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Urban Regeneration for Nature Tourism Development

Case Studies on Waterfront and Post-industrial Site Transformation

Wanli Fang | Tourism Hub, World Bank Group



Photo: View of Gansevoort Peninsula

Outline



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Urban nature tourism and the industrial-nature synergy

02 Waterfront Revitalization

- Little Island, New York, USA

03 Industrial Site Regeneration

- Shougang Park, Beijing, China

04 Policy Implications

Operational guidance for development institutions and practitioners

An aerial photograph of an industrial facility, possibly a water treatment plant or refinery. The image shows a large circular structure with a central opening, a tall crane-like structure, and various pipes and buildings. The scene is overlaid with a semi-transparent dark blue filter.

01

Introduction

Urban nature tourism and the industrial-nature synergy



INTRODUCTION

Urban Nature Tourism

- The interest in nature tourism is expanding beyond remote wilderness areas, with more people seeking to connect with nature through experiences within urban settings.
- Urban nature tourism involves outdoor activities in various forms of public green space, presenting an opportunity to generate economical and wellness benefits from ecological assets.
- Unlike traditional nature tourism that values untouched environments, urban nature tourists expect comfort and easy access to cultural facilities.
- Post-industrial urban sites that effectively integrate **ecological restoration** with **cultural heritage preservation** are well-suited to meet this growing demand.
- Such sites serve as critical **Point of Interests** in the city-wide Green Infrastructure network.

The Industrial – Nature Synergy

While industrial heritage structures and restored natural systems both possess tourism values, they generate the most powerful and durable visitor appeal when co-located to mutually amplify one another.



Industrial heritage is often the reason for the initial visit, and restored nature surrounding it is the reason for repeated visits.

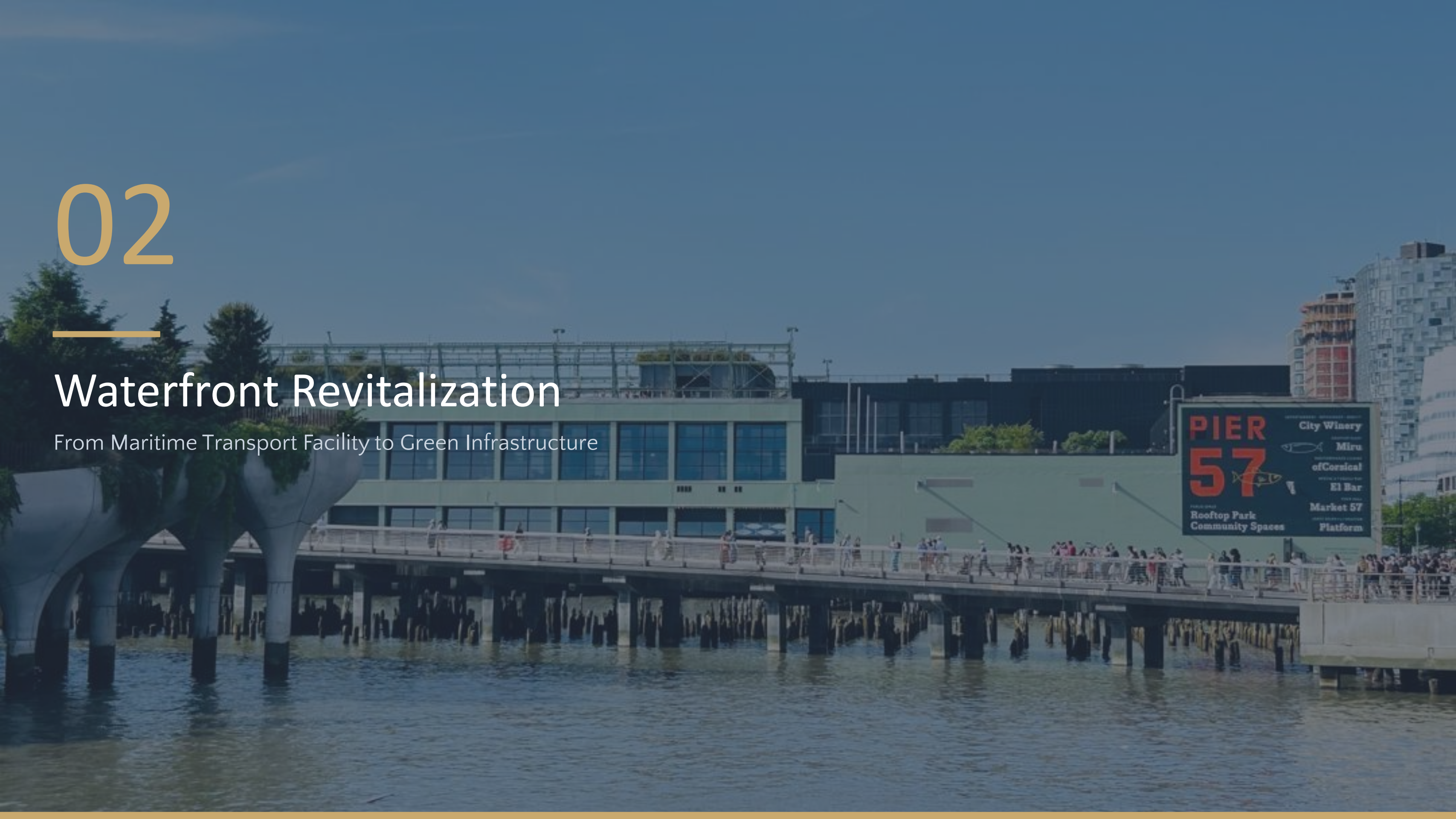


The beauty lies in the contrast between the hard structure of steel and the soft contours of nature.

02

Waterfront Revitalization

From Maritime Transport Facility to Green Infrastructure



Little Island: A Floating Oasis on the Hudson River

Little Island, a man-made island spanning 2.4 acres, is located within the Hudson River Park, which transformed Manhattan's old industrial port area into a four-mile-long green corridor.

The preservation of the Pier 54 Steel Archway at the south entrance of the Little Island serves as a historical gateway that keeps the memory of New York's maritime golden age.

- 1910–1935** Pier 54 served as a terminal for transatlantic liners
- 1998** Hudson River Park Act marked the commencement of the 550-acre park along Manhattan's west side
- 2012** Hurricane Sandy damages Pier 54 beyond repair
- 2018** Construction of the Little Island started
- May 2021** Little Island opened to the public, and soon became the most visited section of the Hudson River Park



The Tulip-Pot Structural System

The design was directly inspired by the wooden pilings of Pier 54 still standing in the river after Hurricane Sandy, translating decayed industrial infrastructure into contemporary structural form.

Unique Structure for Visual Identity

Supported by 280 concrete pilings driven into the Hudson River bedrock. By elevating 132 uniquely fabricated "tulip" pots of different heights above the mean waterline, the engineered landscape creates a **dynamic three-dimensional terrain** of carved hills, valleys, and panoramic viewpoints.

Climate-Resilient Design

Elevated above year-2100 sea-level rise and 500-year storm surge projections, Little Island's modular, open-bottomed concrete "tulips" form a highly stable, undulating landscape to withstand severe storm surges and rising sea levels while allowing marine life beneath it to thrive.





KEY INTERVENTION 2

Ecological Landscape Design

Tailored landscape planning and design strategies have been deployed to maximize the eco-system services of the Little Island.

Botanical Matrix for Biodiversity

Featuring over 350 local plant species and 114 mature trees, Little Island is landscaped with flora selected for multi-season blooms and functions as an urban pollinator habitat.



Biofiltration and Clean Runoff

By channeling all rainwater through stormwater biofiltration swales, the park purifies runoff before it reaches the river, ensuring zero chemical inputs enter the estuary.

KEY INTERVENTION 3

Performing Arts as Social Infrastructure

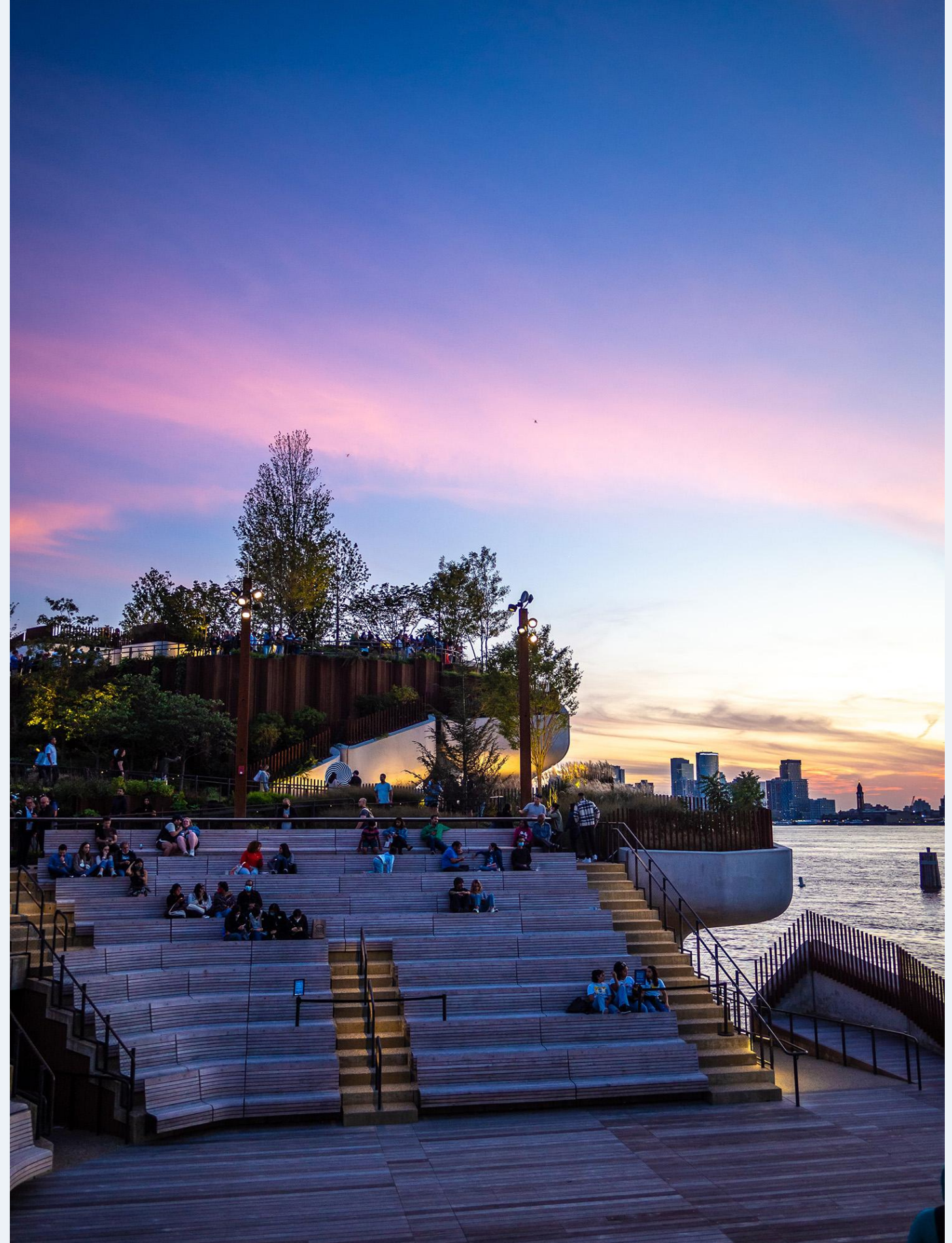
Little Island integrates open performing arts venues into the landscape, enabling the park to function as an active cultural space.

Three Open-Air Venues

A 700-Seat Amphitheater on the park's north side, with a thrust stage facing the Hudson River. A 200-Person Garden Stage to provide intimate performance space within the planting. An open Central Plaza with acoustic design to minimize urban noise. Allows simultaneous use of the park without disruption between different audiences.

Affordable Pricing to Encourage Social Inclusion

At least 51 percent of all event tickets must be priced below USD 30, as per legally binding lease agreement with the Hudson River Park Trust. Educational programming offered six days per week.



The Park in Use: Everyday Life on an Ecological Island

Landscape with no flat ground: microclimates, sheltered valleys, sun slopes, and elevated viewpoints distribute visitors and create a sense of discovery unlike any Manhattan park.

Free Public Access

Open daily 6 AM–11 PM with no admission charge. For residents of nearby communities, the park adds significant new open green space to Manhattan's least-green waterfront areas.

Play, Rest, and Discovery

Boulder scrambles, sun slopes, shaded valleys, café terraces, and game courts. The absence of flat ground creates multiple simultaneous uses without crowding or programming conflict.

Connected to the Greenway Network

Two footbridges connect the Island to the Hudson River Greenway cycle network. Little Island anchors a corridor including the High Line, Whitney Museum, Pier 57, Pier 26, and Gansevoort Peninsula.



IMPACT

Outcomes: Economic, Environmental and Cultural

7.5M+

Cumulative visitors
by 2025

110

Shows presented in
summer 2025

Expedited the development of
Gansevoort Peninsula (2023),
Pier 57 Rooftop Park (2023)
and Pier 97 Park (2024)

A Popular Tourism Destination for Neighborhood Revitalization

Attracts an average of over **1.5 million visitors** annually, about 70% from outside New York City. It has significantly boosted foot traffic, benefiting local hospitality, retail, and dining businesses.

Urban Biodiversity and Microclimate Creation

This rich botanical matrix functions as a floating micro-ecosystem that attracts pollinators, birds, and migratory species, while reducing carbon emissions and mitigating the urban heat island effect.

An Emerging Local Anchor for Performing Arts

The park's three open-air venues provide a mix of free and ticketed world-class performances, including theater, dance, live music, and educational workshops.

03

Industrial Site Regeneration

From heavily polluted industrial sites to multi-functional public green space





CASE STUDY BEIJING CHINA

Shougang Park: From Steel Giant to Urban Landmark and Popular Tourism Site

- **Century-Old Legacy:** Originally founded in 1919, Shougang (Capital Steel) was one of China's largest state-owned steel enterprises.
- **Strategic Location:** Situated in Beijing's western outskirts, positioned on the eastern bank of the Yongding River.
- **Environmental Closure:** Steel production ceased in 2010 to curb air pollution and facilitate Beijing's urban economic restructuring.
- **Regeneration Flagship:** Transformed into a premier national model for post-industrial urban renewal and adaptive reuse.
- **Olympic Catalyst:** Hosted the Big Air skiing and snowboarding events for the 2022 Winter Olympics, boosting its global profile.



716 acres

Area of Phase I
(north district)

2010

Steel production
ceased

2020

Shougang Park
Open to the public

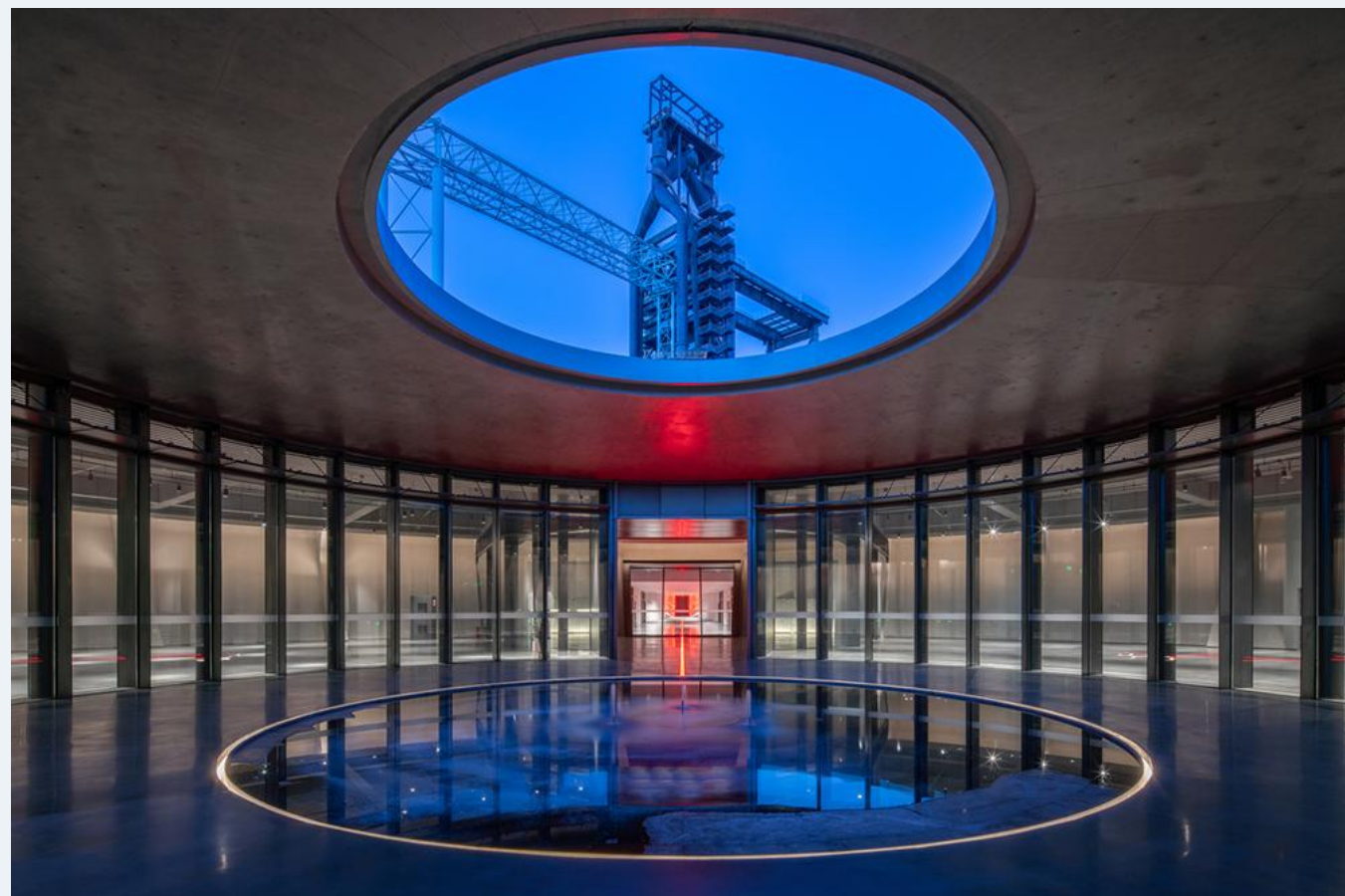


KEY INTERVENTIONS 1

Xiu Chi Lake

Multi-Layered Water Infrastructure

- Built in 1940 initially as a water-storage reservoir to support steel manufacturing, it underwent a full restoration beginning in 2016.
- The water surface (about 8.3 acres) was turned into a constructed wetland, while the space beneath was excavated to create parking space and an art gallery, enhancing urban amenities and providing an innovative way to appreciate the beauty of the industrial heritage.



Iconic Visual Effect

The reflective surface of a rehabilitated lake does not merely add recreational value to an adjacent blast furnace. It doubles and transforms the industrial structure visually, converting rust and steel into a mirror image that is simultaneously industrial and natural, permanent and seasonal, hard and soft.

Qunming Lake

Ecological Restoration & Biodiversity Recovery

Nature-based Solutions

Concrete revetments have been substituted with tiered, stepped green banks that include submerged aquatic vegetation. This approach followed China's "Sponge City" design principles introduced in 2014.

Protected Bird Island

A protected bird island inaccessible to visitors has enabled the recovery of a functioning urban wetland ecosystem that now serves as a designated wintering ground for migratory waterfowl species.



Qunming Lake covers a water surface of about 49.4 acres.

Yongding River: a Regional Ecological Corridor

Restoring Beijing's 'Mother River' (2010)

Yongding River has experience intermittent dry up since 1996. Comprehensive restoration was launched in 2010. Year-round flow resumed in 2023 and the river now connects a major reservoir and dozens of riverbank parks, forming a regional ecological corridor.

New Shougang Bridge (2019)

The bridge simultaneously provides transport access for park visitors and serves as designed landscape infrastructure, linking the urban core to the riverfront ecological belt.

Yongding River Market (2025)

Launched in September 2025, the Market transforms the riverbank into a vibrant commercial and cultural zone, generating revenue from ecological asset. The second phase is under development.

The Yongding River Market



Shangri-La Hotel



KEY INTERVENTION 4

Innovative Use of Existing Structure and Space

Shangri-La Hotel

A five-star hotel transformed from the abandoned power plant, with mountain and river views.

Sports Facilities

Repurposed coal storage warehouses for ice hockey, figure skating, curling, and speed skating.

Elevated Walkway

Shougang's own version of the High-Line. Originally an industrial pipe corridor for transporting raw materials.

Stormwater Management

Rain gardens, permeable surfaces, and vegetated banks on vacant sites for stormwater management.



Year-Round Visitor Economy Through Seasonal Activation and Place Branding

Restored water bodies and repurposed industrial structure enable a distinctive seasonal activation calendar, converting a single-visit heritage site into a **year-round tourism destination**.

SPRING

- Waterfront trekking and cycling
- Family-oriented tree planting with native species
- Outdoor markets and cultural events on lakesides
- Beer festivals
- Teenager basketball games



SUMMER

- Walking tour along the High-Line
- Half marathon along the Yongding River
- Music / movie festivals
- Pop-up sci-fi conventions
- Outdoor sports: climbing and cycling



AUTUMN

- Birdwatching and photography
- World Table Tennis Championship
- Waterside dining and gourmet festivals
- Harvest markets
- International Fair for Trade and Services



WINTER

- Ice rink on Xiu Chi Lake
- New Year Countdown venue
- Ice and snow festivals
- Neon night-economy: illuminated blast furnaces reflected in both lakes



IMPACT

Outcomes: Economic, Environmental and Cultural

14 M+

Visitors in 2025

USD 83 M

On-site spending
in 2024

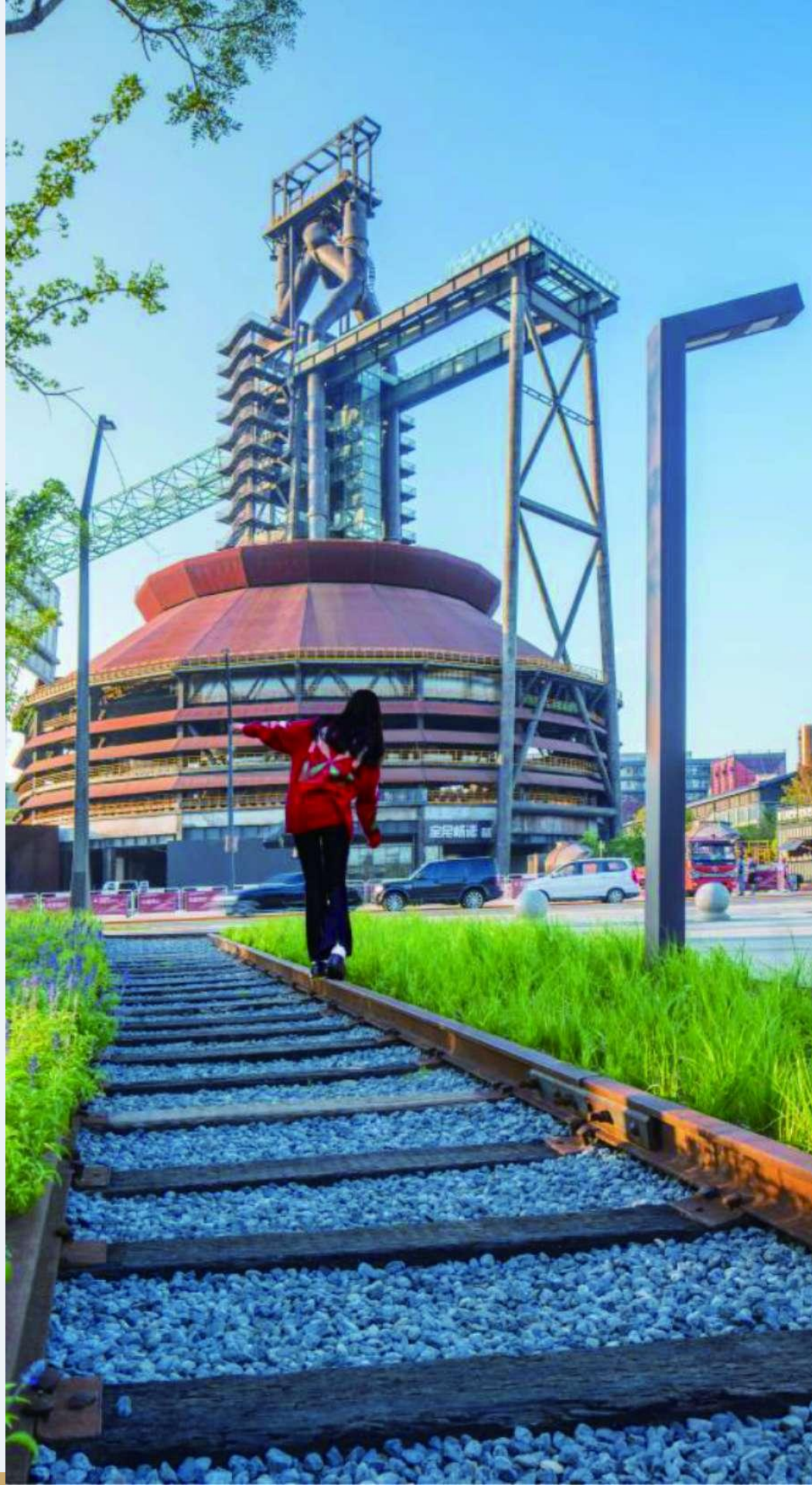
25,000+

Jobs in service
and tech sectors

1,000+

New enterprises

- **Economic:** The park drives consistent visitor spending, commercial rental income, and hospitality revenue, all supported by revitalized urban space. It hosts more than 1,000 companies and sustains tens of thousands of jobs in retail, culture, sports, and events.
- **Environmental:** Both locals and visitors enjoy cleaner air, reduced flood risks, cooler local temperatures, and open access to green spaces and waterfront amenities. Meanwhile, the wider ecosystem benefits from restored biodiversity, improved soil quality, and a stormwater management system that mitigates pollution to the Yongding River.
- **Cultural:** Visitors experience a unique blend of industrial heritage, ecological landscapes, and top-tier performing arts and sports programs. Residents gain psychological and restorative health advantages from having daily access to water, greenery, and seasonal wildlife.



04

Policy and Practice Implications

Operational Guidance for Development Institutions and Practitioners



Three-Step Action Framework

1. Asset Identification

Mapping the site's Heritage Asset Stock (structures, machinery, spatial configurations, historical associations) and Ecological Asset Stock (water bodies, green corridors, topography, biodiversity potential, connectivity to regional ecological systems) as distinct but potentially synergistic inventories.

2. Synergy Activation

Analyzing the design and planning strategies that establish physical, visual, and sensory links between the two types of assets: a) situating promenades along the water's edge to capture reflections of industrial structures, b) raising walkways to provide aerial perspectives of heritage sites set against natural landscapes, and c) organizing seasonal events that use natural elements as a backdrop for industrial settings, etc.

3. Value Capture

Assessing the tourism and economic outcomes generated by the synergy: visitor satisfaction scores, dwell time, repeat visitation rates, commercial clustering (e.g., hospitality, retail, cultural venues locating to exploit the industrial-natural view), property value uplifts, and the broader place-branding value that positions a formerly stigmatized industrial district as a popular destination.

Six Lessons for Practitioners

01 Spaces Need Content to Thrive

Regenerated urban areas serve as settings and frameworks, but it is the introduction of new functions and activities that play a crucial role in fostering and sustaining vibrancy.

02 Nature Returns, Visitors Follow

Restoring natural elements to post-industrial areas can improve landscape diversity and richness, which encourages repeated visits and delivers environmental, cultural and economic benefits for both visitors and residents.

03 Plan Holistically, Sequence Strategically

Comprehensive planning combined with gradual execution is essential to adapt to changes in market conditions and demand. Pilot initiatives can offer scalable solutions and financing for the remaining sites.

04 Seed Public Funds, Harvest Private Investment

Public and philanthropic funding for ecological restoration and infrastructure serves as a key driver to attract private sector investment in tourism facilities and assets.

05 Spotlight Destinations Through Signature Events

Major events (e.g., sports, cultural) can be a driver to improve visibility and branding of the destinations over a short time and build momentum for urban regeneration.

06 Operations Make or Break Destinations

Even the most beautifully regenerated space will fail to retain visitors without professional, well-funded, and consistently delivered day-to-day management.

Thank you!

Contact: wfang1@worldbank.org

