MICHAEL REESE HOSPITAL SITE

TECH PARK ADVISORY PANEL REPORT

MAY 2011

The transformation of the former Michael Reese Hospital site into a world-class technology park on

the South Side lakefront will elevate Chicago as a globally competitive, high-tech city,

while at the same time contribute to the growth and economic prosperity of the

local community, city, county and state.

Make no little plans. They have no magic to stir men's blood and probably themselves will not be realized. Make big plans; aim high in hope and work, remembering that a noble, logical diagram once recorded will never die, but long after we are gone will be a living thing, asserting itselfwith ever-growing insistency. Remember that our sons and grandsons are going to do things that would stagger us. Let your watchword be order and your beacon beauty. Think big.

Daniel Hudson Burnham, Chicago architect. (1846-1912)

As we carry out our long-term strategy to create new jobs throughout Chicago and build an even more modern and diverse economy, we must continue to target emerging business sectors that will be the foundation of economic opportunity in the 21st century.

Mayor Richard M. Daley, Announcement of Advisory Panel, December 16, 2010

Aerial view of entire site

MISSION

The transformation of the former Michael Reese Hospital site into a world-class technology park on the South Side lakefront will elevate Chicago as a globally competitive, high-tech city, while at the same time contribute to the growth and economic prosperity of the local community, city, county and state.

EXECUTIVE SUMMARY

In December 2010, Mayor Richard M. Daley created an advisory panel, led by Frank M. Clark, Chairman and CEO of ComEd, to assess the potential for creating a world-class technology park on the site of the former Michael Reese Hospital. This report summarizes the panel's conclusions and consensus opinion.

The Michael Reese Hospital site represents approximately 37 acres of mostly vacant land on the city's South Side between 26th and 31st streets, roughly between Martin Luther King Drive and Lake Shore Drive. The site's size and location make it ideal for a tech park, which would provide clear benefits to the surrounding community as well as the greater city and region. First, a world-class tech park would create many jobs, while enhancing Chicago's global competitiveness as a technology center. A tech park could attract high-growth, high-value companies, capable of substantial investment in facilities and people. The Michael Reese site benefits from close proximity to renowned research universities, federal research labs, Chicago's central business and financial districts, and many of the region's major tech companies; it is also adjacent to high-bandwidth fiber lines, a critical asset to companies that place a premium on data speed.

The panel identified five key objectives for a tech park at this site:
1. Create high-quality, modern jobs that require a wide range of skills and education levels
2. Attract established companies, and foster creation of new companies, in emerging business sectors
3. Attract individual and institutional investors to support these companies
4. Foster economic development of the nearby communities
5. Balance financial risk and return among public and private investors, and generate a positive return (direct and indirect) on the City's initial investment

Within the context of these objectives, the panel developed a set of seven guiding principles:

1. Development of a tech park at the site of the former Michael Reese Hospital is a once-in-a-generation opportunity for the City of Chicago and should be done in a way that strengthens Chicago by creating a showcase for business and entrepreneurship, while providing jobs and economic development

2. The development of the tech park should be a public/private partnership that provides a net return to all investors and stakeholders

3. Development of the tech park should benefit **all** stakeholders

4. The tech park should be fully integrated into the local community

5. The tech park should be developed in Chicago's tradition as a city of innovation and leadership

6. Development of a tech park is a long-term initiative (20+ years)

7. The tech park development process should be deliberative, open and transparent

The panel also identified several key factors likely to be critical to future success in developing a technology park:

- A committed **champion** with dedication, energy and influence to get the project off the ground

- Effective **leadership** to direct and guide the project from concept to completion

- Adequate **funding,** both public and private, to design and build the park and tand to nurture innovation

- **Bridging institutions** to sustain continuity through the life of the development cycle

- **Soft infrastructure** to create, maintain and sustain the necessary talent pool

- Appropriate **metrics** to track progress and establish accountability

Other important factors include:

- University affiliation
- Anchor tenants
- Industry clusters
- Hard Infrastructure
- Price competitiveness
- Flexibility of building uses
- Nearby amenities
- Attractive lifestyle options

Finally, environmental sustainability is vital to a showcase development. While technology facilities (including labs, clean rooms and data centers) historically have been disproportionate consumers of resources (energy, water, etc.), new technologies and design philosophies offer the opportunity to create a resource-efficient development.

The Chicago Central Area Committee, an economic development civic organization, told the panel that the Michael Reese site "offers ideal characteristics to create the single best example of sustainable planning, design and building in the world."

Conclusion and Recommendation

The advisory panel believes that the idea of developing a world-class technology park at the Michael Reese Hospital site is worthy of serious consideration. Such an endeavor will be complex, requiring sound planning, visionary champions, skilled leadership, and most importantly, collaboration between the public (City, County and State) and the private (universities, corporations and civic and neighborhood leaders) sectors. The panel believes that a tech park at this site has the potential to transform not just the city, but also the state and the entire Midwest region.

The advisory panel recommends that the City initiate a process to solicit ideas and design concepts for developing a tech park at the site.

The transformation of the former Michael Reese Hospital site into a world-class technology park on the South Side lakefront will elevate Chicago as a globally competitive, high-tech city, while at the same time contribute to the growth and economic prosperity of the local community, city, county and state.

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INTRODUCTION

On December 16, 2010, Mayor Richard M. Daley created an advisory panel to assess the potential for creating a world-class technology park on the site of the former Michael Reese Hospital (the Site). The panel was chaired by Frank M. Clark, Chairman and Chief Executive Officer of ComEd and included eleven other individuals, including leadership from the Illinois Institute of Technology (IIT), the University of Illinois at Chicago (UIC), and the University of Chicago (UChicago), experts in high tech and venture capital, and representatives from city government. The panel members were:

- Kirk Allen, President & CEO, Sloan Valve Company
- Paula Allen-Meares, Chancellor and John Corbally Presidential Professor, University of Illinois at Chicago
- John Anderson, President, Illinois Institute of Technology
- Jeff Aronin, Chairman & CEO, Paragon Pharmaceuticals
- Rita Athas, President, World Business Chicago
- Chris Gladwin, President & CEO, Cleversafe
- Shirley Newsome, Alderman, City of Chicago, 4th Ward
- Maura O'Hara, Executive Director, Illinois Venture Capital Association
- Lance Pressl, Foundation President, Chicagoland Chamber of Commerce
- James L. Tyree, President, Abbott Biotech Ventures Inc.
- Robert Zimmer, President, University of Chicago

In addition, the panel would like to recognize the contribution of the following individuals for their assistance throughout the process: David Baker, Vice President for External Affairs at IIT, Robert Rosenberg, Associate Vice President for Communication at the University of Chicago, David Gulley, Assistant Vice Chancellor for Research at University of Illinois at Chicago, and Andrew Mooney, Commissioner, and Michael Jasso, Deputy Commissioner, Department of Housing and Economic Development.

The purpose of the panel was to better understand the necessary steps and resources to develop a technology park at the Site and provide recommendations to the Mayor about the process for potentially pursuing development of the site. This report summarizes the conclusions derived through the panel's conclusions and consensus opinion.

CONCLUSION AND RECOMMENDATION

The advisory panel believes that the idea of developing a world-class technology park at the Michael Reese Hospital site is worthy of serious consideration. Such an endeavor will surely be challenging, requiring sound planning, visionary champions, skilled leadership, and most importantly, collaboration between the public (City, County and State) and the private sectors (universities, corporations and civic and neighborhood leaders). The panel believes that a tech park at this site has the potential to transform not just the city, but also the state and the entire Midwest region.

The advisory panel recommends that the City initiate a process to solicit ideas and alternative design concepts for developing a tech park at the site.

MISSION OF THE TECHNOLOGY PARK

The transformation of the former Michael Reese Hospital site into a world-class technology park on the South Side lakefront will elevate Chicago as a globally competitive, high-tech city, while at the same time contribute to the growth and economic prosperity of the local community, city, county and state.

VISION

The technology park will be an international destination for business, learning, and innovation; an urban center for entrepreneurship, technology, community and collaboration; as well as a showcase for innovative architecture and environmental sustainability.

The technology park will be a high-density, multi use, multi-tenant development—a vibrant 24/7 district where people seek to work live, and play.
- Flexible lab, R&D and office space offering both established and emerging businesses a place to innovate, collaborate, prosper and grow
- Infrastructure and amenities, including stores, restaurants, entertainment and hotels
- Thriving mixed income residential communities

An integral part of the Chicago landscape.
- Integrating seamlessly with adjacent neighborhoods, the South Loop, the Central Business District and greater Chicago
- Bridging IIT, UIC, UChicago, among other Chicago higher education institutions
- Linking with Chicago's Lakefront, Museum Campus/Northerly Island and McCormick Place

With cutting-edge green tech, a statement of possibility as well as a demonstration of economic vitality.

VALUE PROPOSITION

A high-tech, competitively priced, community linking Chicago's research universities and corporations with an increasingly global talent pool and smart capital, all located in an easily accessible, livable city.

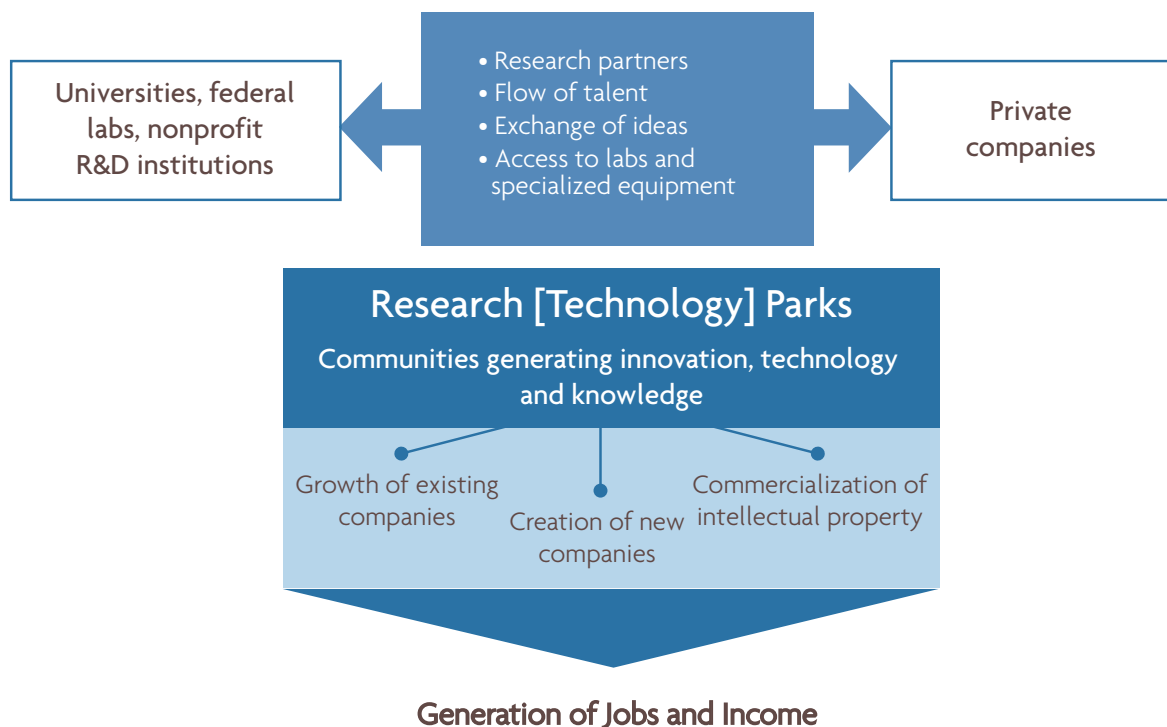| Target Markets	Positioning
Technology Companies • IT, data centers, other data intense businesses • Life sciences and health care • Nanotechnology • Alternative energy • Software and web services	• A "Hot" location in a region brimming with talented people and bustling with new innovation • Cutting-edge infrastructure • More efficient/effective place to innovate • Vibrant place to work and live
Retail/Entertainment/Hospitality Companies	A "Hot" location attracting a dynamic, 24/7 population looking to work, dine, shop and visit
People wanting to work and live in a vibrant, urban environment	A "Hot" location for young people; a great place to live after college, to start and raise a family, set down roots

DEFINITION OF A TECHNOLOGY PARK

"A Science [Technology] Park is an organization managed by specialized professionals, whose main aim is to increase the wealth of its community by promoting the culture of innovation and the competitiveness of its associated businesses and knowledge-based institutions.

To enable these goals to be met, a Science [Technology] Park stimulates and manages the flow of knowledge and technology amongst universities, R&D institutions, companies and markets; it facilitates the creation and growth of innovation-based companies through incubation and spin-off processes; and provides other value-added services together with high quality space and facilities."[1]

By providing a location in which researchers and companies operate in close proximity, research [technology] parks create an environment that fosters collaboration and innovation and promotes development, transfer and commercialization of technology (figure ES-1).[2]

Figure ES-1. Research Park Concept

- Research partners
- Flow of talent
- Exchange of ideas
- Access to labs and specialized equipment

Universities, federal labs, nonprofit R&D institutions

Private companies

Research [Technology] Parks
Communities generating innovation, technology and knowledge

Growth of existing companies

Creation of new companies

Commercialization of intellectual property

Generation of Jobs and Income

1   International Association of Science Parks (IASP). Accessed at http://www.iasp.ws/publico/index.jsp?enl=2
2   Characteristics and Trends in north American Research Parks: 21st Century Directions. Prepared by Battelle Technology Partnership
   Practice, in connection with Association of University Research Parks. © October 2007.

THE MICHAEL REESE HOSPITAL PROPERTY (The Site)

The Site is approximately 48 acres (37 excluding surface streets). It is bordered by 26th Street on the north (approx. 750 feet), 31st Street on the south (approx. 950 feet), S. Lake Park Ave. on the east (approx. 2,750 feet), and principally South Vernon Avenue on the west (approx. 2,400 feet) with a small parcel on Martin Luther King Drive at 26th street (approx. 275 feet).

There are presently three structures on the site (two in the process of demolition). The original Singer Pavilion, located roughly at Cottage Grove and 30th Street, is not currently slated for demolition.

Also, in the northwest corner of the site there are approximately 3 acres of quasi-park area, with 4 tennis courts and a basketball court. For safety reasons, this space is presently fenced off, along with the other borders of the site.

For the purposes of the advisory panel, we made the assumption that necessary infrastructure, including street grid, electricity, gas, sewers, water, etc., would have to be developed as part of any proposed project.

WHY BUILD A TECHNOLOGY PARK AT THE SITE

Since its founding, Chicago has been an entrepreneurial city, led by visionaries. Fusing Chicago's traditions of architecture and technological innovation could create something of historic and enduring significance. A technology park could continue the momentum of Chicago's innovation businesses in industries as diverse as biotech, IT and computational science. Executed correctly, a tech park at the Site holds the possibility of being a beacon to the world.

The case for a technology park is based on four main ideas:

1) Economic benefit for the community
2) Global competitiveness for Chicago
3) Development economics
4) Market opportunity and proximity advantage

ECONOMIC BENEFIT (POTENTIALLY 7,000 TO 20,000+ JOBS)

"Like cities...[parks] offer employment opportunities and provide a convergence for economic activity, giving hope for an increased standard of living to its population. Science parks bring these same opportunities, whether they are urban, suburban, or rural. To these locations will come the people who will build, operate, study, research, develop and produce."[3]

Tech parks create highly skilled, high-paying jobs that spur employment even beyond the park itself. According to a study by Battelle, a nonprofit technology development and laboratory management company, under the auspices of the Association of University Research Parks, each core ("direct") tech park job, on average and across select industries and geographies, created 1.5 additional ("indirect") jobs in the surrounding economy.[4]

For comparison, University City at the Massachusetts Institute of Technology was built on formerly vacant, disused land, in an urban setting, and located close to several world-class universities. According to its developers, University City has created more than 4,000 direct jobs.[5]

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3 How Sustainability Advances Science Parks, Their Users, Communities, and Investors. Phil Wirdzek, International Institute for Sustainable Laboratories and Lisa Galley, Galley Eco Capital. (2009). Accessed at http://i2sl.org/elibrary/wirdzek2009.html.

4 Characteristics and Trends in north American Research Parks: 21st Century Directions. Prepared by Battelle Technology Partnership Practice, in connection with Association of University Research Parks. © October 2007.

5 Source: http://www.forestcityscience.net/press/mit_fcstg_2005jan03.shtml

Assuming a comparable employment generation rate at the 33% larger Michael Reese site, and building densities (floor space to land area ratio) comparable to other Chicago area tech parks, it is plausible to envision that between 5,500 to 6,500 direct jobs could potentially be created at a new tech park. Applying a much higher building density assumption—potentially 2 to 3 times that of University City—the direct jobs created could exceed 10,000.

What's more, while many of the direct employment opportunities at a tech park would likely be knowledge-based, high skilled jobs, many others would likely require basic skills. As well, many quality jobs would likely be created outside the park to support both tenant companies and their employees.   The additional impact could be dramatic. Using Chicago-specific employment multipliers from the Bureau of Labor Statistics[6], a tech park could generate an estimated 1,500 to 6,000 additional indirect jobs in the region. Again, as above, using higher density and employment multiplier assumptions, and depending on the mix of industries within the park, the total employment (direct and indirect) impact of a tech park could exceed 20,000 – 25,000 jobs throughout the area.

6 Bureau of Labor Statistics RIMS II (1997/2005) Chicago 2000 CMSA

GLOBAL COMPETITIVENESS

*"Recognizing that a capacity to innovate and commercialize new high-technology products is increasingly a part of the international competition for economic leadership, **governments around the world are taking active steps to strengthen their national innovation systems.** These steps underscore the belief that the rising costs and risks associated with new potentially high-pay-off technologies, and the growing global dispersal of technical expertise, require national R&D programs to support new and existing high-technology firms within their borders. They also **reflect the belief that shared facilities, coupled with geographical proximity, can facilitate the transition of ideas from universities and laboratories to private markets."** [7]*

A technology park could enhance Chicago's position in a global economy where cities increasingly compete for emerging tech businesses and associated talent. National governments have identified technology parks as one way to compete for companies and jobs, and consequently are investing heavily in parks big and small (more than 600 since 2000[8]).

With leading academic institutions, established and growing tech clusters in biotech and IT, and a diversified economic base, Chicago is already in this race. Creating a best in class, showcase campus on the shores of Lake Michigan could provide a new focus for the collaboration and network economics that make for success in this environment.

DEVELOPMENT ECONOMICS

Rents, royalties, taxes and appreciation in land value are commonly used to recapture initial site acquisition and development costs. Because of the expected high development cost for the Site, it is necessary to think of uses and users that will be attracted to a high-density development, and demand the resources and infrastructure that justify higher rents. Technology companies are often such tenants. They benefit from the collaborative opportunities provided by a concentration, or clustering, of similar businesses. These companies also generally require specialized facilities such as reinforced floors and high ceilings, specialized electricity supply, and elaborate ventilation and cooling systems. Such facilities, though expensive to create, are able to command premium rents.

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7 Understanding Research, Science and Technology Parks: Global Best Practice: Report of a Symposium. Charles W. Wessner, Editor: Committee on Comparative innovation Policy: Best Practice for the 32st Century; National Research Council (www.nap.edu/catalog/12546.html)

8 WAINOVA Atlas of Innovation: science/technology/research parks and business incubators in the world. © 2009.

MARKET OPPORTUNITY AND PROXIMITY ADVANTAGE

Like most other successful tech park locations, the Michael Reese Hospital site benefits from its proximity to three renowned research universities (IIT, UIC and UChicago) and easy access to several others.

Furthermore, Chicago is experiencing rapid growth in technology start-ups such as Groupon, Grub-Hub, Cleversafe and many others. The city is already home to tech concentrations in industries such as life sciences and information technologies. In addition, the region's leadership in science research, including two federal research labs (Argonne and Fermilab), has been helpful in attracting a diverse base of corporate R&D labs to the Chicago area. Proximity to other tech companies and other labs offers potential opportunities for collaboration, commercialization and spin-offs.

Another important distinction of the Michael Reese site is its proximity to the high-bandwidth fiber lines that follow the adjoining railroad right-of-way. Even at the speed of light, distance matters. As with the internet, cloud computing and massively data-intensive applications have become ever more central to the daily lives of companies and individuals, and the central location of Chicago – and this site in particular – provides an important advantage.

A century ago, Chicago was at the crossroads of the rail lines, and its location helped give rise to companies like Armour & Co. and Sears Roebuck & Co. Chicago is today at the crossroads of the nation's fiber lines. It is already home to one of the world's largest data center and co-location facilities (the Lakeside Technology Center at 350 E. Cermak) just a few blocks away from the Michael Reese site. New companies creating information technology products and services, and seeking to be close to large-scale server and bandwidth infrastructure, may find the Michael Reese site has the potential to give them the edge they need to succeed in the global economy.

OBJECTIVES FOR A TECHNOLOGY PARK AT THE SITE

Building on Chicago's reputation as a global city and an emerging technology hub, the creation of a Tech Park at the former Michael Reese Hospital Site should achieve five primary goals for Chicago and the South Side:

1. Create high quality, modern jobs that require a wide range of skills and education levels
2. Attract established companies, and foster creation of new companies, in emerging business sectors
3. Attract individual and institutional investors to support these companies
4. Foster redevelopment of the nearby communities
5. Balance financial risk, and return, among public and private investors, and generate a positive return (direct and indirect) on the City's initial investment

GUIDING PRINCIPLES OF THE ADVISORY PANEL

THE PANEL WAS GUIDED BY A SET OF SEVEN KEY PRINCIPLES:

1. Development of a Tech Park at the site of the former Michael Reese Hospital is a once-in-a-generation opportunity for the City of Chicago. The development should strive to:
   a. Strengthen Chicago's position as a premier, globally competitive, high-tech city
   b. Create a world-class showcase for business and entrepreneurship
   c. Provide job opportunities for neighborhood residents as well as the region as a whole
   d. Foster continued economic development in the neighborhood, city and the region

2. The development of the Tech Park should be a public/private partnership that provides a net return to all investors and stakeholders
   a. Government (City of Chicago, Cook County, State of Illinois, Federal)
   b. Universities (IIT, UIC, UChicago, others)
   c. Business (developers, corporate tenants)
   d. Civic (private foundations, community leaders)
   e. With a goal of shared risk, shared return
   f. Evaluation of risk and return should include both direct and indirect costs/investments and direct and indirect benefits

3. Development of the Tech Park should benefit the welfare of **all** of
   a. Investors & Stakeholders
      i. Universities
      ii. Private Entities
      iii. Government
   b. Tenants
      i. Commercial (i.e., established and new tech companies and the ancillary businesses to support them)
      ii. Non-profit research centers
      iii. Residential
   c. Neighborhood residents
      i. People
      ii. Businesses
   d. City of Chicago
   e. Regional economy (creation of opportunities for new businesses, corporate growth and ultimately jobs)

4. **The Tech Park should be fully integrated into the local community**
   a. Embrace the rich cultural history of the nearby neighborhoods
   b. A multi–use development, potentially including laboratories, data center(s), retail, hotel, residential and restaurants
   c. Should be welcoming to the surrounding community
   d. Open space provided for both tenants and neighbors
   e. Streets within the tech park should be reintegrated into the neighborhood grid
   f. Be another "destination" landmark in the City, along with Millennium Park, the Lakefront, Museum Campus, Navy Pier, etc.
   g. Residential development must include affordable housing in the mix
   h. Retail development within the tech park (including restaurant and hotel) should benefit entire neighborhood, not just park residents

5. **The Tech Park should be developed in Chicago's tradition as a city of innovation and leadership**
   a. Daring in its aspirations
   b. Confident in its design
   c. Vibrant, and compelling as a place to work, live and play
   d. Provides synergy among tenants, residents and community
   e. Showcases cutting-edge green tech ("sustainability by design") as a statement of possibility, as well as demonstration of its economic viability

6. **Development of a tech park is a long-term initiative (20+ years)**
   a. It will likely take at least a generation to fully develop the property
   b. The economics will be particularly challenging due to the cost of the land and the expense of necessary infrastructure
   c. The competition among cities and nations for companies and new technologies will continue to be fierce
   d. Though the vision will evolve over time, the empowering vision will sustain the development

7. **The tech park development process should be deliberative, open and transparent**
   a. Although to be initially led by the City of Chicago, the ultimate development may be led by another entity(ies) (public or private) as determined best to achieve the desired outcome
   b. Still the City of Chicago will take the lead in initiating the development process and will continue to play a leadership role throughout its development

EXPECTED BENEFITS OF CREATING A TECH PARK AT MICHAEL REESE SITE

1. Benefits to the Neighborhood
   a. Direct Benefits
      i. Provide a mix of quality jobs (functions and skills)
         1. Creating the park
         2. Working in the park (permanent jobs, with opportunity for growth and career development)
      ii. Provide a diverse mix of housing options, including affordable housing
      iii. Provide new amenities and infrastructure (lake access and amenities, improved street grid, utilities, etc.)
      iv. Transportation
         1. Linkage to Loop central business district
         2. Linkage to universities (IIT, UIC, UChicago)
         3. Linkage to other tech parks, specifically
            a. University Technology Park at IIT
            b. Chicago Technology Park Park (CTP)
            c. Illinois Science and Technology Park in Skokie
      v. Attract commercial development
         1. Retail
         2. Dining
         3. Entertainment
         4. Hotel
         5. Parking
      vi. Retain current residents in the neighborhood with jobs, lifestyle options
      vii. Attract new residents to the area
   b. Indirect Benefits
      i. There will be a "ripple effect" on the community from the development of the park—development should consider, and try to enhance the caliber, size and reach of those ripples
      ii. Area jobs servicing employees and residents of the tech park
      iii. "Critical Mass" for development and activities around the park
      iv. Support for schools through collaboration with tech park companies and by increasing demand for better school options
      v. Possible partnership with STEM-focused (science, technology, engineering and math) schools could provide alternative educational option for residents

EXPECTED BENEFITS OF CREATING A TECH PARK AT MICHAEL REESE HOSPITAL SITE
(continued)

2. Benefits to the City, County and State

a. Solidify Chicago as a global technology city

b. Develop a world class campus on prime, lakefront property

c. Collaborate and complement existing tech parks (in particular IIT and CTP)

d. Attract tech companies, established and new, to the region, thereby creating jobs through-out the area

e. Create an option for high growth tech companies to remain, expand and prosper in the city

f. Attract additional risk capital (investment and investors) to the region

g. Help retain top rated science, technology and research talent in the region

h. Provide a living laboratory for cutting-edge sustainability development

i. Create an environment for technology companies to seed, take root and make a home in Chicago and the region

j. Put a piece of prime property on the tax rolls

k. Tap into the commercial potential of federal dollars invested in research

ASSETS AND CHALLENGES

SITE ASSETS	SITE CHALLENGES

Site for Development
• Close to Central Business District, Museum Campus, cultural offerings
• Extraordinary lake and city views
• Proximity to I-55 & Lake Shore Drive
• Level land (demolition virtually complete)
• Significant size
• Proximity to proposed high-density residential developments at Prairie Shores and Lake Meadows
 	
Site for a Tech Park
• Proximity to research universities (IIT, UIC, UChicago, Northwestern)
• Proximity to great concentration of data center infrastructure and long-haul fiber transmission lines, including 350 E. Cermak (one of the world's largest data and server co-location centers)
• Proximity to Lake Michigan
• Proximity to McCormick Place (ideal location for conferences)
• Opportunity for high density development (high floor to area ratio (FAR))
• Potential to develop new infrastructure to meet demands of a tech park tenant base
	Site for Development
	• Lack of basic infrastructure (water, gas, electric)
	• No specific identity upon which to build brand
	  o Michael Reese name not "brandable"
	  o Site not identified with a specific neighborhood
	• Limited access to mass transportation
	• Separation from neighborhood street grid
	• Overlooks McCormick Place truck staging area
	• Market economics likely to require subsidy (initially unsupported by rents)
	• May be difficult to secure financing (debt/equity)
	• Possible environmental issues
	
	Site for a Tech Park
	• Relatively small size
	• Lack of infrastructure for high intensity technology demands
	• Not located near other existing technology companies

NEIGHBORHOOD ASSETS	NEIGHBORHOOD CHALLENGES
• Lakefront • Rich history • Boulevards and architecture • McCormick Place • Museum Campus • Housing – Lake Meadows, Prairie Shores	• Absence of retail, restaurant, lodging • Not yet a major destination location from other areas of city • Resulting in limited transportation services

ASSETS AND CHALLENGES

CITY ASSETS	CITY CHALLENGES

• Very livable city
• Largest city in the Midwest
• Global financial center
• Established and growing tech hub(s)
• Transportation hub
• Two major airports
  o O'Hare
  o Midway
• Increasingly becoming a center of risk capital investors
• Improving schools, including several top flight college prep schools
• Culture
• Sports
	• Significant traffic congestion
	• Aging transportation
	• Perception lags reality of Chicago as a technology hub
	• Not yet seen as an early stage venture capital center
	• Many improving schools still have a way to go before achieving excellence

REGION ASSETS	REGION CHALLENGES

• Proximity to many major research universities.
• 8 Big Ten universities within 240 miles of the site, with an average distance of approximately 165 miles.
• 30 full engineering schools, 28 limited engineering programs in 5 state region (IL, IN, IA, WI, MI)
• Chicago is a magnet for grads from Midwest region
• Established Life Sciences cluster
• Two major federal research laboratories
  o Argonne
  o Fermilab
	• Distance from legacy innovation hubs in Boston and Bay areas
	• Financial condition of states

FACTORS CRITICAL TO SUCCESS OF A TECH PARK

The first factor necessary for the successful development of a technology park is capital. Whether mega parks in Asia that are being developed with billions of dollars in state investment, or university linked parks of more modest scope, capital financing is critical. On the other hand, capital is necessary, but not sufficient for success.

Of equal importance is a long-term perspective and ample patience. Tech parks take years to progress from concept to critical mass. Some of the most notable parks took a generation (20+ years) to emerge as a success. Often, parks that identify and secure one or more anchor tenants can reduce the time to as few as 10 years.

In March 2008, the National Research Council convened a conference on best practices among science and technology parks around the world.[9] The symposium identified six best practices:

1. One or more committed **champions.** That is, an individual or individuals who possess both the dedication, energy, and to a significant extent, the power and influence to get a project off the ground and see it through to completion.

2. Effective **leadership** with the capabilities and resources to create and nurture networking and collaboration among the residents of the park is critical. Furthermore, a dynamic, capable leader can attract entrepreneurs, capital investors and other necessary people to the broader network structure of the park.

3. **Funding,** both public and private, to support development of the park as well as provide risk capital for innovation and commercialization of ideas. The most successful parks generally operate in a rich environment of stable access to venture capital for new companies, as well as private equity and debt financing vehicles for more established firms.

4. **Bridging Institutions** or other long-term governance mechanism to maintain and continuously develop the park's vision.

5. **Soft Infrastructure,** which includes the human factors that create and maintain the talent pool necessary to fuel innovation and help companies to grow. Soft infrastructure includes housing options, educational systems, and lifestyle amenities, among others.

6. **Metrics,** or measures to allow for proper evaluation of the performance and contribution of the park in light of the commitments of investors, governments and the community.

9 Understanding Research, Science and Technology Parks: Global Best Practice: Report of a Symposium. Charles W. Wessner, Editor: Committee on Comparative innovation Policy: Best Practice for the 32st Century; National Research Council (www.nap.edu/catalog/12546.html)

Another study prepared by Battelle in 2007[10] identified several important features and trends in the development of current parks. The study notes that research parks have evolved from the early 1960s stand-alone model to a form that is today much more integrated into their communities. These parks tend to be master planned developments with a mix of academic, industrial, commercial and residential structures. Because people work, live and play in these integrated communities, on-site amenities must be provided commensurate with the demands of the park tenants and residents.

The Battelle study notes several challenges that must also be addressed, including facilitating relationships—cultural and commercial—between businesses and universities. As well, it is necessary to address the challenges of commercialization inherent in bringing any new product idea to market.

10 Characteristics and Trends in north American Research Parks: 21st Century Directions. Prepared by Battelle Technology Partnership Practice, in connection with Association of University Research Parks. © October 2007.

FACTORS CRITICAL TO SUCCESS OF A TECH PARK (continued)

The advisory panel also identified several other facts that are important

1. **University affiliations (3+ is better)** While virtually every park is linked to at least one university, having the collaboration of several institutions significantly increases the likelihood of viability.

2. **Anchor tenants** help create the critical mass, and cash flow, necessary to carry a park from concept to reality (and serve as a powerful magnet for start-ups and talent).

3. **Industry clusters** attract tenants, and new companies spin off from existing firms. Clusters become virtuous circles, the more pronounced they become the stronger they attract other like businesses.   Early incentives to attract anchor tenants can build important momentum in establishing clusters.

4. **Hard infrastructure**
   a.   Data bandwidth
   b.   Electrical capacity and redundancy
   c.   Lab space
   d.   Office space
   e.   Transportation access (including mass transit, car and bicycle)
   f.   Security
   g.   Dining (convenience and better quality establishments)
   h.   Conference facilities

5. **Price competitiveness**
   a.   Taxes/Incentives
   b.   Rents
   c.   Labor
   d.   Indirect costs

6. **Flexibility**
   a.   Building uses
   b.   Floor plans
   c.   Lease options

7. **Proximity to**
   a.   Affordable, attractive housing
   b.   Transportation options
   c.   Restaurants, Night life, Culture
   d.   Activities

FACTORS CRITICAL TO SUCCESS OF A TECH PARK (continued)

8. 'Round the clock **life style** opportunities
   a. 24/7 accessibility
   b. Security

In addition to the above factors, review of technology parks around the globe generated several observations.

- It is important to note that virtually every tech park, successful or not, has received significant investments of public funds.

- It will be difficult to achieve qualitative success, and probably more difficult to achieve quantitative success (i.e., return on financial investment). In fact, "making the numbers work" may require support from civic-minded philanthropies/philanthropists.

- While it is most likely that data intensive companies will be attracted to the technology park because of the proximity to the fiber lines along the rail tracks, it will be important to also target more people-intensive industries and businesses to create adequate demand to sustain the ancillary amenities that bring a tech park to life.

- While it is not clear which came first—park or culture—most thriving tech parks are located in communities that celebrate entrepreneurship and risk taking.

- The most famously successful parks achieved their success over a long period of time. Consequently, it is worth again emphasizing the importance of governance structures, bridging institutions and, perhaps most important, patience.

SUSTAINABILITY

"Certain types of building are disproportionate users of resources, for example, data centers, clean rooms and laboratories. In other words, the types of buildings that you would expect to find in a technology park. According to Laboratories for the 21st Century (Labs21®), a laboratory can demand 3 – 8 times the energy of a traditional office building. A laboratory hood requires as much energy as three homes." [11]

Design matters. As energy consumption and pollution become increasingly important in evaluating new developments, designed-in sustainability factors will play a role in project selection. It is reasonable to believe that the "sustainability quotient" of a facility can become a competitive advantage. Designed-in sustainability can increase value of a building, decrease its operating costs, and increase tenant appeal.

According to Wirdzek and Galley, in the U.S., buildings account for 49% of primary energy use, 72 % of electricity consumption, 29% of CO_2 emissions, and 13.6% of potable water consumption. Green buildings, on the other hand, use 29% - 50% less energy, 40% less water, and reduce CO_2 emissions by 1/3 and solid waste by as much as 70%.[12]

Such results will lead to higher building values for buildings designed to achieve efficiencies. All achieved with little added construction cost (1% for "silver" LEED certification, 2-3% more for "gold" or "platinum").

According to the Chicago Central Area Committee, an economic development civic organization, the Site "offers ideal characteristics to create the single best example of sustainable planning, design and building in the world." They go on to note "the City of Chicago is positioned to respond to and lead [sustainable design] trends and, in so doing, become a capital of Green innovation, Green building, and practical Green economic development. Chicago can become to sustainability what Silicon Valley is to Information Technology."

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11 How Sustainability Advance Science Parks, Their Users, Communities and Investors. Phil Wirdzek, Lisa Galley. International Institute for Sustainable Laboratories, http://www.i2sl.org/elibrary/wirdzek2009.html. p1.
12 Wirdzek & Galley, p. 10

POTENTIAL NEXT STEPS

I. Decide who will champion the project
    a. Mayor/Mayor's office/Other
    b. Separate entity (public, private or joint)

II. Establish leadership model and designate/appoint leader(s)
    a. Within city government or separate entity
    b. Degree of independence from the public sector
    c. Skills/perspective mix
        i.   Developer
        ii. Entrepreneur
        iii. Technologist
        iv. Connector, alliance builder
        v.   Elected official

III. Design and establish long-term governance mechanism

IV. Determine approach to making site available to the market

V. Develop and execute plan for soliciting, evaluating and deciding on design

APPENDIX
a. Advisory Panel Process
b. Community Data
c. Bibliography

A. ADVISORY PANEL PROCESS

The full Panel met six times. The first four meetings included presentations by outside experts to help panel members understand the property particulars and the general issues associated with development of a tech park. As well, the panel learned about key successes and shortfalls of other tech park developments around the world. Finally, the group collaborated on identifying the global best practices, key success factors and avoidable pitfalls associated with developing successful technology parks.

There were six formal panel meetings:
- January 18 – Overview of the Site.
  Presenters: Andrew Mooney & Mike Jasso, Department of Housing and Economic Development, City of Chicago; Erin Lavin Carbonargi, Public Building Commission, City of Chicago
- February 9 – Chicago R&D/Technology Park Dynamics.
  Presenter: CBRE Life Science and Technology Group.
- February 16 – Vision for Chicago Technology & Innovation Campus.
  Presenter: Accenture.
- March 3 – Green Urban Development.
  Presenter: Chicago Central Area Committee.
- March 16 – Panel discussion.
- March 29 – Panel discussion, finalize report.

In addition to the general meetings, the panel also engaged local civic and community leaders to listen to their perspectives and hopes for the site.

APPENDIX

SITE AND COMMUNITY DATA

Adjacent Residential
- Lake Meadows – 1,869 rental units, studio, 1, 2 and 3 bedroom apartments.
- Prairie Shores – 1,675 rental units, studio, 1, 2 and 3 bedroom apartments.

Nearby Retail
- Lake Meadows Shopping Center

  3357 S. King Drive
- Jewel/OSCO

  35th St. and King Drive
- Dominick's

  3445 S. King Dr.
- Walgreens

  35th St. and King Drive
- South Loop/Roosevelt Road
  - o Jewel, Dominick's, Whole Foods
  - o Target
  - o DSW
  - o Best Buy
  - o Home Depot
  - o Staples

Nearby Services
- Police: Chicago Police Headquarters, 3510 S Michigan Ave.
- Fire: Chicago Fire Department, 10 W 35th St.
- Medical: Mercy Hospital, 2525 S. Michigan Ave.

PARTIAL LIST OF AREA SCHOOLS

Public Primary Schools	Type	Grades
Ariel 1119 E. 46th St.	Small	Pre K – 8
Doolittle East 535 E. 35th St	Neighborhood	Pre K – 8
Drake 2722 S. King Dr.	Neighborhood	K – 8
Fuller 4214 S. Saint Lawrence Ave	Neighborhood	Pre K – 8
Haines 242 W. 23rd Place	Neighborhood	Pre K-8
Healy 3010 S. Parnell Ave.	Neighborhood	Pre K-8
Mayo 249 E. 37th St	Neighborhood	Pre K – 8
Mollison 4425 S. Dr. Martin L King Jr. Dr	Neighborhood	K – 8
National Teachers Academy 55 W. Cermak	Neighborhood	Pre K-8
Pershing East 3113 S. Rhodes Ave	Magnet	Pre K – 3
Pershing West 3200 S. Calumet Ave	Magnet	4 – 8
Price 4251 S. Drexel Blvd	Neighborhood	4 – 8
Robinson 4225 S. Lake Park Ave	Neighborhood	Pre K – 3
Sheridan 533 W. 27th St	Magnet	K – 8
University of Chicago – Donaghue 707 E. 36th St.	Charter	Pre K – 5
University of Chicago – NKO 1119 E. 46th St	Charter	Pre K – 5
University of Chicago – Woodson 4444 S. Evans Ave	Charter	6-8
Ward, J. 3710 S. Shields Ave	Neighborhood	Pre K – 8
Williams 2710 S. Dearborn St.	Small	Pre K – 5
Williams Middle 2710 S. Dearborn St.	Small	6 – 8
Wells 244 E. Pershing Rd	Small	K – 8
Woodson 4414 S. Evans	Neighborhood	Pre K – 8

PARTIAL LIST OF AREA SCHOOLS

Catholic Primary Schools	Type	Grades
Bridgeport Catholic Academy 3700 S. Lowe Ave.	Private	K – 8
Holy Angels School 750 E. 40th St.	Private	K – 8
Old St. Mary's School 1532 S. Michigan Ave.	Private	K – 8
St. Barbara School 2867 S. Throop St.	Private	K – 8
St. Elizabeth School 4052 S. Wabash Ave	Private	K – 8
St. Gabriel School 607 W. 45th St.	Private	K – 8
St. Jerome School 2801 S. Princeton Ave	Private	K – 8
St. Pius V School 1919 S. Ashland Ave.	Private	K – 8
St. Procopius School 1625 S. Allport St.	Private	K – 8
St. Therese School 247 W. 23rd St.	Private	K – 8
Santa Lucia School 3017 S. Wells St.	Private	K – 8

PARTIAL LIST OF AREA SCHOOLS

High Schools	Type	Grades
The Air Force Academy High School 630 South Wells Street	Career Academy	9 - 10
ChiArts 3200 S. Calument Ave	Contract	9 - 10
Chicago Military Academy 3519 S. Giles Ave	Military Academy	9 – 12
Cristo Rey Jesuit High School 1852 W. 22nd Pl.	Catholic – Coed	9 - 12
Daniel Hale Williams Preparatory School of Medicine 4934 South Wabash	Career Academy	9 - 12
De La Salle - Institute Campus 3434 S. Michigan Ave.	Catholic – Boys	9 - 12
De La Salle - Lourdes Hall Campus 1040 W. 32nd Pl.	Catholic – Girls	9 – 12
Dunbar 3000 S. King Dr.	Career Academy	9 - 12
Graham Training Center 2347 S. Wabash Ave.	Special Education	10 - 12
Hales Franciscan High School 4930 Cottage Grove Ave	Catholic – Boys	9 - 12
King College Prep 4445 S. Drexel Blvd	Selective Enrollment	9 – 12
Perspectives Joslin 1930 S. Archer	Charter	9 – 12
Perspectives/IIT 3663 South Wabash Avenue	Charter	9 – 12
Phillips 244 E. Pershing	Neighborhood	9 – 12
St. Ignatius College Prep. 1076 W. Roosevelt Rd.	Catholic – Coed	9 – 12
University of Chicago Lab Schools, 1362 E. 59th St.	Private	9 – 12
Urban Prep – South Shore 1014 E. 4th St	Charter	9 – 12
Young Women's Leadership 2641 S. Calumet	Charter	7 – 12

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