Transatlantic Cities Forum: Re-Envisioning Philadelphia's Industrial Spaces

Creative Strategies and Recommendations for the Reuse of Industrial Infrastructure

February 26–27, 2015

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STRENGTHENING TRANSATLANTIC COOPERATION

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The German Marshall would also like to thank the 12 panelists that traveled to Philadelphia to attend the Transatlantic Cities Forum, as well as the six local Philadelphia experts for participating in the two days of activities. Peer-to-peer learning was an important component of this event, and the outcome of this learning was a critical input to the results outlined in this report. Finally, the German Marshall Fund thanks the Technical University in Dortmund, Germany, for collaborating on this event, and for bringing several dozen architect and planning students to add a fresh perspective to the dialogue. These students also participated in a separate two-day design charrette with students from Drexel University.

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ORGANIZERS OF THE TRANSATLANTIC CITIES FORUM

Transatlantic Cities Forum: Re-Envisioning Philadelphia's Industrial Spaces was hosted by The German Marshall Fund of the United States in collaboration with the Lindy Institute for Urban Innovation at Drexel University and with the support of the William Penn Foundation. The workshop took place in Philadelphia, PA, on February 26-27, 2015.

About the German Marshall Fund

The German Marshall Fund of the United States (GMF) strengthens transatlantic cooperation on regional, national, and global challenges and opportunities in the spirit of the Marshall Plan. GMF contributes research and analysis and convenes leaders on transatlantic issues relevant to policymakers. GMF offers rising leaders opportunities to develop their skills and networks through transatlantic exchange, and supports civil society in the Balkans and Black Sea regions by fostering democratic initiatives, rule of law, and regional cooperation.

Founded in 1972 as a non-partisan, non-profit organization through a gift from Germany as a permanent memorial to Marshall Plan assistance, GMF maintains a strong presence on both sides of the Atlantic. In addition to its headquarters in Washington, DC, GMF has offices in Berlin, Paris, Brussels, Belgrade, Ankara, Bucharest, and Warsaw. GMF also has smaller representations in Bratislava, Turin, and Stockholm.

GMF's Urban and Regional Policy Program (URP) supports leaders, policymakers, and practitioners in the United States and Europe by facilitating the transatlantic exchange of knowledge for building inclusive, sustainable, and globally engaged cities.

About the William Penn Foundation

The William Penn Foundation, founded in 1945 by Otto and Phoebe Haas, is dedicated to improving the quality of life in the Greater Philadelphia region through efforts that close the achievement gap for low-income children, ensure a sustainable environment, foster creativity that enhances civic life, and advance philanthropy in the Philadelphia region. In partnership with others, the foundation works to advance opportunity, ensure sustainability, and enable effective solutions.

About the Lindy Institute for Urban Innovation

The Lindy Institute for Urban Innovation at Drexel University is a semi-independent interdisciplinary organization, named in honor and recognition of Philip Lindy and his family, who have donated generously to civic engagement initiatives at Drexel. Launched in 2012, the Lindy Institute provides a centralized hub for Drexel and its partners to incubate and launch innovative, effective community initiatives that build regional economic strength while promoting experiential learning, public service, and scholarly work by students, faculty, and professional staff.

INTRODUCTION

Transatlantic Cities Forum: Re-Envisioning Philadelphia's Industrial Spaces originated with the participation of Philadelphia in the Transatlantic Cities Network, a network of 23 U.S. and European cities established by the German Marshall Fund to foster exchange and dialogue on best practices and innovative policies. In 2013, the Philadelphia representative of the network, Shawn McCaney of the William Penn Foundation, proposed a project to capitalize on the network's expertise by hosting a workshop locally on the reuse of formerly industrial land, and specifically on how these spaces could be repurposed to better serve the community. After a competitive application process, GMF selected the project for implementation in spring 2014, and planning began shortly thereafter.

In many ways, Philadelphia is ubiquitous for its rich industrial heritage. It was once known as the "workshop of the world," famous for its manufacturing expertise and the factories, rail yards, and dockyards that were spread throughout the city and particularly concentrated along the banks of the Delaware and Schuylkill Rivers. As deindustrialization hit during the 20th century, many of these industrial spaces and landmarks slowly fell out of use. Further, urban renewal and the construction of new transportation systems such as the interstate highway system profoundly reshaped the relationship Philadelphia has with its waterfronts and degraded connectivity between neighborhoods.

Philadelphia has the opportunity to repurpose industrial infrastructure to improve public assets, transform former industrial rivers, and create new types of green infrastructure opportunities that are also public goods. Creatively reactivating these spaces is an ongoing opportunity for Philadelphia to advance broader physical redevelopment and connectivity goals and improve quality of life throughout the city. Further, creatively repurposing these spaces could put the entire metropolitan region in a more competitive economic position.

In recent years, Philadelphia has begun to capitalize on these opportunities, in some cases winning national praise for citizen-based planning efforts that have drawn attention to redevelopment opportunities, especially along the waterfront. For example, *A Civic Vision for the Central Delaware* sought to create a planning process to draw additional resources to waterfront planning along the Central Delaware River through an extensive and year-long visioning process. Smaller-scale projects have already taken root, such as the Race Street Pier on the Delaware River and the Schuylkill Banks Boardwalk on the Schuylkill River. Meanwhile, Philadelphia's economy has also undergone a profound shift away from a manufacturing and toward a service-sector economy driven by health and education sectors.

Such changes have been supported by a growing number of local actors that make up a coalition of local governments, educational institutions, philanthropic actors, the design community, non-profits, private developers, and the broader public. It has also received support at the highest political levels, including a vision by Mayor Michael Nutter to establish the city as "the greenest city in America." As Philadelphia prepares for its next mayoral race in November 2015, creating great public spaces to benefit social, economic, and environmental indicators throughout the city should be on the top of the political debate. These spaces should build upon the robust and distinctive urban fabric that Philadelphia already has.

Through a series of visioning exercises, this workshop promoted the exchange of knowledge and expertise on the adaptive reuse of the city's industrial spaces. The workshop also sought to inspire Philadelphia stakeholders about the creative potential of sites throughout the city by lifting up successful reuse models and promoting dialogue on how these models could be translated to Philadelphia's context.

The following white paper explains the format and the creative process of the workshop, the workshop participants, and the outcomes of the deliberation. This paper will also show how these outcomes will be used in Philadelphia and how this work will continue.

WORKSHOP FORMAT

Workshop Participants

The German Marshall Fund, the Lindy Institute of Urban Innovation, and the William Penn Foundation asked a diverse panel of local, national, and international to recommend creative strategies for the reuse of industrial spaces in Philadelphia, with a specific focus on two sites: the **Delaware Power Station** and the **Lehigh Viaduct**.

Each local participant was selected based on the recommendation of local actors for their contribution to ongoing efforts to remake industrial infrastructure and/or contribute to public space efforts in Philadelphia. Local participants included:

Alan Greenberger
Deputy Mayor for Economic Development and Director of Commerce, City of Philadelphia

Michael DiBerardinis
Deputy Mayor for Environmental and Community Resources, City of Philadelphia

Mami Hara ASLA, AICP
Chief of Staff / First Deputy Commissioner, Philadelphia Water Department

Joseph A. Forkin
Vice President for Operations and Development, Delaware River Waterfront Corporation

Prema Gupta
Director, Planning and Economic Development, University City District

Shawn McCaney, AICP/PP ASLA
Program Director, Creative Communities, William Penn Foundation

Ferdinando (Nando) Micale, FAIA, AICP
Principal, Wallace Roberts & Todd, LLC

Harris Steinberg, FAIA
Executive Director, Lindy Institute for Urban Innovation, Distinguished Teaching Professor of Architecture and Interiors, Westphal College Drexel University

Ryan J Debold
Project Planner, Lindy Institute for Urban Innovation

Joseph R. Syrnick, PE, PLS
President & Chief Executive Officer, Schuylkill River Development Corporation

Nancy Rogo Trainer, FAIA, AICP
Associate Vice President for Planning and Design, Drexel University

Each national and international expert was selected based on a project in each participant's home city considered to be a case study with lessons relevant to ongoing efforts in Philadelphia. Please see Appendix I for a short description of these best practices. National and international participants included:

Alessandro Armando (Torino, Italy)
Assistant Professor of Architectural and Urban Design, Department of Architecture and Design, Politecnico di Torino

Janet Bebb (Portland, Oregon)
The Intertwine Alliance

Dave Cable (Charlotte, North Carolina)
Executive Director, TreesCharlotte

Irby Hightower (San Antonio, Texas)
Principal, Alamo Architects

Andreas Kauffman (Leipzig, Germany)
Urban Planner, Buero Kauffman

Ellen Lamberts (Antwerp, Belgium)
Urban Project, City of Antwerp

Marc Matsil (New York, New York)
New York State Director, Trust for Public Land

Andreas Mueller (Essen, Germany)
Deputy Director, Department of Urban Development, City of Essen

Gabrielle Muris (Rotterdam, the Netherlands)
Project Director of Innovation, Rotterdam University of Applied Sciences

Leilah Powell (San Antonio, Texas)
Chief of Policy to Mayor Ivy R. Taylor, City of San Antonio

Nico Tillie (Rotterdam, the Netherlands)
Researcher Landscape Architecture, Delft University of Technology + Landscape Architect, sustainable development and smart cities, City of Rotterdam. The Netherlands

Tamar Shapiro (Washington, DC)
President and Chief Executive Officer, Center for Community Progress

Key project staff from the German Marshall Fund included:

Geraldine Gardner
Director, Urban and Regional Policy, German Marshall Fund

Emily Yates
Program Officer, Urban and Regional Policy Program, German Marshall Fund

Bartek Starodaj
Program Coordinator, Urban and Regional Policy Program, German Marshall Fund

In addition, the workshop participants were joined by 15 architecture students from the Technical University of Dortmund, Germany. These students provided informal support to the entire group and listened to the dialogue throughout the two days. The students were headed by Prof. Dr. Thorsten Wiechmann and Marian Günzel.

Workshop Assignment

The German Marshall Fund, the Lindy Institute of Urban Innovation, and the William Penn Foundation asked the panel to recommend creative strategies for the reuse of industrial spaces in Philadelphia, with a specific focus on two sites: the **Delaware Power Station** and the **Lehigh Viaduct**. The panel was divided into these two groups based upon professional experience and knowledge.

Often recognized for its beauty and imposing civic architecture, the Delaware Power Station is on 16 acres of prime waterfront. It is also located adjacent to historic Penn Treaty Park and adjacent to Philadelphia's Fishtown neighborhood, which has been noted for its vibrancy and recent influx of new residents and businesses. This group focused on the adaptive reuse of urban infrastructure and the transformation of this industrial waterfront into a lively, public waterfront.

Figure 1: Delaware Power Station with downtown Philadelphia in the horizon

Near the waterfront and adjacent to several diverse neighborhoods, the Lehigh Viaduct Rail Yard has the potential to be the axis of a new linear public space. This group focused on transforming disused urban infrastructure with a concentration on neighborhood connectivity and additional features such as green infrastructure, storm water management, and recreation.

The panel tackled the assignment of creatively imagining these sites through a five-step process. First, the panel heard from four leaders on current initiatives and challenges in Philadelphia around the reuse of industrial infrastructure and the creation of new public spaces. Speakers included Deputy Mayor Alan Greenberger, Deputy Mayor Michael DiBerardinis, Shawn McCaney of the William Penn Foundation, and Harris Steinberg of Drexel University. These speakers provided a rich historical context of local planning in Philadelphia, focusing on recent successes such as Philadelphia's new comprehensive plan and new zoning code. The speakers cited other wins, such as the fact that there is over $8 billion of development currently occurring within the city, and that the population is increasing for the first time in more than 60 years.

Nonetheless, the speakers underlined that deep structural poverty remains in the city, and that there is a need to extend the benefit of high-quality public spaces to more neighborhoods throughout the city. This is why, as McCaney described, the foundation is now begin to focus its investment not only on the City Center but also on the neighborhoods that are outside of Philadelphia's center. Finally, the speakers urged the panel to be aspirational in their deliberations, citing the benefit and potential of big ideas.

Second, each of the groups visited their respective sites. The Delaware Power Station group visited the inside of the station and explored the structure's several large halls and the adjacent grounds. The group also visited the nearby neighborhood of Fishtown and explored potential connections between the neighborhood and the power station. Similarly, the Lehigh Viaduct group visited several of the neighborhoods adjacent to the viaduct and explored the length of the viaduct itself. Despite it being an active rail line, the group was able to access the viaduct at various pieces and observe key points of connection to gain a better understanding of its potential.

Third, based on the site visits, members in each group worked together to complete an analysis to outline and agree on the strengths, weaknesses, opportunities, and threats (SWOT analysis) that they observed from visiting the sites.

Fourth, each of the groups worked independently through a series of design exercises to stimulate creative thinking about the sites and to compare these big ideas to existing plans and realistic opportunities. This included a creative pie-in-the-sky session, in which panelists brainstormed big ideas for their respective sites based on the previous SWOT analysis. The subsequent discussion included a mix of group conversations, small group brainstorming, and individual design work, which led to the drafting of design and policy recommendations for each site.

Fifth, the final component included a peer review session in which each of the groups shared the conclusions of their work with the entire group to receive initial feedback and evaluation.

Separately, the workshop also included a public forum for members of the broader Philadelphia public. This included a panel discussion on the process of transatlantic learning, and featured presentations from four panelists about the redesign of a particular site in their home city. This was also an opportunity for students from Dortmund University to gauge public opinion about the Delaware Power Station and the Lehigh Viaduct and about reusing industrial sites more generally throughout Philadelphia. The students shared the results of their polling to the wider group during the workshop's second day.

The discussions over the course of the two days were shaped by a set of five guiding questions. As part of their recommendations, panelists were asked to answer these broader sets of questions, which relate to issues not only for industrial sites in Philadelphia but more broadly to post-industrial U.S. and European cities. These guiding questions were:

1. How do you shift the perspective of industrial heritage into citywide assets that can add up to something significant?
2. How do you balance public good with private development and ensure the economic viability of new investments?
3. How do you make the case for investing in transformative infrastructure?
4. What are some tools or mechanisms [from your city] that have enabled new investments in public space and the repurposing of industrial infrastructure?
5. What are some strategies or interim uses that can help change the perspective around these places and spaces in Philadelphia?

Philadelphia has the capacity to reuse sites and structures that symbolize its rich industrial heritage to promote and drive creative types of social or economic development throughout the city's neighborhoods. Just as important is the opportunity to create new public spaces that improve local quality of life and environmental sustainability.

Nonetheless, and as the guiding questions hint, these creative transformations are complex from both an institutional and financial perspective. This can make it difficult to "think big" and to aspire to truly high-impact visions for the reuse of these sites. It is for this reason that exploring national and transatlantic best practices matters for Philadelphia. After a formal research process, GMF hand-selected over a dozen representatives of projects (most from other post-industrial cities) that are representative of innovative design, that promote new models of institutional collaboration, or that create new economic development opportunities for their city. See Appendix I for an introduction to these sites and why each was invited to participate in this Transatlantic Cities Forum.

GROUP OUTCOMES:
How Industrial Spaces Can Boost Philadelphia

Delaware Power Station

The Delaware Power Station is located on the Delaware River Waterfront. It is adjacent to the Fishtown neighborhood and close to the Northern Liberties neighborhood. Though it is separated from these neighborhoods by Interstate 95, the power station is adjacent to the historic and well-used Penn Treaty Park, and down the road from other activities such as Sugarhouse Casino.

Constructed in 1917, the structure has imposing concrete walls and stacks that are visible throughout the surrounding area. Because it is one of the last few industrial buildings on that part of the waterfront, preservationists have for many years made the case that the restoration of the building is vital to the revitalization of the waterfront itself. Though it has been mostly idle since the mid-1980s, the structure of the building is sound. In early 2015, the building and the surrounding grounds, totaling over 16 acres, were sold to a private developer.

Figure 2: Delaware Power Station

Overall, the Power Station group took an evolutionary view of the site, emphasizing that any development and reuse of the site should take a long-term view of the needs of the surrounding community and the city of Philadelphia at large. For example, the first phase of the reuse of the site could focus heavily on programming that draws in users and actually going into the surrounding neighborhoods to bring pedestrians toward the waterfront. Based on the results of this phase, the second phase would include actual infrastructure improvements and development. The intention is that this would make preservation economically viable.

Results

The Delaware Power Station group identified the following as part of the SWOT Analysis:

Strengths: The intact structure itself is a strength of the site. As panelists toured the building, they were impressed by the grandeur of the building but also by its intact industrial details. Many individuals commented on the civic nature of the space and that the building's height could itself be utilized in its reuse. Further, its location on the waterfront and positioning next to a well-used urban park (Penn Treaty) lends the building a unique set of assets.

Weaknesses: The building is isolated and has weak public transportation connections. The scale of the building itself is a weakness because of the work that would be required to make it useable. Further, this site is just one of many industrial sites in Philadelphia that are competing for limited financial resources and attention.

Opportunities: Because it is a big building located on such large grounds, there is the opportunity to redevelop the site in different phases. Further, multiple uses could provide for the site's economic viability while still preserving its essence. While I-95 has previously acted as a barrier, highway

access could bring regional visitors to the site. New connections with nearby neighborhoods could lessen the divide posed by I-95, while events could draw in residents from the surrounding neighborhoods and lessen the psychological barrier that I-95 has created between these neighborhoods and the waterfront.

Threats: Environmental contamination on the site and possible demolition are threats for the reuse of the site and building.

During a pie-in-the-sky exercise, panelists were encouraged to think about the reuse of the site in a scenario without financial barriers. The following are some of their ideas:

- Make the space into an arts and exhibition center to provide "authentic" artist spaces not available elsewhere in the city.
- Draw on Philadelphia's history of industrial innovation and make the space into a "guild" of tradesmen by providing maker spaces.
- Use the building and the site as an opportunity to create new mobility options by linking the site with other areas of the city with small boats.
- Label the site an "empower station." Bring in a consortium of academic actors to promote homegrown innovation. This would connect not only internationally but also to the city and the local community. Through partnerships with institutions such as Exelon, the Mayor's Office of Innovation and Technology, and the Franklin Institute, the site could become an energy center.
- Draw on the site's history of "old" energy production by promoting renewable energy on the site through an urban photovoltaic field.
- The site should have a mix of uses and users and strive to be multi-generational.
- The site could host a "living lab" incubator that would promote innovation to solve problems of the surrounding neighborhoods.
- The building and the site could play host to new types of outdoor and indoor recreation. For example, the building could be turned into a diving center or extreme sports center with a climbing wall. The north side of the site could have a swimming pool.
- Open the building up to the outside. For example, certain sections of the bottom floor could be removed so that a bike path could go through the structure. Given the structure's height, it could be made into an urban arboretum.
- Use the building and the isolation of the site as an advantage by turning it into a concert and club space where noise would not be an issue.
- Scale down the surrounding streets to create new access points to the site for the surrounding neighborhoods.
- Make the building into a neighborhood monument by installing lights that illuminate up the structure at night.

Urban Energies

A common theme that emerged from the discussion was the need for the site reuse to draw from the structure's history as an energy producer and from other possible themes such as:

- Ruin energy (graffiti, art)
- Maker energy
- Community energy
- New renewable energy, e.g. water + solar
- "Old" legacy energy

Principles for Reuse

From this brainstorming session and resulting discussion, several common qualities emerged:

- First, the site's reuse needs to be open and connected so that it does not remain an isolated landmark but is instead integrated within the surrounding communities of Northern Liberties and Fishtown.
- Second, the reuse of the site needs to be multi-layered, especially because the building itself is so multi-dimensional. As such, there should be different types of programmatic offerings that appeal to a diversity of users and people.
- Third, sustainability and energy should be priorities in the reuse of the site to reflect the transition of the structure away from a traditional power plant to a use that reflects Philadelphia's trajectory in the 21st century.

Programming

From these principles, the group came up with five different programming options that could be possible for the reuse of the Delaware Power Station. The group stressed that all of these should be seen as complementary options that would reinforce all the positive effects that would come with the reuse of the site.

- **Interim Uses:** Before any development happens, the site itself could become a staging ground for a host of improvements that are not resource intensive but that activate the space and create a constituency that cares and advocates for gradual improvements for the grounds and structure.
- **Innovation Spaces:** Development of the space should encourage a mix of users and uses that reflect new types of production, education, and energy opportunities. Key to this would be making the entire area a mixed-use development so that it has the combination of multiple uses that would make it lively. Opening up sections of the rest of the grounds for residential or commercial development could promote this mix of uses and also take the pressure off of making drastic changes to the structure itself.
- **Recreation:** The site and structure itself could host a number of creative recreational uses: playgrounds, bike paths, fitness centers, and even a pool.
- **Exhibition and Events:** Given the size of the grounds and the structure itself, the site could host large events, such as concerts and temporary exhibitions, which would make it an urban fairground.
- **Connections:** Create new physical connections between the site and the rest of Philadelphia. Given that the site is currently is divided from Fishtown by a streetscape that is not pedestrian friendly, these new connections could help draw in many new users. These connections would not only benefit this site but also the rest of the waterfront in this area. These improvements could include a focus on projects to enliven streets through arts, new lighting, safety features, and multimodal paths. These would go a long way to fixing the perception issue that the site is far away from the surrounding neighborhoods. Long term, this could involve the remaking of the surrounding streets into a pedestrian-oriented streetscape. The focus should particularly be on improving the pedestrian experiences for individuals that would travel to the site on public transportation, such as improving the walk from the closest Septa Subway station.

Chief among these programming opportunities is the possibility that the Power Station could anchor an industrial sites network with a vision of creating a connection between the sites that symbolize Philadelphia's industrial heritage. Thus, instead of asking how this site is different from all of the other empty industrial sites

in Philadelphia, the question becomes how to connect all the sites in a way that showcases both their potential and Philadelphia's history, similar to the industrial heritage route in Ruhr Valley in Germany. This idea could be built off of trail recommendations that are already noted in the Philadelphia Comprehensive Plan.

The recommendation by the group to focus on phasing in interim uses reflects the resources that would be needed to fully reuse the site and structure. Nonetheless, there are a variety of interim uses — all of which could activate the space, involve local citizens, and draw much needed attention and resources. Because of its location on the waterfront and near neighborhoods such as Fishtown and Northern Liberties, any reuse must take advantage of these assets and open up to them. Further, the structure itself, with its grandeur and details that harkens back to Philadelphia's industrial past, should be preserved to provide a backdrop and inspiration for a use that reflects Philadelphia's ongoing evolution.

Lehigh Viaduct

The Lehigh Viaduct is an infrequently used rail corridor that bisects several low-income and diverse neighborhoods (including Port Richmond and Kensington) and connects to the Port Richmond Railyards and the waterfront of the Delaware River. The site is currently owned by Conrail. Because of the linearity of the viaduct, the space provides the opportunity to create a valuable new public amenity. What is currently an off-limit corridor has the potential to evolve into a green recreation space that would benefit several neighborhoods and thousands of nearby residents, and could eventually connect the Delaware River to the Schuylkill River. Given that the majority of recent public space investments have gone to parks in the Center City that are adjacent to wealthier neighborhoods, the reuse of this rail corridor would also add an important equity component to the city's open space efforts, given that it intersects several low-income communities. (This would also be in contrast to other nationally recognized greenway projects, such as the High Line in New York City, which cut through high-income neighborhoods.)

Figure 3: Typical streetscape in neighborhoods surrounding the Lehigh Viaduct

Results

Strengths: There are vibrant and working-class neighborhoods such as Kensington, Fishtown, Port Richmond, and Old Richmond on both sides of the viaduct, so many community assets already border the viaduct, including several schools. There are also several nearby shopping districts and green spaces that could connect to a potential greenway, including Pulaski Park. The viaduct's length and the fact that it is an intact corridor is also a strength, given that it goes all the way down to the waterfront, thus setting the stage for a host of potential programming options. In addition, the site has a single owner.

Weaknesses: The surrounding area is currently car-oriented. Because the viaduct is an overgrown rail yard, any improvements would require significant resources and work, and its scale could make the entire site overwhelming. Rail use on the site continues, and the area is perceived negatively because of crime and environmental contamination. The presence of I-95 is a barrier given that it disrupts the traditional street grid and cuts the neighborhoods off from the waterfront.

Opportunities: The viaduct bisects several residential communicates, which creates a unique opportunity to engage the community. Already there are groups starting to form around the use of the viaduct, providing an existing platform for a broad and deep engagement strategy. The viaduct could serve as a recreational space that connects directly to the momentum of nearby riverfront development.

Threats: Crime rates and vacancies remain an issue in several of the neighborhoods adjacent to the viaduct, especially in the viaduct's northern portion. There is also considerable economic and social segregation amongst these neighborhoods. (In some cases, this is a perception issue that activation of the viaduct could begin to change.) Additionally, Conrail is the owner of the viaduct, and while they have not fully committed to the potential reuse of the site, they have expressed a willingness to discuss safety improvements. The line itself remains sporadically used, potentially precluding any alternative use of the space for a long time. Building momentum for this site could be challenging if community leadership does not emerge, while piecemeal development and a lack of integration with surrounding development could threaten the overall vision.

During the pie-in-the-sky exercise, panelists were encouraged to think about the reuse of the site in a scenario without barriers. The following are some of their ideas:

- New green spaces at widest points of the viaduct, connected by new trails that go out into the surrounding neighborhoods.
- Connect to the waterfront by creating a new destination along the river that would draw residents to the water.
- Narrow the surrounding streets (such as Lehigh Viaduct) to make it easier for pedestrians and bikers to access the greenway. Make these into mixed-use areas to keep them as lively as possible throughout the day and evenings. The public realm on these streets should be greatly improved through trees, art, and new crosswalks.
- Make the overpasses that go over the Viaduct into unique "portals" that offer access to the greenway.
- Make the greenway an oasis of biodiversity by creating a habitat for native plants — turn this into a learning opportunity for the community, school groups, etc.
- Use the Lehigh Viaduct to tell the story of the people of the surrounding neighborhoods and their history and diversity. Part of this cultural program should include local food offerings, such as a dedicated place for food trucks.

- Put a separated bike and pedestrian trail in the viaduct and combine it with other recreational opportunities, such as playgrounds, a skate park, soccer fields, ball parks, or "whimsical" play areas. To boost these interactive components, a dedicated place for community agriculture should be included.
- Iconic public art should anchor parts of the trail.
- Renewable energy should be integrated into the site, such as lights that are powered by solar or wind power.

Figure 4: Brainstorming potential activites and green infrastructure along the Lehigh Viaduct

Principles for Reuse

From this brainstorming session and resulting discussion, several common qualities emerged.

- First, the viaduct should not be seen as a target but as an instrument to increase focus on the neighborhoods themselves. In other words, one of the viaduct's best uses could be as a connector at a variety of scales to increase movement between neighborhoods and get residents and visitors to the Schuylkill River. Beyond connecting to the river, the greenway could also be a way to increase residents' access to the rest of the city by acting as a backbone to new east-west connections.
- Second, given the viaduct's scale, its redevelopment should be seen as a long-term strategy of phased development. This phasing and development of activity nodes would give residents a taste of what is possible, garner community support and engagement, and allow for a more fine-tuned longer term development strategy.
- Third, the involvement of the residents in creating a vision for the type of programming and design aspects they would like to see should be an absolutely critical piece of reuse strategy for this corridor. Indeed, the potential creativity of the surrounding neighborhoods should be seen as an invaluable asset.

Figure 5: View of the Lehigh Viaduct from surrounding neighborhoods

Programming

From these principles, a few different programming options could be possible for the Lehigh Viaduct. The panel stressed that all of these should be seen as complementary options that would reinforce all the positive effects that would come with the reuse of the site.

- **Combination of development with conservation and active recreation:** at the widest sections of the viaduct, create an attraction (e.g. a big open space) that would form a new center of gravity for the area. However, for the other parts of the viaduct, there are many benefits to a light touch — providing simple green space, community garden plots, and trails for the active recreation in some places while leaving the rest to nature. Unprogrammed space should be integral to the design because it accommodates different cultures and user groups, which is important given the diversity of the area.
- **Equal focus on surrounding neighborhoods:** the success of the viaduct will be intimately tied to its integration with the surrounding neighborhoods. Greenways, for example, should begin in the neighborhoods themselves and be connected to the viaduct. Historic housing stock should be preserved and commercial buildings must be reactivated to preserve an active and walkable environment in surrounding areas. The reuse of the viaduct should directly draw from the energy and ideas of the surrounding neighborhoods.
- **Connectivity is paramount:** the goal must be creating a trail that is continuous from one end of the trail to the other. This preserves the existing distinctiveness of the viaduct and the fact that it is one intact parcel. Further, there should be as many connections as possible into the viaduct so that both sides receive equal access to the trail and share in its benefits.
- **Create a strong story about the viaduct:** highlight the viaduct's history and symbolism as a part of Philadelphia's industrial history and culture heritage. At the same time, a new story arc must be created that emphasizes its reuse potential. For instance, programming should begin very early on in the reuse of the viaduct, such as on major arteries like Lehigh Avenue and other corridors that abut the viaduct, that reclaim this edge area and capture the imagination of the community. There are other ways to change the perception of the area, such as through iconic art projects.
- **Phasing:** Panelists focused on four different phases that should be part of the reuse of the viaduct. This is not a specific timeline that should be followed, but reflects the general principle that the site's reuse should be phased through time.
  - **Earliest:** Develop a strong story and strategy, make safety enhancements to the site, identify and promote cultural anchors, engage program partners and site owner, engage communities plus partners in developing a vision, identify champions.
  - **Early:** Plan for trail connectivity and landscape features, review possible contamination, pursue funding, make gateway enhancement, improve Lehigh Ave streetscape, develop controls and guidelines, perform parcel analysis and acquisition.
  - **Midway:** Refine vision, opportunistically occupy edge of viaduct and acquired parcels, seed a development project, identify implementation entity, achieve funding goals, conduct feasibility analysis and schematic design.
  - **Long term:** Redevelop key sites, complete a "green frame" of trails and parks, develop funding and financing approach for full development plan, select developer and manager of the site.

NEXT GENERATION PERSPECTIVES:
Outcomes from Technical University of Dortmund Students

As part of the TCF, participants were joined by 15 architecture students from the Technical University of Dortmund, Germany. These students provided informal support to the entire group, listened to the dialogue throughout the two days, and participated in a separate design charrette with students from Drexel University. See examples of the results of their sketches in Figure 6.

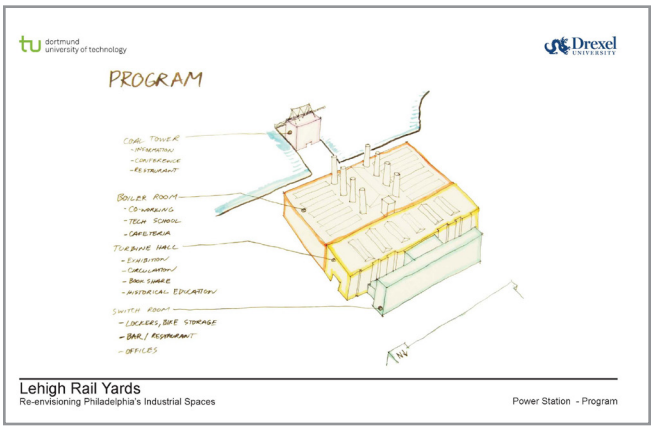

Figure 6: A proposed program for the Delaware Power Station

What Does Philadelphia Think?

During a public forum, the students from the Technical University of Dortmund asked dozens of members of the public what they know about the Delaware Power Station and the Lehigh Viaduct, and about their visions for what could happen on the site. Below is a synopsis of the results:

1. What does Philadelphia lack? Green areas, waterfront access, community centers, sports facilities, activities and facilities for teenagers
2. What is your perception of the Fishtown neighborhood? Gentrification, creative, cheap, exciting, vibrant, changing, artists
3. What is your perception of Port Richmond and Kensington? Unsafe, lack of green space, vacant buildings, working class
4. What would you like to see in the Port Richmond/Lehigh Viaduct area? Open fields without prescribed uses for the community, educational trails highlighting the area's history, bicycle facilities, pocket parks, trails providing new connections to the surrounding areas
5. What are your ideas for large industrial buildings such as the Delaware Power Station? Event location, restaurants, apartments, galleries, new community center, artist studios, dance studios, outside illumination to create a new neighborhood landmarks
6. On a broader level, what opportunities do these sites hold? Green space, connections for neighborhoods, preservation of important industrial heritage of Philadelphia
7. What do you see as a challenge within these sties? Lack of accessibility, vacancy, the presence of I-95, preservation and reuse are expensive, environmental contamination, lack of political actions, lack of involvement from nearby residents, the difficulty of ensuring the long-term financial viability of these projects

CONCLUSION:
A Lasting Vision For Philadelphia

Philadelphia's industrial spaces are unique assets for the environmental, social, and economic development of the city. They should play an important role in the future development in Philadelphia, in improving the city's public space offerings, and in the retention of existing residents and attraction of new talent. The city and other institutional actors should be commended for the ambitious visions it has already created for these spaces, and these are a promising beginning in the conversation over how a rich industrial legacy can be reoriented to serve the city that Philadelphia is today.

After extensive discussion, the panels made the following key recommendations for the two sites:

- **Delaware Power Station:** The development of the station should be a long-term process that emphasizes connectivity with the surrounding neighborhoods. In the interim period, temporary events and creative recreational uses could draw in users and create a constituency for the reuse of the site and structure. Because of the station's industrial history, the group was drawn to the idea of making it a space for craftsmen and/or artists. The structure's owner should prioritize the preservation of the actual station, which could be financed through mixed-use development elsewhere on the property.
- **Lehigh Viaduct:** Similar to the recommendations for the Delaware Power Station, and because of the sheer size of the Viaduct, developments strategies need to be viewed in phases and as a long-term process. The panel emphasized the need to have authentic and extensive engagement with the diverse surrounding communities in order to garner support for such a large-scale project, and to ensure the site design meets community needs. The group was excited by the variety of possibilities for use of this site and saw its overall capacity to connect rather than divide communities.

Acting on these recommendations will take public and private leadership and commitment to improving the public realm, significant investment, and, above all, acceptance of the role that industrial spaces can play in improving the city's public realm.

Perhaps most critical to the success of both of these sites is the need to connect them to each other, both physically and figuratively. As two little used industrial spaces next to several vibrant neighborhoods, the combination of the two could create a high-quality urban corridor that would boost the use of this entire section of the Delaware River Waterfront. As the European and U.S. case studies (Appendix I) show, such dramatic transformations on once-barren industrial sites have been done before. Through a mix of creativity, intentionality, and inclusivity, the reuse of these sites could allow them to become unparalleled assets for the residents of Philadelphia.

APPENDIX I:
Transatlantic Cities Forum Best Practices

APPENDIX I:
Transatlantic Cities Forum Best Practices

Each national and international expert was selected based on a project in each participant's home city considered to be a case study with lessons relevant to ongoing efforts in Philadelphia, and on the expert's overall experience in their field. The following is a selection of the best practices that inspired the engaging discussion throughout the Transatlantic Cities Forum.

Rotterdam, the Netherlands

Nico Tillie, City of Rotterdam

DakPark

The rooftop park, "Dakpark," was first conceived in 2011 when local residents, the landowner, and the City of Rotterdam sought a new purpose for former railway yards bordering the neighborhoods of Bospolder and Tussendijken. Previously an underutilized barrier between one of the most densely populated areas of the city and the Nieuwe Maas, the redeveloped site was opened in 2014 as 26 acres of recreational parkland designed by Buro Sant & Co. Set atop a mall and newly built levee, the park created economic possibility for the owner and improved access to both the river and open green space for locals. The elevated park also offers citizens additional views of the city and contains a neighborhood garden, greenhouse, walking paths, playground and water features.

Antwerp, Belgium

Ellen Lamberts, City of Antwerp

Park Spoor Nord

Park Spoor Noord is a former railway and brownfield that was reopened in 2009 as a neighborhood garden and public park for the City of Antwerp. Acknowledging a community need for light, air, and open space, the city reached an agreement with the site's owner, Nationale Maatschappij der Belgische Spoorwegen (the national railway service or NMBS), to develop 44 acres of public land and 15 acres of real estate towards the creation of a green park and urban beach. Designed by Secchi-Vigano, the three-phase process sought direct community engagement and staged on-site activities that coincided with project milestones. Planners also emphasized preservation of the site's industrial heritage through the reintegration of existing railway buildings as public, year-round structures facilitating community gatherings, culture, and sports.

Torino, Italy

Alessandro Armando, Politecnico di Torino

Parco Dora

Parco Dora is a former industrial complex adjacent to the city's Dora River that was transformed into a 90-acre park near the city center. Integral to the site design was the preservation of the many industrial features of the former complex. These have been adapted to become different kinds of programming, including an elevated walkway, a multifunctional event space, a light installation project, and a large meadow. Some of the towers have even become part of a new stormwater management system. The project design began in 2004 and was completed in 2012.

New York, New York

Marc Matsil, The Trust for Public Land

The QueensWay

The QueensWay will transform a 3.5-mile stretch of long-abandoned rail line into an elevated pedestrian and bicycle pathway connecting several different neighborhoods in Queens, New York. The coalition behind the proposal completed a feasibility study in 2014.

Charlotte, North Carolina,

David Cable, TreesCharlotte

The Carolina Thread Trail

The Carolina Thread Trail is an ongoing project launched in 2007 that seeks to create a signature regional feature for the 15 counties surrounding Charlotte, North Carolina. Working toward a goal network of 1,500 miles of multi-use trails, 220 have already been completed using new and existing paths. The process faces challenges in organization, regional infrastructure, varying capacity, and wealth distribution across rural and urban areas, as well as issues of property rights. However, the Foundation for the Carolinas, the Community Foundation Environment Community, and the Catawba Lands Conservancy are working to guide community involvement in planning, construction, and use of the trailways. They emphasize the idea of self-determination by participating local governments and provide support through the Carolina Thread Trail Fund. At its completion, the network will connect 2.3 million people with their region and to its natural and historic sites.

Portland, Oregon

Janet Bebb, The Intertwine Alliance

The Intertwine Alliance

The Intertwine Alliance is a unique model for the regional conservation of open space in the Portland, OR, region. In recognition of the strong influence of partnerships and consensus in the implementation of regional visions, it seeks to create a movement behind the community assets such as parks, trails, and natural area by building strong coalitions of public, private, and non-profit leaders. It currently has over 100 formal partners.

San Antonio, Texas

Leilah Powell, City of San Antonio, Texas

The San Antonio River Walk

From 2008 to 2010, the San Antonio River Walk restored eight miles of linear park and riverine features as part of its Mission Reach Ecosystem Restoration and Recreation Project. The $271.4 million initiative was funded by the city of San Antonio, the U.S. Army Corps of Engineers, Bexar County, the San Antonio Water System, and private donations collected by the San Antonio River Foundation. Its three-phase program introduced native plants, riparian woodlands, aquatic habitats, and 15 miles of hiking and biking trails. It connected pedestrian paths with historical sites, added art features, built bridges, improved pedestrian and vehicular access, and established low water and in-stream crossings to provide visitors with a more engaging park experience.

Essen, Germany

Andreas Mueller, City of Essen, Germany

Zollverein

Zollverein is a former coal mine and coking plant in Nordrhein-Westfalen, north of Essen, which operated between 1847 and 1993. Following its declaration as a German historic monument in 2000 and a UNESCO World Heritage Site in 2001, the site has been transformed into a center for arts, culture, and creative enterprise. With funding support from the European Union, Zollverein was established as an anchor point on the European Route of Industrial Heritage, with restoration occurring in three major phases: Shaft XII, Shaft 1/2/8, and the coking plant. Following the motto, "Preservation through Alternative Use," the 247-acre site now exemplifies adaptive industrial reuse — restored and revitalized facilities housing the Red Dot Design Museum (showcasing the world's largest exhibition of contemporary design); a ceramics workshop; a jewelry manufacturer; the Ruhr Museum, and various other galleries in a series of architecturally unique structures.

Rotterdam, the Netherlands

Gabrielle Muris, RDM Campus

RDM Campus

The RDM Campus is a waterfront development project working to create a new future for the industrial shipyard at Rotterdam Droogdock Maatshappij (Rotterdam Drydock Company). With the goal of creating a Knowledge Alliance between education and business partners at Albeda College, Rotterdam University, and small companies advancing the fields of "Building, Moving, and Powering," the RDM Campus will center on an Innovation Drydock that will serve as a forum for collaboration in applied technology and design. Development plans will preserve the shipyard's industrial maritime history as well as that of the neighboring Heijplaat village while creating new economic activity and sustainable solutions for the port and city's future needs. Improvements will also be made toward the site's connectivity both locally (through a fast ferry to Rotterdam's city centre) and nationally by creating spaces attractive to larger institutions in maritime technology.

Leipzig, Germany

Andreas Kaufmann, Büro Kaufmann

Baumwoll Spinnerei

This 24-acre site in Leipzig was once the site of one Europe's largest cotton mills. Having survived the bombings of World War II, the site eventually closed in 2000. Since then, however, it has been transformed into a large mixed-use district with space for over 100 artists. It also includes offices, restaurants, and other public uses that make it a prime example of successful adaptive reuse.

Pittsburgh, Pennsylvania

Thomas Bartnik, PGH Green Innovators (did not attend)

Pittsburgh Energy Innovation Center

This project focuses on adaptive reuse of a former trade school near downtown to transform it into a 6.6 acre urban campus and center for energy research, workforce development, and education. It has a particular focus on engaging community leaders and increasing education opportunities for the development of clean and sustainable energy sources and the wider revitalization of a historic but economically disfranchised neighborhood

APPENDIX II:
Site Maps

MAP A: Lehigh Viaduct + Rail Yards

MAP B: Delaware Power Station

MAP C: Lehigh Viaduct South

LEHIGH VIADUCT + RAIL YARDS

STUDY AREA - AERIAL (2012)

Feet: 0 500 1,000 2,000 3,000 4,000 — 1 inch = 1,500 feet

Meters: 0 125 250 500 750 1,000 1,250 — 1 centimeter = 180 meters

Map A: View of the Delaware Power Station (1) and the Lehigh Viaduct (2) study areas.

TRANSATLANTIC CITIES FORUM:

RE-ENVISIONING PHILADELPHIA'S INDUSTRIAL SPACES

FEBRUARY 26-27, 2015

PHILADELPHIA CONTEXT

1 DELAWARE POWER STATION: 11.3 ac / 4.6 ha

2 VIADUCT SOUTH: 59.3 ac / 24.0 ha

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DELAWARE POWER STATION

STUDY AREA - AERIAL (2012)

Feet: 0, 500, 1,000
Meters: 0, 125, 250, 500

1 inch = 625 feet

1 centimeter = 75 meters

Map B: Close-up view of the Delaware Power Station study area, showing the structure with the adjoining lot.

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LEHIGH VIADUCT SOUTH

STUDY AREA - AERIAL (2012)

Feet
0 500 1,000
Meters
0 125 250 500

1 inch = 625 feet

1 centimeter = 75 meters

Map C: Close-up view of the Lehigh Viaduct study area.

CREATIVE TRANSFORMATIONS

GERMAN MARSHALL FUND
TRANSATLANTIC FORUM & WORKSHOP

PHILADELPHIA CONTEXT

LEHIGH VIADUCT SOUTH: 59.3 ac / 24.0 ha

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