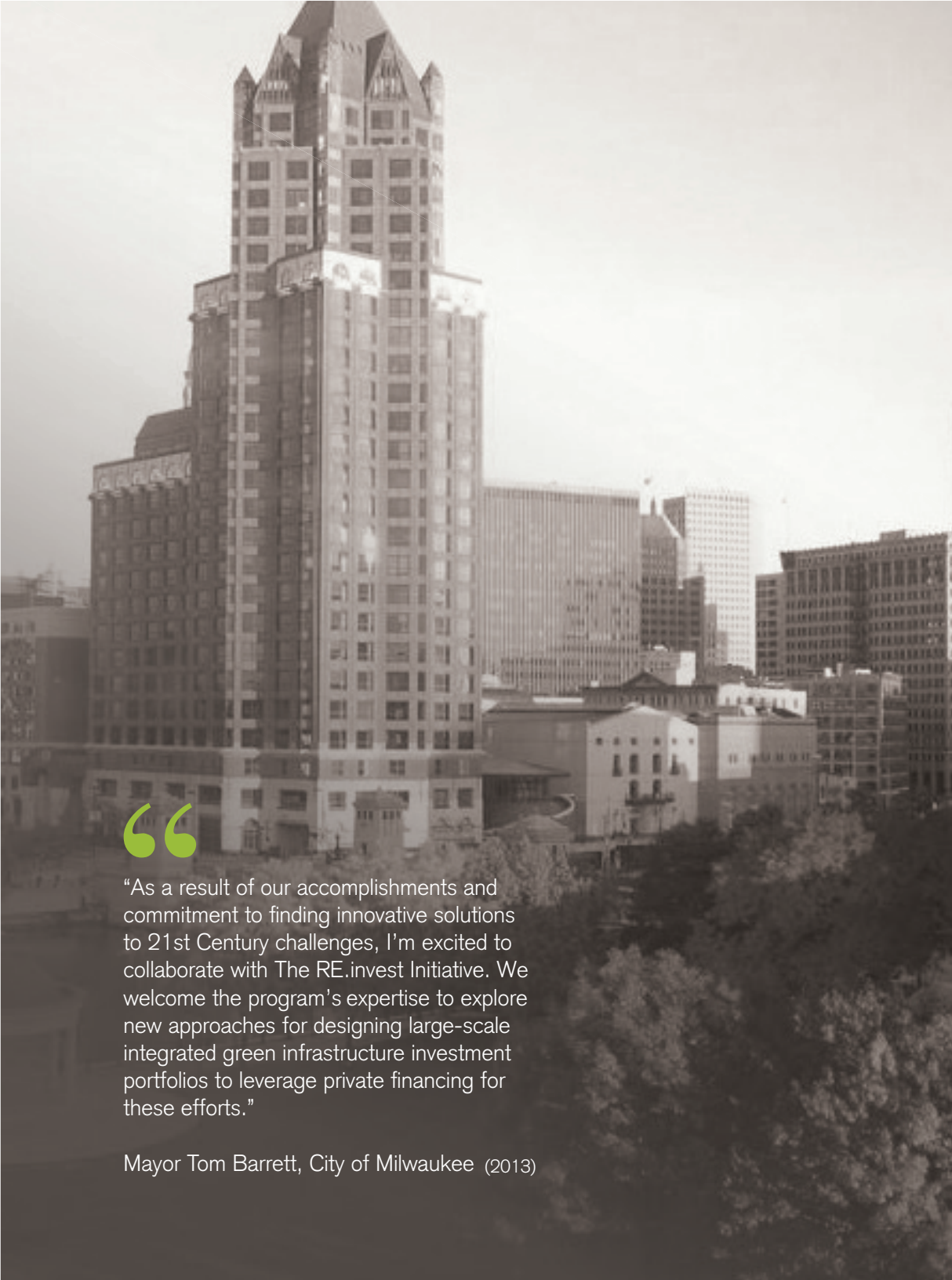


RE invest | CITY REPORT 2015



MILWAUKEE



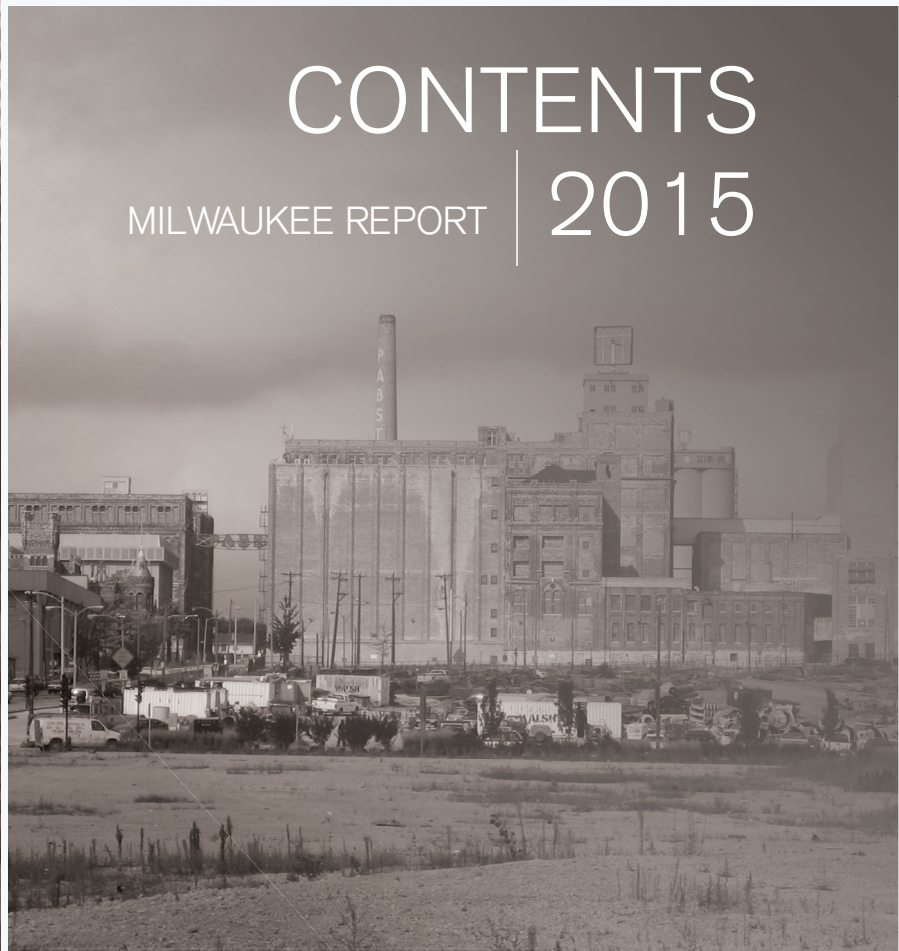
“

“As a result of our accomplishments and commitment to finding innovative solutions to 21st Century challenges, I’m excited to collaborate with The RE.invest Initiative. We welcome the program’s expertise to explore new approaches for designing large-scale integrated green infrastructure investment portfolios to leverage private financing for these efforts.”

Mayor Tom Barrett, City of Milwaukee (2013)



re:FOCUS
PARTNERS



CONTENTS

MILWAUKEE REPORT | 2015

02 | INTRODUCTION

03 | OVERVIEW

04 | OPPORTUNITY

RELEVANT MODELS 05

San Jose Environmental Innovation Center 05

New Lab 05

Danish Outdoor Lighting Lab 05

Portland Innovation Park 05

PLANNING & DEVELOPMENT CRITERIA 06

Maximize Green Infrastructure and Soil Amendments Based on MMSD Chapter 1 06

Prepare Space for Mix of Prototype Installations 06

Address Environment, Health, and Safety Issues 06

Coordinate with Nearby Development 06

Facilitate Workforce Development 06

LEGAL & MANAGEMENT FRAMEWORK 08

Timeframe & Transfer 08

Management Responsibilities 08

Land Ownership & Liability 09

Contract Innovations 09

CORPORATE ENGAGEMENT & PARTNERSHIPS 11

Emerging Technology Providers 11

Corporate Research & Development Departments 11

Venture Capital Investors 11

LOCAL, NATIONAL & GLOBAL ENGAGEMENT 12

Local Engagement 12

National Engagement 12

Global Engagement 12

13 | INNOVATIONS

FIGURES

04 | FIGURE 1
Draft Milwaukee iPark Site Rendering

07 | FIGURE 2
Draft Milwaukee iPark Site Plan

10 | FIGURE 3
Draft Milwaukee iPark Perspective Rendering

TABLES

07 | TABLE 1
Cost Estimates for Milwaukee iPark



Introduction

An essential quality of resilient energy and water systems is the ability to continuously improve. Most city infrastructure systems today epitomize the opposite trait, system upgrades occur as a patchwork of band-aids using familiar approaches rather than strategically leap-frogging to better technologies. One of the most important barriers to implementing these more resilient infrastructure upgrades is the inability to test new technologies in real systems, such as utility water pipes, power lines, or telecommunication networks, and validate modeled performance improvements.

Currently, municipal governments are making the best use of increasingly strained public resources to upgrade critical infrastructure. However, most lack access to best-available technologies based on limited opportunities to “try before buying” through conventional procurement processes. Often the same opaque contracting, permitting, and regulatory processes that limit public sector innovation also stymie private companies.

Companies that face multi-year environmental permitting and review processes often set-up testing sites in friendly R&D environments and avoid communities that have the greatest infrastructure upgrade needs.

Corporations and those who invest in the most cutting edge technologies are doing everything possible, including traveling to places like Israel that have advanced technology incubation support systems, to access in-system demonstration sites and prove that technologies work. The City of Milwaukee can take advantage of this corporate interest and willingness-to-pay by attracting and facilitating private investment in a local technology demonstration park. Designed to facilitate in-situ testing and demonstration for water, energy and telecommunication technology - an innovation park can effectively lower barriers to market entry for companies seeking to demonstrate the value of new cross-sector technologies in-system without extreme transactions costs, such as the hassle of coordinating multi-year reviews across energy and water sector utilities.

Like many cities, Milwaukee currently owns properties that are underutilized. These sites pose redevelopment challenges for traditional real estate developers, but they offer significant opportunities to create underground and surface resilient infrastructure improvements. By developing these sites as technology demonstration spaces - styled as outdoor museum exhibits - with integrated surface and sub-surface green infrastructure upgrades, the City can take an alternative approach to attracting leading companies from around the world and promoting sustainable economic growth.

Overview

The City of Milwaukee is in the midst of an ambitious effort to transform the 30th Street Industrial Corridor into a major modern employment center and economic hub. The 30th Street Industrial Corridor encompasses 880 acres, or the size of about 660 football fields, with some 518 acres that are zoned for industrial use. The area's decline in the post-industrial economy and housing crisis of 2008 has made it a focal point for redevelopment under Mayor Tom Barrett.

To date, the City has invested in multiple studies and planning efforts, and purchased the 84-acre former Tower Automotive Site to transform it into Century City, a modern industrial park intended to serve as a centerpiece for revitalization in the corridor. Building on its legacy as an industrial center for water and energy companies, Milwaukee has prioritized investment in these sectors as part of revitalizing Milwaukee's 30th Street Industrial Corridor to serve as hub for the City's economic future. Catalytic development efforts include the Century City I and II business parks, new single and multifamily housing at Esser Paint, and a proposed \$2 million Greenway and Gateway project as a part of the Century City Business Park. Other private sector investments include the proposed development of a STEM high school and the Midwest Energy Research Consortium's (M-WERC) Energy Innovation Center—a business start-up accelerator and Corporate/Academic research center—are aligned with the City's goal to create a regional ecosystem of development and innovation.

The City of Milwaukee recognizes that redevelopment of the 30th Street Industrial Corridor must go beyond building business parks to attract tenants. Any long-term development strategy must also include systematic support for local workforce development and a transition plan for the nearly 100 acres of abandoned and blighted properties in the area.

Leveraging the City's investment and development interests in energy, power, controls and water-related industries, the RE.invest team identified an opportunity to develop a municipally owned parcel near the M-WERC Energy Innovation Center into an Innovation Park (iPark) that can serve as a demonstration site for cutting-edge technology installations in a way that serves both community and market needs.



Picture 2.5 acres in the 30th Street Industrial Corridor, strategically located between industrial warehouses, new development at Century City and the M-WERC Energy Innovation Center. But instead of an empty concrete parking lot and overgrown grasses—imagine a vibrant outdoor space, with tree-lined sidewalks, expanses of manicured grass, and technology demonstration sites. Where visitors can watch wastewater become energy, and more importantly see performance data streamed to touch screen displays. Where city managers from around the world can walk through a section of an empty stormwater tunnel to see how water moves underground through micro-hydro turbines to produce renewable energy. Envision a physical place designed to support entrepreneurs working to grow new sustainable energy sources from algae or build cutting edge self-healing power grids. Milwaukee can design a new type of physical technology incubator and innovation district that engages companies and attracts private investment to support the City's highest economic and sustainable development priorities.

Opportunity

The set of partners already lined up in Milwaukee are poised to not only ensure quick development of an iPark structure, but also support streamlined uptake of any relevant and productive solutions. Mayor Barrett and the City of Milwaukee have a history of supporting innovation, successfully leading the development of The Global Water Council, prioritizing workforce programming, and supporting the expansion of local incubators and accelerators like the Energy Innovation Center, co-located with the proposed iPark. In addition, local purchasers of innovative technology including the Milwaukee Metropolitan Sewerage District, and regionally headquartered corporations including Johnson Controls, AO Smith, Eaton Corporation, Kohler, and the Wisconsin Energy Corporation - coordinated through local iPark sponsor the Midwest Energy Research Consortium (MWERC) - are enthusiastic about the proposed iPark as a sourcing platform for new technology procurement.

The proposed iPark brings together elements from various technology demonstration models currently in use around the world, including trade shows (installation contracts and agreements); incubators and accelerators (sponsorship, first-look financing, and venture fund structures); and museums (education, curation and management systems). What makes the proposed parks unique relative to these other models are the links to existing infrastructure systems (in-situ/utility connections) and the specific focus on municipal innovation in evaluating and procuring resilience solutions at scale.



Figure 1. Draft Milwaukee iPark Site Rendering

Relevant Models

The RE.invest proposed iPark brings together elements from several other types of technology hubs. Below are four examples of innovation centers from around the world that highlight parallel approaches to demonstrating, prototyping, incubating, and/or accelerating specific companies or projects.

- San Jose Environmental Innovation Center

<http://www.sanjoseca.gov/DocumentCenter/View/28291>

The City of San Jose recently transformed an underutilized municipally-owned property into a productive economic and social technology demonstration hub. The City maintains ownership of the site and collects lease fees through a separate non-profit “commercialization catalyst” called Prospect Silicon Valley. Large corporations, including BMW, Applied Materials, Wells Fargo Bank, Denso and Siemens, sponsor this non-profit entity. Prospect Silicon Valley works directly with incubators, accelerators, investors and corporations and provides SJEIC space for validating green technologies. Milwaukee’s Innovation Park could go beyond providing workspace and basic tools—which can be offered through M-WERC’s Energy Innovation Center—to provide in-situ connections that allow companies to show economic and environmental performance over time for a real site (versus lab) and encourage performance-based for system-wide resilient infrastructure upgrades.

- New Lab

<http://newlab.com>

Located in an old shipyard at Brooklyn’s Navy Yard, New Lab provides physical office space and shared access to highly capital-intensive manufacturing equipment that early-stage entrepreneurs and start-up companies need to prototype and test manufactured products and processes. New Lab’s model is based on its non-traditional combination of shared equipment and collaborative design/work space, where innovators can access traditionally hard-to-find tools and equipment, like 3D printers, welding facilities and machining tools, without absorbing the capital costs and risks individually. Similar to New Lab, Milwaukee’s Innovation Park could allow early-stage companies to access complex systems and network connections; showcase and demonstrate new technologies in a safe, curated, public space; and offer a unique opportunity for larger energy, power and controls companies to demonstrate performance at a utility-scale.

- Danish Outdoor Lighting Lab

<http://www.lightinglab.dk/UK/>

The Hersted neighborhood in Copenhagen participated in a new platform, the Danish Outdoor Lighting Lab or DOLL, to help develop future LED-lighting solutions. DOLL’s aim is to create energy efficiency and intelligent indoor and outdoor lighting solutions, while generating jobs in the local community and beyond. By serving as a living lab, residents, businesses and municipal decision-makers can test and experience different kinds of lighting solutions. In total, 25 companies have set up side-by-side demonstrations of technologies related to more efficient lighting, from physical lights to different sensor systems and power supplies. The Danish Outdoor Lighting Lab’s primary focus is partnering with corporate entities looking to showcase products and services within a physical outdoor space, while facilitating end-user interaction for eventual scale and distribution. Milwaukee’s iPark could provide a similar outdoor user experience for both “shoppers” and residents.

- Portland Innovation Park

http://www.bre.co.uk/filelibrary/Innovation_Park/Brochure_sections/US_Innovation_Park_-_Call_for_national_and_international_suppliers.pdf

In collaboration with British company BRE, the Portland Development Commission is currently in the process of designing a sustainable construction and building materials demonstration space. The Portland Innovation Park is structured with a focus on partnering with corporate entities looking to showcase products and services within a physical space, while quantifying costs and performance in an open data environment. Like Portland’s model, Milwaukee’s Innovation Park could engage a core of strategic corporate and demonstrator partners and emphasize performance data collection.

Planning and Development Criteria

Building on the place-based models from Brooklyn, Copenhagen, Portland, and San Jose, the City identified two co-located parcels of land - 4131 N 31st St and 4101 N 31st St - to serve as an example site for the development of a potential iPark. This site was identified to facilitate initial design and cost estimation, but should not be considered as the only site available for iPark development with Milwaukee's 30th Street Industrial Corridor. These particular municipally-owned parcels are well positioned for iPark development based on their size (2.5 acres), current development status (limited development potential), zoning (DPD) and proximity to both M-WERC and Century City I and II developments. To facilitate iPark development, the RE.invest team recommended the following site development criteria:

- Maximize green infrastructure and soil amendments based on MMSD chapter 13

Site design should prioritize green infrastructure upgrades (tree trenches, bioswales, porous pavement) along the edges and throughout the parcels. In addition, to providing flooding mitigation on-site, these infrastructure upgrades should beautify the area in support of broader redevelopment efforts in Century City. The draft site plan in Figure 1 highlights options for green infrastructure upgrades.

- Prepare space for mix of prototype installations

In an effort to minimize costs while maximizing value for demonstrators, prototypes demonstrating freestanding technology systems that display real performance data should be prioritized. Initial site designs (see Figure 1) include specifications for the space available (footprint) for technology demonstration along with power availability for each demonstration platform. The proposed layout for the site accommodates 5-10 technology demonstrations.

Example: ClearCove Systems, a wastewater to energy company that has expressed interest in serving as an initial iPark demonstrator, could deploy a pilot system for a period of 7-10 days at a local wastewater treatment plant to collect real-time data on the impact that their technology can create through wastewater-to-energy conversion in Milwaukee's wastewater treatment system. Concurrently, the ClearCove team

could deploy a prototype to the iPark site that runs dirtied water through their system and extrapolates from the pilot collected data to show projected performance improvements and cost savings to the City over time.

- Address Environment, Health, and Safety Issues

Based on the location of the site, safety, liability and weather-related concerns must be taken into consideration. A fence line was incorporated into the site plan and cost estimates. In addition, the RE.invest team recommended utilizing shipping containers to house individual technology demonstrations as a part of the site design. This option would protect installations from potential weather-related damage and vandalism and provide a consistent design standard for demonstrators.

- Coordinate with Nearby Development

Recognizing that the identified parcels are being considered as a part of a larger development project coordinated by Northwest Side Community Development Corporation and the Century City Business Park, the site plans included at least 50 spots for parking access and coordinate with the area development plans more broadly.

- Facilitate Workforce Development

The proposed iPark should support local workforce development efforts, including green infrastructure maintenance programs coordinated by MMSD, M-WERC Energy Innovation Center workforce development initiatives, and the proposed Advanced Manufacturing Training Center. Long-term site development should integrate spaces for not only testing technologies but also serving as an active skills lab for MMSD and the City's relevant workforce development programs.

For example, within the proposed parking lot, the site plans include space for testing various porous pavement options that the city could procure while also facilitating small-scale installation, operations, and maintenance training.

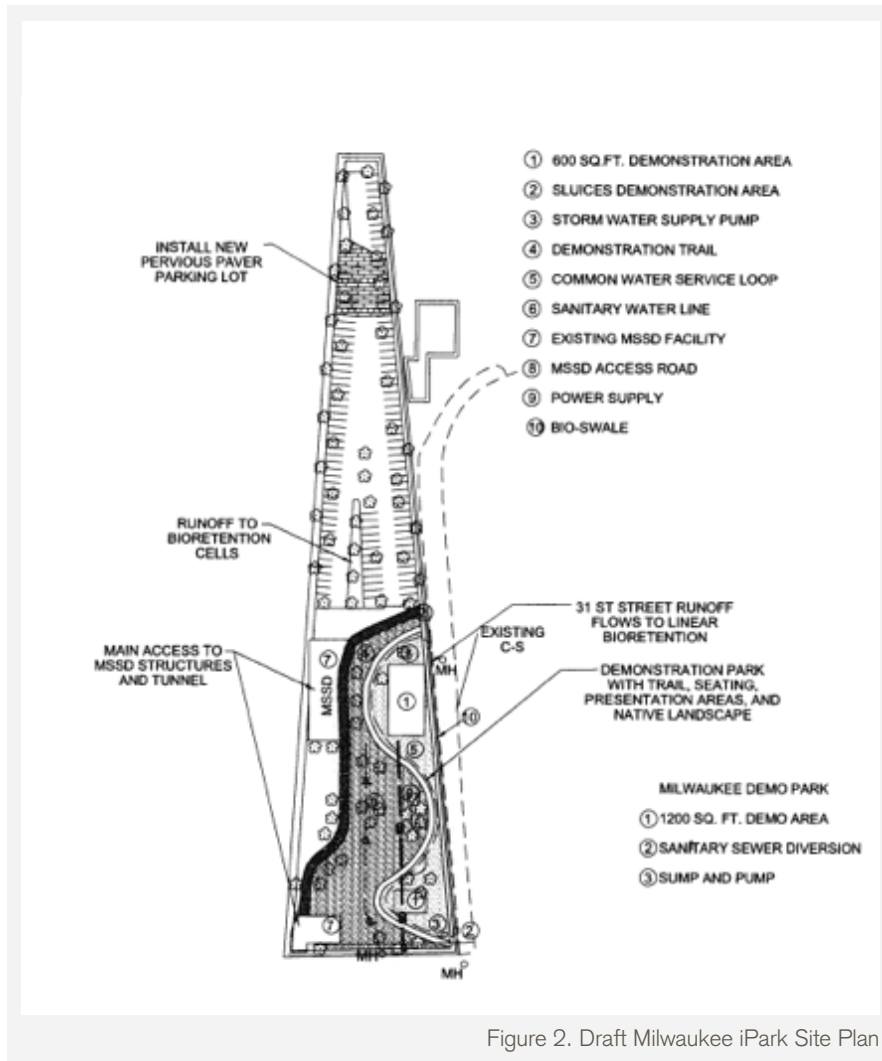


Figure 2. Draft Milwaukee iPark Site Plan

Figure 1 shows the proposed site design along with capital cost estimates that include site preparation, and green infrastructure installation. The site plan features 600 sq.ft. reserved for demonstration, parking, a pathway featuring different porous pavement solutions, and all utility adjustments necessary to facilitate in-site demonstration.

Based on this draft site plan, two different capital costs were calculated to reflect the increased cost of providing access to active utility lines (power, water, sewer) for withdrawal and return, which in this case is an estimated total of \$8,300, versus free-standing demonstrations. While to date, demonstrators have indicated a preference for prototypes that would not be connected on-site to utility lines, it is important to note that costs would be lower to install connections during initial parcel construction rather than as ad-hoc retrofits for future demonstrators. Cost estimates do not include the removal of contaminated soils, as it is anticipated that these costs would be covered by the City, using brownfield or other cleanup grants.

DESIGN ELEMENT	CONSTRUCTION COST (\$)	
4131 & 4101 N 31st ST		
Site Preparation and Remediation		
Mobilization		1,300
Paving, Landscaping, Drainage & Bioswales		
Site Grading		101,000
Landscaping including bioswales & native plantings in Demo Park		351,000
Excavation & Pervious Paving for Parking & Walkway		253,400
Stormwater Collection & Conveyance to Bio-swale		30,500
Demonstration Park	w/o Wastewater System Connection	w/o Wastewater System Connection
Fencing around MSSD areas and Demo Park	122,800	122,800
Excavation & Paving for Demonstration Park	17,800	17,800
Wastewater piping & diversion	58,900	78,300
Water piping	24,300	24,300
Stormwater diversion	11,100	NA
Electrical supply & site lighting	88,700	88,700
Startup & Commission	8,800	8,800
Demobilization	1,300	1,300
TOTAL	\$1,070,900	\$1,079,200

Table 1 - Cost estimates for Milwaukee iPark

Legal and Management Framework

Beyond site specific planning, the RE.invest team worked to define the key legal and operational elements required to create an iPark management framework with clear roles for various types of partners.

• Timeframe & Transfer

The iPark approach outlined in this report can be applied to both temporary or permanent installations and technology demonstrations. In the case of Milwaukee, the RE.invest team recommended establishing a 3-year timeframe for the initial iPark land use. This timeframe would allow a sufficient length of time to set-up and test a suite of technologies, without locking all participating entities into a long-term management structure or transferring the site permanently to a new use. After three years, all parties would have an option to disband, adjust and/or extend the iPark for future years to accommodate new or rotating exhibits. Should the iPark be extended, remaining participants would be required to secure additional funds. Below is a projected timeline for Year 1:

- Q1 Confirm roles/responsibilities of all partners, including signing partnership agreements, raising initial funds, and drafting site/demonstration lease contracts.
- Q2 Secure funds, including (anticipated) brownfield grants, continue fundraising for construction phase; procure iPark design/build firm.
- Q3 Commence site cleanup.
- Q4 Sign land transfer lease/agreement (upon completion of all site cleanup); begin iPark construction; hire local manager; coordinate launch planning with other planned events (e.g. September EIC Grand Opening).
- Q1 Year 2 Milwaukee iPark Launch event and park operation.

• Management Responsibilities

In order to ensure the success of the iPark, the RE.invest team recommends that management of the park be separated into local and national responsibilities.

At the local level, a part- or full-time iPark manager should be seated within a local partner organization, such as M-WERC's Energy Innovation Center. This manager should be contracted with funds from sponsors and demonstrators. The local iPark Manager would have authority over an independent iPark funding account, and ultimately be responsible for iPark operations, maintenance and engagement. This means that the iPark Manager would execute contracts with local contractors (e.g. landscape architects, maintenance staff) to oversee construction, exhibit installation, and ongoing operations and maintenance. The iPark Manager would also be responsible for coordinating with local partners, national sponsors, and demonstrators. In addition, the iPark Manager would be encouraged to build community events that leverage the iPark, including workforce development programming, events, tours, and the like.

Pending corporate support, a designated national entity would support all local iPark Managers and curate demonstrators and/or sponsors companies for the first 3 years. The national entity would include representatives from all national and international partners including site designers and sponsors companies. In addition to ensuring consistent design standards across iPark sites as they develop, the national entity would be responsible for coordinating a quarterly meeting and an annual event that brings together local, national and international iPark partners. This entity would also identify additional cities for future iPark development.

Beyond the parties directly engaged in the iPark, local partners including the City of Milwaukee, the Midwest Energy Research Consortium, and the Northwest Side Community Development Corporation would all maintain interests in the success of a local iPark and therefore play important roles in supporting the local manager.

• Land Ownership & Liability

While iPark development can be considered for both public and privately owned parcels of land, the two parcels of land in Milwaukee considered for iPark development through RE.invest are currently municipally owned, zoned DPD, and include a permanent easement to MMSD for access to the deep combined sewer storage tunnels that run below the city for stormwater management. The RE.invest team developed three ownership scenarios, described in simplified terms below, for local consideration. All scenarios are consistent with local law and are being explored further based on partner preferences.

- The first option is for the Redevelopment Authority of the City of Milwaukee (RACM) to sell both parcels to the Northwest Side Community Development Corporation (NWSCDC) or some other local developer who would then lease a portion of the land to a designated national entity or iPark demonstrators directly.
- A second option is for RACM to sign a 3-year low cost lease that includes a buy-out option for the City. In this scenario, the lessee could be NWSCDC, a designated national entity, or a local partner, for example, M-WERC. In this scenario, liability for the site would transfer to the lessee.
- A third option is for the City to maintain ownership of the parcels outright, making RACM responsible for leasing a portion of the land to a designated national entity or leasing sites directly to iPark demonstrators. In this option, the City would maintain liability for the site development.

• Contract Innovations

In order to ensure that the iPark provides not only aesthetic and economic development benefits, but also potentially a financial benefit to the City, the RE.invest team recommended that all leases and land use contracts include a clause to ensure that a percentage of the funds collected in excess of operating costs can be funneled into a Contribution Account to support broader green infrastructure upgrades or related operations and maintenance in the 30th Street Industrial Corridor. In addition, lease contracts with demonstrators should include a clause that ensures a small, yet to be determined, percentage of any sale that results from iPark demonstration follow a similar allocation formula, such as 50% towards iPark functions and 50% towards a Contribution Account.

For example, if operating costs in Year 2 are \$450,000 and a combination of sponsorship fees, lease fees and a portion of sales bring in \$1,200,000 – then the agreement would ensure that 50% of the \$750,000 in excess of iPark operations would be invested back into iPark functions (i.e. events, online resources, etc.) and 50% - or \$375,000 - would be put into a Contribution Account to support pre-defined municipal activities.

In short, this model creates a new way to facilitate private investment in green infrastructure and distributed system upgrades in traditionally underserved communities.



FIGURE 3
Draft Milwaukee iPark Perspective Rendering

Corporate Engagement & Partnerships

Unlike other demonstration sites - iParks are designed to provide water, energy, waste, monitoring/controls, and financial technology companies with the ability to showcase and demonstrate new techniques and products in a safe curated public space and to facilitate direct access to municipal consumers. By letting companies showcase products and services, while publicly quantifying costs and performance, the iPark model is intended to simultaneously streamline municipal procurement and traditional corporate customer acquisition processes for leading green and resilience focused companies and technologies.

The Milwaukee iPark was designed to lower the barriers to market entry for companies seeking to demonstrate the value of new cross-sector technologies in-system without extreme transactions costs, such as the hassle of coordinating multi-year reviews across energy and water sector utilities. In doing so, the Milwaukee iPark could serve as a platform for any company seeking to prove commercial viability of cross-cutting technologies; promote innovative resilient infrastructure solutions; or more strategically source acquisition of innovative start-ups.

Through the process of developing engineering and design options in all eight RE.invest partner cities, the RE.invest team engaged in discussions with a wide range of companies interested in specific technology demonstration and investment opportunities. Below are several categories of target private sector partners for potential iParks based on current market needs in Milwaukee.

- Emerging Technology Providers

The companies that most directly benefit from a public space that provides in-situ demonstration are start-ups or small companies developing municipal solutions. Opportunities range from testing emerging water, wastewater, and water/energy nexus technologies to showcasing energy generation and storage systems and smart meters, sensors, monitors & cloud IT evaluation platforms. Because acquisition of municipal customers is both time and resource intensive, especially for new companies that sell environmental technology and infrastructure products, the iPark model offers a pathway to reduce customer acquisition costs and timeframes.

- Corporate Research & Development Departments

Benefits to larger companies with robust research and development departments are two-fold. First, like their smaller peers, larger companies are also looking for opportunities to pilot innovative technologies. Beyond demonstration and testing rights, these companies also have the chance to build a more strategic acquisition pipeline by gaining first look rights to emerging environmental technology and infrastructure products that get positive reviews from municipal customers.

- Venture Capital Investors

Unlike the previous categories of private sector partners, the iPark model offers a way for venture capital (VC) investors to increase the likelihood of success (uptake of products and technologies) of their existing portfolio companies in municipal markets. Similar to how VCs currently support early-stage incubators and/or accelerators, the iParks provide a later-stage opportunity to evaluate product-market fit and assess the viability of long-lived technologies within municipal procurement cycles.

In all of these categories, the iPark model is structured so contributing sponsors can engage at different levels, with tiered branding opportunities, demonstration rights, and curation opportunities to select demonstrators in Milwaukee and other iParks.

Local, National & Global Engagement

The iPark model is likely to be most successful at first in US markets like Milwaukee that are committed to supporting innovation and developing an economic cluster focused on energy, water, power and control technologies. But the model does not need to be exclusive to the US; cities around the world face the same challenges of rebuilding aging infrastructure systems and designing new systems to meet the needs of rapidly urbanizing areas. Making effective temporary use of underutilized land and building public-private partnerships to support long-term infrastructure improvement has potential global value.

For that reason, the RE.invest team has identified ways that in future the Milwaukee iPark can expect to engage in local, national and international efforts.

- Local Engagement

Because of the unique set of investments the city and private developers are making in the 30th Street Industrial Corridor, the iPark in Milwaukee can serve as a hub for education and workforce development. Connected to the Energy Innovation Center, the proposed STEM high school, the business park development at Century City and the proposed Advanced Manufacturing Training Center – the iPark can host events, coordinate workshops and serve as a regional hub for innovation.

- National Engagement

The iPark model is also being explored in other RE.invest partner cities. While each iPark has a different focus based on local priorities and competitive advantages, together the set of parks provide a broad vision for the future of municipal resilience solutions. By coordinating these iParks through a national entity, each participating city can connect through annual meetings and iPark sponsored events, facilitating knowledge transfer. In addition, cities hosting iParks can serve as a regional showrooms and anchors for peer cities facing similar resilience challenges that are also looking to procure innovative solutions.

- Global Engagement

An iPark is a physical demonstration and testing site for innovative infrastructure systems and technologies - everything from desalinization plants powered by renewable energy technologies to seawalls and recycled water systems - on underutilized parcels of land. The benefit of those iParks is two-fold, first companies that have a hard time accessing municipal clients can have a more direct line of communication and municipal decision-makers can “try before buying” infrastructure products. Another product of the RE.invest Initiative is the Adaptation Atlas (www.adaptationatlas.com), a tool intended to bridge the gap between climate impact science and on-the-ground solutions by mapping resilient infrastructure and technology projects from cities around the world. The iPark implementation strategy described in this report offers cities like Milwaukee an opportunity to serve as a physical resilience showroom. To complement these types of showrooms, the Adaptation Atlas is designed as an online catalogue or showcase for cities from around the world seeking resilience solutions. The Atlas is intended to serve as a mechanism for facilitating dissemination of iPark technology innovations and performance data, and help cities like Milwaukee attract additional rounds of sponsors and demonstrators for future phases of development.



Innovations

To help catalyze local economic development, the City of Milwaukee can consider collaborating with local and national partners to structure the RE.invest proposed iPark model in a way that supports local priorities while continuing to expand the City's leadership in cultivating innovation and investing in long-term resilience.

- Leverage underutilized parcels of land for outdoor museum-style technology demonstrations and exhibits
 - Test innovative water, energy, power, and controls technologies to leverage regional economic strengths and interests
 - Feature green infrastructure flood management systems and services to increase regional uptake of best management practices
 - Enable better environmental performance data collection from in-situ installations
- Incentivize corporate investment in local resilience building and catalyze local economic development by creating new innovation parks
 - Leverage planned economic redevelopment to generate greater private investment interest in the region
 - Connect local procurement decisions to global innovation in environmental technology markets
 - Use innovative contracting structures to ensure that corporate demonstrations generate public benefits and revenues, as allowed under local procurement rules and regulations