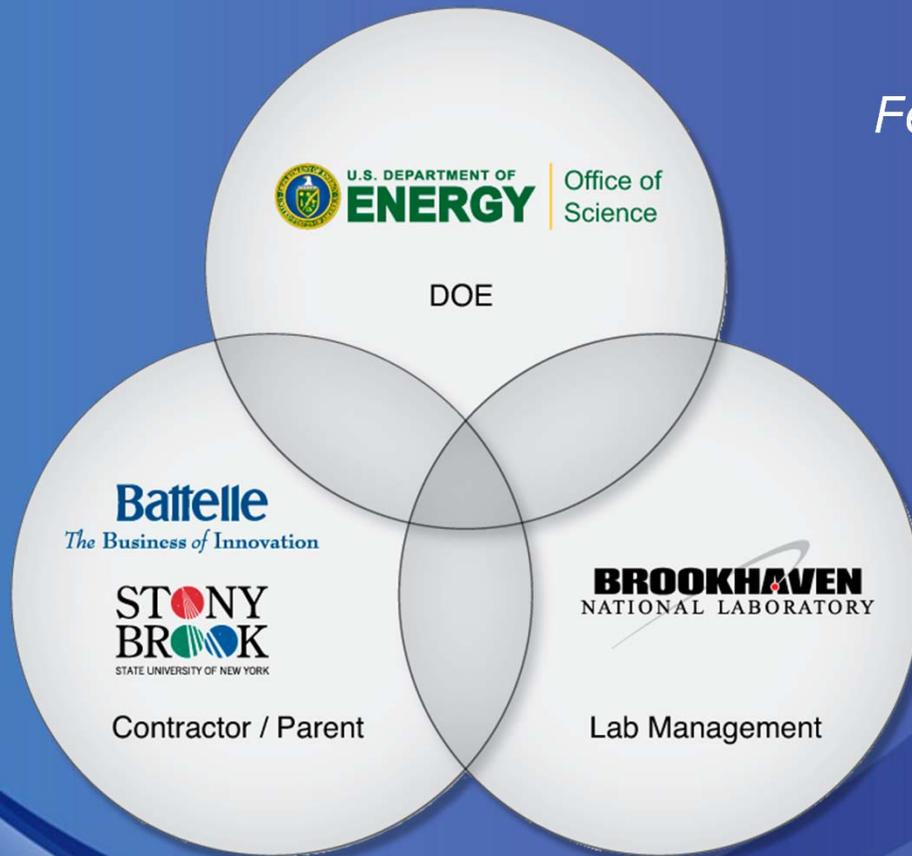


Brookhaven National Laboratory Overview and Planning

*Reinhold Mann
February 5, 2014*



BROOKHAVEN
NATIONAL LABORATORY

a passion for discovery

 U.S. DEPARTMENT OF
ENERGY | Office of
Science

The DOE National Laboratories

Office of Science Laboratories

- 1 Ames Laboratory
Ames, Iowa
- 2 Argonne National Laboratory
Argonne, Illinois
- 3 Brookhaven National Laboratory
Upton, New York
- 4 Fermi National Accelerator Laboratory
Batavia, Illinois
- 5 Lawrence Berkeley National Laboratory
Berkeley, California
- 6 Oak Ridge National Laboratory
Oak Ridge, Tennessee
- 7 Pacific Northwest National Laboratory
Richland, Washington
- 8 Princeton Plasma Physics Laboratory
Princeton, New Jersey
- 9 SLAC National Accelerator Laboratory
Menlo Park, California
- 10 Thomas Jefferson National Accelerator Facility
Newport News, Virginia

Other DOE Laboratories

- 1 Idaho National Laboratory
Idaho Falls, Idaho
- 2 National Energy Technology Laboratory
Morgantown, West Virginia
Pittsburgh, Pennsylvania
Albany, Oregon
- 3 National Renewable Energy Laboratory
Golden, Colorado
- 4 Savannah River National Laboratory
Aiken, South Carolina

NNSA Laboratories

- 1 Lawrence Livermore National Laboratory
Livermore, California
- 2 Los Alamos National Laboratory
Los Alamos, New Mexico
- 3 Sandia National Laboratory
Albuquerque, New Mexico
Livermore, California

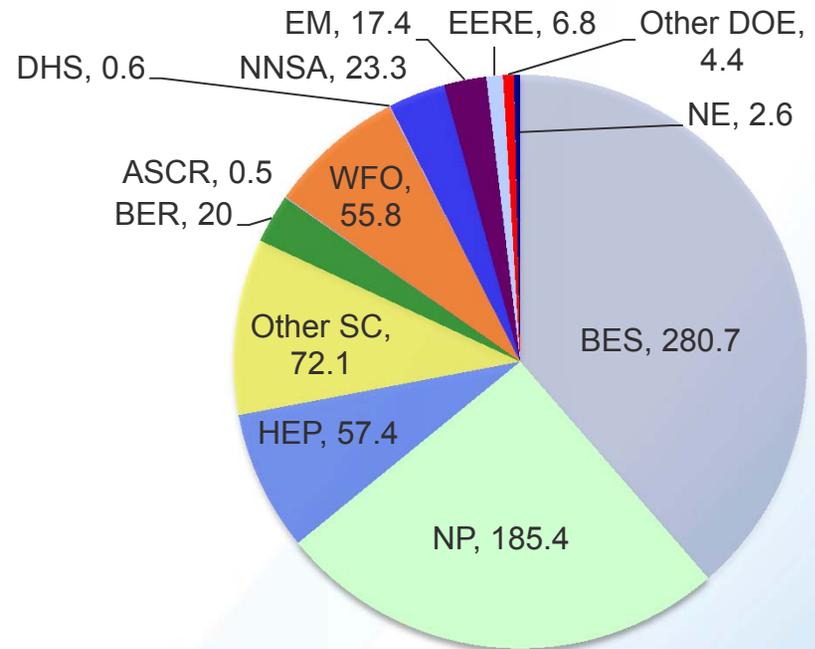


Brookhaven National Laboratory at a Glance: FY12

- Physical Assets
 - 5320 acres
 - 302 SC buildings
- Human Capital
 - 2989 FTEs (3054 heads)
 - Direct/indirect: 0.59/0.41
 - 399 undergrad/grad students (paid by Lab)
 - 4427 facility users
 - 1348 visiting scientists



FY 2012 Funding by Source (\$M)



FY 2012 Total Lab Operating Costs: \$727.0 million
FY 2012 Total DOE/NNSA Costs: \$23.3 million
FY 2012 WFO (Non-DOE/Non-DHS) Costs: \$55.8 million
FY 2012 WFO as % Total Lab Operating Costs: 7.7%
FY 2012 DHS Costs: \$0.6 million

BNL is managed by BSA – a partnership of Battelle and Stony Brook University

Research Leadership



1957



1976



1980



1988



2002



2003



2009



2009 National Medal of Science

5 Nat'l Medal of Science winners
5 Fermi Awards
11 Lawrence Awards
2 Wolf Prizes
20 NAS/NAE members

Major Research Facilities



National Synchrotron Light Source

National Synchrotron Light Source

- One of world's most powerful tools observing structure and behavior of materials
- Researching energy, Alzheimer's disease, breast cancer, HIV/AIDS, environmental cleanup technology and more



National Synchrotron Light Source II

National Synchrotron Light Source II

- Soon to be world's brightest X-ray light source
- \$960 million project - hundreds of local jobs
- **Scheduled for completion in 2014**
- Approx. 3,000 visiting researchers
- 1/3 from NYS



Center for Functional Nanomaterials

Center for Functional Nanomaterials

- Exploring energy science at the nanoscale
- Building new materials atom-by-atom to achieve desired properties and functions

Major Research Facilities



Relativistic Heavy Ion Collider (RHIC)

RHIC

- 2.4 mile circumference
- Studying the origins of universe through ion collisions revealing make up of visible matter
- Discovery of the 'perfect liquid'



New York Blue Supercomputer

New York Center for Computational Science

- Partnership between BNL & Stony Brook University
- Supports broad range of research and economic development



Long Island Solar Farm

Long Island Solar Farm

- Partnership between BNL, LIPA and BPSolar
- 32MW Peak to power 4500 L.I. homes
- Unique opportunity to study renewables in the Northeast and test new Grid technologies

Brookhaven Energy R&D: A Collaborative Approach

Basic Research, Applied Research, and Industry Working Together

BNL Resources



BNL
Research



NY State Consortia/Resources

ENERGY CHALLENGES: New York and Beyond

- Electric Systems
- Sustainable Fuels

DOE ALIGNMENT/LEVERAGE

- DOE Priority Research Directions
- 4 Energy Frontier Research Centers

Collaborators/Joint Appointments



BNL is owned by the U.S. Government and operated/managed by Brookhaven Science Associates, LLC



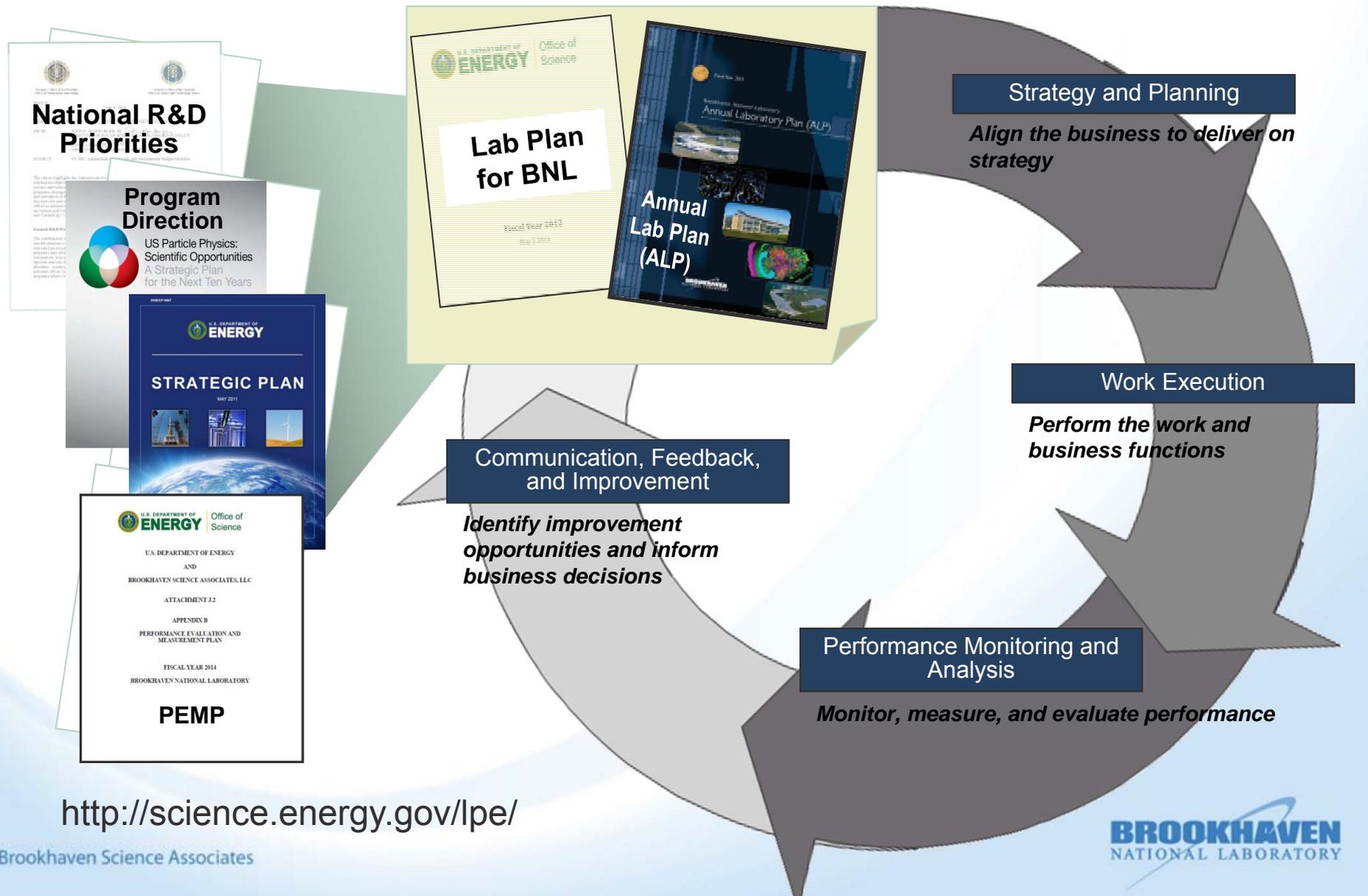
Stony Brook University
Stony Brook, New York



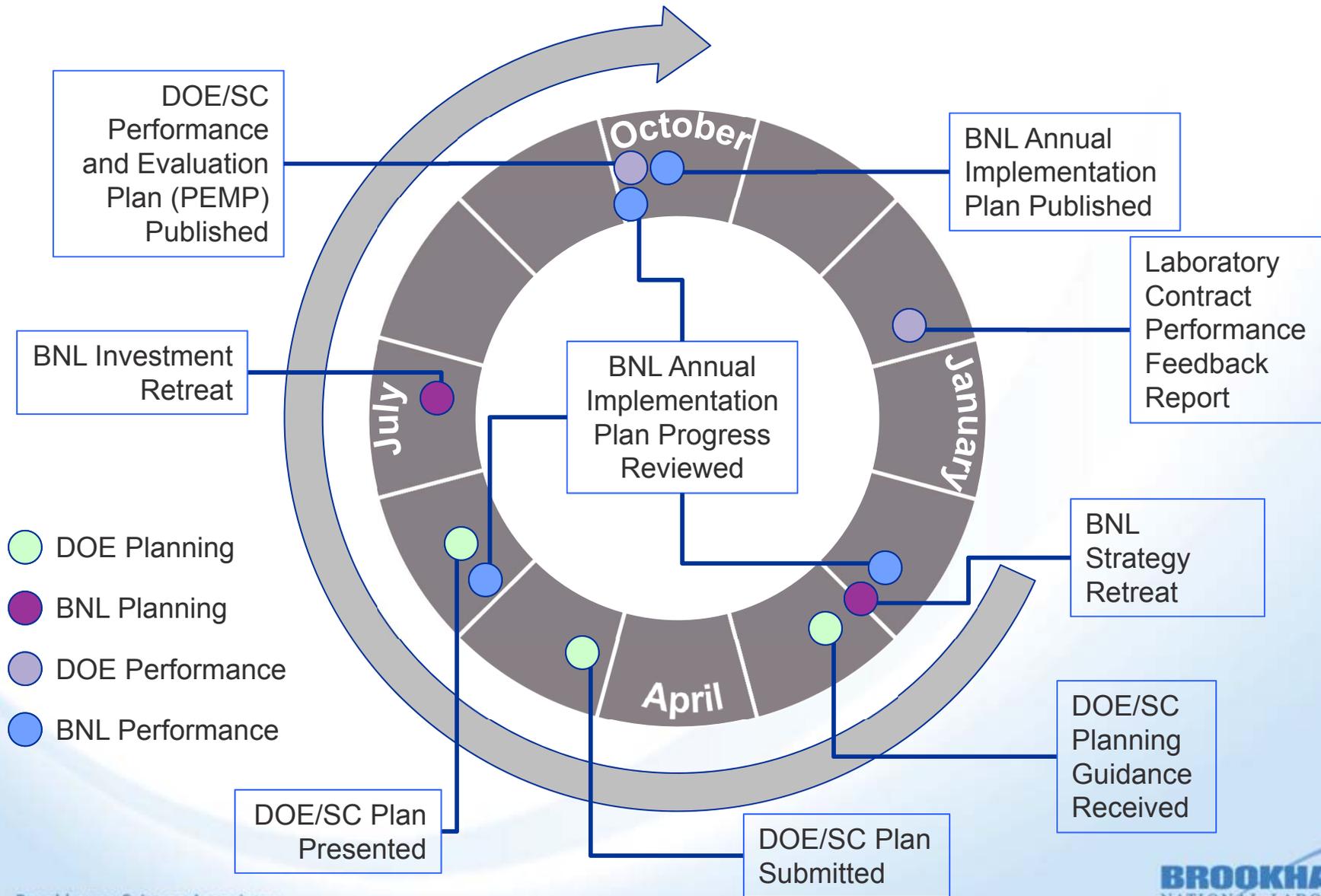
Battelle
Columbus, Ohio

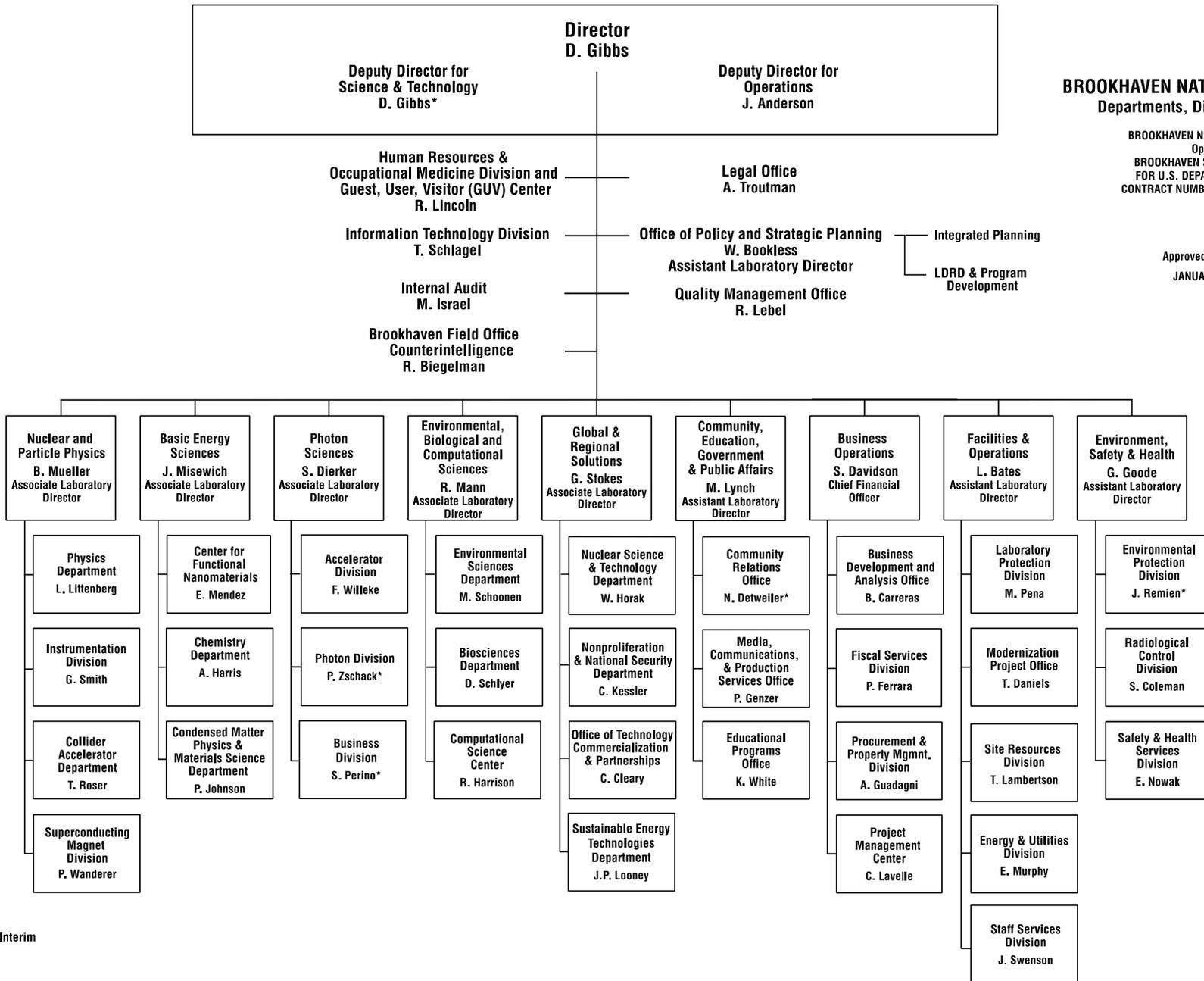
Brookhaven Science Associates, LLC
Upton, New York

The management model: an organizing principle for integration



The DOE/SC and BNL Planning Cycles





BROOKHAVEN NATIONAL LABORATORY
Departments, Divisions and Offices

BROOKHAVEN NATIONAL LABORATORY
Operated by
BROOKHAVEN SCIENCE ASSOCIATES
FOR U.S. DEPARTMENT OF ENERGY
CONTRACT NUMBER DE-AC02-98CH10886

Approved by Doon Gibbs
JANUARY 16, 2014

* Interim

Capability Stewardship, Customer Relations, Horizontal Integration

Examples of oversight at different levels

- Lab investments review, e.g., by ALDs and Chairs
- Program and project peer reviews – driven by sponsors
- Department and Directorate-level visiting committees
 - feedback on quality of strategy, plans, science, workforce development, program development
- Science & Technology Steering Committee
 - reports to BSA Board
- BSA Board – Assurance Committees