Discovery Park

A Collaborative Transformation Project at Brookhaven National Laboratory

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BNL History

- Almost seven decades of outstanding scientific achievement
- Founded on March 21, 1947
  - Columbia, Cornell, Harvard, MIT, Johns Hopkins, Pennsylvania, Princeton, Rochester, Yale
- Funded by AEC for research into the peaceful uses of the atom to improve public well-being
  - Promote basic research in the physical, chemical, biological, and engineering aspects of the atomic sciences

- Establish a national laboratory in the Northeast to design, construct, and operate large scientific machines that individual institutions could not afford to develop on their own

- Seven Nobel Prizes
Laboratory at a Glance

- Only multi-program National Laboratory in the Northeast
- Physical Assets
  - 5,320 acres
  - 321 buildings; 4.88 million SF
- Human Capital
  - 3,041 staff
  - 4,427 facility users
  - 400 undergrad/grad students
- Support of over 1,100 NYS Researchers
  - 850 Academic
  - 185 Medicine
  - 45 Industry
  - 25 State & other
- Strong Regional Partnership with Stony Brook University

- Total 2009 economic output
  - $704 Million
  - 5,400 jobs
  - $212 Million goods and services
  - $74.7 Million in new construction and renovation

- Annual economic output 2010-2014
  - $950 Million / 7,100 jobs
Current Situation

Moving from 40-65 year old buildings to safe, mission-ready science facilities and infrastructure

- BNL is one of the oldest of the DOE multi-program laboratories – weighted average building age
- 69 buildings (over 850K SF) date back to WW II
- 24% of offices are in legacy WW II buildings
- Mission Readiness requires demolition, new construction, renovation, and recapitalization
- Scientific strategies require and benefit from increasing external and particularly regional partnerships (Energy, Discovery to Deployment, Education, etc.)
Current Situation

Moving from 40-65 year old buildings to safe, mission-ready science facilities and infrastructure

*per July 2013 FIMS data

* per FY 2012 DOE Budget Office Metrics

Average Age of Facilities (Years) - FY 12

Average Age of Facilities (Years) - FY 13

*per July 2013 FIMS data
Mission Ready Facilities & Infrastructure

Campus development zones which inform strategic infrastructure, facility, and BNL business growth decisions
Funding Strategy

Federal Projects
Unique Scientific Capabilities

Laboratory Generated
Small Projects/Renovation
Energy and Utilities - UESC

Private Partnership Lease
Discovery Park
Discovery Park – A Transformative Project

- Envisioned as a joint land use partnership with New York State and Long Island’s local and regional government, as well as private industry.
- Discovery Park will enhance the DOE’s investment and assets at Brookhaven National Laboratory and position BNL as a valued and visible community partner.
- Discovery Park will leverage assets and needs in several critical areas:
  - Laboratory Revitalization
  - Guest and User Services
  - Energy Science and Technology
  - Next Generation Workforce Development
  - Discovery to Deployment Partnerships
Laboratory Revitalization

- One in four BNL office occupants reside in World War II-era facilities
- Discovery Park’s Administrative Office Building can leverage private-sector shared resources
- Migrating to modern administrative offices will provide a more sustainable operation and an estimated 35 percent footprint reduction
- Elimination of legacy buildings will eliminate millions of dollars of growing functional, maintenance, health and safety, and fire protection legacy
Guest and User Portal

- The current and expanded major facilities (NSLS to NSLS-II and RHIC to eRHIC) attract over 4,000 machine users from across the world each year and user facility demand is projected to expand by 50 percent.

- A critical demand exists for “dorm style” user facility accommodations that are conventionally co-located and integrated with BNL’s research operations and facilitate an unmatched scientific community.

Averaging 68,000 room nights per year over last five years.
Regional Energy Science & Technology Center

- BNL’s role in solving regional and national energy problems brings a variety of capabilities, including the 32MW Long Island Solar Farm and BNL’s Microgrid as an inherent ‘Lab Plant’ research tool for grid research.

- Discovery Park will include the Advanced Electric Grid Innovation and Support (AEGIS) Center for electric network monitoring, analysis, and modeling creating a significant tool for the Northeast region.

- Broad regional partnerships with DOE and BSA will provide support.
Next Generation Workforce Development

- As an anchor for Discovery Park, the **Portal to Discovery** provides a new hands-on science educational capability for substantially expanding the current 40,000+ students/year.

- In addition to STEM education, the facility serves as an iconic entrance, visitor processing, outreach, scientific “Summer School,” and service facility, available for community use.

- Funding for the Portal to Discovery will be leveraged by developing partnerships with local not-for-profit organizations and the DOE.

www.Portaltodiscovery.org
Discovery to Deployment Partnerships

- Discovery Park can provide space for new businesses and industrial partnerships in immediate proximity to the scientific engine and user facilities of BNL.
- BNL has the track record and the expertise to connect technologies and entrepreneurs to sources of capital, service providers, manufacturing, and market channels.
Infrastructure Renewal, Revitalization, and Repurposing

**Development Characteristics**
- 40 acres
- 730,000 SF
- 1,000 - 1,500 occupants

**Features**
1. Traffic circle / roundabout
2. Portal to Discovery
3. New security gate
4. 200K GSF Lab/Admin. Buildings
5. Danish House (Conf./Retreat)
6. AEGIS Facility
7. Child Development Center
8. 30K GSF Research Lab
9. Visitor/user/guest housing

**Existing Brownfield Site**
- Current facilities are well beyond their expected life cycle and continue to deteriorate.
- Two facilities have already experienced structural failure and have been demolished.
- Housing units range from studios to multi-bedroom apartments, which are not best positioned to meet the laboratories housing strategy.
- BNL has a sustained business of 68,000 room nights per year on average.

**Proposed Improvements**
- New, state-of-the-art offices, laboratories, and support facilities.
- Provide revitalized dormitory housing for BNL's unprecedented national and international community of researchers and scientists.
- Visitor and guest processing, amenities, and outreach.
- Revitalized scientific community and atmosphere.
- Integration of existing child development center.
- Expansion space for technology and industry partnerships.
Discovery Park will provide a new “Front Door” to the campus, reflecting the world-class scientific research being performed at BNL.

The revitalization of this brownfield site maximizes its potential while respecting the existing environmental characteristics of the campus.

Beyond simply renewing infrastructure, the improvements will refocus the existing site to serve as a modern, expanded gateway to the DOE science capabilities in an open environment.

The development provides the option for non-DOE investment in infrastructure and for increased partnerships and collaboration.
Additional Questions and Comments?