campaign and the *Made in Midtown* project. This project has documented the extent of manufacturers remaining in the district and the disastrous economic effects that wholesale conversion would produce. Both sides are now stalemated as they look for a common solution.

The garment designers argue that they, retailers and others at the end of the fashion production chain critically depend on having manufacturers (sewers, cutters, patternmakers) nearby. The newer start-up designers are especially dependent on the fashion-related cluster. As Nanette Lepore, a designer, explains on the *Made in Midtown* website:

> "I couldn't have started my business if it wasn't for the New York City Garment District. If you start out like I did, out of my apartment, I could sell twenty of something. I would go see the buyer at Barneys every month and show her a new dress, and she'd order fifty. And I could take it to a factory around the corner."

Today, although she has a much larger firm, she says she makes 80 percent of her products within a 10-block radius from her office in the garment district. P²

Photo: Tarry Hum

Chinatown and the Decline of Immigrant Garment Clusters in the Fashion Capital of the World

By Tarry Hum

Tarry Hum teaches at Queens College and the Graduate Center of the City University of New York.

The effort to save garment production in New York City is often focused on the Midtown Garment Center, making it is easy to forget the network of immigrant manufacturing clusters throughout the city. A key cluster was in Manhattan's Chinatown, where the garment industry had once anchored its local ethnic economy. The story of its decline is related to many factors, including government policy in the aftermath of 9/11.

At its height in the 1980s, Manhattan's Chinatown was a key production site with approximately 500 garment shops and a workforce of 20,000. Today, Chinatown's garment industry has essentially vanished. Although a handful of factories struggle to survive in a small area currently undergoing a rezoning study, the future is written in neighboring gentrified streets noted for high-end retail and condominium buildings. While the demise of manufacturing in the United States is attributed to globalization and the emergence of industrialized Asia and Latin America, with its vast and cheap labor force,

progressive planners need to understand the contributions of local racial politics, land use planning and zoning policies and a post-9/11 development agenda. At this critical juncture, when momentum has gathered to save some garment production to support the city's fashion industry, it is time to focus on the historic relationships between the Midtown Garment Center and immigrant production clusters, and immigrant marginalization in industrial retention policies and advocacy.

The Demise of Garment Production in Chinatown

Once a national production center for fashion-sensitive women's outerwear, Chinatown's garment industry is now so diminished that its remaining firms employ approximately 800 workers in a handful of buildings with a total of 71,000 square feet of manufacturing space. The Garment Industry Development Corporation (GIDC), established in 1984 as a labor-government-manufacturer organization to support and advocate for local garment production, has essentially ceased operations. The dramatic and steady decline of the city's apparel firms and workforce is evident in the New York State Quarterly Census of Employment and Wages. In 2000, Manhattan's Chinatown still represented a key industrial cluster with 400 firms employing 11,000 workers.

While the number of apparel firms and employment continued to decline citywide, the drop between 2000 and 2005 was particularly acute in Chinatown. This uneven decline is striking and immigrant clusters in the outer boroughs, namely Brooklyn's Sunset Park, have now surpassed Chinatown in terms of number of garment firms and workers. The Midtown Garment Center is the densest apparel manufacturing site in the city but the relatively high wages there suggest the prominence of non-production employment.

During the late 1970s, thousands of immigrant Chinese women were incorporated into the industrial labor force, transforming Chinatown's economy. The garment industry had anchored Chinatown's immigrant economy by providing an avenue for small business formation as garment contractors. The industrial labor force generated demand for retail, professional services and other commercial activity. Women's labor force participation was integral to Manhattan Chinatown's industrial working-class composition and identity. The prevalence of garment sweatshops and working-class poverty provided fertile ground for union activism, namely by UNITE's Local 23-25, and the establishment of worker centers, such as the Chinese Staff and Workers Association, and other progressive organizations that advocate for immigrant and worker rights. Chinatown's industrial economy advanced the evolution of a multi-tiered institutional structure once dominated by traditional family associations to include non-profit social service agencies, advocacy organizations and a vibrant civil society.

Many blame 9/11 and the subsequent inadequate state response to it as delivering the death knell to Chinatown's industry, already weakened by global deregulation and free trade policies and the expiration of the Multifibre Arrangement, which imposed quotas on U.S. apparel imports. As Patrick Murphy of New York City's Economic Development Corporation noted, these conditions coalesced into a "perfect storm." Located approximately ten blocks from Ground Zero, Chinatown was immediately impacted by 9/11. Government made Chinatown part of a frozen zone in Lower Manhattan with limited vehicular and pedestrian access. The intermittent loss of telephone and electricity service for several months essentially halted normal commercial activities.

The impact of 9/11 on Chinatown's economy and its garment industry was devastating. According to an internal UNITE document, mega-retail chains that dominate the garment industry cancelled orders to Lower Manhattan shops due to concerns about timely shipping from an area with limited roadway access. In 2000, approximately 11,000 of New York City's 60,000 garment workers (representing 19 percent of the apparel workforce) worked in Manhattan Chinatown factories. A few years later, Chinatown's garment workforce shrank by more than three-quarters (77 percent) and by 2010, fewer than 900 workers were employed in Chinatown's garment industry. As noted in a 2001 Fiscal Policy Institute study on the disproportionate impact of 9/11 on New York City's immigrant low-wage labor force, "[T]he industry hardest hit by reduced work volume is apparel manufacturing, which has much of its production based in Chinatown."

Rebuilding Chinatown and the Lower Manhattan Development Corporation

While the catastrophic events of 9/11 dealt a fatal blow, the demise of Chinatown's garment industry should also be seen through the lens of local economic development policy and the planning objectives of local community elites. Formed as a subsidiary of New York State's Empire State Development, the primary tasks of the Lower Manhattan Development Corporation (LMDC) were to oversee the development of the World Trade Center memorial site as well as the planning and revitalization of Lower Manhattan. Comprised of gubernatorial and mayoral appointees largely representing real estate and corporate interests, LMDC was charged with overseeing a total of $3.4 billion in federal Community Development Block Grant funds. According to a 2004 Good Jobs New York report titled *The LMDC: They're in the Money; We're in the Dark,* the wealthiest downtown neighborhoods such as TriBeCa and the Financial District received a majority share of rebuilding allocations in contrast to the area's low-income immigrant communities of color, namely Chinatown and the Lower East Side.

Recognizing that virtually all the "weak" or marginal garment contracting shops had not survived the 9/11 economic fallout, key industry actors collaborated on a proposal to develop NY Fashion Space as a last-ditch effort to preserve the much leaner Chinatown garment industry by providing and maintaining a stable supply of affordable manufacturing space. Modeled after the successful Greenpoint Manufacturing and Design Center in Brooklyn, UNITE, GIDC and the New York Industrial Retention Network sought $25 million from LMDC to acquire and renovate approximately 100,000 square feet of space to sustain Chinatown's specialized niche in quick turnaround and small production orders. While industry advocates believed an infusion of money and public support could save a much diminished but viable garment cluster, the proposal was summarily dismissed, according to May Chen of UNITE. To

Photo: Tarry Hum

date, LMDC has taken no official action on this funding request.

Post-9/11 planning and rebuilding in Chinatown marked a concerted effort to remake a paradigmatic immigrant working-class neighborhood to better serve Lower Manhattan's position as an epicenter of global finance and the consummate entrepreneurial world city. LMDC's objective for Chinatown revitalization was clearly articulated in a 2003 request for proposals "to encourage changes in the Chinatown community that would promote tourism." This imperative to grow NYC's tourist economy was made manifest in a focus on supplemental sanitation and regulatory services to rid Chinatown of filth, dirt and vice—historically symbolized by opium dens and now embodied by the informal trade in designer knock-offs. According to a 2006 Committee on Homeland Security Staff Report, LMDC committed $176 million to Chinatown, of which a tiny 4 percent was dedicated to economic development, with most of the funds to support a *Clean Streets* program overseen by the NYC Department of Small Business Services and the newly formed Chinatown Partnership Local Development Corporation. In sum, $7 million for post-9/11 economic development in Chinatown was spent on sweeping local streets. Meanwhile, the 2010 U.S. Census found that the Asian population of Manhattan's Chinatown has declined by 12 percent.

Some local organizations have supported the approaches of the LMDC and the City's economic development policies. After 9/11, Asian Americans for Equality (AAFE) formed the *Rebuild Chinatown Initiative* to spearhead a comprehensive planning process to promote a "transformational" revitalization of Chinatown. Preserving and strengthening industrial sectors such as the garment industry, which had anchored Chinatown's working class, was not part of this planning vision. The transformational projects endorsed by Chinatown's local community development corporations including AAFE and the Chinatown Partnership are premised on a controversial Business Improvement District to continue LMDC's funded street cleaning activities and to market Chinatown as a destination for elite consumption.

Photo: Tarry Hum

Garment production has now been refashioned as a "service" component to New York City's "creative economy." In other words, the rationale for retention of manufacturing capacity is framed as providing an essential service to the city's fashion industry. Historic production sites such as Chinatown no longer have a place in this refashioned landscape and in fact, its historic role in supporting the city's apparel industry has been erased. A 2011 map of apparel production sites in the city produced by the Design Trust for Public Space does not name Chinatown at all. Current efforts to retain garment production capacity in the fashion capital of the world are now led by the Council of Fashion Designers of America, Design Trust for Public Space and Municipal Arts Society and are solely focused on the Midtown Garment Center.

Post-industrial New York City involves the remaking of Manhattan's Chinatown from a dense working-class neighborhood into a tourist destination and site of Pacific Rim capital. LMDC's selective funding decisions helped to legitimate the embrace by Chinatown's community elite of a neoliberal development vision and agenda. P²

Atlanta

How to Remake Cities as Places for Twenty-First Century Manufacturing

By Nathanael Z. Hoelzel and Nancey Green Leigh

For decades, the Atlanta metro economy revolved around services, real estate, tourism and logistics. The City of Atlanta's economic development strategy was focused on property-led development, which did not concern itself with losing industrial land to other uses and the suburbs, or with the declining quality of Atlanta's industrial base.

Since hosting the 1996 Summer Olympics, Atlanta's strong economic growth has garnered international attention (as has its related title as the "Capital of Sprawl"). Atlanta's urban planners and governing coalitions have operated the quintessential "growth machine" and were even the impetus for Stone's influential "urban regime theory." They have not prioritized industrial firms and manufacturing jobs in Atlanta's development strategies and politics. Labels of "deindustrialization" and "post-industrial city" have dominated local planning perspectives. The unquestioning use of these labels and even vilification of industry in planning processes have meant that Atlanta and many other cities face challenges to revitalizing their manufacturing industry.

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Solutions to under-performing central Atlanta neighborhoods were to "bring back the downtown" and create mixed-use transit-oriented development. These efforts overshadowed any strategy for revitalizing industry and industrial neighborhoods. The consequent imbalance in the economy has meant that Atlanta and its metro area have fared worse than the nation as a whole during the Great Recession. Indeed, the most recent U.S. Bureau of Labor Statistics data show that the Atlanta metro area has the worst labor market performance among the twelve largest metro areas.

Atlanta's under-productive and threatened industrial districts are surrounded by neighborhoods with concentrated joblessness, poverty and disinvestment. Other central cities have initiated strategies in response to decades of deindustrialization and pro-growth development agendas that undermined support for maintaining and growing local industries and jobs. Fortunately, Atlanta's progressive planners can draw on these strategies to promote urban manufacturing, quality industrial employers and facilities and jobs for local residents in revitalized industrial areas.

Challenges for Progressive Planning

The most significant barrier to sustainable urban industrial development is the contentious relationship between industry and communities. Planners must address the issues of local political support, public perception, environmental justice and potential NIMBYism (Not In My Backyard). Advances in sustainable industries and the lingering impacts of the Great Recession present opportunities to redefine this relationship and progressive

Photo: Nathanael Z. Hoelzel

Former industrial land converted into a smart growth mixed-use neighborhood in Atlanta.

planning for central city industrial and neighborhood revitalization.

A compelling argument for revitalizing urban industry, particularly manufacturing, has often been that industry offers above-average pay and benefits to workers with a wide range of skills and job titles, and contributes to more diverse and resilient local economies. This argument is gaining traction with political leaders and a public demanding cleaner industrial processes, greener products, greater innovation and more goods that are "made in the U.S.A." However, for Atlanta and other cities that want to capitalize on this renewed interest, the diminished supply and quality of industrial land is problematic. Space for new manufacturing is scarce as hundreds of acres of industrial land have been lost to other uses, and supportive infrastructure has largely become obsolete because of neglect. Bucking this trend with new protections and investments in remaining productive industrial areas is politically difficult. Central city governments and their planners have limited capacity to capitalize on federal initiatives and private demand for emerging industries. Moreover, years of economic development policies failing to prevent industry's mass exodus from central cities have left fewer industrial businesses to influence local decisions. And, prevailing notions of "smart growth," "back to downtown" and "sustainable development" policies may marginalize the efforts of industrial advocates.

As cities miss out on new manufacturing jobs and tax revenues, they continue to suffer from disinvestment in their industrial neighborhoods. For instance, at least a third of Atlantans in poverty live within a mile of the city's three most critically important industrial districts. Residents in these neighborhoods are predominantly African American, have experienced high job losses and are more likely to earn less income and attain less formal education than other Atlantans. Many of Atlanta's 900 or so brownfields are concentrated within or adjacent to these areas. Residential foreclosures, abandoned and vacant properties, illegal dumping and building code violations scattered across the neighborhoods compound revitalization efforts. Similar scenarios exist in other central cities, and planners should engage in more peer learning as well as generate new knowledge on theory, practices and resources for revitalizing urban industry.

A Plan for Twenty-First Century Manufacturing in Central Cities

In 2009, we engaged in a graduate studio at the Georgia Tech School of City and Regional Planning that produced Atlanta's first strategy for sustainable industrial development. The work of the studio included a review of best practices and policies for urban industry recently prepared by more than a dozen U.S. cities. The studio's

final report was awarded the year's best student project by Georgia's chapter of the American Planning Association and publicly lauded by Atlanta's mayor. Rather than letting it sit on the shelf, the City incorporated several key policy recommendations in recent updates to the local comprehensive plan. We continue to work with the City as a partner in a 2010 U.S. Environmental Protection Agency (EPA) grant for area-wide planning for brownfield-impacted neighborhoods. Our focus is on revitalizing an industrial district and its surrounding neighborhoods. We intend to advance several specific components of the plan over the upcoming year, including the following.

Evaluation of Industrial Development Trends and Identification of Productive Industrial Areas

A first step will be to identify industrial land where industrial zoning is no longer appropriate, as well as identify productive industrial areas that need protection, are able to support desirable industrial development and can withstand mixed-use zoning without jeopardizing the industrial firm and employment base. We created an evaluation tool of industrial areas that examines their form, function, marketability and targeted public priorities for redevelopment (including reusing brownfields) to guide the City's future land use and economic development decisions.

Planned Manufacturing Employment Districts

The next step is to create new, more flexible, industrial zoning categories that prevent encroachment from incompatible land uses and limit residential, retail, office and institutional activities. Chicago's Planned Manufacturing District is the model several cities have adapted. Urban design guidelines should accompany protective zoning to ensure land uses, particularly industrial uses, are neighborhood-appropriate. Physical setbacks and landscape buffers between different land uses, screening industrial operations and stringent environmental nuisance and pollution requirements are a few design considerations. We also recommend supplementing the new zoning categories with transparent and systematic zoning appeals processes, capital investment planning and industrial real estate services and marketing meant to stabilize and reinforce the competitiveness of protected industrial areas.

Photos: Nathanael Z. Hoelzel

Abandoned and vacant properties, illegal dumping and brownfields in Atlanta's industrial districts make it difficult to attract new industry.

Photos: Nathanael Z. Hoelzel

An expanding local brewery and an advanced manufacturer in Atlanta depend on industrial land and skilled local industrial labor.

Policies for Sustainable Urban Industries, Good Jobs and Stronger Business Linkages

Cities must adapt traditional tools and incentives for industrial retention and attraction to reflect modern industrial needs if they are to develop desirable businesses and jobs in urban industrial districts. Planners, consequently, must better understand trends in sustainability and technology, new career opportunities in manufacturing and changes to industrial agglomerations.

The U.S. Department of Commerce's "sustainable manufacturing" program encourages industrial processes and products that conserve natural resources and generate less pollution. Likewise, the U.S. Department of Labor defines a "green job" to be one "in businesses that produce goods or provide services that benefit the environment or conserve natural resources." The national network of Manufacturing Extension Partnerships helps smaller manufacturers with innovation and competiveness in emerging sustainable industries. While national policies and networks of experts can support local efforts in attracting desirable industries as opposed to traditional "smokestack" industries, progressive planners must be cognizant of the *quality* of local jobs being produced. Simply put, not all green jobs are quality jobs (see goodjobsfirst.org).

Future policies should reflect the types of spatial proximity and urban agglomeration economies most supportive of sustainable urban industrial development and local (and green) jobs in manufacturing. There is a significant consensus that cities offer unique benefits for creating knowledge, innovation and productivity in industry, but our theories and practices tend to overlook the nuances of organizing desirable types of manufacturing in central cities. For example, there is considerable emphasis on fostering networks of small and medium-sized urban manufacturers, but finding physical spaces and acquiring technology suitable for small operations is challenging. Industrial site selection techniques and private real estate brokers are often not concerned with the need of start-ups or small manufacturers. Accordingly, local planners and industrial advocates can help by steering investments toward dedicated spaces like industrial incubators and cooperatives. Local industrial supporters may also consider enlisting professional site selectors that can identify small spaces not typically listed by brokers.

Strengthening local business linkages and diversity in industrial supply chains is another important step. Planners can detail linkages between local industrial and non-industrial businesses by examining their purchases and contract work. This supply chain strategy can help market local industries to businesses seeking new locations, identify opportunities for import substitution and illustrate the number and quality of local industrial firms.

Progressive planners can take business linkage studies further by drawing attention to the diversity issues in ownership, management and workforce of local industrial firms. Leigh recently presented our work at the Urban Manufacturing, Supplier Diversity and Economic Development Policy Symposium hosted

by a national non-profit, the Diverse Manufacturing Supply Chain Alliance. According to the latest (2007) U.S. Census Survey of Business Owners, only around 13 percent of the nation's 615,000 manufacturing firms are minority-owned. Further, nearly 70 percent of these are firms without paid employees (i.e., sole proprietors). For minority-owned manufacturing firms with employees, the average size is quite small, approximately fourteen employees.

The history of race inequality in U.S. manufacturing contributes to today's environmental justice concerns and local apprehensions in the form of NIMBYism for new manufacturing in central cities. Expanding opportunities for small and medium-sized industrial businesses in our nation's supply chains, particularly among minority-owned manufacturing businesses, may help mend relationships between industry and our urban neighborhoods.

Workforce Training and Local Hiring in Sustainable Industries

Decades of manufacturing suburbanization increase the spatial job-resident mismatch and intensify workforce issues in central cities. Recent U.S. Senate Joint Economic Committee hearings and policy briefings by the National Association of Manufacturers stressed the problem of skills gaps in our nation's industrial workforce and employers unable to fill jobs in emerging sustainable industries. Finding experienced workers in the future may be more difficult as recent national surveys suggest that parents generally do not want their children pursuing careers in manufacturing. We consider these challenges in our recommendations for developing comprehensive workforce strategies that prioritize careers, as opposed to only jobs, in value-added sustainable industries targeted to young, under-employed and unemployed residents in urban industrial neighborhoods.

Atlanta has opportunities to tailor job training and local hiring programs that match the skills needed by district employers with nearby residents who possess these skills. The City can seek assistance from technical colleges and a non-profit workforce agency recently awarded a U.S. EPA Environmental Workforce Development and Job Training grant located in the neighborhoods adjacent to the industrial district. The City should also consider community benefit and first-source hiring agreements within the district.

Manufacturing Support and Moving Forward

Progressive planners interested in promoting these strategies must find allies among local political leaders, industrial businesses and community members. To achieve this, we recommend building public-private partnerships in the form of local industrial networks that can educate, advocate and secure support for industry in local land use and economic development policies. Chicago's Local Industrial Retention Initiative, Cleveland's WIRE-Net, New York City's Industrial Retention Network, Philadelphia's Manufacturing Alliance and San Francisco's SFMade are examples of such partnerships. Both strategies and partnerships must overcome challenges unique to each city. In globalizing cities, industry competes for land and resources with office and real estate development and is stigmatized by misperceptions. In shrinking cities, the hollowing out of existing industrial agglomerations and diminishing tax bases undermine industrial revitalization efforts.

In cities like Atlanta, where industry's contribution to economic prosperity has historically been underappreciated, manufacturing must demonstrate it has an essential contribution to make to sustainable development. These are indeed significant challenges, but we are seeing cracks in America's perception, particularly in its largest cities, that it has a post-industrial economy. The time is ripe, and the needs are compelling, for a new attitude towards urban industry accompanied by proactive land use plans and local economic development policies. P²

Photo: Nathanael Z. Hoelzel

A December 2011 community meeting prioritizing brownfield sites in Atlanta's industrial neighborhoods near the 1996 Summer Olympics opening and closing ceremonies venue.

Post-Industrial Restructuring?

The Changing Regional Manufacturing Landscape in the U.S.

By Marc Doussard and Greg Schrock

Deindustrialization—the mass disappearance of manufacturing jobs in the Midwest and Northeast during the 1970s and 1980s—defines the field of urban economic development in ways both silent and explicit.

The core tools of the discipline emerged from the frenzied experiments of cities that were desperate to slow the gutting of their economies. Industry and occupational targeting, workforce development, industrial retention initiatives and tax increment financing all began as efforts to make mobile capital "sticky," and to the extent that economic development retains a focus on economic equity in addition to economic growth, it does so because the stark inequalities of deindustrialization mandated as much.

North and South, Rustbelt and Sunbelt

The divergent fortunes of the North and the South over subsequent decades shape the ways that scholars and practitioners understand the field. In the popular imaginary, if not in reality, economic rebounds in Chicago, Boston and Pittsburgh form the exception to the rule of a stagnant, hollowed-out Rust Belt stretching West, South and East from the Great Lakes. The Rust Belt's mirror image defines the opposite developmental pole. The ascent of an imagined Sunbelt—spanning the South and West geographically, but tied in the popular imagination to the South's free-market fundamentalism—suggests a superior path.

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In terms of population, political power, firm relocations and the development of sunrise industries, the Sunbelt thrived at the obvious expense of the Rustbelt. While critical scholars emphasize the massive shift in federal spending underlying the ascent of the nation's historically poorest region, the Rustbelt–Sunbelt dichotomy has come to shape urban policy. The schism is most evident in the contrast between the supposedly free-market South and the heavily regulated North (which purportedly pays a great price for its policy sins). It also shapes attitudes towards the manufacturing industries whose departure defined the sunset of the North.

A generation after productive manufacturing capital accelerated its exodus from the Midwest and Northeast, manufacturing has nearly disappeared from economic development. Tax increment financing, fiscal policy and asset sales have moved to the center of the urban agenda in the North. Clear policy contrasts to the South's free market fundamentalism are now few and far between, and planners face a diminished capacity to discuss the fundamental question of job quality outside of the narrow bounds of technocratic workforce development programs. In the worst-case scenario, disengaging economic development from manufacturing means forfeiting the ability to focus planning on issues of economic structure and equity.

All of this makes reexamining the decline of U.S. manufacturing an important step toward recovering a jobs-based agenda. And there is much to reexamine. The celebrated Sunbelt model of economic development appears to have faltered. The pace of manufacturing job loss in Georgia, North Carolina and the urban Southeast in the late 2000s rivals the sharp cuts seen in Youngstown, Flint and Chicago a generation ago. At the same time, regional income

growth bears an increasingly strong relationship to the presence of technically specialized *occupations*.

In other words, the received wisdom about manufacturing is increasingly inaccurate, and manufacturing itself supplies an increasingly narrow lens through which to view regional prosperity. Each of these developments poses fundamental challenges to the practice of economic development.

The Migration of the Rust Belt

In 1982, economists Barry Bluestone and Bennett Harrison coined the term "deindustrialization" in their book, *The Deindustrialization of America*. They were addressing a specifically Northern problem. The wave of manufacturing job losses that defined the end of the 1970s and the beginning of the 1980s centered in states that bordered the Great Lakes: Illinois, Ohio, Michigan, Indiana and New York. There were deep manufacturing job losses in just three Southern metropolitan areas, two of which lay on the periphery of the South and had strong economic ties to the Rust Belt through the Ohio-Mississippi River system.

The depiction of deindustrialization as a Northern phenomenon was incomplete but essentially accurate. By the beginning of the 2000s, the terms and location of deindustrialization had shifted. Where manufacturing contraction was previously driven by recession, industrial job losses proceeded throughout the 2001–2007 economic expansion. At the end of the decade, seven of the top twenty-five sites of manufacturing job loss were in the former Confederacy—many of them near the top of the list—and three more could be found in new-economy California (see Table 1).

The concentration of these job losses in the Southeast, and especially in the Carolinas, provides a fundamental clue about why regional fortunes changed. The growth of the Southeast in the late twentieth century was driven in part by the relocation of footloose manufacturers from the Midwest and New England. Their willingness to uproot facilities for reduced labor costs suggested at the time that the move would not be sustainable. Today, the same factors—comparatively high labor costs, competitive end markets, unmitigated cost-based competition between firms—are driving the furniture, apparel and textile industries out of the Carolinas and overseas.

Table 1 Top 25 Metro Areas with Greatest Manufacturing Job Loss, 2001–2010

Metropolitan Area	Manufacturing Employment Change, 2001–2010 (%)
Hickory–Lenoir–Morganton, NC	-48.8
Detroit–Warren–Livonia, MI	-48.2
Dayton, OH	-47.5
Providence–New Bedford–Fall River, RI–MA	-40.3
Miami–Fort Lauderdale–Miami Beach, FL	-39.5
Allentown–Bethlehem–Easton, PA–NJ	-38.4
New York–Northern New Jersey–Long Island, NY–NJ–PA	-38.1
Richmond, VA	-38.0
Austin–Round Rock, TX	-37.8
St. Louis, MO–IL	-37.6
Rochester, NY	-37.5
Sacramento–Arden–Arcade–Roseville, CA	-37.4
San Jose–Sunnyvale–Santa Clara, CA	–37.1
Charlotte–Gastonia–Concord, NC–SC	-36.9
Buffalo–Niagara Falls, NY	-36.8
Toledo, OH	-36.1
Cleveland–Elyria–Mentor, OH	-35.3
Philadelphia, PA–NJ–DE–MD	-34.7
Akron, OH	-34.3
New Haven–Milford, CT	-34.3
Greensboro–High Point, NC	-33.7
Columbus, OH	-33.6
Los Angeles–Long Beach–Santa Ana, CA	-33.4
Greenville, SC	-33.4
Boston–Cambridge–Quincy, MA–NH	-33.2

Source: *Authors' calculations from U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages data*

The Profit Cycle and the Future Geography of Manufacturing

Each manufacturing firm has a different propensity to relocate. This is the idea behind the concept of the profit cycle developed by economic development planning expert Ann Markusen. Profit-cycle theory argues that industries become increasingly footloose as they mature, and that each industry has a different propensity for relocation.

At its core, profit-cycle theory distinguishes between evolutionary and mature phases in industrial

development. As firms innovate technologically, they use their temporary monopolies on new goods and processes to raise prices—and profit margins—on products. In this phase of the industry's development, profits and employment numbers are high relative to production levels. But this price-setting power erodes with time. By reverse-engineering market-setting products and hiring away key personnel from industry innovators, competitor firms catch up technologically. A period of price-based competition follows, characterized by falling profit margins and—thanks to the de-skilling of work—declining employment relative to output levels. Significantly, this latter phase of industry development often results in relocations by firms seeking cost advantages in an increasingly volatile economy.

Manufacturing growth in the Sunbelt in the late twentieth century was rooted in textiles, woodworking, consumer electronics and other mature, mobile industries. In the early twenty-first century, the capital mobility that helped to make the region has sped the decline of its urban economies. This insight offers guidance on the question of identifying the potential for future manufacturing resurgence. Future employment growth will most likely center around technologically innovative manufacturing industries in which firms command higher profit margins and require skilled workforces to effectively tap profit potential.

While all U.S. manufacturing industries began to shed jobs well before the 2007–2009 recession, the largest proportionate job losses between 2001 and 2007 came in mature, non-durable industries, especially apparel manufacturing (-50%), textiles (-47%) and leather products (-43%). Computers and electronics (-27%) and electrical equipment manufacturing (-23%), the two durable goods industries with the highest job loss rates in the period, are characterized by firms' increasingly unfavorable position as the number of competitors have increased and profit rates have fallen. In short, firms in these industries moved from the innovation-driven phase of the profit cycle into the reality of cost-based competition. Otherwise, durable goods manufacturers suffered comparatively small (albeit still significant) rates of job loss.

The geography of durable manufacturing, then, is likely to provide a significant clue to the potential geography of manufacturing resurgence. Durable manufacturing industries, such as auto production and metal fabrication, retain their historical concentration in the Rust Belt of the Midwest and Northeast. Profit-cycle theory suggests these regions are likely to have an advantage in future employment growth. And that is indeed the case. Rust belt metropolises accounted for nine of the top fifteen growth regions for manufacturing employment between early 2010 and 2011 (see Table 2).

Table 2 Top Manufacturing Employment Growth Metros, Q1 2010–Q1 2011

Metropolitan Area	Manufacturing Employment Change, 2010–2011 (%)
Elkhart–Goshen, IN	9.6
Detroit–Warren–Livonia, MI	8.8
Grand Rapids–Wyoming, MI	6.8
Toledo, OH	6.0
Dayton, OH	6.0
Tulsa, OK	5.0
San Antonio, TX	4.8
San Jose–Sunnyvale–Santa Clara, CA	4.4
Portland–Vancouver–Beaverton, OR–WA	3.4
Milwaukee–Waukesha–West Allis, WI	3.4
Austin–Round Rock, TX	3.3
Minneapolis–St. Paul–Bloomington, MN–WI	2.9
Buffalo–Niagara Falls, NY	2.7
Houston–Baytown–Sugar Land, TX	2.6
Akron, OH	2.6

Source: Authors' calculations from U.S. Bureau of Labor Statistics, Quarterly Census of Employment and Wages data

Today, as a generation ago, the harsh reality of manufacturing job loss is accompanied by a more complicated and varied process of industry restructuring. The reality of restructuring—and the policy opportunities it opens up—is often obscured by the stylized narrative of a rusting North and ascendant Sunbelt. A restructuring perspective suggests a different future for U.S. manufacturing, and a different path forward for urban policy. While it remains unlikely that overall manufacturing employment levels will ever rebound to the extent necessary to replace the jobs shed over the past three decades, selected strands of manufacturing remain rooted in place, and will likely resist the off-shoring pressures currently seen in many cost-competitive industries.

Rather than forswearing manufacturing altogether, the field of economic development can benefit from using profit-cycle theory as a means of identifying potentially resurgent, and "sticky," manufacturing sectors. P²

Designing an Urban Industrial Future

Philadelphia's Lower Schuylkill River District

By Laura Wolf-Powers

This case study of the Lower Schuylkill River District in Philadelphia highlights current debates about how to integrate progressive ideas into on-the-ground efforts to regenerate urban manufacturing. As they position the Lower Schuylkill District for a new generation of investment, Philadelphia planners are faced with a set of questions that in many ways typifies efforts to unlock twenty-first century job growth in older industrial cities. Can contemporary industrial districts be compatible with urban vibrancy and livability from a design perspective? How can investments in high-level, university-connected research lead to jobs for workers with low and moderate skills? And how can we reconfigure a broken educational system to better position economically struggling urban residents to benefit from industrial growth? Progressive planners need to be part of this discussion.

The Lower Schuylkill River District—a historically industrial corridor comprising 3,700 acres on the east and west banks of the Schuylkill River in Philadelphia near its convergence with the Delaware—has in the past five years begun to play a key role in conversations about the city's economic future. A vibrant center of industrial activity in the early twentieth century, the Lower Schuylkill was deeply affected by the decline in Philadelphia's industrial base between 1950 and 2010. It is now characterized by aging infrastructure, underutilization, transportation access challenges and (due to the variety of petroleum and heavy manufacturing uses in its past) significant environmental contamination. But that's really only half the story; in spite of its challenges, the district is opportunity-rich. It lies two miles southeast of Center City's dense mix of housing, offices and retail and due south of the campuses that make up the burgeoning employment district of University City. It is eminently accessible by rail, highway, air transport and water port infrastructure, including the recently redeveloped Philadelphia Navy Yard. Much of the acreage is publicly owned. Strategic redevelopment can poise the area for incorporation into a larger strategy for job growth in a city rebounding from a difficult half-century.

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Two planning documents have come to frame discussion of the Lower Schuylkill's immediate future. The first, an industrial land use and market study released by the city in 2010, identifies parcels within the district as prime locations for "modern industrial sites," ranging from university-linked lab space to large logistics and distribution centers to purpose-built manufacturing facilities. The second, the Philadelphia City Planning Commission's *Philadelphia2035* comprehensive plan, also envisions opportunities for industrial and research-linked employment growth in the corridor while emphasizing the potential to use parts of it for stormwater management and to provide public green space at the river's edges. An early 2011 announcement by Sunoco Oil that it would be selling 1,400 acres within the area and ceasing its refining operations in Philadelphia as of mid-2012 has added increased urgency to a master planning process recently launched by the Philadelphia Industrial Development Corporation and the Philadelphia City Planning Commission.

Standard Boxes vs. Urban Context

Given the sheer size of the parcels that currently exist or could be created in this area, there is a strong inclination among those with their eyes on the industrial real estate market toward priming Lower Schuylkill sites for single-story, large-floorplate development. The city's 2010 industry study concluded that Philadelphia can become more competitive with its suburbs by assembling and preparing multiple-acre sites suitable for the flat, sprawling, parking-enclosed building typologies that increasingly characterize production and distribution; strategists in city government are particularly optimistic about the possibility of attracting air freight facilities and food distribution operations. But this raises eyebrows among urbanists. Isn't this suburban-style development that forecloses opportunities to create dense, visually interesting city form in a central location? Can't developers put in place job-dense industrial districts that feature street walls and connect to an urban grid?

The conundrum here is that job-dense industrial use in an urban setting is a relatively rare thing in 2012. Requirements for large floorplates, complex truck staging capacity and high loading clearances shape nearly all contemporary demand for industrial property. And to date, these requirements remain incompatible with anything that looks like a city to most people—though Tom Dalfo of the Philadelphia Industrial Development Corporation (PIDC) argues that automated warehouses and distribution centers with heights exceeding 80 feet will be "largely, if not exclusively, an urban building form" in the near term due to permitting challenges in low-height suburban communities.

A 100-foot single-story warehouse may epitomize Jane Jacobs's definition of a border vacuum, especially if juxtaposed with a more traditionally urban built fabric, but does it have to? It may be the case that in prioritizing the equity and diversity that industrial jobs bring, progressive planners will need to make peace with underwhelming architecture. Alternatively, though, we might help transform functionalist flat-roofed boxes into interesting urban neighbors. Medium-scale commercial farming is already taking place on factory roofs in Brooklyn, and it isn't difficult to imagine combining clean industry with restorative landscapes and recreational spaces.

Architecture historian and curator Nina Rappoport recently taught a Syracuse University seminar in which students experimented with integrating industry and the public realm based on historic urban utopian precedents. While she primarily advocates the preservation of multi-story buildings in older neighborhoods, Rappoport believes that many manufacturing facilities can be made compatible with public realm interventions; examples include bike paths buffered from traffic by landscape features and ballfields or sculpture parks on the tops of the buildings themselves. Philadelphia planners, who have tasked themselves with creating space as well as jobs in the Lower Schuylkill District, are open to combining modern goods production and distribution with trail networks, wetlands and play areas.

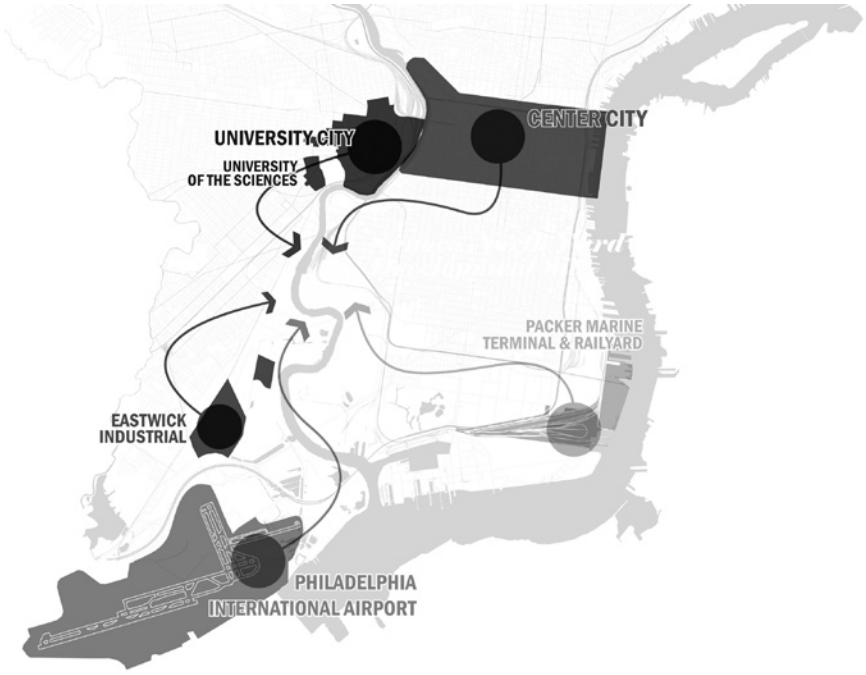
Finally, while the main opportunity in the Lower Schuylkill District lies with the "modern" box, an alternative form—the multi-story legacy industrial building housing small-scale artisans and fabricators—is succeeding in other parts of Philadelphia. The PIDC is about to release a strategy document on supporting artisanal manufacturing which, in adaptively reusing nineteenth and early twentieth century loft-style factories in mixed-use neighborhoods like Kensington and Frankford, has a more traditionally urban character.

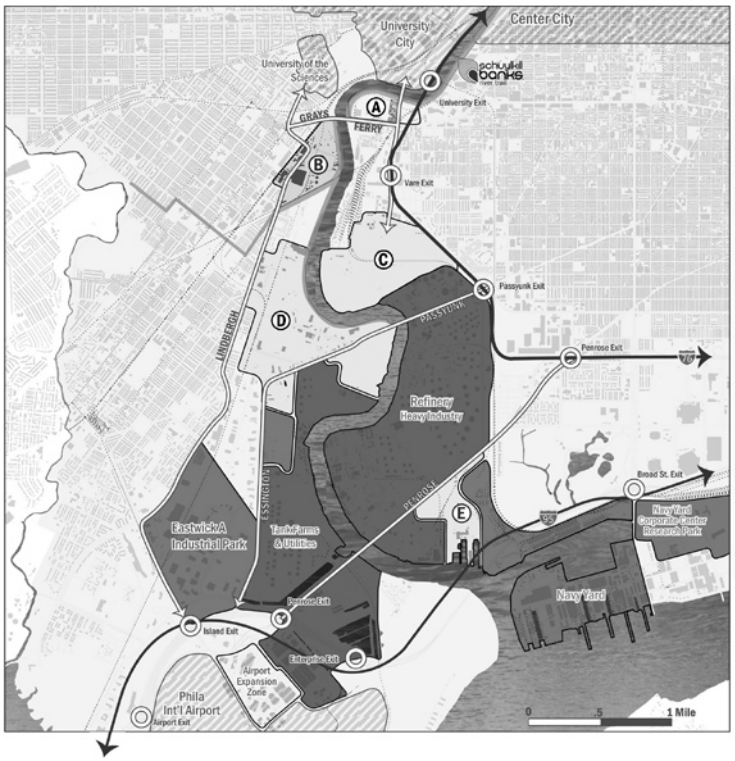
The Job Creation Value of Proximity to Universities

In the northern portion of the district on both banks of the river lie sites that call out for connection with the nearby campuses of University of the Sciences, Drexel, and University of Pennsylvania as well as technology commercialization centers and centers for medical research. Together, University City initiatives have over a billion dollars in funding from the National Institutes of Health and $54 million from the National Science Foundation. Part of the Lower Schuylkill District master planning process will certainly entail an evaluation of these institutions' demand for research-related offices, labs and product design and prototyping space.

As in many cities where medical and engineering research are growing parts of the economic base after declines in mass manufacturing, the challenge is to translate innovation

and discovery into job growth, especially for moderately skilled workers. According to product-cycle theory, the evolution of new products begins in dense, high-cost, knowledge-rich areas and often remains in those areas as a manufacturing and marketing/distribution process is developed and refined and engineers "work out the kinks." Once an item can be produced routinely, a shift in production occurs to areas with abundant low-cost land and labor. In cases like sophisticated medical instruments, machinery, biopharmaceuticals and anything else with high design content, the early, "innovative" stage in which the company is adding jobs and catalyzing supplier formation at the original location can last quite a while. The trick is to build infrastructure that promotes the commercialization of university research and then gives firms reasons to "stay in the neighborhood" for as long as possible. The availability of facilities such as high-quality "wetlabs" is one aspect of this, but also important are access to labor (discussed below) and the cultivation of backward linkages to high-capacity small and medium-sized supplier enterprises. Another key (as Jennifer Clark points out elsewhere in this issue) involves activating universities as more constructive participants in regional innovation systems. Given that the Lower Schuylkill master plan will focus on physical infrastructure, these "softer" aspects of cluster development also need to become a priority for economic development planners. Practices pursued by multinational firms—supply chain decentralization and financial incentives to outsource—make that work harder, but it must be done.





Maps: Interface Studio, Philadelphia, PA

Ⓐ DUPONT CRESCENT
Time to University City: 4 minutes
Time to PHL Airport: 10 minutes
Opportunity: Research/Mixed-Use
52 Acres

Ⓑ BOTANIC AVENUE
Time to University City: 6 minutes
Time to PHL Airport: 12 minutes
Opportunity: Advanced Manufacturin
46 Acres

Ⓒ SUNOCO NORTH YARD
Time to University City: 9 minutes
Time to PHL Airport: 11 minutes
Opportunity: Production/Distributior
254 Acres

Ⓓ EASTWICK B
Time to University City: 8 minutes
Time to PHL Airport: 9 minutes
Opportunity: Production/Distributior
363 Acres

Ⓔ NAVY YARD EXPANSION
Time to University City: 15 minutes
Time to PHL Airport: 5 minutes
Opportunity: Production/Distributior
102 Acres

Growing the Local Food Economy

Philadelphia is a restaurant town. It is also home to a vibrant local food movement that includes gardeners, small-scale commercial growers, food processors and dozens of farm-to-table restaurants. As in many cities with dense populations and sophisticated palates, food manufacturing has become a target cluster for growth. Given its centrality within the city, as well as the proximity of the Philadelphia Wholesale

Produce Market, which has recently relocated just outside it, and the Port of Philadelphia (a major unloading point for imported foods such as cocoa and bananas), sites in the Lower Schuylkill District may make competitive locations for food processors, manufacturers and distributors.

One challenge at the Lower Schuylkill site, which applies to any development that might occur there, not just food manufacturing, is the question of vehicular access. Traditional methods of servicing businesses in this area were river barges and freight rail. Rail is still useful for some firms, but infrastructure—currently lacking—for moving trucks and cars and connecting them to the regional highway network must be a central part of the district's redevelopment. For those considering the food cluster, this site presents an opportunity to minimize trucking's environmental impact by encouraging co-location of processing, manufacturing and distribution facilities close to food wholesale sites.

Workforce Issues

Any strategy to grow industry in Philadelphia must engage with the fact that while the city's large working-age population is a potential asset, low high school graduation and college attainment rates and high rates of functional illiteracy create a mismatch between the skills of the workforce and the skill demands of many firms. Recent national studies have pointed to a gap between demand for manufacturing and other industrial workers and the supply of such workers. In a recent survey of manufacturers in the Delaware Valley region conducted by the Delaware Valley Industrial Resource Council, 86 percent of 139 firms responding reported that they were trying to fill full-time vacancies. Well-paid manufacturing work requires relatively sophisticated technical skills that often require several semesters of post-secondary education. The key to earning a high wage in a manufacturing position is increasingly tied to the ability to program computer numerically controlled (CNC) machines. Of Philadelphia's working-age population, 22 percent have not obtained a high school degree, and by one estimate, 550,000 individuals, or over half, are functionally low-literate.

A higher skilled workforce cannot be produced overnight, and high school dropouts with low functional literacy are unlikely to find jobs in modern factories without significant educational remediation. Furthermore, the yawning income gap cannot be attributed entirely to skill deficits; ample evidence has shown that the diminished power of labor under neoliberalism (to use a shorthand term) plays a significant role as well. But even as they work from outside the system, progressive planners focused on the Lower Schuylkill site and on Philadelphia industry can make an impact by advocating for closer collaboration among high schools, post-secondary institutions and consortia of firms in the city. Such efforts could provide exposure to manufacturing occupations at the high school level, solid technical training at a technical college level and targeted on-the-job training (possibly subsidized or financed through state grants such as the State of Pennsylvania's Industry Partnerships) at the employer level. For decades, the prevailing focus of workforce and education policy has been "knowledge" jobs in the service industries. In fact, industrial jobs *do* typically involve knowledge work, and the fact that these sectors have seen employment gains nationwide even during the past two years of sluggish economic growth suggests that this would be a good time to build up a skilled labor supply.

Nationwide indications of an employment "comeback" in manufacturing from 2009 through 2011 after more than a decade of decline are cause for cautious optimism. The state of Pennsylvania (which is the sixth largest state in the nation in terms of manufacturing GDP) has tracked this national trend, but the Philadelphia metropolitan region and city have not. The redevelopment of the Lower Schuylkill corridor, if accompanied by other strategic industrial development initiatives like university engagement and workforce training, has the potential to introduce new jobs and revenues into the city's economy while remediating contaminated land and adding to the city's rapidly improving public realm. Smart, progressive planning—and advocacy for the interests of the less skilled potential employees of emergent industrial firms—will be a big piece of the puzzle. P²

Manufacturing is not Dead

How to Track its Reemergence

By Ron Kelly

For the last several decades, many policymakers have intoned that "manufacturing is dead." Recent data, however, show that manufacturing is quite strong. Global economic trends and increasing transportation costs are making production in the U.S. more appealing to domestic and foreign manufacturers, and many are finding greater economic value in production that is closer to the point of sale.

The rapidly changing conditions for manufacturing create challenges and opportunities for economic development planners who are working to increase opportunities in the manufacturing sector. To effectively guide policy to promote manufacturing, economic development planners must get smart about the industries that exist and are realistically poised for growth in their regions. Often this is not an easy task. Most economic development planners want data representing realities on the ground today. While a variety of federal data programs offer great detail on industries and employment, many practitioners in the trenches are pressured to provide a clear picture of "now" and become frustrated by the time lag associated with data releases. This is not a criticism of the data programs; collecting and ensuring the accuracy of labor market data takes time.

Ron Kelly is a program manager at Center for Regional Economic Competitiveness, an independent, non-profit organization founded to provide policymakers from around the world with the information and technical assistance they need to formulate and execute innovative, regional, job-creating economic strategies. The center also manages the Council for Community and Economic Research (C2ER), Labor Market Information Training Institute and Association of Public Data Users.

What is Real-Time Labor Market Information?

Access to current and reliable data about hiring needs will allow economic development planners to understand industry and economic trends affecting manufacturers in their regions. This data will help them to understand the priorities of manufacturers and provide a fairly comprehensive picture of their current operational realities. Many planners and policymakers build relationships with manufacturers to gain intelligence, but the information gathered from these qualitative methods does not always provide the full picture. Management often does not want to share information with outside entities, fearing that their competitors might obtain a strategic advantage. In addition, directly surveying firms may lead to results that vary substantially from standard labor market information programs.

Advances in information technology and the growing usage of the internet to post job advertisements has led to an emerging data source that is increasingly being used to provide essential labor market information details. Proprietary data vendors are producing what is known as *real-time labor market information,* which is created by using web-spidering technologies that collect job postings and related characteristics from internet job boards. Duplicate postings are removed, and individual job advertisements are analyzed and categorized using keywords and phrases.

For economic development planners operating at the regional level, these data could provide a powerful glimpse inside the operations of manufacturers. One of the best ways to understand the priorities of manufacturers is to see what positions they are hir-

ing for. This information provides perspective on ways in which manufacturers are growing or changing by demonstrating what types of positions they seek to fill during a specific time frame. Economic development planners can ascertain current hiring trends and information on how occupations have grown or declined over time when analyzed in a time series.

In addition, planners can compare key industry and occupation hiring trends of their regions to others, benchmarking factors like education requirements and starting salaries to similar firms elsewhere. Also, data categorizations for hot economic development topics are often developed by the proprietary vendors of real-time labor market information. For instance, job postings can be analyzed for the presence of specific green skill requirements to quantify the number of job openings that could be considered green jobs.

Data on education and certification requirements for job postings can provide economic development planners with insight into the increasing complexities of existing industries and occupations. This data can inform necessary conversations with community colleges and other training providers to assess how these players contribute to the skills development of the local workforce.

As with all data sources, real-time labor market information has its own set of limitations. While current, the data will not include all job openings, as certain types of jobs (those with low skill requirements, passed on by word of mouth or part of the informal economy) are not typically posted on the internet. Planners looking to focus mainly on catalyzing economic opportunities for this population might not find much information to inform their work.

Real-time labor market information is available not only in summary form but also in detail; planners can drill down to individual job postings. This level of detail is critical for professionals in workforce development. To access this sort of data, local and regional governments can subscribe to a data provider. Many state labor market information agencies already subscribe, offering periodic analysis on the web or through a newsletter.

Study Shows Value of Real-Time Labor Market Information

Colleagues at the Center for Regional Economic Competitiveness recently completed an analysis of manufacturing at the national level for the first six months of 2011 using solely real-time labor market information obtained from Labor Insight, a tool developed by Burning Glass International, Inc. (one of several proprietary vendors offering such data). The research effort was to ascertain where manufacturers are hiring as well as the characteristics of these jobs.

The study found nearly 669,000 web-posted manufacturing job openings nationwide during that time frame. Furthermore:

- Manufacturing job openings were concentrated in major metropolitan areas on the East Coast, in the Midwest and in Texas and California.
- Less than 10 percent of manufacturing job openings were related to production.
- The top three manufacturing industries with job openings (as a percentage of total manufacturing jobs posted) were:

Computer & peripheral equipment	9.7%
Aerospace products & parts	7.6%
Pharmaceutical & medicine	6.9%

- The top five occupations sought by manufacturers (as a percentage of total manufacturing jobs posted) were:

Sales representatives, wholesale & manufacturing, except technical & scientific products	7.6%
Mechanical engineers	6.6%
General & operations managers	3.0%
Computer software engineers, applications	2.9%
Retail salespersons	2.5%

- A majority of manufacturing job openings required education greater than a high school diploma, with a quarter of production-related manufacturing job openings including that requirement.
- Seven percent of manufacturing job openings required some sort of industry certification.

These are national characteristics in manufacturing hiring over a six-month time frame. The data may show vastly different scenarios at the regional level, given industry clusters and other local factors.

Real-Time and Other Labor Market Data in the Arizona Green Jobs Analysis

Researchers are increasingly integrating real-time labor market information with other information to produce a more complete analysis that can better inform policy recommendations. I managed a green jobs survey for the State of Arizona from June through September 2010. The survey went out to 10,000 employers and received a response rate exceeding 52 percent. The purpose of the survey was to obtain a baseline analysis of the green economy in Arizona, with a particular emphasis on collecting specific data on jobs where green skills were essential. Firms were asked to provide specific data by job title for all positions they classified as green given provided definitions. Also included in the survey was a question on current green job vacancies.

We were very satisfied with the information provided by employers on their current employment, however, given the economic conditions in the state at the time of the survey and other factors, the data on the job vacancy question was sparse. Under guidance from our client, it was decided to partner with a real-time labor market information provider to obtain a more complete picture of green job vacancies during the time frame of the survey. Particular emphasis was placed on green job openings and their associated traits (salary, minimum education, skill requirements, etc.) as the green economy was seen as emerging in the state.

Ultimately, real-time labor market information was used to complete an analysis of green job vacancies over the period from March 2010 to March 2011. Using this data, the report provides a full picture of overall web-posted job openings, including the subset requiring green skills; characteristics of green job openings compared to all available jobs; education and skill requirements of green job openings compared to all other job openings; and reported wages available to green job seekers.

Comparing the analysis from our survey to the real-time data, benefits and limitations emerged. On the positive side, real-time labor market information provided a time series which would have been very difficult to replicate through survey methodology. By tracking job vacancies from month to month it was easier to get a sense of how the recession and subsequent recovery affected job vacancies and possible seasonality of employment (for both green and non-green occupations).

A survey of employers may be more likely to provide insight into job openings with low skill requirements. These jobs are not likely to be found on an online job board and would thus not be included in the real-time labor market information. This omission could skew wage, minimum education and skills requirement data upward.

Our survey relied upon the respondent's judgment to decide whether to report a job as green based on provided definitions. Although guidance was provided in the survey instrument, it is unlikely that all respondents interpreted the definitions in the same manner. For the real-time labor market information, analysis was conducted on job postings to understand the existence of green skills requirements. Those with green skills requirements would be classified as green. With proper information technology measures in place for such analysis, this could lead to more consistent reporting and classification. This is especially true when measuring a fuzzy concept such as green employment. On the other hand, it could also lead to a more lenient categorization. The survey instrument asked whether any variety of green skills were "essential" to the job, a level of judgment that is difficult to build into an automated classification system. P²

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