No longer satisfied with being relegated to the urban hinterlands, the industrial sector is showcasing its value to economic development and city building through an ambitious plan in Philadelphia.

INTRODUCTION

Cities evolve. They evolve in response to a myriad of factors both known and unknown. Cities reflect the manifestations borne of changes in technology, infrastructure, demographics, climate and many other factors too numerous to mention. Public policy and real estate markets reflect these changes by reacting with physical changes to the built environment.

These changes to the built environment often result in more efficient uses of land and property. Office buildings use fewer square feet per worker due to increased efficiency, retailers require less space for inventory due to changes in logistics, apartments shrink through improved design efficiencies and, perhaps, in response to affordability challenges. Even the vaunted single family home, which has been growing in average size for decades, has recently ticked down, again likely due to homebuyers’ increased quest for value.

But, counter to this increased efficiency in physical footprint, the industrial, warehouse and research and development (R&D) sector has for decades moved in the opposite direction. While surely there have been improvements in logistical and distribution processes, the historical trend has been away from multi-story loft warehouses and factories to single story expansive warehouses. Technology has allowed for greater column spacing and higher stacking capabilities, which do, indeed, improve efficiency, but this is marginal when compared to the overall footprint.

As a result of the large floor plates and subsequent need for large parcels of land, cities, which by their nature make it more difficult to locate large parcels, have steadily been losing their ability to attract manufacturing and industry. (Labor costs and difficulty in navigating city streets with tractor trailers surely contributes to this, as well.) And, when smaller footprints are possible, but still single story, the high costs of urban land make such development difficult, if not impossible, to pencil.

As the availability of viable sites dwindles, the multi-story loft factories proceed on a path to gentrification, as they are converted
in to trendy apartments or creative office spaces. A community evolves and nearby parcels are converted into newly constructed and denser uses. This was especially pronounced in the previous run-up of the 2000s, as the back to the city movement flourished and the gradual disappearance of industrially zoned land picked up considerable steam.

**LOS ANGELES AND NEW YORK CITY**

Recognizing the loss of jobs that can result from the lack of industry, the City of Los Angeles enacted an industrial land use plan back in 2006. As per the City of Los Angeles, industrial zoned land was “under increasing pressure from other types of development, typically big box commercial, residential and institutional uses, including schools. Only 8% of the City of Los Angeles is zoned for industrial use (excluding the Port of Los Angeles and LAX) and it is critical that the City determine how much of this job-producing land should be preserved for the future.”

The recommendations covered five industrial neighborhoods within greater Los Angeles to “better plan the uses in industrial areas as a whole.” Lamenting the trend at the time of making zoning decisions on a case-by-case basis, the city recognized the lack of bigger picture considerations, especially as industrial zoned land was converted to residential uses. The study reported that such changes “may not take into account effects on the character of the neighborhood or district or the impact an isolated project may have on the City’s job needs.”

The result was a more comprehensive public review and planning process at the community plan level. If new community plans confirmed the recommendations, the community plan process addresses changes in plan designation and zoning, and will identify the implementation process for changes.

And, just across the East River from Manhattan, the Brooklyn Navy Yard has successfully nurtured a modern industrial park. Originally founded in 1801, the Navy Yard hosted shipbuilding efforts up until its closure by then Secretary of Defense Robert McNamara in 1966. At the time of its closing, according to the Brooklyn Navy Yard Development Corporation, the Navy Yard employed more than nine thousand workers as the oldest continually active industrial plan in New York State.

New York City purchased the Navy Yard in 1967 for $24 million, and reopened the City-owned industrial park in 1971 under the management of a Local Development Corporation. Today, the Brooklyn Navy Yard, under the management of the Brooklyn Navy Yard Development Corporation, is a thriving industrial park comprised of more than forty buildings, over 275 tenants and nearly six thousand employees on its 300-acre campus. Industries range from movie studios to furniture manufacturers, ship repairers, jewelers, and media communications now occupy the four million square feet of leasable space. A thriving industrial compound just across from Manhattan’s density and sky-high rents preserves the city’s industrial past with a modern tenant list.

**PHILADELPHIA PLANS FOR ITS INDUSTRIAL FUTURE**

Similarly recognizing the various negative ramifications of the disappearance of industrial land, the City of Philadelphia is embarking on an ambitiously proactive industrial land use strategy of their own. The scope of their endeavor is broad.

The Philadelphia effort is backed by the

The 2010 study found a critical shortage of modern, or relevant, industrial sites across fifteen city industrial districts, located primarily, although not exclusively, along the city’s two dominant rivers—the Schuylkill and the Delaware. The conclusion was that there was a significant competitive disadvantage in attracting and retaining industrial activity.

The NBBJ and HR&A master plan focuses on the Lower Schuylkill as a first step due to a number of advantages: size, industrial character, transportation assets, separation from residential areas and proximity to local and regional economic engines.

Likewise, the Philadelphia City Planning Commission’s comprehensive plan to guide policy, investment and future growth, titled Philadelphia 2035, designates the Lower Schuylkill as an “industrial legacy area” with the objectives of business attraction, job creation, support for economic activity in Center City and enhanced public access to the river’s edge, among others.

In sum, the September 2010 PIDC study estimates that the creation or redevelopment of 2,400 acres of development-ready industrial land could support 22,000 new jobs and substantial new tax revenue over a twenty year timeframe.

Philadelphia currently has nearly 105,000 industrial jobs, accounting for roughly twenty percent of total employment. And, the more than $320 million in direct annual taxes coming from the industrial sector amounts to nearly fifteen percent of the city’s total tax revenue. In short, the industrial sector is already a significant part of Philadelphia’s economic landscape. The Lower Schuylkill Master Plan looks to retain and grow the sector in a bid to be even more competitive in the domestic and global marketplace.

Supporting recommendations include site assemblage opportunities, infrastructure improvements, financial feasibility of new development, advanced manufacturing development strategies and targeted workforce development improvements. Also identified are funding gaps and incentive needs and sources to support redevelopment.

Master Plan Principles

Taken together, the Philadelphia master plan vision is comprised of six guiding principles:

1) Create a new identity as a 21st Century industrial district—Create a gateway to the city by linking the airport, University City, Center City and other key neighborhoods, and integrate river access, open space and other amenities to create and showcase a unique Philadelphia asset.

2) Prioritize job creation and economic growth—Support and complement the growth of other economic anchors and capitalize on locational advantages of the Lower Schuylkill to develop a range of new jobs, across a variety of skills and education levels.

3) Connect the Lower Schuylkill—Reconnect to economic anchors, adjacent communities and the city as a whole to foster industrial and recreational activity.
4) Foster diversity of uses—Support a diversity of uses by integrating economic, recreational and environmental objectives to strengthen long-term vitality.

5) Provide access to the river—Employ trails, public spaces and dedicated access points to re-introduce the river to Philadelphians.

6) Build sustainably—Strive to integrate energy-efficient buildings, alternative energy generation and distribution, new patterns of commuting and progressive stormwater and floodplain management.

By being pro-active and incorporating objectives not usually associated with industrial districts, such as recreation, public space and sustainability, the NBBJ and HR&A strategy is poised to introduce a new model for economic development.

Bolstering the possibility of implementation, the plan also includes a market and economic strategy analysis to ensure the master plan is grounded in real estate, economic and funding realities.

Proposed Interventions

The study recognizes the City of Philadelphia’s recent zoning overhaul as “zoning for modern industry.” The resulting simplification of and updates to industrial zoning categories is one such policy intervention that positions land for investment. Additional interventions for “setting the stage” for investment include:

- Land assembly for large footprint developments or multi-site initiatives,
- Outreach and assistance with site selection for smaller firms and start-ups, and
- Targeted investments that align workforce development initiatives with growth clusters.

Reduction of business costs also plays in to the equation, with specific recommendations that include:

(a) Public support for site preparation and brownfield remediation,

(b) Tax credits or low interest financing for higher value uses to mitigate higher construction costs, and

(c) Reductions or abatements of various business and property taxes in exchange for job creation.

And, lastly there are recommendations for improving the physical environment, such as basic infrastructure upgrades to improve access, open space and amenity upgrades to incentivize higher value uses and district-wide stormwater improvements to mitigate costs of on-site stormwater management.

Three Campuses for Industry

To achieve this, the single plan develops a physical framework that includes three distinct campuses: (A) The Innovation District, (B) a Logistics Hub, and (C) an Energy Corridor. For each campus there are four collective planning strategies:

1) Improve site character,
2) Strengthen access and connectivity,
3) Consider the environment, and
4) Integrate open space and public access.

This includes identification of existing inherent advantages for each campus. For the Innovation District, including advanced
manufacturing and R&D, proximity to University City (including the campuses of the University of Pennsylvania and Drexel University) exposes innovation potential, as do Penn’s investments in complementary sectors and adjacent sites.

For the Logistics Hub, transportation and logistics advantages are borne of proximity to Philadelphia International Airport and Interstates 76 and 95. And, also benefiting from the proximity of the airport and highways, the Energy Corridor gets a boost from Carlyle Group’s pending investment in the former Sunoco Oil Refinery, a sprawling complex close to the airport.

The Innovation District. The Innovation District is comprised mostly of small and medium sized (3-20 acres), irregularly shaped parcels, many of which border the river. With views of Center City and the river, as well as being proximate to University City, the district can support the growth of University City through, in many instances, the adaptive reuse of existing structures. At 522 acres, building sizes are projected to range from 20,000–80,000 square feet, providing a range of scales. The walkable green campuses can accommodate R&D, advanced manufacturing, artisanal industries and, perhaps, institutional and university-related back-of-house administration.

The recent expansion of Penn east of the Schuylkill has already occurred on the site of the old DuPont laboratory space, where Penn is setting up R&D incubator space for progressive innovation, such as robotic nanodrones. In fact, the workforce for R&D has been growing in the higher quality neighborhoods around Penn. The traditional model of fledgling industries being forced to the suburbs means this workforce either has to move with them or become commuters. If the businesses stay, they can keep their localized workforce, and provide jobs for the less well educated that already live in the less-well-off neighborhoods nearby.

Alan Mountjoy, NBBJ’s Principal leading these efforts, notes that “the future knowledge worker that will be using this district will be better educated, trained and potentially live nearby, thus bringing back a sense of cohesion between the working and living in their lives.” Mountjoy continues, “the future worker in this district may be just as likely to arrive to work on a bike as in a pickup truck.”

Two largely publicly owned parcels—Bartram’s North and Bartram’s South (named for the nearby Bartram’s Garden)—could catalyze private development. As these publicly owned parcels are developed in conjunction with infrastructure improvements, pressure in the private market can spur development of other parcels.

The Logistics Campus. The Logistics Campus currently includes auto-related uses, such as dealerships and scrap yards, distribution uses, the existing Eastwick Industrial Park and extensive wetlands. The potential for airport logistics and support services is due to its proximity to the airport and Interstate 95. Current development momentum from USPS and the Philadelphia Regional Produce Market, as well as the potential for an existing recreational trail extension along a rail right-of-way, provides opportunity for linkages back to University City.

In fact, as Mountjoy identifies, “there is one aspect that seems to get short notice: the [proposed] extension of a single river road from Penn all the way down the west side of the river. It is a strong indication that we would like to see the river be less isolated in the future, whatever its function. This mixing
of industrial and public access blends together the aesthetic, environmental and economic to create a larger sustainable vision for the entire district.”

As part of the NBBJ and HR&A plan, higher and better uses are envisioned as supporting airport expansion plans, centered mainly on freight traffic, including convenient access sites that can accommodate distribution and warehouse facilities. While the Logistics Campus has less vacant land available for development, the continued consolidation and shrinking of the number of auto dealerships will present opportunities for supportive redevelopment.

The Energy Corridor. Finally, the Energy Corridor has the potential to create a key energy hub on the east coast with excellent receiving and distribution capabilities, as well as potential for significant job growth. Further, it can play a larger role in sustainability by becoming a lower cost, stabilized energy source for the larger industrial district, e.g./cogeneration. With single ownership of large parcels and redevelopment efforts already underway, the high value industrial infrastructure is the beneficiary of excellent port, rail and highway access.

Due to decades of oil- and energy-related uses, redevelopment of the district in to other supporting or recreational uses is cost prohibitive. Although opportunities to improve the perimeter aesthetics exist, the primary focus is to encourage growth of energy uses as an economic development tool. Philadelphia Energy Solutions, a joint venture of Sunoco and Carlyle Group, is considering multiple scenarios for re-use of the existing, albeit shuttered, oil refinery. Refineries are not easy to relocate. And reusing this one makes a lot of sense because the cost of tearing it down and cleaning the site would be prohibitive.

Further, whereas railways were once thought to be an impediment to redevelopment when the refinery was going to close, they are proving to be assets. The rail infrastructure is precisely why the site works for refining Marcellus Shale, which would arrive by rail, not by sea, as other sources had previously.

As NBBJ and HR&A point out, the public sector can take several steps to promote and encourage growth and enhanced activity. Among these are

- Job training to create a quality work-force,
- Incentives to support new businesses,
- Marketing and branding support for the Energy Corridor, and
- Streamlined reviews and permitting processes.

COMMENTARY

Industrial land uses have been the heart and soul of economic growth for generations. The recent past, however, has seen the decline of many manufacturing sectors. More recently, though, industrial growth has rebounded somewhat, albeit in new forms and with new processes. Just as those forms and processes are new, so too, do they require new approaches to economic and physical development.

NBBJ’s Mountjoy notes that “the mixed-use district was the hallmark of the New Urbanist proposition. But, the New Urbanists were preoccupied with places of consumption. This district is a mixed-industrial district that allows for the flourish-
ing of places of production: food, distribution, energy and medical and technology research and development.”

Asks Mountjoy, “Can this be the vision for a more competitive United States economy, where places of education, research, development and production are grouped for potential synergies?”

As the City of Philadelphia is showing, a coordinated approach to industrial development can go beyond job creation to create identifiable districts and opportunities for growth. Innovation, as the Lower Schuylkill Master Plan shows, can emerge from industrial areas, not just universities. The current trend of physically re-uniting research, development and manufacturing can speed innovation, and keep that innovation loop as tight as possible.

Industry and manufacturing used to be at the heart of city building. Today, a more efficient—physically, logistically, and environmentally—industrial sector can once again create an economic and, this time, aesthetic legacy.
NOTES:


2Alan Mountjoy, interview by Howard Kozloff, Los Angeles, CA, September 9, 2014.

3Ibid.

4Ibid.

5Ibid.