Robert Lane
Senior Fellow for Urban Design
Regional Plan Association
Urban manufacturing: Intersection of the global and the hyper-local
Urban manufacturing in Bogota and the United States: Economy and Policy

Similarities:
• Both Bogota and American cities are still wrestling with the implications of the changing nature of urban manufacturing: technology and the “maker movement”
• Both Bogota and American cities are trying to understand how to build the ecology of the urban “factory neighborhood”

Differences
• Bogota’s manufacturing districts are not (yet) subject to displacement so it is not yet facing the ultimate dilemma: integration versus protection
• Bogota has a legacy of managing land use at a much finer grain than in the US
Urban manufacturing in Bogota and the United States: Urban Form

Similarities
• Urban manufacturing districts in both Bogota and N. America are predominantly low-rise.
• Streets in urban manufacturing districts are not well designed: Goods movement conflicts.
• Open spaces are scarce and poorly defined.

Differences
• The low-rise manufacturing districts in Bogota are more “urban”: higher coverage and more transparency.
• Bogota does not have a legacy of managing the high-density loft factory.
Urban manufacturing in Bogota and the United States: Questions

Questions:
• What is an “Innovation District”: Vertical versus horizontal mixed use
• What urban design strategies can encourage new forms of mixed-use
• What strategies can be used to manage the ecology of the factory neighborhood
Defining the Region: New Scales, New Contexts

Urban manufacturing: Intersection of the global and the hyper-local
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Resource Procurement

Zach Craun, Columbia MUD
Urban manufacturing: Intersection of the global and the hyper-local

The “Junk Map”

Waste disposal
Urban manufacturing: Intersection of the global and the hyper-local

New England Edition

China Confronts Mounting Piles of Unsold Goods

A Drag on its Economy

Exports Slow, but Not Factories — Problem Masked in Data

By Keith Bradsher

Guangzhou, China — After three decades of rapid growth, China is encountering an unfamiliar problem with its newly struggling economy: a huge backlog of unsold goods that is crippling shop floors, clogging car dealerships and filling factory warehouses.

The glut of everything from steel and household appliances to cars and apartments is hampering China’s efforts to emerge from a sharp economic slowdown. It has also produced a series of price wars that have led manufacturers to redesign efforts to export what they cannot sell at home.

The severity of China’s inventory overhang has been carefully masked by the recycling and adjusting of economic data by the Chinese government — all part of an effort to prop up confidence in the economy among business managers and investors.

But the main inventory survey of manufacturers in China showed on Thursday that inventories of finished goods rose much faster in August than in any month since the survey began in April 2004. The previous record for rising inventories, according to the HSBC/MultiSurvey, was in August 2008.

Export powerhouse feels pangs of labor strife

By Jim Yardley

The air thickened with tear gas as police and factory security guards pushed into the Infobide Export Processing Zone firing rubber bullets and swinging cane sticks. Protesters in factory workers tried to flee. A sewer cover crumpled to the ground, knocked unconscious by a shot from the head.

Dozens of people were beaten and hospitalized. The officers were chasing down protestors at two garment factories in the industrial area in western Bangladesh. But they were also protecting two ingredients of manufacturing formulas that has quietly made Bangladesh a leading bar and foreign investment. Both were at stake on that March morning. Workers earning as little as $10 a month, less than the cost of one of the garments they stitched for European stores, were being fired over a cut in wages. These were the sprawling garage-like Chinese factories that have mushroomed out of Bangladesh’s two factories, tearing a labor dispute into something potentially much larger.

But with “Made in Bangladesh” labels now commonplace in American stores, Bangladesh’s manufacturing formula depends on the presence of these factories, and the labor industry for Bangladesh.” Bangladesh, once poor and irrelevant to the global economy, is now an export powerhouse, second only to China in global apparel exports, as factories churn out clothing for brands like Tommy Hilfiger, Gap, Calvin Klein and H&M. Global retailers like Target and Walmart now operate sourcing offices in Bangladesh, the capital.

Garment makers are critical to Bangladesh’s economy, accounting for 83 percent of manufacturing exports and more than 87 percent of all manufactured goods.

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Urban manufacturing: Intersection of the global and the hyper-local
Brookings Studies: Metro Manufacturing Revival based on coincidence of:
- The 100 most populated metro regions export 80% of US goods.

From the Global to the hyper-local: the “Mega-regions”
From the Global to the hyper-local: the NY metropolitan region
From the Global to the hyper-local: the NY metropolitan region
From the Global to the hyper-local: the NY metropolitan region

1 dot = 500 jobs

Industrial sector
- Manufacturing: 929,000
- Wholesale trade: 556,000
- Construction: 510,000
- Transportation and warehousing: 360,000

Jobs
From the Global to the hyper-local: the manufacturing neighborhood
From the Global to the hyper-local: the manufacturing neighborhood
The Industrial City Returns:

Howard’s Garden City

Le Corbusier

Toni Garnier
Does Manufacturing Matter?

- You lose control of what you don’t make
- Rents on innovation are paid in production
- Manufacturing has strongest linkages
- Manufacturing jobs are more valuable
Does *Urban* Manufacturing Matter: Equity and Environment

- Access to labor
- Access to markets
- Access to technology
- Access to infrastructure, equipment and buildings
Does *Urban* Manufacturing Matter: Economy – agglomeration and innovation

**Industry in Motion**
Following fashion for two weeks
July 19 - July 31, 2011
Does *Urban* Manufacturing Matter: Economy – agglomeration and innovation

- Access to labor
- Access to markets
- Access to technology
- Access to infrastructure, equipment and buildings
Does *Urban* Manufacturing Matter: Economy – agglomeration and innovation

“PDR”:

- Production
- Distribution
- Repair

- Changing nature of manufacturing enables new forms of mixed use

PDR employment today:

63,000 JOBS

10% of city total
Does *Urban* Manufacturing Matter: Economy – agglomeration and innovation

**Design Implications:**
- Smaller spaces
- Proximity to the core
- Mixed Use

**Policy Implications:**
- Regulatory challenges
- Agglomeration versus displacement
Does *Urban* Manufacturing Matter: The “innovation district”
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Does *Urban* Manufacturing Matter: The “innovation district”

Barcelona: 22@ Innovation District

Kendall/MIT Innovation District
Does *Urban* Manufacturing Matter: The “innovation district”

Portland State Innovation District
Does *Urban* Manufacturing Matter: The “innovation district”
Does *Urban* Manufacturing Matter: The “innovation district”
The “innovation district” and vertical mixed-use

Questions:
- Policy: Level of subsidy
- Regulation: Managing the mix
- Design:
  - How much proximity/connectivity
  - How much vertical mixed use
  - Role of streets and public spaces
The “innovation district” and vertical mixed-use
The “innovation district” and vertical mixed-use
The “innovation district” and vertical mixed-use

Legacy mixed-use
The “innovation district” and vertical mixed-use
The “innovation district” and vertical mixed-use
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The “innovation district” and vertical mixed-use
The “innovation district” and vertical mixed-use

Additional floors in narrow set-back tower

New “sliver towers”

New green “sky-scape”
The Industrial District Reconsidered: Garment District Case Study

Factory consolidated on lower two floors
New “highline”
New service and factory lobby
Office or residential lobby
Street trees and streetscape

Additional floors in narrow set-back tower
• Innovation and the Low-rise urban industrial district

Crawford Industrial District, Chicago, 1931

Spring Creek, New York, 1952
Challenge: The Low-rise urban industrial district
Challenge: The Low-rise urban industrial district

CHICAGO

PITTSBURGH

PORTLAND
Challenge: The Low-rise urban industrial district

What are the design issues?
- Large buildings that are not suited to the new urban manufacturing model
- Buildings that do not relate to the street
- Public space design: Disorganized left-over spaces. Poorly defined loading and storage areas
- Street design: quality of pedestrian experience and goods movement
- Managing the edge: integration versus encroachment

Strategies and case studies:
- Beyond the Box: clip and carve
- Rationalize the leftover spaces
- Create mixed-use streets
- Explore new building types to introduce new uses
Low-rise industrial district strategies: beyond the box
Low-rise industrial district strategies: make the open space network
Low-rise industrial district strategies: make the open space network
Low-rise industrial district strategies: make the open space network
Low-rise industrial district strategies: make the open space network

New roll-down doors
Delivery/service area retained
Café in back of new loading dock
showroom
Loading dock used as showroom space

Mixed-use in time and space: sharing
Low-rise industrial district strategies: re-think the street

<table>
<thead>
<tr>
<th>Original Design</th>
<th>CURB</th>
<th></th>
<th>TRAVEL LANE</th>
<th></th>
<th>TRAVEL LANE</th>
<th></th>
<th>CURB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Updated Design</td>
<td>CURB</td>
<td></td>
<td>PARKING LANE</td>
<td></td>
<td>TRAVEL LANE</td>
<td></td>
<td>CURB</td>
</tr>
</tbody>
</table>
Low-rise industrial district strategies: re-think the street

Mixed use bike lane symbol

Typical cross street
Low-rise industrial district strategies: re-think the street

Mixed use street “kit of parts”
Low-rise industrial district strategies: re-think the street

Mixed use street “kit of parts”
Low-rise industrial district strategies: fix the edge
Industrial district strategies: low-rise mixed use

HOUSING FOR NON-TRADITIONAL FAMILIES

University of Calgary, BC
Industrial district strategies: low-rise mixed use
Industrial district strategies: low-rise mixed use
Industrial district strategies: low-rise mixed use
Industrial district strategies: low-rise mixed use
Industrial district strategies: low-rise mixed use
Industrial district strategies: low-rise mixed use

Newmarket, Boston, MA
Industrial district strategies: low-rise mixed use

**HEAVY INDUSTRIAL THRESHOLDS** require a 30 foot min. buffer zone between manufacturing & residential buildings. The entry facade & truck traffic of the manufacturing building will be oriented away from the residential. This allows the buffer zone to be developed as an outdoor amenity for the residential units.

**LIGHT INDUSTRIAL THRESHOLDS** separate truck traffic from residential traffic and orients the entry facade of the manufacturing away from the residential side. The residential and manufacturing programs exist in a single structure but are separated by a programmatic buffer which includes circulation and support spaces.

**ZONING AS SPACE MAKING**
Industrial district strategies: low-rise mixed use
Industrial district strategies: low-rise mixed use
Industrial district strategies: low-rise mixed use

case study:
Morrisona Industrial Park
Industrial district strategies: low-rise mixed use

Morrisania Industrial Park

case study:
Morrisania Industrial Park
Industrial district strategies: low-rise mixed use
Industrial district strategies: low-rise mixed use
Industrial district strategies: low-rise mixed use
Policy strategies for the low-rise urban industrial district

Policy strategies:
• Zoning for performance
• Know the ecology
• Curate the mix
Industrial district strategies: zoning for performance

A. Purpose
IX is intended to provide for a variety of light industrial and manufacturing uses while allowing for retail, service and commercial activity and limited housing opportunities. To help ensure that land is reserved for manufacturing and industrial residential uses are limited to the upper stories. IX is not intended to provide for areas exclusively dominated by light industrial or manufacturing but provide for developments that incorporate commercial uses with housing, retail and service related activity. IX can serve as a land use transition between heavy industrial areas and mixed use and commercial districts.

B. General

C. Lot
Lot Dimensions
Lot area: 90 min., 0 min.
Lot width: 90 min.

D. Placement
Building and Structure Setbacks
Front street: 90 min. / 80 max.
Side street: 90 min. / 80 max.
Side interior: 100 min.
Rear: 200 min.

E. Parking
Location of Parking
Front yard: 2 bays max of on-site parking with drive aisle
Corner yard: 2 bays max of on-site parking with drive aisle
Side yard: Permitted
Rear yard: Permitted

F. Height
Building Height
All buildings or structures: 45' max.

Zoning for performance: Form-based zoning
Industrial district strategies:
• understand the mix
• curate the mix
Industrial district strategies: curate the mix
Industrial district strategies: curate the mix

Greenpoint Manufacturing and Design Center
Mission-Driven Entity

• Manage and program the nyc fashion innovation center
• Help designers find factories to produce their lines
• Promote a “nyc-made” brand
• Help enforce deed restrictions on manufacturing space
Lessons Learned for Bogota and the US

Urban Form
• Transform the box
• Design a new open space network
• Re-think the street
• Fix the edge, but create new connections to context
• Explore new forms of mixed-use

Policy:
• Know the ecology
• Regulation: Performance-based zoning and design guidelines
• Empower a mission-driven entity to “Curate the mix”.
• Calibrate national politics to local economy
Thank You
Place-Making
Emergence of the “innovation district”
Emergence of the “innovation district”
Urban manufacturing: Intersection of the global and the hyper-local

*Manufacturing sector data are a subset of private nonfarm business sector data.
Industrial district strategies: low-rise mixed use

The "innovation district" and vertical mixed-use
What is Regional Plan Association:

- 3 states
- 31 counties
- 783 towns and cities
- 23 million residents

The Tri-State Region and its environs.