

# **BUFFALO CENTRAL TERMINAL MASTER PLAN**

# **APPENDIX C**

## **PRECEDENT CASE STUDIES**

**AUGUST 2021**

### **CONSULTANT TEAM:**

**SMITHGROUP**

**JAMES LIMA PLANNING &  
DEVELOPMENT**

**MUSTARD SEED WORLD  
GROUP**

**BARBARA CAMPAGNA /  
ARCHITECTURE + PLANNING**

**TROPHY POINT**

**WATTS ARCHITECTURE &  
ENGINEERING**



# BETHLEHEM STEELSTACKS

## BETHLEHEM, PENNSYLVANIA, USA

Bethlehem SteelStacks resides on the site of what was the former Bethlehem Steel plant, once the 2nd largest steel manufacturer in the nation. Opened in 1857, the Saucona Iron Company started its operations making iron rails for a local railroad, eventually changing its name to the Bethlehem Steel Company in 1904. Their steel would later be used in the construction of the Chrysler Building in New York City in 1930 and in the creation of the building of the Golden Gate Bridge in 1937. By 1943, the company had more than 31,000 employees working to manufacturer steel during World War II. 23 years later, steel from the company was used in the construction of Madison Square Garden in New York City. Despite more than 120 years of successful steel-making the Bethlehem Plant officially closed its doors in 1995 and filed for bankruptcy in 2001.

### BUILDING POLITICAL SUPPORT

In 1999, after the Bethlehem community rallied to bring new life to the largest brownfield in the United States, a Tax Increment Financing (TIF) district was established by the City of Bethlehem, Bethlehem Area School District and County of Northampton to direct tax dollars from new businesses towards the site. Over the next few years, the non-profit arts organization ArtsQuest and local PBS affiliate PBS 39 devised a plan for an arts and entertainment-themed park at the Bethlehem Steel site, but did not have rights to the land to create it. This changed in 2006 however, when the Las Vegas Sands Casino Corporation donated 9.5 acres of the property immediately adjacent to the historic blast furnaces to those organizations and to the City of Bethlehem as a part of their purchase of 120 acres of the former

### PROJECT SUMMARY

**Owner:** Crosstown LLC

**Owner:** ArtsQuest; Bethlehem Redevelopment Authority

**Project Partners:** WRT | Planning + Design; Commonwealth of Pennsylvania; Wind Creek Hospitality; PBS 39: City of Bethlehem; Artefact, Inc; Spillman Farmer Architects; USA Architects; Bethlehem Area School District; Northampton County; Air Products; Keystone Savings Foundation

**Building date:** 1863

**Renovation date:** 2011

**Size:** 10 acres

**Use:** entertainment venue; public space; tourism

**Cost:** \$98.2 million

**Sources of Funding:** Tax Increment Financing (TIF) district; Private donations; Commonwealth of Pennsylvania grant; City of Bethlehem capital grant

**Similarities to Central Terminal:** historical significance of site; importance of site to surrounding community; lack of proximity to highway infrastructure; proximity to education institutions

**Differences from Central Terminal:** number of structures on campus; ownership structure; usage of TIF district; located in a smaller city





steel site. With this donation, ArtsQuest began to plan the transformation of the area into a year-round venue for local and international music, art, festivals and educational programming. In 2010, construction began on the 65,000 square foot ArtsQuest Center at SteelStacks on what was formerly the Bethlehem Steel No. 8 Hammer Shop, and it opened to the public in the spring of 2011. That year would be one of the busiest years of development at the SteelStacks site, with the Levitt Pavilion SteelStacks and the PPL Public Media Center opening later that summer. The combination of these 3 attractions ultimately brought in 700,000 visitors to the area within its first 8 months of operation.

In the spring of 2012, the Bethlehem Redevelopment Authority opened a Bethlehem Landing Visitor Center in the 1863 Stock House building — the oldest within the SteelStacks site – at a cost of \$5.5 million. In the summer of 2015, the Bethlehem Redevelopment Authority completed the \$15.5 million revitalization of the Hoover Mason Trestle, a former elevated railway used in the steelmaking process that is now a linear park and pedestrian walkway. Later that year, the Urban Land Institute awarded SteelStacks its Global Award for Excellence for its efforts in the redevelopment of the site. In 2019, ArtsQuest announced the renovation of the Turn-and-Grind Shop of the former Bethlehem plant into what

will be called the Air Products Atrium at the Turn & Grind Center, after a \$1.5 million donation by a Lehigh Valley industrial gas company, Air Products. Considered the “jewel” of the SteelStacks campus, the building would include a 14,000 square foot programming space open to the public that can host national touring education programs, exhibits specific to the sciences or arts and theatrical performances.

### **PROGRAM OF USES**

Since its opening, the ArtsQuest Center regularly draws in more than 800,000 visitors a year to its 1,750+ musical productions, film screenings, community celebrations and festivals. The 65,000 square foot Center includes:

- Musikfest Café – Space that doubles as a restaurant and performance venue, providing a place to feature the Lehigh Valley's regional artists
- Frank Banko Alehouse Cinemas – Two-screen, full-time independent film cinemas unique to the region
- Highmark Blue Shield Community Stage – Performance venue for regional artists and music students
- Levitt Pavilion SteelStacks – Through a partnership with the national Levitt Pavilions, 50 concerts are offered for free on the lawn each summer, bringing in more 50,000 visitors per year

SteelStacks has hosted a number of festivals and events that have garnered significant attention locally and across the county, bringing in upwards of \$136 million annually to the region. Musikfest – the largest music festival in the United States that is entirely free to the public – which been held in Bethlehem since 1984 and has roots going all the way back to 1741, has relocated to the site in recent years. Peepfest, a two-day celebration of the marshmallow candy founded by a local candy maker, culminates with the dropping of a 400-pound Peep on New Year's. Although the tournament is every 4 years, the World Cup Viewing Party hosted by SteelStacks regularly attracts 52,000 fans with its 60 games on large outdoor viewing screens. The SteelStacks campus has also been the site of a number of athletic events, including the five-state Muscular Dystrophy Association Rally, Rodale Runner's World Half Marathon and St. Luke's University Health Network Night of Heroes.

## FUNDING SOURCES

Funding for the creation of Bethlehem SteelStacks has come from several sources. A \$100 million Tax Incremental Financing (TIF) district for the entirety of the Bethlehem Steel site has provided the majority of the funding needed to preserve and redevelop the 10 acres adjacent to the historic blast furnaces



of Bethlehem Steel. An additional \$7.68 million was provided by the Commonwealth of Pennsylvania to spur private investment in the site. A \$100,000 grant through the Keystone Savings Foundation was used for construction and education programming at the Turn-and-Grind Shop, in addition to \$1.5 million pledged by the industrial gas company Air Products.

## KEY LESSONS

While the entire 1,800+ acres of the Bethlehem Steel site would appear daunting to redevelop, SteelStacks instead focused on a 10-acre parcel adjacent to the blast furnaces – perhaps the most imposing and eye-

catching feature of the property. In addition, by targeting varying forms of entertainment (comedy, music, festivals, etc), SteelStacks has appealed to a broader audience throughout the year. To this end, by building upon the unique aspects of the city of Bethlehem through placemaking and culturally-relevant events, the site has drawn in a reliable local audience while appealing to thousands of tourists. Finally, the TIF district has served to be a critical tool in redeveloping the 10-acre site at an accelerated pace- bringing in higher-than-expected revenue with it.



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- Photo 2: SteelStacks historic blast furnaces at night; SteelStacks - <https://www.steelstacks.org/event/10323/rise--fall-of-bethlehem-steel/>
- Photo 3: SteelStacks Levitt Pavilion event; SteelStacks - <https://www.steelstacks.org/about/what-is-steelstacks/>
- Photo 4: Photo by Dylan Sauerwein on Unsplash







# CINCINNATI MUSEUM CENTER

## CINCINNATI, OHIO, USA

Built by the same architects as the Buffalo Central Terminal and considered a “Temple of Transportation” by the local and national press, the Fellheimer and Wagner-designed Cincinnati Union Terminal opened its doors in 1933 as a confluence of seven railroads in the area. Despite its opening amidst the Great Depression, the Terminal saw up to 216 trains per day at its peak and efficiently dispatched and received its passengers using ramps unique to different transportation modes (taxi’s and personal vehicles, buses and streetcars). The onset of World War II continued this growth, bringing up to 34,000 troops through the Terminal per day in 1944, the highest amount of passenger traffic the facility was to see before its eventual closing.

Upon the conclusion of WWII, the Terminal – much like passenger train

travel as a whole – began to decline. With the rise of the personal automobile and air travel as viable alternatives to rail, fewer trains made their way through the Terminal, and with only two per day by 1972, the Terminal was forced to close. In spite of this, the listing of the Terminal that same year on the National Register of Historic Places set the stage for its redevelopment.

### BUILDING POLITICAL SUPPORT

After the closure of a short-lived entertainment and shopping complex in 1982, the Union Terminal Association (UTA) formed in 1986 to ensure the survival of the Union Terminal over the long term. Consisting of City officials, County officials and concerned citizens, this organization saw an opportunity to incorporate a consortium of museums – previously unrelated to one another – into the redevelopment of the space.

### PROJECT SUMMARY

**Owner:** Crosstown LLC

**Owner:** City of Cincinnati; Cincinnati Museum Center (CMC); Hamilton County has a stake from the levy in the 1980s

**Project Partners:** GBBN Architects; John G. Waite Associates, Architects, PLLC; Turner Construction Company

**Building date:** 1933 (by Fellheimer and Wagner)

**Renovation date:** 2016

**Size:** 535,000 square feet

**Use:** museum; active train station

**Cost:** \$288.2 million (over the course of several decades)

**Sources of Funding:** tax levies from Hamilton County; Federal Historic Tax Credits; State of Ohio Historic Tax Credits; State of Ohio capital grants; City of Cincinnati grants; private philanthropy

**Similarities to Central Terminal:** similar history with passenger rail; architectural features (same original builder); one entity manages property; extensive rehabilitation was needed for reuse

**Differences from Central Terminal:** proximity to freeway; rail returned long before latest revitalization effort; established early partnership with museum/education entities within Cincinnati; served as shopping mall for several years after initial closure





With the Cincinnati Historical Society and Cincinnati Museum of Natural History as initial tenants, a \$33 million bond levy was put to Hamilton County voters in 1986 with the vocal support of former Cincinnati Mayor (and future television personality) Jerry Springer, which subsequently passed. With an additional \$8 million grant from the State of Ohio and \$3 million grant from the City of Cincinnati – alongside more than 3,000 private donations from individuals, corporations and foundations – construction on the Cincinnati Museum Center (CMC) began. Over the next two decades, the Center grew in size and scope, adding a children's museum and the National Underground Railroad Freedom Center to its

list of institutions. With the return of Amtrak passenger rail in 1991, the revitalization of the Union Terminal was well underway.

Following in the pattern of that initial 1986 bond levy, similar methods have been instrumental in the Terminal's restoration over the past two decades. To help cover occupancy costs and needed repairs of the building, a 5-year operating levy was again put to Hamilton County voters in 2004 and also passed, followed by an extension of this levy five years later for an additional \$16.2 million. In 2008, after recognizing the need to fully restore the Terminal to its original grandeur while adapting for future uses, the CMC requested the Hamilton County Board

of Commissioners include a sales tax levy on the ballot to raise funding. After partnering with the Cincinnati Music Hall in 2013 – and upon the Terminal being recognized as one of the “11 Most Endangered Historic Places” in early 2014 by the National Trust for Historic Preservation – the levy was included on the ballot that November.

Following an extensive public outreach campaign led by the National Trust that included pop-up booths, lectures and concerts featuring locally-brewed beer, the 5-year, ¼ percent sales tax referendum passed with 62% in support, producing \$175.7 million for the latest redevelopment. An advisory committee of Hamilton County government officials, the CMC and other entities was established the following year to oversee the redevelopment, which was completed in 2018.

## **PROGRAM OF USES**

Today, the Cincinnati Union Terminal is primarily a cultural destination for the region and contains the Cincinnati Museum Center, which includes: the Cincinnati History Museum, Cincinnati History Library and Archives, Duke Energy Children's Museum, Museum of Natural History & Science, Robert D. Lindner Family OMNIMAX® Theater, Holocaust & Humanity Center (HHC) and the

National Underground Railroad Freedom Center. Collectively, they drew more than 1.8 million visitors in 2019.

Amtrak's Cardinal line also runs through the Terminal, with service from Chicago and Washington D.C. Three trains run per week in each direction, and the station served more than 8,600 passengers in fiscal year 2018.

## FUNDING SOURCES

Funding for various renovations of the Union Terminal came from voter-approved tax levies (\$225 million in several tranches, from the 1980s to the 2010s), Federal Historic Tax Credits (\$34 million), State of Ohio Historic Tax Credits (\$5 million), State of Ohio capital grants (\$14.5 million), City of Cincinnati grants (\$3 million) and private philanthropy (\$7.5 million).

## KEY LESSONS

The success of the Cincinnati Union Terminal can be attributed to a few key factors:

- Success of tax levy campaigns with Hamilton County voters to support both capital improvements and operations – despite an anti-tax local perspective that had been exacerbated in the wake of a large levy for the Bengals' Paul Brown Stadium in the 1990s
- A confluence of organizations under one

purpose (Cincinnati Museum Center), that brings in an estimated 1.4 million visitors annually from different age groups

- Revival of active rail to the Terminal, providing transportation as an alternative reason for visiting the space outside of cultural tourism
- Strong relationship with a variety of stakeholders and organizations within the Cincinnati community

The emotional element of the preservation campaign is notable. Leveraging the collective memories of those who had worked at the terminal, those who had passed through it on their way to war (and on their way back home) and those who loved the museums it houses was critical to the effort.

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# CROSTOWN CONCOURSE

## MEMPHIS, TENNESSEE, USA

Opened as a Sears-Roebuck distribution center and department store in 1927, the 1.3 million square foot building that would later become Crosstown Concourse remained a Sears until 1993. After closure, the building remained vacant for the next 20 years, with various developers, organizations and government officials unsure of how to redevelop the building.

### **BUILDING POLITICAL SUPPORT**

In 2010, however, a 501(c)(3) non-profit called Crosstown Arts was created by individuals seeking to preserve and redevelop the structure, with arts and culture serving as the foundation. The following year, Memphis Heritage, Inc. would designate the building as one of the 12 most endangered historic buildings in Tennessee. Rather than adhering to a prior plan to incorporate small startup companies incrementally over the coming decades, a 6-month feasibility

study with immense community involvement would lead to an entirely new vision for the enormous structure. This vision – championed by local civic leaders and articulated by architecture firms Looney Ricks Kiss (LRK) and DIALOG in 2012 – would incorporate a “vertical village” that would utilize the multiple stories of the building, with a particular focus on healthcare, arts and educational uses. Eight tenants signed on to the redevelopment of the space in 2013, including St. Jude Children’s Research Hospital and the Memphis non-profit Church Health, who runs a YMCA on the campus.

In 2015, the name “Crosstown Concourse” was officially adopted for the site, and in the summer of 2017 the building was officially opened to the public as the largest adaptive reuse project in the state of Tennessee. That same year,

## **PROJECT SUMMARY**

**Owner:** Crosstown LLC

**Project Partners:** Crosstown Arts; Looney Ricks Kiss (LRK); DIALOG; Kemmons Wilson Companies; Shelby County; City of Memphis; Methodist LeBonheur; Memphis Teacher Residency; St. Jude Children’s Research Hospital; Memphis Education Fund; Urban Atlantic; Church Health

**Building date:** 1927 (by George Nimmons)

**Renovation date:** 2017

**Size:** 1.3 million square feet

**Use:** high school; health clinic; retail; residential; art space; office space

**Cost:** \$210 million

**Sources of Funding:** New Market Tax credits; Historic tax credits; PILOT agreements; City of Memphis grants; Shelby County grants; Private philanthropy

**Similarities to Central Terminal:** large square footage in a historic building

**Differences from Central Terminal:** design of building (open floor plan); proximity to freeway; accessibility to site





Architectural Review magazine selected the redevelopment as a recipient of its “New Into Old” awards, given to an outstanding adaptive reuse project from around the world. The project would receive additional awards the following years: a Congress of New Urbanism Charter Award, National Trust for Historic Preservation Richard H. Driehaus Foundation National Preservation Award, and a AIA Institute Honor Award for Architecture in 2019. Finally, the building received LEED Platinum status in Building Design and Construction, which is the largest historic adaptive reuse LEED Platinum certified project in the world.

## PROGRAM OF USES

The Crosstown Concourse facility includes a wide assortment of uses by 48 different tenants and is currently leased at full capacity. Under the master plan for the facility, half of the 1.3 million square feet would be leased to nonprofit organizations serving different needs of the Memphis community, including the aforementioned St. Jude Children’s Research Hospital, Methodist Le Bonheur Healthcare, Memphis Teacher Residency and Memphis Education Fund. These tenants are expected to treat approximately 125,000 patients and train 2,500 students and teachers per year. With a 400-student private charter school also relocating to the building (complete with a

425-seat blackbox theatre), there are 3,000 students, retail customers, patients and residents are expected to traverse Crosstown each day.

A 20,000 square foot YMCA sponsored by the nonprofit Church Health also operates in the building, as well as the largest private dental clinic in the nation, Crosstown Dental Group. A nonprofit bakery also operates in the space, providing employment opportunities to homeless populations and immigrants from Nepal, Syria and Sudan. A fresh market, pharmacy, restaurants, art exhibits and a radio station also utilize the facility.

Additionally, there are 265 apartments that are subsidized and rented to students and artists at St. Jude’s, Memphis Teacher Residency and Crosstown Arts.

## FUNDING SOURCES

The funding for the \$210 development of Crosstown Concourse (which includes \$135 in construction costs) is derived from a total of 32 different sources. The initial funding that kicked off the project was obtained from the many of the development’s largest tenants: Crosstown Arts, Church Health, St. Jude’s, ALSAC (St. Jude’s charitable foundation), Methodist Le Bonheur Healthcare and Memphis Teacher Residency. A \$25 million investment from the developer of the



project served as the foundation for their investment. \$56 million in New Market Tax Credits were allocated, including \$12 million from Urban Atlantic through its affiliate Mid-City Community CDE and \$5 million from the National Trust Community Investment Corporation. \$40 million in Historic Tax Credit equity was secured from the City of Memphis, Shelby County and the federal government. The Shelby County Commission approved \$5 million in funding for public infrastructure upgrades at the site, which is followed by another \$15 million allocation for public infrastructure upgrades by the City of Memphis. A 20-year PILOT (Payment in Lieu of Taxes) program was also approved by the

Downtown Memphis Commission for further improvements. Finally, a senior loan of \$86.5 million from Suntrust Bank was secured for construction.

#### **KEY LESSONS**

The key lessons learned from this project include the success of the development in securing a variety of users in successful market segments, including healthcare, recreation and educational institutions. The undertaking of the project, while enormous in size, was also aided by the open floor plates of the former distribution center, saving costs and time in its redevelopment. Finally, the eight anchor tenants of the

facility — which contributed financially and physically to the creation of the space — drew in activity and momentum that would have been difficult to replicate without their buy-in.



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Photo 2: Crosstown Concourse - <https://crosstownconcourse.com/gallery>

Photo 3: Parcels at Concourse - <http://parcelsatconcourse.com/gallery>

Photo 4: Crosstown Concourse - <https://crosstownconcourse.com/gallery>









# EVERGREEN BRICK WORKS

## TORONTO, ONTARIO, CANADA

The Don Valley Pressed Brick Works Company operated at the site of today's Evergreen Brick Works until 1984, at which point the land was acquired by the City of Toronto and the Toronto and Region Conservation Authority (TRCA). In 1992, the first phase of the development of a park began with support from the City of Toronto, TRCA and a significant private donation by the Weston Foundation. Volunteer groups began to plant the meadow known as the Weston Family Quarry Garden in 1998, encompassing 40 acres of the site that is also a floodplain. Programming began in 2007 with the opening of the first Evergreen Brick Works farmer's market, followed by the official opening of the year-round Evergreen Brick Works in 2010.

### BUILDING POLITICAL SUPPORT

In 2002, Evergreen, a Canadian non-

profit dedicated to making cities more livable and green, first proposed the redevelopment of the site into a native plant nursery and job training location that would later become a campus focused on sustainability, nature, culture and community. After the buildings were deemed historical by the City of Toronto that same year, Evergreen began the process of creating partnerships with organizations in the community to utilize the remaining buildings not included in the original proposal – a requirement the City put on the use of the property.

By this time, Diamond Schmitt Architects had led the remediation of the brownfield for future use by restoring the buildings and cleaning up the hazardous materials and soil. They had also sought to protect the surrounding landscape and river with permeable paving, rainwater collection, new greenscapes and natural filtration

## PROJECT SUMMARY

**Owner:** Toronto Region and Conservation Authority (leased to Evergreen)

**Project Partners:** Evergreen; Diamond and Schmitt Architects; City of Toronto; ERA Architects; Du Toit Allsopp Hiller Architects; Province of Ontario; Government of Canada; Royal Bank of Canada; Toronto Region and Conservation Authority

**Building date:** 1889

**Renovation date:** 2010

**Size:** 12 acres

**Use:** programming space for art exhibits; classrooms; green design forums; recreation; headquarters for various nonprofits

**Cost:** CA\$55 million (~\$43.4 USD)

**Sources of Funding:** private philanthropy; Government of Canada grants; Province of Ontario grants

**Similarities to Central Terminal:** historical significance of site; brownfield; nonprofit leading redevelopment process; similar size site

**Differences from Central Terminal:** extensive greening efforts prior to development; grassroots redevelopment efforts spearheaded by environmental groups





strategies, aligning with Evergreen's vision for the site.

A CA\$3 million investment by David and Robin Young in 2003 moved the vision and planning process forward, soon to be followed by funding from the Province of Ontario in 2004. The City of Toronto negotiated the lease for Evergreen at the site for relatively affordable rent, facilitated additional water and soil remediation and provided a CA\$55.6 million loan guarantee to begin construction at the site.

Due to the prolonged planning process for the project and because the public wanted to see some activity at the site, Evergreen planned for some events at the unfinished

site in 2007. A native plant sale and farmers market were tremendously successful, bringing in 2,000-3,000 visitors weekly for the 5 hours they were open, culminating in being ranked #1 in the *National Post's* top 30 things to do in Toronto that summer.

Evergreen Brick Works officially opened to the public in 2010, and in 2014, the LEED-Platinum certified Centre for Green Cities opened to serve as a new headquarters for the Evergreen nonprofit.

### PROGRAM OF USES

The Evergreen Brick Works development encompasses a number of different uses, including educational programs for children and adults; a farmers' market; a plant

nursery; adjoining park and wildlife habitat; an open-air industrial museum; and offices for Evergreen and like-minded organizations.

### FUNDING SOURCES

Funding for the CA\$55 million redevelopment of the site came from the following sources: CA\$20 million by the Government of Canada under the Canada Strategic Infrastructure Fund; CA\$10 million from the Province of Ontario; CA\$25 million from private donations.

### KEY LESSONS

Local perspectives suggest that much of the credit for the successful development of Evergreen Brickworks can be attributed to the vision, commitment and collaboration that Evergreen's Board of Directors and Steering Committee brought to the process as they navigated a complex 8-year development effort. Further, the collaborations between the nonprofit, public and private entities supported the long-term viability of the project and brought in funding sources that would otherwise have not been available. Finally, the intent by all parties – Evergreen, the City and the community – to make the site open to the public served as a catalyst to complete the project despite the length of the process.

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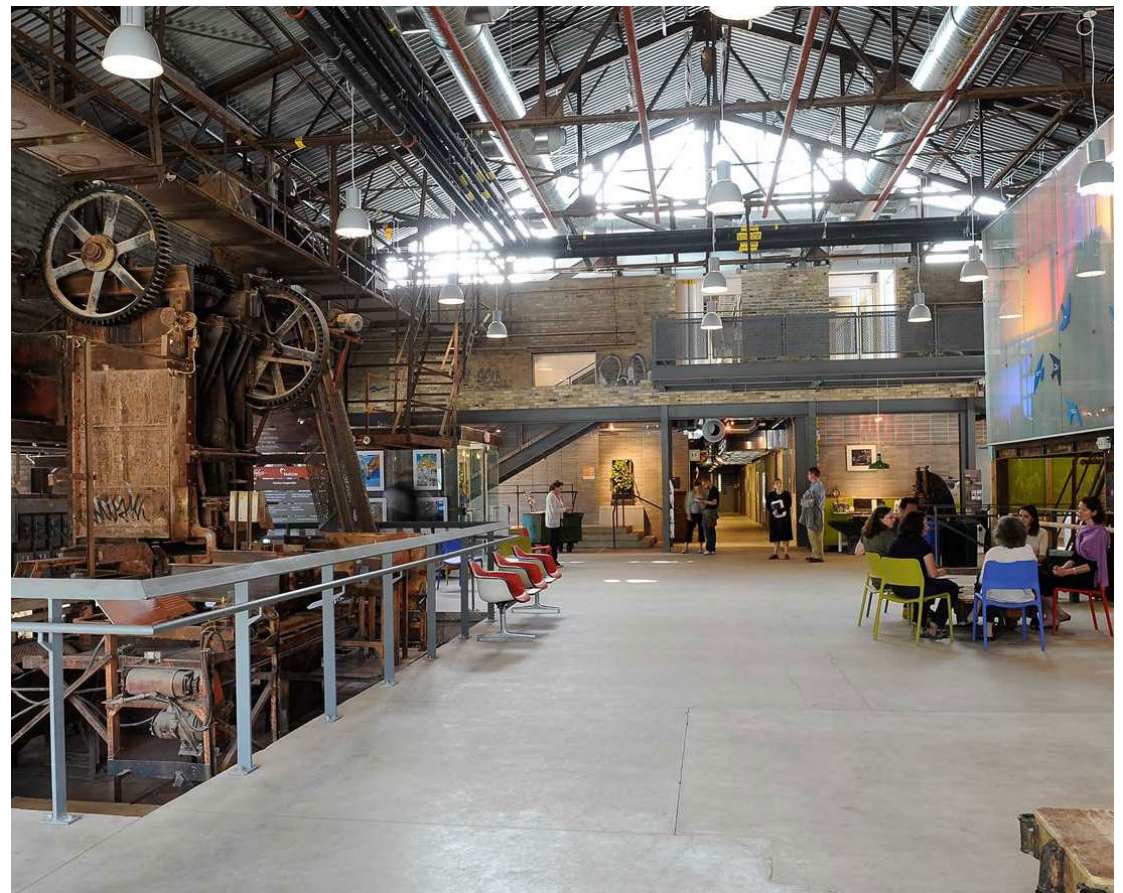
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# HAZELWOOD GREEN

## PITTSBURGH, PENNSYLVANIA, USA

The Jones & Laughlin Steel Company (J&L Company) first occupied the 42-acre site of what would later become Hazelwood Green, constructing two buildings on either side of the Monongahela River in 1883. The Hot Metal Bridge, built in 1884, linked these plants and served as a critical connection in the output of the facility, to the point where it was second most heavily guarded section of infrastructure during World War II. The construction of the Roundhouse in 1887 through a subsidiary, Monongahela Connecting Railroad, augmented the company's operations by pivoting train engines and materials where needed in the manufacturing process and for end customers across the country. The success of the steel industry propelled the company well into the 1950's, with 12,000 workers employed at both plants

during its peak.

The eventual decline of Pittsburgh steel industry, however, brought about a similar decline for J&L Company, which led to the sale of the site and its 3,600 employees to Ling-Temco-Vought Incorporation (LTV) Coke Works in 1974. LTV did not fare any better, however, with the company ceasing operations at the site entirely by 1997. The following year, only 6,000 residents remained in the Hazelwood neighborhood – less than half the number of residents at its peak of 13,000 in 1960.

### BUILDING POLITICAL SUPPORT

With the creation of the Riverlife Task Force master plan in 1999 to reimagine Pittsburgh abundance of urban waterfront, the former-LTV Coke Works site was identified as a key component of any potential plan by the Task Force.

## PROJECT SUMMARY

**Owner:** Almono LP (Richard King Mellon Foundation; Benedum Foundation; Heinz Endowments); Regional Industrial Development Corporation (RIDC) – Owners of Mill 19

**Project Partners:** U3 Advisors (Project Director/ authorized agent); GBBN Architects; Carnegie Mellon University; Advanced Robotics for Manufacturing; Catalyst Connection; City of Pittsburgh; Commonwealth of Pennsylvania; Allegheny County; Uber ATG; OneValley; R3A Architects; Meyer, Scherer & Rockcastle, Ltd; Turner Construction

**Building date:** 1887

**Renovation date:** 2002

**Size:** 178 acres

**Use:** office; research & development; light manufacturing; public green spaces; trails and recreation

**Cost:** \$90.7 million

**Sources of Funding:** Private philanthropy; Commonwealth of Pennsylvania grant

**Similarities to Central Terminal:** historical significance of site to the community; connection of site with surrounding neighborhood

**Differences from Central Terminal:** shovel-ready site; ability to add new pedestrian-friendly infrastructure; relationship with major foundations within the city; substantial appetite for residential component





In 2002, with LTV still in possession of the property, Almono LP was created as a collaboration between four local foundations to purchase the site from bankruptcy at a cost of \$10 million. The next 13 years brought about environmental remediation and preparation of the site for its eventual reuse, as well the approval by the City of Pittsburgh of the Preliminary Land Development Plan (PLDP) for the site in 2013.

After three years of planning, the recently-named Almono site was officially rebranded as Hazelwood Green in 2017. A 2018 Preliminary Land Development Plan and 2019 Zoning Text Amendment with the City of Pittsburgh became the

guiding documents for the campus's full redevelopment and proposed 4.3 million square feet of non-residential development alongside 3.6 million square feet of residential development on the site. They also divided the campus into three distinct districts, each with their own site conditions: Mill District, River District and Flats District.

#### **PROGRAM OF USES**

Hazelwood Green contains a variety of different uses owned and operated by different entities. Continuing the site's manufacturing history, Advanced Robotics for Manufacturing (ARM) opened their new 90,000 square foot headquarters in the 265,000 square foot steel skeleton of

Mill 19 in 2019 – a building the Regional Industrial Development Corporation (RIDC) owns and redeveloped for \$24 million, including \$10 million in grant funding by the Commonwealth of Pennsylvania, \$700,000 from the RIDC itself and \$9 million in private financing. That same year, Carnegie Mellon University's Manufacturing Futures Initiative (MFI) relocated into the same space to collaborate with the ARM with a \$20 million donation from the Richard King Mellon Foundation, with the remaining square footage occupied by the conferencing and workforce training center, Catalyst Connection. Carnegie Mellon announced the purchase of an additional 8.3 acres for potential expansion plans that same year, and another 70,000 square feet of Mill 19 would later be occupied by the autonomous vehicle company Aptiv. A Silicon Valley firm specializing in connecting startups with investors and corporations, OneValley (formally known as GSV Labs) is slated to move into the renovated Roundhouse in late 2021, bringing another technology firm to the area. The site is also home to a 42-acre track that Uber built in early 2019 for the testing of self-driving cars.

The property has also incorporated public events and activities, such as the 2015 relocation of the local Thrival Innovation +

Music Festival, with space for 10,000 fans.

The division of the property into smaller parcels in 2019 at a cost of \$21 million resulted in the creation of Blair Street Road and Hazelwood Avenue, allowing for pedestrians, bicyclists and personal vehicles to traverse the area. Another people-oriented right-of-way, Lytle Street, opened in early 2020 for \$10 million and incorporates features that enhance safe pedestrian access: chicanes (serpentine curves) alongside alternating street parking, raised bicycle lanes and intersections and green infrastructure.

The 2-acre Plaza at Hazelwood Green, an \$5.7 million outdoor public space in the center of the property, opened in late 2020 and incorporate green infrastructure and space for public events, complete with a series of swing sets built by the MFI on site.

## FUNDING SOURCES

Funding for the redevelopment of the Hazelwood Green campus has been secured from the following entities (funding amounts provided where possible):

- City of Pittsburgh (\$23 million)
- Commonwealth Financing Authority
- Commonwealth of Pennsylvania (\$10 million)
- Allegheny County

- Pennsylvania Department of Transportation
- Pennsylvania Industrial Development Authority
- Pittsburgh Public Schools
- Power of 32 Site Development Fund Partners LP
- Redevelopment Assistance Capital Program (RACP)
- Redevelopment Authority of Allegheny County
- Urban Redevelopment Authority of Pittsburgh
- Richard King Mellon Foundation grant (\$20 million)
- Regional Industrial Development Corporation (\$700,000)
- Almono LP (\$10 million)
- Private philanthropy (\$9 million)

## KEY LESSONS

Almono LP and the Regional Industrial Development Corporation have been steadfast in their desire to build off the existing research institutions (Carnegie Mellon in particular) for the Hazelwood Green redevelopment. Further, with Pittsburgh's promising technology scene, efforts have been made to draw in companies that are developing technologies that will guide the

nation into the latter half of the 21st century, including Uber and Aptiv's self-driving vehicle technology. To this end, the success of Hazelwood Green can be best attributed to these factors:

- Collaboration between Carnegie Mellon University's Manufacturing Futures Initiative (MFI) and the Advanced Robotics for Manufacturing (ARM), drawing in like-minded companies to the area
- Partnership between three key foundations in the city that operate Almono LP, which in turn controls the majority of the site while providing financial support for its initiatives
- Shovel-ready site that has already been remediated
- Usability of space by the public for purposes ranging from music festivals to biking infrastructure



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Photo 1: E3 Aerial via Hazelwood Green - <https://www.hazelwoodgreen.com/>

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# KANSAS CITY UNION STATION

## KANSAS CITY, MISSOURI, USA

When it first opened in October 1914, Kansas City Union Station was a jewel of the national rail network, the third largest station in the country after Grand Central Station and Pennsylvania Station in New York City. Serving as a major hub for the next several decades, ridership reached 670,000 in 1945 before falling into decline starting in the 1950s.

In a story that is common to similar stations across the country, the grand station slowly fell into disrepair – by 1983 Amtrak was operating inside an inflatable bubble to deflect pieces of falling ceiling and shortly thereafter moved out of the station entirely to a mundane building nearby colloquially known as the “Amtrak Shack”.

By 1993, several efforts had already been made to preserve and restore the building – on the National Register of Historic Places since 1972 – but legal,

financial and political challenges had prevented the project from becoming a reality.

### BUILDING POLITICAL SUPPORT

In the fall of 1993, the municipality of Kansas City was involved in a \$90+ million lawsuit with Canadian real estate company Trizec Corporation, who had agreed to renovate the building as a part of a larger development but had failed to do so. While the sum of money involved was substantial, the Mayor’s Chief of Staff, Andy Scott, took an atypical approach to build momentum for the project, leading the City to choose to settle with Trizec for just \$1.5 million in order to get control of the property back and move on from the previous failure.

Simultaneously, Scott worked to build support for the redevelopment through the local corporate leadership, including

## PROJECT SUMMARY

**Owner:** Union Station Kansas City, Inc.

**Project Partners:** Ehrenkrantz Eckstut & Kuhn Architects; SmithGroup; Hines

**Building date:** 1914 (by Jarvis Hunt)

**Renovation date:** 1999

**Size:** 850,000 sf

**Use:** museum, events space, retail, office

**Cost:** At least \$258 million

**Sources of Funding:** bi-state sales tax (provided \$118 million), federal funds, state tax credits, private donations

**Similarities to Central Terminal:** station followed a very similar trajectory of decline and closure; similar sized building

**Differences from Central Terminal:** station has regained train service following renovation and is perhaps 25 years ahead in its renewal



Hallmark Cards, Inc. (whose headquarters are across the street from the Station) and Sprint Corporation, along with local philanthropic giant the Kauffman Foundation. This civic leadership was key on a number of fronts:

- A call to the Hallmark CEO opened the door to a Canada-based employee who used to work for Trizec and was able to make the right connections to arrange the settlement
- The linkage of the Kauffman Foundation, Hallmark Foundation and Sprint Foundation provided financial backing on a scale that none of the three could have done on their own
- Once the nonprofit Union Station Kansas City, Inc. was set up to lead the redevelopment, Board leadership from those organizations helped to steer the effort's success

The final piece of political support needed was that of the public imagination – as noted in the funding section below, a major component of funding the Union Station redevelopment was a \$118 million bi-state tax levy, the first (and still only) of its kind in Missouri or Kansas. While similar levies had been put to voters twice before, the success of this ambitious, bi-state version was due to a multi-pronged public relations campaign,

including an open house where 15,000 people came to see the station over two days, while the Mayor walked up and down the line in the pouring rain, thanking them for being there. This came alongside key supporters putting pressure on local news outlets (including an important Kansas-based newspaper) to support the bi-state tax.

### **PROGRAM OF USES**

Today, the Kansas City Union Station is home to Science City, an interactive children's science museum. Early in the redevelopment planning, the science museum, which was searching for a new home, and the Station were brought together, providing the former with a future home and the latter with an anchor tenant.

Along with Science City, the other main attraction at Kansas City Union Station is Amtrak. While rail service does not take up a huge portion of the building, its return has been immensely powerful, symbolically and draws additional visitors, who frequent the food and retail vendors in the building as well.

In addition to the active rail service, "Union Station Stories" is a 5,000 square foot exhibition dedicated to the history of the Station, opened on the building's 100th anniversary in 2014 and replacing an earlier

railroad history museum which had been closed. There is also an 8,000 square foot model train gallery.

Finally, office, events and conference space ensure that Union Station is consistently activated for a variety of reasons throughout the week and year.

### **FUNDING SOURCES**

The renovation of Kansas City Union Station cost \$258 million, with funding coming from a variety of sources, including a novel, voter-approved, bi-state tax levy. The tax levy provided \$118 million and set a legal deadline for the project of November 11, 1999. It also provided a \$40 million endowment for the ongoing operations of the Station.

The levy was supplemented by \$43.5 million from various federal agencies, \$21 million in state tax credits and \$100 million in private donations (a large portion from the foundations of local corporate leaders like Hallmark and Sprint who were actively involved in the redevelopment).

Among the smaller, but notable, contributions was a \$250,000 grant from the federal transportation budget that the local Congressman secured in order to support the planning that eventually led to the return of Amtrak service.



## KEY LESSONS

The success of the Union Station revitalization was due in large part to a convergence of three factors which had not all been coordinated before:

- Consolidated ownership of the property under the auspices of a nonprofit created specifically for the station's redevelopment (with no developer involved anymore), which allowed the project to build momentum
- A programmed use (the science center) that everyone could agree on and which would drive traffic to the building
- Civic and philanthropic leadership that brought substantial sums of money to the project

By aligning these three elements, the efforts to revitalize the station were able to marshal resources and public support in a coordinated, effective manner, and the parties involved were able to make

strategic decisions about the path forward. In particular, the substantial philanthropic support was instrumental in convincing government backers of the interest in and viability of the project prior to committing their own money and gave Union Station leadership flexibility to hire the right teams, not just the most affordable.



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# LARKINVILLE

## BUFFALO, NEW YORK, USA

Since its inception as Buffalo's first business and manufacturing district in 1827, the "Hydraulics" neighborhood has served as an important foundation of the city's history. Powered by the Hydraulic Canal nearby, the area was ideal for businesses in need of affordable power generation, which played a substantial role in John D. Larkin's decision to relocate his growing soap factory to the neighborhood in 1877. Despite the factory growing in size and square footage over the next few decades, with the decline in the mail-order business and amidst decreasing sales, the company was forced to liquidate all of its assets and close in 1943. Much of the former plant was demolished, including a Frank Lloyd Wright-designed administration building in 1950, leaving the neighborhood barren of industry for the

next 50 years.

### BUILDING POLITICAL SUPPORT

In 2002, recognizing the opportunity within the remaining vacant buildings, longtime Buffalo resident and business owner Howard Zemsky (Larkin Development Group) purchased the 600,000 square foot Larkin Terminal Warehouse building at 726 Exchange Street, with the intention of converting it into Class A office space. After obtaining agreements from a variety of tenants including KeyBank, law firms and government agencies, Larkin Development Group set its sights on establishing a new community within the neighborhood under the name "Larkinville" in honor of its most successful occupant.

The effort to build Larkinville has required patience. After the 2002

### PROJECT SUMMARY

**Owner:** Larkin Development Group (first mover and largest owner); City View Properties and others

**Project Partners:** Schneider Architectural Services; University at Buffalo; Kevin Connors & Associates

**Building date:** 1912 (initial Larkin Terminal Warehouse by Lockwood, Greene & Co.)

**Renovation date:** 2002 (initial Larkin Terminal Warehouse); surrounding development ongoing

**Size:** 600,000 square feet (initial Larkin Terminal Warehouse)

**Use:** Class A office space; restaurant; day care center; new projects have added additional uses including residential

**Cost:** At least \$41 million for initial conversion of Larkin Terminal Warehouse

**Sources of Funding:** primarily private financing; have used New Market Tax Credits on one building; using Historic Tax Credits now

**Similarities to Central Terminal:** neighborhood that had seen similar loss of population since the 60s and 70s; creating a destination in a place that was not one

**Differences from Central Terminal:** multiple owners of property within neighborhood; proximity to freeway access; new construction (some buildings); residential components of development





opening of 726 Exchange Street, Larkin Development Group did not open additional buildings until 2010, and the company has only begun to move beyond office development into residential recently.

A key part of that patient effort has been the creation of a sense of place. In 2012, the central plaza of this new community, Larkin Square, was completed, in addition to a new restaurant in the 1930's-era Larkin Company fuel station. Two years later, another restaurant and brewery was completed in an 1890's-era building, drawing in greater activity to the neighborhood.

It was during this time that various programming and activities were introduced

to the District in the hopes of creating a 24/7 community, where residents can “live, work and play” without leaving the area. Food Truck Tuesdays have been especially popular and the KeyBank Live concert series during the summer months has been a contributor, as well as the addition of a location of popular Buffalo bakery Paula's Donuts. A 2017 addition of the Swan Street Diner in a fully-restored rail car sought to attract a breakfast clientele, while providing visitors and residents yet another reason to linger in the area.

Not everything has worked though – Larkin Development Group has been willing to try a wide range of programming and to move on quickly from concepts like a weekly

night market which didn't draw the attendance they wanted.

The increased activity and foot traffic from the events have spurred the development of Larkintown even further, and while there have been some complaints by residents in regards to parking availability and increased noise from the concert series, most appear to be generally happy with the neighborhood's transformation.

## PROGRAM OF USES

The redevelopment of the Larkintown District includes a mix of Class A office space, restaurants and housing. Some notable recent and proposed developments include:

- The 380,000 square foot F.N. Burt Paper Box Factory was redeveloped by Savarino Companies in 2015, featuring Class A office space, market-rate apartments, a distillery and hair salon among other amenities
- Buffalo Distilling Company opened in the 1890 Duchmann Building in 2016
- The 325,000 square foot former Atlantic and Pacific Tea Company warehouse by Frontier Development Initiatives & Savarino Companies was converted into market-rate loft apartments and a proposal for the 100,000 square foot

Iroquois Door building would do the same

- An 87,000 square foot mixed-use new construction building features residential and commercial components

## FUNDING SOURCES

While various developments in Larkinville have availed themselves of different funding sources, some of the key sources include:

- Payment-In-Lieu-Of-Taxes (PILOT) agreements
- State of New York Mortgage Agency (SONYMA) insured loan through New York State Common Retirement Fund
- Federal and New York State Historic Tax Credits
- HOME funding through Buffalo Urban Renewal Agency
- New York State Housing Finance Agency's New Construction Capital Program and Middle-Income Housing Program
- Low Income Housing Tax Credits
- Private investment and philanthropy

## KEY LESSONS

The critical piece of the success of the Larkinville redevelopment can be attributed to the vision that the Zemskys and Larkin Development Group brought to the effort

from the beginning. While it was ten years between the opening of the first repurposed building at Larkin Terminal Warehouse and the main public space in Larkin Square, the vision was always to redevelop the space on a district-wide scale. Their patience and vision has been the driving force behind creating a district that now has more than 2,000 workers each day. Larkinville shows the importance of a first mover who is willing to take a risk, as well as the importance of placemaking and programming in creating a new attraction.

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# MICHIGAN CENTRAL STATION

## DETROIT, MICHIGAN, USA

Opened ahead of schedule in 1913 to replace a former station that burned down – indeed, trains started running before the flames died at the former station – Michigan Central Station was for decades the point debarkation for new arrivals in Detroit. For generations of immigrants, it was the point where they started a new life – an inland Ellis Island, by many accounts.

Through the 1940s, the station saw as many as 4,000 passengers a day. But, like stations across the country, it saw a long decline in ridership after World War II and, despite a slight boost during the oil crisis of the mid-1970s, was ultimately shuttered when Amtrak left in 1988.

### **BUILDING POLITICAL SUPPORT**

Following a burgeoning renaissance in the 1990s, the residents of the Corktown neighborhood to the east of Michigan

Central Station began to take an interest in the preservation of the station, owned at that time by the Morouns, a notable local shipping family.

With the station languishing, the City Council voted in 2009 to demolish the building; however, an election shortly thereafter brought in a new Council less disposed to its demolition. Coupled with a City budget crisis and a lawsuit brought by local preservationists, the building was saved and will continue to be a local landmark.

While Corktown, to the east of the station, has seen a renaissance since the 90s, with its Victorian townhomes attracting affluent residents to the area, the more critical connection for the Ford project is to Mexicantown to the southwest and to Southwest Detroit in general. One of only two neighborhoods (along with Black

## **PROJECT SUMMARY**

**Owner:** Ford Motor Co.

**Project Partners:** Practice for Architecture and Urbanism; Gensler; Quinn Evans Architects

**Building date:** 1913 (Warren and Wetmore; Reed and Stem)

**Renovation date:** 2019 - present (ongoing)

**Size:** 500,000 square feet

**Use:** office; hotel; retail; heart of Ford's new Corktown campus

**Cost:** In excess of \$740 million

**Sources of Funding:** substantial funding from Ford; City tax breaks; Historic Tax Credits

**Similarities to Central Terminal:** a similar grand train station that went out of service, with a substantial tower as well, rather than just a relatively low building as many others are; also slightly removed from the heart of downtown

**Differences from Central Terminal:** Ford is already a key anchor tenant for the redevelopment, making the future use more secure



Bottom) in Detroit where Latinx and Black residents could move when they arrived at the Central Station throughout much of the 20th Century. Ensuring that the revitalized station area is inclusive of the less-affluent and majority non-white neighborhoods has been challenging at times and has included efforts to change the historic layout of the building to add substantial entrances on that side, to stop referring to the Corktown side of the building as the “front” and to think about the implications of technologies like facial recognition for security and access, in a community where a substantial portion of the residents are undocumented. This work is ongoing.

### **PROGRAM OF USES**

A refurbished Michigan Central Station will form the heart of Ford's new Detroit campus, a 1.2 million square foot innovation hub. In addition to Michigan Central, the redevelopment will include an old public school book depository, a former brass factory, a former hosiery factory and several new buildings, alongside publicly-accessible open space. The development is intended to bring 2,500 Ford jobs – including in their autonomous vehicle team – alongside 2,500 jobs from other community partners.

The renovated station itself will include hotel

and retail as well as office space, as a part of a vibrant mixed-use district connecting the Corktown neighborhood to the broader Southwest Detroit community. As a part of the planned district, housing will be developed, along with community amenities like a grocery store.

### **FUNDING SOURCES**

The project is primarily privately funded by Ford, with the company investing at least \$740 million in the effort. Additional funding has come in the form of tax breaks from the City of Detroit, as well as Historic Tax Credits and some public money for infrastructure. However, the project is not yet fully-funded and will require more money to get beyond core and shell in all spaces, instead of just in a few select office areas.

### **KEY LESSONS**

When Ford decided to get involved in the redevelopment of Michigan Central Station, it completely changed the scope of what could be accomplished on the site. Following a period of ownership by parties that did not want the Station torn down but were less than enthusiastic about committing to a full-scale reconstruction, Ford's arrival was that of an anchor tenant with commitment to the space and funding to take substantial strides towards getting it functional again.

Through Ford's successes and missteps, several lessons can be seen:

- First, simply having an anchor tenant willing to bring substantial money and jobs – in Ford's case, 2,500 of their own employees to the campus – makes getting a redevelopment done more feasible
- However, Ford's approach has not been without its pitfalls, in terms of both overall project planning and of communication with neighbors
- On the design side, the initial building design got out ahead of the use planning, with paperwork filed to restore it to an exact copy of itself from 100 years ago. Once the realities of how the space would be used started to be understood, many elements had to be renegotiated with SHPO
- From a community perspective, Ford has, at times, been more comfortable engaging with and planning for the vocal white community in Corktown – even in the way it refers to the overall project as its “Corktown” campus. Planning with and for the majority non-white population on the other side of the station has been harder, with language, technology (like sensing cameras) and access all needing to be better addressed

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# NORTHLAND WORKFORCE TRAINING CENTER

## BUFFALO, NEW YORK, USA

The building formerly known as the Niagara Machine & Toolworks at 683 Northland Avenue has been centered on industry since its construction began in 1910. Niagara Machine & Tool Works, a manufacturer of stamping presses and press brakes with 700 employees at its peak, occupied the Green & Wicks-designed space until 1992, at which point the building became vacant and fell into disrepair.

With the purchase of 50 acres of vacant land along the Northland Corridor by the Buffalo Urban Development Corporation (BUDC) in 2014, the redevelopment of 683 Northland Avenue was imminent. By 2015, a redevelopment proposal was in place. As a signature initiative of the Buffalo Billion, Governor Andrew Cuomo unveiled plans for a 100,000 square foot Northland Workforce Training Center (NWTC) within the

former Niagara Machine building. An Advanced Manufacturing Training Center and Utility of the Future & Clean Energy Training Center were to be the 2 components of the facility and support programming in target sectors experiencing unprecedented growth such as advanced manufacturing, health and life sciences and energy.

### Building Political Support

Under Governor Cuomo's plan, the New York Power Authority (NYPA) contributed \$15 million for the Future & Clean Energy Training Center as a part of their workforce planning strategic initiative, while the State of New York provided \$29 million as a key component of Gov. Cuomo's "Reforming the Energy Vision" initiative. From this amount, \$6 million would be set aside for operational support of the workforce training center, with the intention of

## PROJECT SUMMARY

**Owner:** Buffalo Urban Development Corporation (BUDC)

**Project Partners:** Empire State Development; Buffalo Urban Development Corporation; University at Buffalo Regional Institute; Alfred State College; Empire State College; Erie Community College; Buffalo Niagara Manufacturing Alliance; Watts Architecture & Engineering; Barbara A. Campagna/Architecture & Planning, PLLC

**Building date:** 1911 (by Green & Wicks)

**Renovation date:** 2018

**Size:** 230,000 square feet (100,000 square feet of which is the NWTC)

**Use:** workforce training center

**Cost:** \$110 million

**Sources of Funding:** Federal Historic Tax Credits; New York State Historic Tax Credits; New Market Tax Credits; City of Buffalo grant; New York Power Authority grant; National Grid grant; National Fuel; LISC grant; SUNY operational support

**Similarities to Central Terminal:** a large, long-vacant brownfield property on the East Side, the NWTC has undergone adaptive reuse for today's needs and is managed by a non-profit, with public support

**Differences from Central Terminal:** proximity to freeway access; includes a major state-funded academic initiative; was always an industrial building rather than a transportation hub



providing support for 5 years or more. Another \$6 million would be allocated for training equipment for the Center, with an additional \$3.7 million for improvements to Northland Avenue. The remaining \$28.3 was allocated for subsequent property acquisitions (\$6.2 million), planning and preparation for the corridors redevelopment strategy (\$500,000) and the redesign and rehabilitation of buildings (\$21.6 million), including the Northland Workforce Training Center. Additional funding sources soon followed, with National Grid providing \$550,000 in grants for brownfield redevelopment and commercial district revitalization and another \$10,000 to provide transportation for students of the NWTC. The City of Buffalo also provided \$4 million in funding soon after the Center was announced. In 2018, the United States Representative for the Buffalo region, Brian Higgins, announced an additional \$14 million in New Market Tax Credits for the project, with \$9 million allocated through the AFL-CIO Housing Investment Trust and the remaining \$5 million through the National Trust Community Investment Corporation – this would translate into \$4.5 million in equity. Finally, the State of New York provided an additional \$25 million in funding to relocate Buffalo Manufacturing Works to the complex in August of 2019 in what would become



Phase 2 of the project's redevelopment, for a total state allocation of \$110 million.

#### **PROGRAM OF USES**

The redevelopment of the site comprises a number of uses, with the most prevalent being the Northland Workforce Training Center. Programs of study within this Center support careers centering on manufacturing, including welding, electrician, machine tooling and mechatronics. Career coaching and placement programs are also located within the facility.

Support for the Workforce Training Center extends beyond the direct financial contributions to its construction, in the

form of partnerships and financial support for programming. To advance the physical training components of the Center, a number of partnerships were established with local colleges in the greater Buffalo-Niagara region. Alfred State College of Technology and SUNY Erie committed to supporting academic training services for the 4 programs within the NWTC: Welding Technology (Associates of Occupational Studies – AOS), Electrical Construction and Maintenance Electrician (AOS), Machine Tool Technology (AOS) and Mechatronics. SUNY Empire State College committed \$10 million in academic, student and other support until 2025 using its online programming format.

From a Green Energy Workforce Training Certificate and lab through the Harry Van Arsdale Jr. School of Labor, SUNY Empire State College is providing a community solar program to deliver low-cost power to the adjoining Delavan-Grider neighborhood. From a partnership between SUNY Empire & New York State Department of Labor, the Empire State Career Connector will align training and education needs to job demands identified by the local workforce boards and the Regional Economic Development Councils. Another program, the Educational Opportunity Center (EOC), would expand the NWTC's partnerships with the University at Buffalo to identify career and education pathways through SUNY Empire or other SUNY colleges. Local Initiatives Support Corporation (LISC), also provided Northland with a \$125,000 grant to become a Financial Opportunity Center, providing students with long-term financial and employment coaching along with other tailored supportive services.

## FUNDING SOURCES

For its redevelopment and ongoing programming, the Northland Workforce Training Center drew on a number of sources: New York State Buffalo Billion (\$29 million), New York Power Authority grants (\$15 million), City of Buffalo grants

(\$4 million), Federal and New York State Historic Tax Credits (\$20 million in equity), New York State Brownfield Cleanup Program (\$21 million, with \$13 million received to-date), KeyBank (\$30 million loan for Historic and Brownfield Tax Credits), New Market Tax Credits (\$4.5 million in equity), SUNY grants (\$10 million), private philanthropy (\$685,000), National Grid grants (\$560,000), LISC grant (\$125,000); other contributions from National Fuel, New York State Research and Development Authority (NYSERDA), New York State Electric and Gas Corporation and Rochester Gas and Electric Corporation

## KEY LESSONS

The Northland Workforce Training Center makes clear that establishing a successful workforce development program focused on local needs and opportunities is a complex public-private undertaking, one that requires a host of entities involved to develop and program. The success of the Northland Workforce Training Center can be attributed to a few key factors:

- A detailed business plan created before the launch of the project that provided a clear regional economic development strategy for the Buffalo-Niagara region
- Programming that is jobs-oriented to replace a retiring workforce, attuned

to the needs of Western New York and supportive of local communities

- Partnerships with educational institutions in the area to provide job training programming
- A variety of funding sources from different sectors (government, private sector, educational institutions). In particular, government funding was critical to make a high-touch model like this work, as it provided the runway needed to establish success
- Steadfast political support from elected officials, including the Governor and local congressional delegation



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# RDM ROTTERDAM

## ROTTERDAM, THE NETHERLANDS

Long the shipping capital of Europe and for many decades the world's busiest port, the Port of Rotterdam has had to continually evolve to keep up with changes in the shipping industry. With the ever-increasing size of container ships, the core of the port's shipping operations – once located in the heart of the city – have slowly shifted west towards the sea. As they have moved, the facilities left behind have provided abundant opportunity for creative reimagining of the port's role in the city.

One such repurposed facility is the Rotterdamsche Droogdok Maatschappij, the Rotterdam Dry Dock, an iconic contributor to Dutch and international maritime history throughout much of the 20th century which had gone bankrupt in 1983. Shortly after the turn of the new millennium, the dry dock – now owned by the Rotterdam Port Authority – was reborn

as the site of a multisectoral innovation collaboration, repositioning the historic site to continue driving economic growth in Europe's largest port well into the 21st century.

### BUILDING POLITICAL SUPPORT

Conceived in 2004 by visionary leaders from the Rotterdam Port Authority and local educational institutions, “Rotterdamsche Droogdok Maatschappij” was repositioned as “Research, Design, Manufacturing”. Even prior to this, Albeda College had taken over a part of the space for vocational training, and the President of Rotterdam University of Applied Sciences (Hogeschool Rotterdam) saw an opportunity to leverage the location for its industrial design and automotive engineering programs. While the Port Authority was initially hesitant and wanted to demolish the facility to make room for the larger container ships of the day,

## PROJECT SUMMARY

**Owner:** City of Rotterdam; Rotterdam Port Authority

**Project Partners:** Rotterdam University of Applied Sciences; Albeda College

**Building date:** 1902 (approximate)

**Renovation date:** 2009

**Size:** approximately 640,000 square feet

**Use:** industrial startup incubator; education; event space

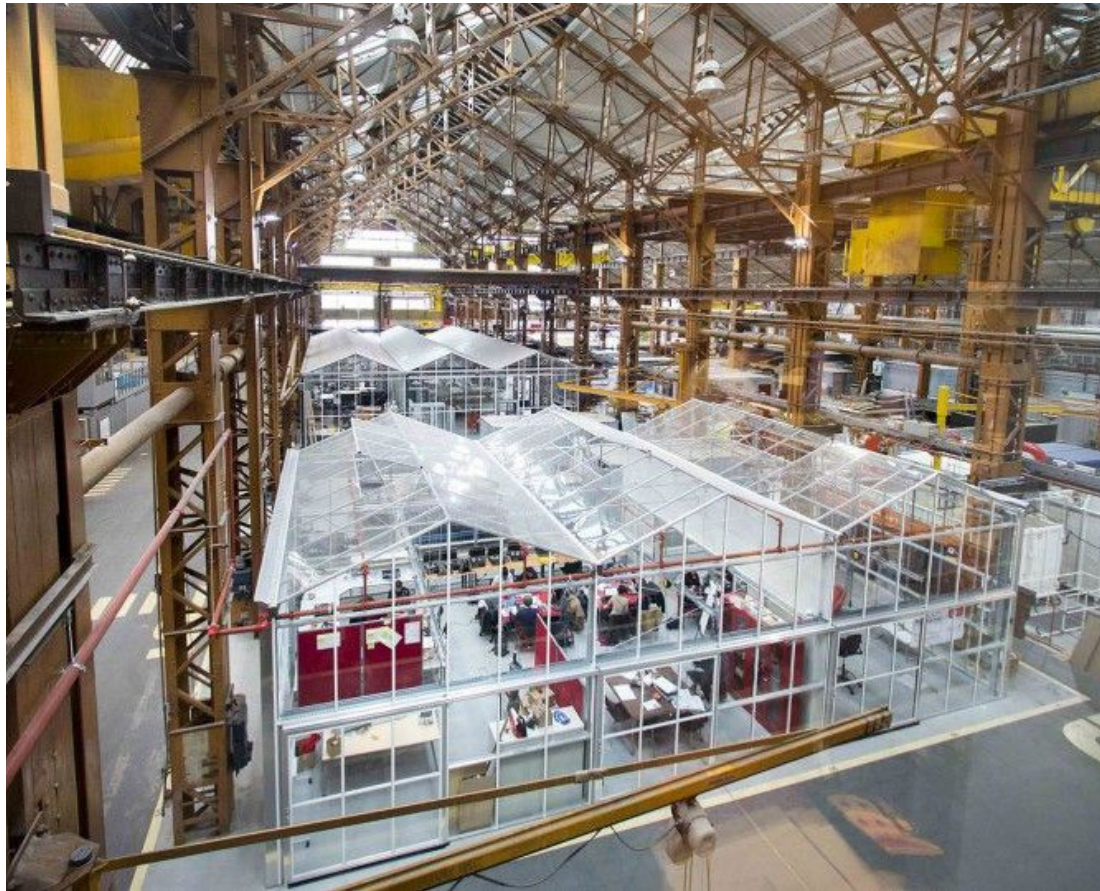
**Cost:** more than €125 million

**Sources of Funding:** Rotterdam Port Authority; City of Rotterdam; Province of Zuid Holland; Rotterdam University of Applied Sciences; Albeda College; European Union

**Similarities to Central Terminal:** similar relatively isolated location in city; surrounding neighborhoods have some similar opportunity needs; limited transit accessibility prior to revitalization; combination of education, events and incubator space could be an interesting use for the Buffalo Central Terminal, given area needs and the infrastructure nearby

**Differences from Central Terminal:** industrial space quite different from a train station





its President saw the value in bringing young people back to the port again, given the shortage of well-trained personnel and companies' enthusiasm for training students.

Educational institutions also provided a stable renter for the property. While they would be renting space at a relatively low cost, the universities provided a

substantial amount of their own money to fit out the spaces and were also signed for long term leases (10 to 15 years at a time) – patient capital enabled thoughtful long range planning and has encouraged other uses to join in creating an innovation center.

Alongside this, an important component of building support for the development

was ensuring accessibility to the site. Built on the south side of the River Maas, RDM was historically isolated from the city center, a challenge for the new initiative when trying to attract tenants, students and others to the site (indeed, one of the initial departments from the Rotterdam University of Applied Sciences which located there has since returned to the city center). One of the last pieces to fall in line, the City and Province both put in substantial money to connect RDM Rotterdam to the public transit network of water buses – initially in a semi-public manner, in which students had a special ticket – and in the last few years, with full access via transit stops.

## PROGRAM OF USES

RDM Rotterdam, once an industrial dry dock, is now home to a multi-sectoral innovation center. A startup incubator shares space with three educational institutions and a total of more than 1,200 students – Rotterdam University of Applied Sciences, along with two trades-oriented schools: Techniek College (part of Albeda College) and the Shipping and Transport College (a group of maritime and logistics schools) – whose students learn from and work with entrepreneurs and startups, creating a mutually-beneficial flow of skills and ideas.

At the Rotterdam University of Applied Sciences RDM Centre of Expertise, Students and researchers work with entrepreneurs on technical innovations for both the port and the city – taking full advantage of the

site's unique location and history. Areas of focus include Next Port Industry (including maritime innovation and circular economy), Logistics & Mobility (including autonomous transportation and digitized logistics), Energy Transition (including renewable energy and innovations in energy storage and efficiency) and Resilient City (including sustainable building technologies and solutions for living with water in a river delta).

RDM Rotterdam is also home to a major events center, which can host workshops, festivals and conferences of up to 5,000 visitors.

## **FUNDING SOURCES**

RDM Rotterdam was funded in large part by the Port Authority itself, who have invested more than €100 million in the site. The anchor educational institutions – Rotterdam University of Applied Sciences and Albeda College – also contributed in €25 million to the fit out of the interior. Funds were also provided from other levels of government for the development itself and for related amenities, including €1.9 million from the EU for the project, along with City and Province funds for the extension of public water transit to the site.

## **KEY LESSONS**

RDM Rotterdam is a part of a burgeoning

innovation ecosystem throughout Rotterdam. In the city center, international organizations like the Cambridge Innovation Center and Venture Café support local talent, while RDM is developing the Rotterdam Makers District both in its original space and across the River Maas in an area known as Merwe-Vierhavensgebied – now M4H Rotterdam, an expansion of RDM's mission and a tribute to its success over the past decade.

Another relevant component of the RDM Rotterdam development is the impact that it is having on the renewal of the adjacent Heijplaat neighborhood, a small, relatively impoverished community that is remote from the rest of Rotterdam and was originally built to house workers at the original drydocks. Long shut off from the waterfront after the closure of Rotterdamsche Droogdok Maatschappij, the revitalization of RDM Rotterdam has improved transit to the neighborhood, provided employment opportunities and sparked some new growth in the area. Development here has been slow, as the main player – Woonbron Housing Corporation – had to undergo a major reorganization process and there was for several years low demand for new houses due to the financial crisis. However, new construction has begun to occur and, at least

as of yet, has not caused major displacement due to the fact that the housing is mostly owned by the housing corporation and there was no need for demolition to build new houses.

Ultimately, the success of RDM Rotterdam is in the way that it reconnects disconnected groups: it reconnects the future of innovation to the maritime industry, the local neighborhood to the wider city and the history of the site to the present in a meaningful way.



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# SILO CITY

## BUFFALO, NEW YORK, USA

When Rick Smith, third-generation owner of Rigidized Metals Corp. wanted to get access for his company to the Buffalo River during the 2000s, he approached Conagra Brands — owner of several nearby grain elevators — about getting an easement across their property. Instead, Conagra said they wanted to sell the site outright and so began Smith's development of Silo City. After acquiring the entire complex, consisting of six historic elevators and warehouses originally known as the American, Perot, Marine and Lake & Rail properties, Smith initially tried to reactivate the structures for ethanol production. However, he shortly decided that a better bet lay in leveraging the striking grandeur of the structures as a part of a cultural and community destination.

### BUILDING POLITICAL SUPPORT

After determining a direction for what was soon to become Silo City, Smith focused on building community interest in the site from the ground up. Working with the local arts community, the property was established as the site of a variety of visual and performance art exhibitions, with vocal performances such as poetry readings making use of the unique acoustics of the enormous silo structures themselves. With a commitment to the arts and a consistent program of interesting events, Silo City has made a name for itself locally and nationally, even getting a mention in Travel+Leisure Magazine in December 2020.

To continue activating the site and make it more welcoming for users, a bar called Duende was opened on the site

### PROJECT SUMMARY

**Owner:** Rick Smith; Generation Development

**Project Partners:** STUDIO V Architecture; Generations Development; Carmina Wood Morris, DPC; Arc Building Partners; Colby Development

**Building date:** various, between 1906 and 1930

**Renovation date:** planning begun in 2013; ongoing

**Size:** 13.4 acres

**Use:** arts installation and performance space; ecological education; restaurant; residential; commercial

**Cost:** conversion of first warehouse is \$65 million

**Sources of Funding:** private investment; Low Income Housing Tax Credits; State Historic Tax Credits; Federal Historic Tax Credits; State Brownfield tax credits; New York State Homes and Community Renewal (HCR) bonds; other New York State HCR funding

**Similarities to Buffalo Central Terminal:** another historic icon on the Buffalo skyline; substantial open space on property that has been creatively activated; phased redevelopment with potential for multiple partners

**Differences from Buffalo Central Terminal:** silos are a substantially different type of building; larger site is under control of a single owner instead of public control of portions





in 2018, providing food and beverage service to visitors, along with consistent restrooms and adding to the draw of Silo City even when events were not occurring.

In the latest step of the process to date – one that speaks to the success Silo City has had in both capturing the imagination and driving local value – Miami-based Generation Development bought the former American Malting Company property from Smith for \$2.8 million in October 2020. With construction currently underway, the mixed-use American complex will be the first fully-realized portion of the development, laying the groundwork for phases to come.

## **PROGRAM OF USES**

Part of the vision for Silo City has been the establishment, in collaboration with STUDIO V Architecture, of a four-stage development arc. This arc conceives the initial state of the property as “Silo Ruins”, a historic attraction where the ruined silos and mills serve as sculptural art themselves, as well as a backdrop for creative arts productions – including poetry readings and experimental theater.

The next phase, “Silo Gardens”, involves the ecological restoration of the property, making it cleaner and safer – and building upon Smith’s environmental commitment at Rigidized Metals, where he is a rare

manufacturer who employs a full-time Director of Ecology.

“Silo Passage” envisions a route through the property, activating various portions sequentially for visitors and providing passages and viewpoints from all levels of the buildings and grounds.

And at full build-out, “Silo City” is intended to be the realization of a mixed-use, residential and commercial district, embedded with public art and ecological principles.

These four stages will be developed in parallel, with some portions of the site moving more quickly towards their final form, while other areas will be developed more slowly and will remain open space, partial ruins and semi-formal performance venues for the foreseeable future.

## **FUNDING SOURCES**

Funding for the initial acquisition and activation has primarily been funded privately by Rick Smith, with programming contributions from other partners.

As subsequent phases begin to come online, outside funding and financing sources are supporting the development, including Low Income Housing Tax Credits, State and Federal Historic Tax Credits, State Brownfield tax credits, and both bonds and other

funding from New York State Homes and Community Renewal for the Generations Development reuse of the American Mill & Warehouse.

## KEY LESSONS

The key element of the approach that Smith has taken to the redevelopment of Silo City is patience and a commitment to pursuing a long-term vision that will come together over years. Building upon the vision outlined in partnership with STUDIO V, he has added incremental pieces, including performance art to attract interest; a bar called Duende to add food, beverage and restrooms; and now – more than seven years after starting to activate the space in 2013 – finally bringing in a partner for a more traditional mixed-use redevelopment of a portion of the campus. This patience has allowed for momentum to build around the project, as well as ensuring that missteps were not made by moving too quickly.



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# WESTERGASFABRIEK

## AMSTERDAM, THE NETHERLANDS

The site of Westergasfabriek had its origins in 1880 as a gas factory, one which would eventually close in 1967. After more than 20 years of additional use as a storage facility by another company, the site was severely contaminated and required immense remediation before any potential reuse. In 1989, thirteen of the red-brick buildings on the site were deemed monuments, preserving them for future use.

### BUILDING POLITICAL SUPPORT

In 1997, a team consisting of landscape architect Kathryn Gustafson and architect Francine Houben of Mecanoo architecten won a competition for the master plan of what would become Westergasfabriek. In collaboration with the local community, toxic materials were removed and the site remediated by 2003, followed by the opening of Cultuurpark Westergasfabriek the next year.

Green redevelopment and preservation continued for the next decade, including the 2018 opening of the Conscious Hotel Westerpark in what was the former Westerpark borough office of the City of Amsterdam. This hotel was designed to be entirely powered by electricity – the first of its kind in the Netherlands. That same year, ownership of the site changed hands, and with new ownership came an increased emphasis on sustainability, culture, relaxation and creativity.

### PROJECT SUMMARY

**Owner:** City of Amsterdam (public space); Westergas (buildings)

**Project Partners:** Millten; Gustafson Porter + Bowman; Projectbureau Westergasfabriek; Westerpark District Council; City of Amsterdam; Mecanoo architecten; GGN; Kingdom of the Netherlands

**Building date:** 1880

**Renovation date:** 2004

**Size:** 28.5 acres

**Use:** Parkland; event space; hotel; daycare; offices; retail; television and radio studios

**Cost:** €8.2 million (\$12.1 million USD)

**Sources of Funding:** historic subsidies; economic development subsidies; private philanthropy

**Similarities to Central Terminal:** availability of green space; proximity to rail infrastructure; proximity to downtown

**Differences from Central Terminal:** proximity to water sources; quantity of vacant land surrounding site





films. Tony's Chocolonely, a chocolatier that seeks to create a chocolate industry that is 100% free from child slavery, operates both offices and a retail store on the site. A branding agency, D.O.L.HOUSE, has offices in one of the renovated buildings, as does a bicycle shop that specializes in electric bicycles. The Theater De Krakeling showcases weekly musical and theatrical performances that largely target younger audiences, while a nightclub, Westerunie, is catered toward an older audience with performances that last well into the night.

The site has also become a haven for the creative class and students alike. Bekijk 't provides hundreds of high school students with the resources necessary to create film's that are later shown in Het Ketelhuis. Kunstbende, supports an annual national talent competition for 13-18 year olds interested in the arts. A daycare on the campus seeks to nurture the creativity within young children while providing a space to grow self-reliance and confidence in their own abilities. A fully-equipped television studio is also located on the campus, emphasizing the desire to make the space a place that serves a variety of media forms.

Apart from the interior uses of the Westergasfabriek buildings, a considerable amount of acreage is dedicated to Cultuurpark

## PROGRAM OF USES

Westergasfabriek has become a model for sustainable re-use of a brownfield site, receiving a plethora of awards along the way and has created a vibrant mix of uses. In addition to the aforementioned eco-hotel, the existing buildings have been renovated to include 12 restaurants, bakeries, cafes and pubs, offering fare

ranging from local favorites to Algerian cuisine.

One cafe incorporates a live Disc Jockey (DJ) studio set that plays over the public radio, while another restaurant, Media Cafe + NEP Studios, doubles as both the set of a Dutch national television program and a fine-dining restaurant. A small cinema, Het Ketelhuis, regularly showcases Dutch

Westergasfabriek. Built in 2006, the park transitions from a more urbanized space to the east – complete with paved pedestrian pathways and a playground – to open and natural parkland on its western edge. In between, space is set aside for sports and recreational activity, including bicycle trails, tennis courts and a field for the popular Dutch game of Korfbal. A 2.5-acre open air event space allows for up to 10,000 people, while an existing stone-lined lake can also be drained for larger events and festivals if need be; otherwise, the space is frequently used by children and adults to cool off. A natural amphitheater is oriented to minimize the noise from passing traffic while allowing spectators to recline on an elevated grass slope.

## FUNDING SOURCES

Funding for the development of Westergasfabriek has been derived from a combination of public and private money. As a part of an agreement to redevelop the campus, a historic building subsidy of €2.4 million and economic development subsidy of €1.8 million was granted by the Kingdom of the Netherlands. As a part of the deal, the developer would have to match up to €4 million to lease the site for 100 years and contribute €1.7 million euros to the development of Cultuurpark Westergasfabriek.

## KEY LESSONS

The development of Westergasfabriek was a substantial undertaking given the contaminated conditions of the site and the desire by the community and developers to make the site a model for sustainable development. To this end, one of the key lessons taken from Westergasfabriek was the potential for activity when green infrastructure and ecology is introduced, which resulted in a variety of passive and active activities that are regularly enjoyed by all age groups. Similarly, the businesses and initiatives taking place within the campus all center around design and the arts in some way, which in turn created a nucleus that the developers could build off of when attracting new talent. These initiatives, like the introduction of ecological features and green infrastructure, also catered to both young children (daycare center) and to the older adult crowd (theater; nightclub) which supports the viability of the site going forward.

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