Discovery Park

Community Advisory Council
October 12, 2017

Lanny Bates
Director,
Campus Development
Discovery Park – Evolving to a Compelling Vision

Discovery Park Repurposes an Existing Developed Property

Existing

Proposed
Discovery Park – Evolving to a Compelling Vision

2012
- Initial idea to repurpose land
- Created early master plan

2013
- Initial public discussion at invitation of Town of Brookhaven

2014
- Campus development plan and BSA Contract proposal
- Engaged GSA

2015
- Became a “recognized project”
- Awarded $1.8M NYS grant

2016
- Completed Feasibility Study
- Received DOE endorsement for a Federal anchor building

2017
- Received SUSB CD-0
- Created Upton Square as initial development focus

Infrastructure Renewal

- Enables demolition of 250,000 SF of old inadequate wood buildings
- Eliminates $34M of repair and ESH legacy deficiencies

<table>
<thead>
<tr>
<th>Facility Type (Total 4.75M SF)</th>
<th>Adequate</th>
<th>Sub-standard</th>
<th>Inadequate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mission Unique Facilities</td>
<td>20%</td>
<td>11%</td>
<td>1%</td>
</tr>
<tr>
<td>Conventional Facilities</td>
<td>18%</td>
<td>29%</td>
<td>21%</td>
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</tbody>
</table>

User Accommodation

- Enhanced one-stop guest/user experience
- Renewed user housing and collaboration space
- Accessible conference center
- Attractive “sense of place”

Economic Development

- Technology transfer, growth, and impact

Opportunities for Discovery Park Tenants

- Supply Chain Relationships
  - “Implant Laboratories”
  - Joint Institutes
  - Technology Incubators

Anticipated User Growth

FY14 - FY25
Strong Regional Support is in Place

The Public-Private Partnership concept of Discovery Park is fully aligned with regional economic development

- $1.8M Economic Development Grant from NYS for utility infrastructure
- Major utility provider interactions (National Grid and PSEGLI) completed with strong interest and opportunities for additional financial support
- Integration of Discovery Park into the Suffolk County ConnectLI “High-Tech Economic Plan”
- $20M for the Yaphank Train Station relocation (“The BNL Station”) in Governor’s massive $5.6B Long Island transportation upgrade project
  - BNL participating with the wide array of stakeholders in the Yaphank project

“Governor Cuomo outlined $5.6 billion in state investments in the LIRR system which will include the new Third Track, the Double Track, 39 renovated LIRR stations and grade crossing eliminations -- modernizing transportation across the region to provide a state-of-the-art system for Long Island.”
Discovery Park Model

Work is underway on development of a model lease and resolution of issues to enable the private development.

<table>
<thead>
<tr>
<th>REAL ESTATE</th>
<th>GOVERNANCE</th>
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<tbody>
<tr>
<td>Split-Site Federal Lease</td>
<td>Mission-Based Progressive Development</td>
</tr>
<tr>
<td></td>
<td>Fee-Based Not for Profit or Commercial</td>
</tr>
<tr>
<td></td>
<td>For Profit Commercial - Master Developer</td>
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<tr>
<td>Full Commercial Off-Site Location</td>
<td>Discovery Park Model</td>
</tr>
<tr>
<td></td>
<td>• Mission integrated</td>
</tr>
<tr>
<td></td>
<td>• A la carte approach</td>
</tr>
<tr>
<td></td>
<td>• Internal master developer</td>
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<tr>
<td></td>
<td>• Directable approach</td>
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<tr>
<td></td>
<td>• Flexible but less integrated</td>
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<tr>
<td></td>
<td>• Service-based master developer</td>
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<tr>
<td></td>
<td>• Stand alone real estate development</td>
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<td></td>
<td>• Market driven</td>
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<td></td>
<td>• Master developer profit center</td>
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MISSION ALIGNMENT

DEVELOPMENT RISK
Upton Square

A concept to allow for accelerated development and identification of the “User Village” component of Discovery Park

• Highlights the history of BNL (Camp Upton) and perpetuates a unique historical name

• Creates an initial three-building, dense, user village, establishing a significant component of the Discovery Park vision

<table>
<thead>
<tr>
<th>SUSC</th>
<th>The Federal Science and User Support Center</th>
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<tbody>
<tr>
<td>Housing</td>
<td>An innovative renewed housing facility</td>
</tr>
<tr>
<td>Education Outreach</td>
<td>A unique regional hub, that will leverage private funding and adjacency to BNL to inspire teachers and students in discovery</td>
</tr>
<tr>
<td>User Amenities</td>
<td>Selected amenities collocated in the two private buildings</td>
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</table>
Science and User Support Center (SUSC)

A Signature Facility enabling infrastructure renewal and Scientific User Accommodation

- CD-0 (Approval of Mission Need) achieved in Dec 2016
- Preliminary Cost Estimate: ~$80M
  - ~80,000-100,000 GSF
  - ~250-300 person occupancy
  - ~300 person Conference Facility
- Conceptual Design is complete to support a CD-1 for a Federal Line Item investment
- Additional engineering work completed to design the Entrance Project as a BNL enabling investment (IGPP)
- The SUSC is the “anchor tenant” in Discovery Park that will enable additional private investment
Discovery Park Master Plan

The Discovery Park Master Plan Integrates multiple investment options through phased development for maximum impact.
Discovery Park Tenant Development

The Discovery Park Project has included an effort, complimentary to the BNL Growth Strategy, to identify and target potential scientific tenants

Phase I TEConomy Study – Platform Technologies

<table>
<thead>
<tr>
<th>Phase I BNL Platform Technologies</th>
<th>TBED Platform Criteria</th>
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</thead>
<tbody>
<tr>
<td>• Advanced Energy Materials and Chemistry</td>
<td>• Built on competency in R&amp;D</td>
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<tr>
<td>• Instrument, Detector and Sensor Development</td>
<td>• Leverages existing business and institutions in similar areas</td>
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<tr>
<td>• Life Sciences Technologies</td>
<td>• Opportunity for public/private partnerships</td>
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<tr>
<td>• Nanomaterials Development, Fabrication and Characterization</td>
<td>• Associated with a significant market and line-of-sight to market technology growth</td>
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<tr>
<td>• Space Radiation Effects on Bio/man-made Materials</td>
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<td>• Ultra-High Resolution Functional and In Operando Imaging</td>
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Phase II TEConomy Study – Near-Term Opportunities

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<thead>
<tr>
<th>Phase II BNL Near-Term Opportunities</th>
<th>Opportunity Drivers</th>
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<tbody>
<tr>
<td>• Drug Discovery</td>
<td>• Leveraging New York State’s investment in energy and bioscience</td>
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<tr>
<td>• Medical Isotopes</td>
<td>• Co-locating partner facilities</td>
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<tr>
<td>• Space Radiation Effects on Biological and Man-made Materials</td>
<td>• Advancing new product development and startup formation</td>
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<tr>
<td>• Materials for Nuclear Energy Applications</td>
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<tr>
<td>• Advanced Electric Grid Development</td>
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<tr>
<td>• Computational Sciences and Big Data Analytics</td>
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## Discovery Park Path Forward

The SUSC Schedule is the index for planning other elements of Discovery Park

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<thead>
<tr>
<th></th>
<th>FY17</th>
<th>FY18</th>
<th>FY19</th>
<th>FY20</th>
<th>FY21</th>
<th>FY22</th>
<th>FY23</th>
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<td><strong>Planning &amp; Access</strong></td>
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<td>Lease Development</td>
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<td>On-going Individual DOE Lease Approval Process</td>
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<tr>
<td>Site Master Plan</td>
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<td>Entrance Design</td>
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<td>Entrance Construction</td>
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<tr>
<td><strong>Upton Square Development</strong></td>
<td>CD-0</td>
<td>CD-1</td>
<td>CD-2</td>
<td>CD-3</td>
<td>CD-4</td>
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<td>SUSC CDR</td>
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<td>SUSC Building Design</td>
<td>SUSC Construction</td>
<td>SUSC Occupancy</td>
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<td>Upton Sq. NEPA</td>
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<td>Private Lease, RFP &amp; Award</td>
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<td>Private Design &amp; Construction</td>
<td>Private Occupancy</td>
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<td>Private Program Development</td>
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<td><strong>Research &amp; Development</strong></td>
<td>Technology Partnership Development</td>
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<td>R&amp;D Park NEPA</td>
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<td>Technology RFP</td>
<td>1st Technology Partnership Design &amp; Construction</td>
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<td>Technology Partnership Facilities</td>
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<td>On-going Development of Research Park on Individual Ground Leases</td>
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### Color Legend
- **Environmental Approval**
- **Development Process**
- **Design Process**
- **Procurement**
- **Administrative Approval**
- **Design/Build Process**
- **Construction**
- **Occupancy/Operation**

Source: U.S. Department of Energy, Brookhaven National Laboratory.