

# Discovery Park

## *A Concept to Deliver the Full Potential of Brookhaven National Laboratory*

*Lanny Bates  
Community Advisory Council  
September 10, 2015*



**BROOKHAVEN**  
NATIONAL LABORATORY

*a passion for discovery*



U.S. DEPARTMENT OF  
**ENERGY** | Office of  
Science

# DOE investments in BNL are having an impact

*Moving toward safe, mission-ready science facilities and infrastructure*



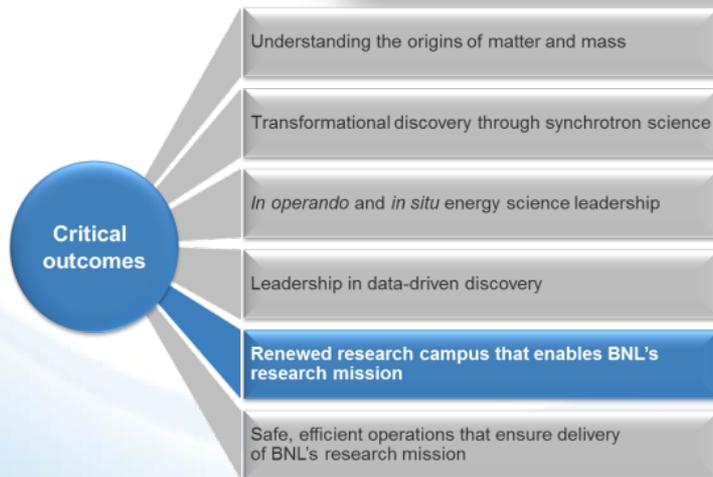
Recent DOE investments have substantially changed the BNL landscape

- Reduced average age of facilities by 5 years
- Built ~870K sq. ft. of new research and support facilities
- Renovated ~124K sq. ft. of core science buildings
- Revitalized facilities have driven a positive change in spirit and culture



# Ten-year BNL Campus Vision

*Delivering the next decade of science while transforming the Laboratory Campus with a diverse investment portfolio*



- Focus key future Federal investment in additional core building renovation to enable the scientific agenda
- Make research safe and cost effective by downsizing the campus and demolishing old buildings
- Ensure scientific machine reliability through targeted utility infrastructure investments
- Renew support infrastructure and enable the growing population of critical scientific users through an innovative public-private concept of Discovery Park

Federal

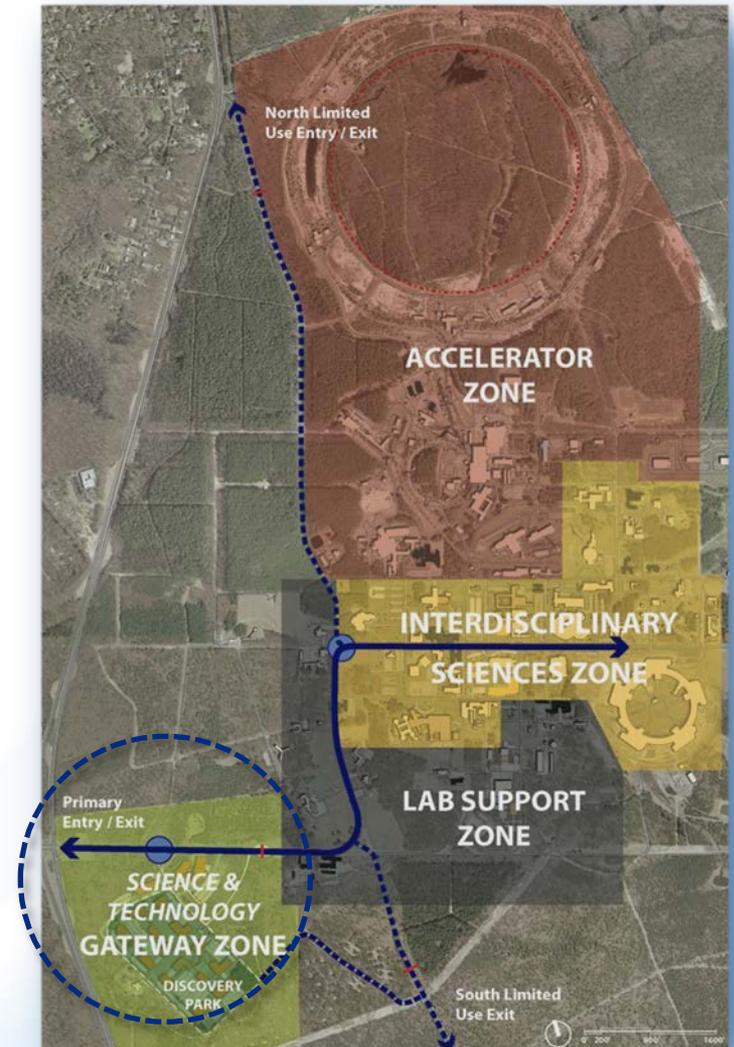
Indirect

Private

# Discovery Park – a Transformative Project

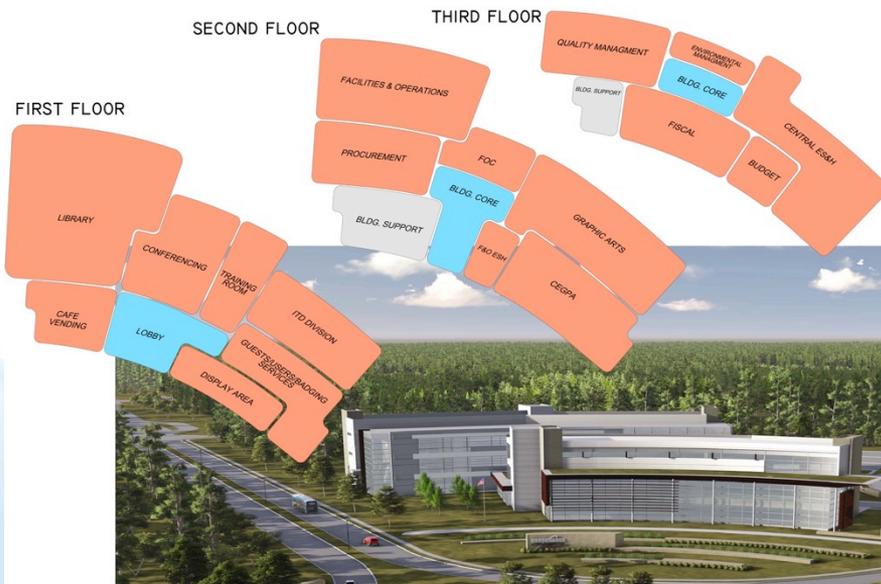
*Delivering support capability to the DOE mission scientific tools with very limited Federal investment*

- Envisioned as a joint partnership with external public/private resources through an alternative land use
- Deployment alternatives leverage available Federal Authorities from DOE and others
- This Gateway Zone will develop a “Research Village” to fill two key DOE capability gaps
  - Site infrastructure renewal and operational efficiency
  - User amenities and housing
- Discovery Park brings a new external face to the Laboratory and provides valuable enhancement to the Laboratory by facilitating complementary local and regional economic benefit

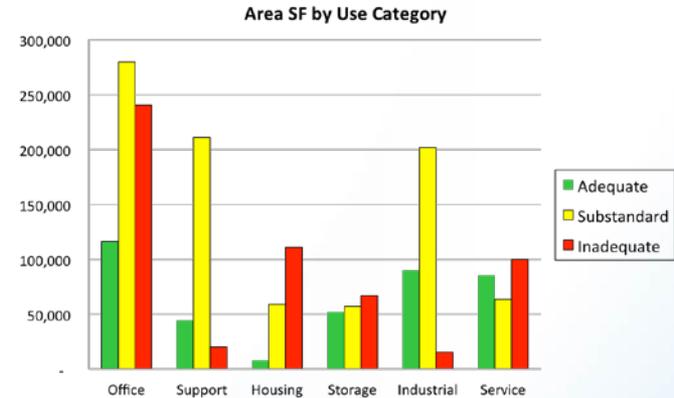


# Infrastructure Renewal

*Renewed support facilities are critical to carrying out the DOE mission by providing optimal operation of the research enterprise*



- Old inadequate WWII wood frame facilities house >300 BNL support staff

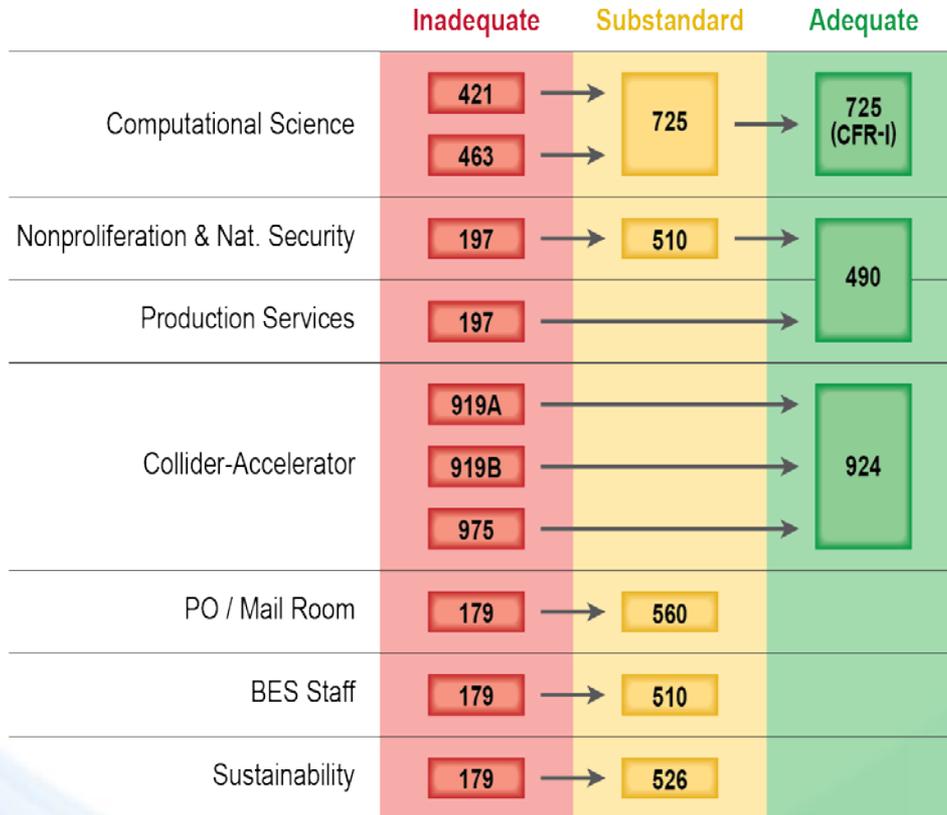


- The preliminary Discovery Park plan provides 130,000 GSF of new office, administrative, and conference space, and 36,000 GSF of housing
- Construction of 166,000 GSF enables
  - Demolition of ~300,000 GSF of office and housing,
  - Improves office space utilization by 15%, and
  - Eliminates \$34M of repair and ESH legacy deficiencies

# Space Reduction Plan

*BNL has an ongoing multi-year plan to consolidate out of and demolish old inadequate buildings*

## Consolidation and Demolition – Without Discovery Park



**BNL Building Moves**

Demolition	GSF
Demolished since 2002	383,043
Existing Vacant Space (FIMS)	27,362
In-Progress Vacant Space (FIMS)	42,355
Planned Indirect Funded Demolition	92,460
<b>Sub-Total Demolition</b>	<b>545,220</b>

# Space Reduction Plan

*Discovery Park availability substantially increases opportunity for footprint reduction and demolition*

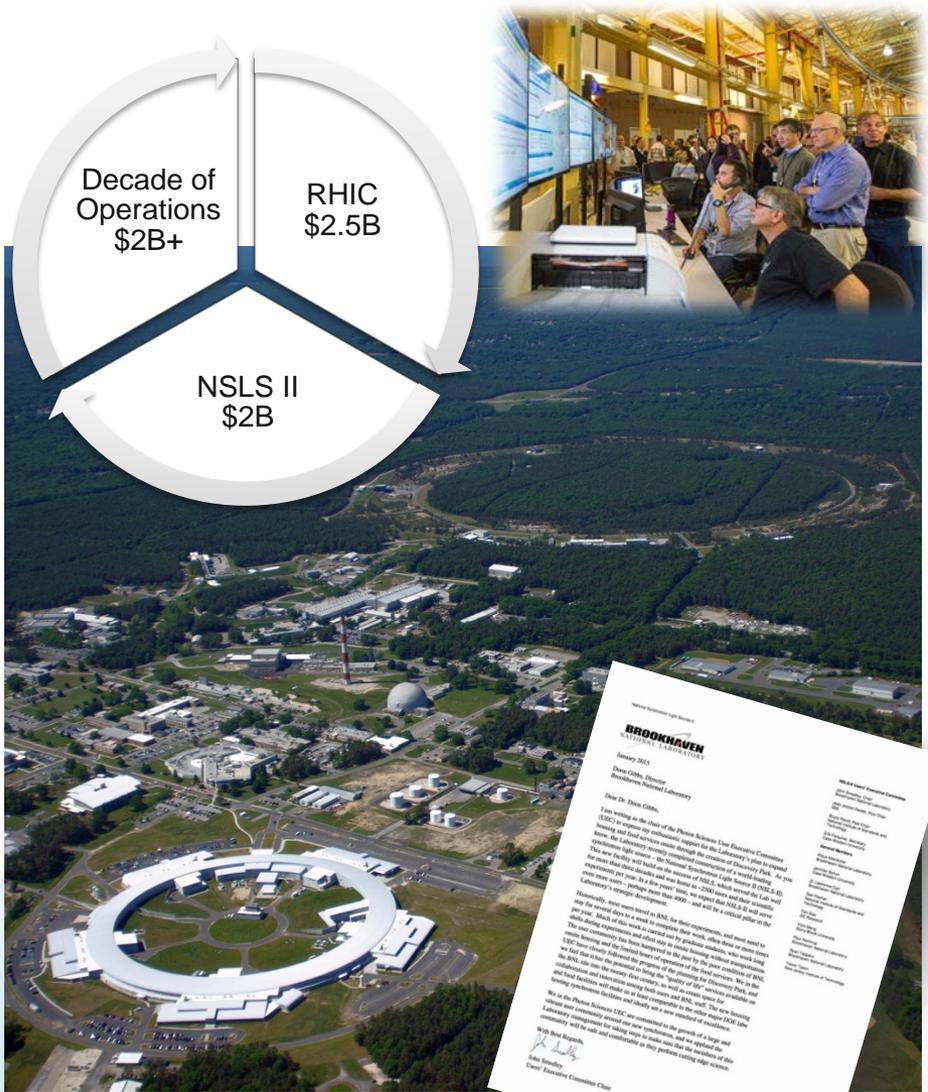
## Consolidation and Demolition – Discovery Park Enabled



Demolition	GSF
Prior Demolition Plan Total	545,220
DP Enabled (Non-Housing) Demolition	121,639
DP Enabled Dorms Demolition	58,767
DP Enabled Apts. Demolition	106,856
<b>Total Demolition</b>	<b>832,482</b>

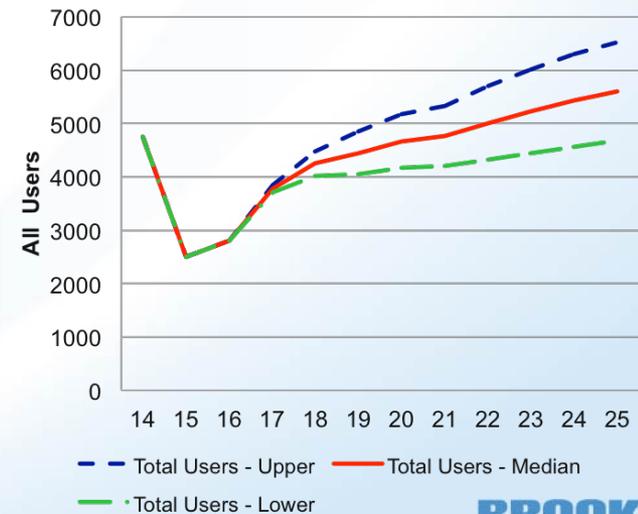
# Attracting and Growing the User Community

The user community provides the intellectual capital to realize the full value of the significant DOE scientific investment



- The next decade will see significant growth in scientific users from 4,500 to 6,000
- The challenge to manage and interpret increasing larger data sets will require more robust user support and is expected to increase user residence time on site
- Quality user accommodation is important to attracting the best, brightest, and most diverse research community

Projected Total Users by FY



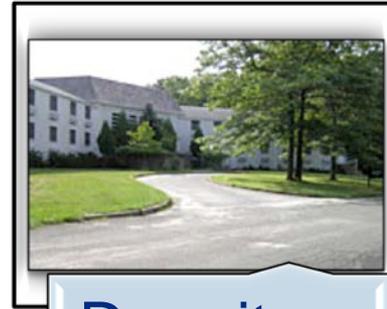
# On-Site User Housing

*Affordable housing is a recognized Long Island Challenge. Convenient and reasonably priced on-site housing is a mission enabler for the DOE user facilities*

- BNL has a strong housing business for users with a combination of apartments, dormitories, and efficiency/hotel accommodations from Camp Upton legacy which is no longer maintainable
- The current total business averages 60,000 room nights per year, roughly equally split between apartments and dormitories. The dorm business can be transferred to a private operation on site
- Ongoing commercial development near the Lab entrance will allow outsourcing of longer-term apartment stays but not the dormitory need



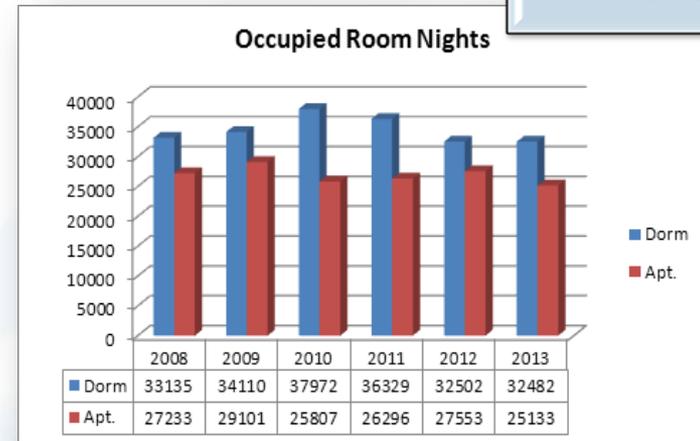
Apartment



Dormitory



Efficiency



# Leveraging Commercial Housing Options

- AVR Realty is currently developing “The Meadows at Yaphank” as a modern “Mixed Use Development”
- The innovative plan is a combination of housing, retail, and office to create an attractive, walk-able community
- “Executive Apartments” can be provided based on demand with transportation options
- First units (two bedroom townhouses) are expected in November 2015 with 240 units (Phase I) available by Summer 2016
- Rental rates compare to BNL apartments
- The Meadows provides a viable solution for apartments but does not address the “non-commercial” product of dormitory-style space which will be developed in Discovery Park

This two-part approach will provide an optimum solution for user needs



# Guest Housing Facility Concept

## ■ Description

- A renewed, short-term convenient housing facility designed for high occupancy and low rent
- Recent studies have sized at ~120 units
- Concepts include “dormitory” or a new, urban “Micro-apartment” approach
- Occupancy rates expected to be 65-80%, including commercial non-BNL use
- Can be a phased expansion to fine-tune market sizing

## ■ Governance

- Ownership and operation by a private company based on rent revenue
- Operations cost lower than a traditional hotel by taking advantage of the efficiency of longer term average stays

- Estimated at \$13-15M (\$325/sq. ft.) private construction cost

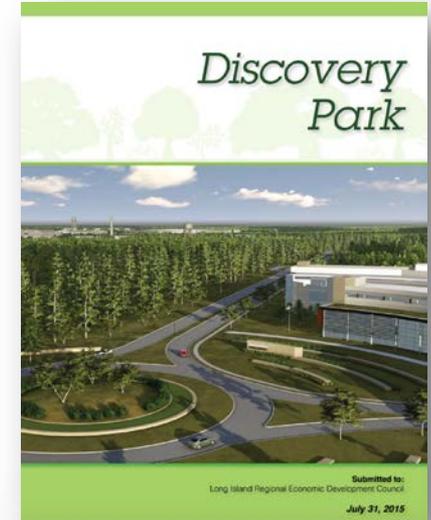


*Rough Developer assessment of rental cost (per night):*

- Micro-apartments \$60-65
- Dorm rooms \$50-55
- Current Dorms \$45

# Regional Considerations in the Discovery Park Concept

- BNL has a growing Northeast regional presence in energy research. This value has been reflected in NYS investments through the BSA Contract
- Long Island is increasingly focusing on a technology driven economy. BNL facilities are attractive externally as an engine for private-driven economic development
- New York State and Suffolk County are becoming strong advocates of the Discovery Park concept
  - Empire State Development Corporation (ESDC) grant application submitted to buy down the initial utility infrastructure costs
  - Discovery Park included in the Suffolk County Executives' Innovation Zone proposal on June 16, 2015
- This regional attraction creates a unique opportunity to leverage private investment in Discovery Park



## Bellone pitches \$300M million expanded plan to tie transit, downtowns and research centers

June 16, 2015 by RICK BRAND / rick.brand@newsday.com



Suffolk County Executive Steve Bellone on Tuesday unveiled an expanded \$300 million rapid bus transit plan for new rail and airport terminals he said would more closely tie transit, downtowns and major research centers and create jobs for young workers.

Bellone said the aim is to capitalize on the county's research institutions, a highly educated population and natural attractions such as beaches, parklands and farms to attract innovative businesses and high-caliber employees.

"Long Island is losing its young at a rate faster than anybody," Bellone said. "We want to build a network of vibrant downtowns connected by a transit system that connects young people to all the places they want to be without getting in a car."

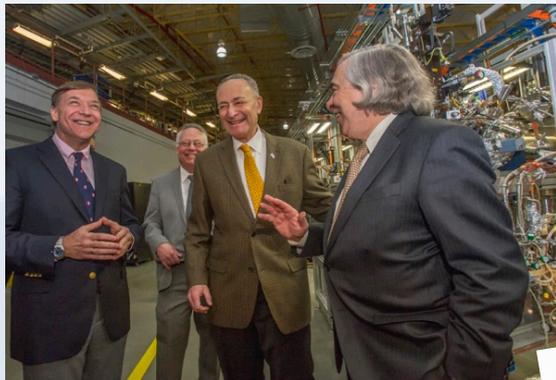


# Leveraging Opportunity for Strategic Partnerships

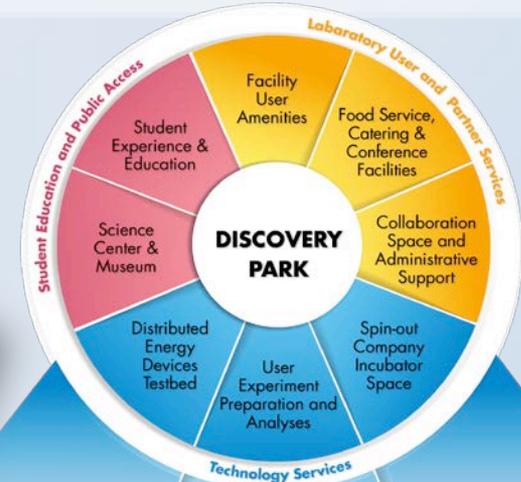


## National Synchrotron Light Source II (NSLS-II) Dedication Ceremony — Senator Charles E. Schumer Comments Friday, February 6, 2015

*“Amazing day ... More scientists will come here, more great research will be done here, and it means more jobs here on Long Island. ... Even if you are not one of the great physicists or scientists, if you live on Long Island this is going to matter to you because not only does it produce good science but it produces good jobs and it is the future for Long Island.”*



## NSLS II Dedication February 6, 2015



- Solar Test Systems Control
- Grid Testbed Control
- Grid Operations Center
- Power Systems Operations
- Equipment Reliability Testing
- Sample preparation
- In-operando testing
- Standard materials testing
- Post-experiment data analysis
- Office space
- Development Labs
- Shared admin services

# Discovery Park Approach

*Discovery Park repurposes a previously utilized property for minimal environmental impact and maximum commercial leverage for the mission*

The Non-Federal Development approach repurposes 40-60 acres of previously developed land convenient to, but outside, the Lab entrance

- Renewed infrastructure
- One stop, efficient user and visitor processing
- Open access to showcase DOE science and leverage community engagement
- A vital sense of place to attract young scientists
- Supports progressive development for “just-in-time” demolition to maintain housing continuity



## Preliminary Programmatic Requirements

- Entrance Facility of ~130,000 GSF
- Housing Facility of ~36,000 GSF
- Entrance roundabout, renewed security portal, and utility infrastructure
- Expandable to over 700,000 GSF for Strategic Partnership mission needs

# Project Status and Next Steps

*The concept of Discovery Park has leveraged 3 years of thought and engagement with a wide variety of experts and potential stakeholders*

Discovery Park has made significant progress toward a viable plan

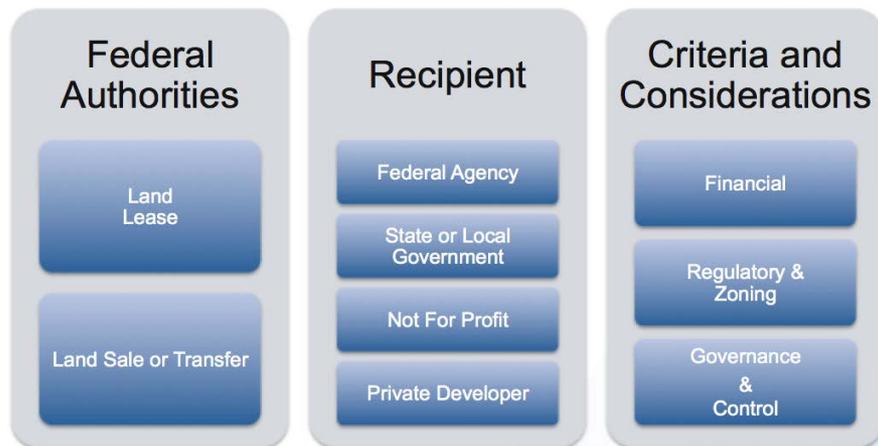
- Significant interest exists locally, regionally, and with potential partners
- The Discovery Park concept is an innovative approach that reaches beyond the concept of traditional Federal alternative financing.

June 4, 2015 Washington, DC

The next step is to more formally engage with the commercial real estate industry to validate the viability and develop an optimum model to recommend to the Department of Energy

Major Milestones	FY
Feasibility study/Alternatives development/DOE approval	2015 - 2016
Approve Land Transaction	2017
Approve & Award Initial Development Plan for construction	2018
Initial Development Completed	2020

## Summary of Options for consideration



# Summary

- Discovery Park can bring significant value to DOE and the New York Region through a unique Public-Private Partnership
- The Project Team will structure a land transaction for the identified 40-60 acres to facilitate commercial development of facilities
  - Convenient, modern, and reasonably priced housing for the BNL user community
  - Quick and easy one-stop administrative processing for the expanded user population and visitors to the BNL site
  - Convenient, efficient and cost effective commercial office space available to consolidate BNL support staff functions
  - Public accessibility to leverage regional economic development and bring local community value
  - A governance structure that can foster private development and commercial operations while maintaining synergy with the DOE and BNL mission
- Federal funding limited to Laboratory indirect contributions for project management, entrance modifications, demolition, and lease costs

BSA will deliver, by June 2016, a feasibility/alternatives study and proposed development model for DOE action