

09/14/2012 UEC Lunch Meeting

Attended by: All 2012 UEC members, Sean Smith, Peter Cummings, Tony Haynes

- Discussion of Intro slides from Sean Smith. They were approved as is.
- Discussion about the adequacy of publication by CNMS staff and users.
 - There are publications by users, by staff and joint publications with both
 - User and staff publication quantities are about equal, joint pubs are about 20% of the total
 - Publications vary from group to group. Macro group is low due to experimental constraints
 - Is there a way or a need to attract users who publish in the same types of journals as the CNMS staff?
 - High impact journals are those with impact factors > 6.
- Sean's discussion:
 - Engagement with industry is being pushed as a priority
 - CNMS has had visits from P&G and Owens Corning
 - DOE nanocenters are developing a new web portal that will be searchable and promote the collection of capabilities to solve problems and market nanocenters to potential users
 - So what make DOE nanocenters special?
 - Compared to Universities user centers the staff support and the tool stability is critical to success.
- Martyn's Town Hall Meeting Notes:
 - There will be
 - Intro slides
 - Standing and new numbers
 - User feedback and survey results
 - Other activities
 - Also discussed:
 - Potential for video conferencing/webcasts
 - Current election status
 - Intro of UEC
 - Open floor discussion

Vision for CNMS:

An Outstanding Science Program attracting a Pre-eminent Cohort of Users

Organization, staffing and capabilities dually support the user and science programs

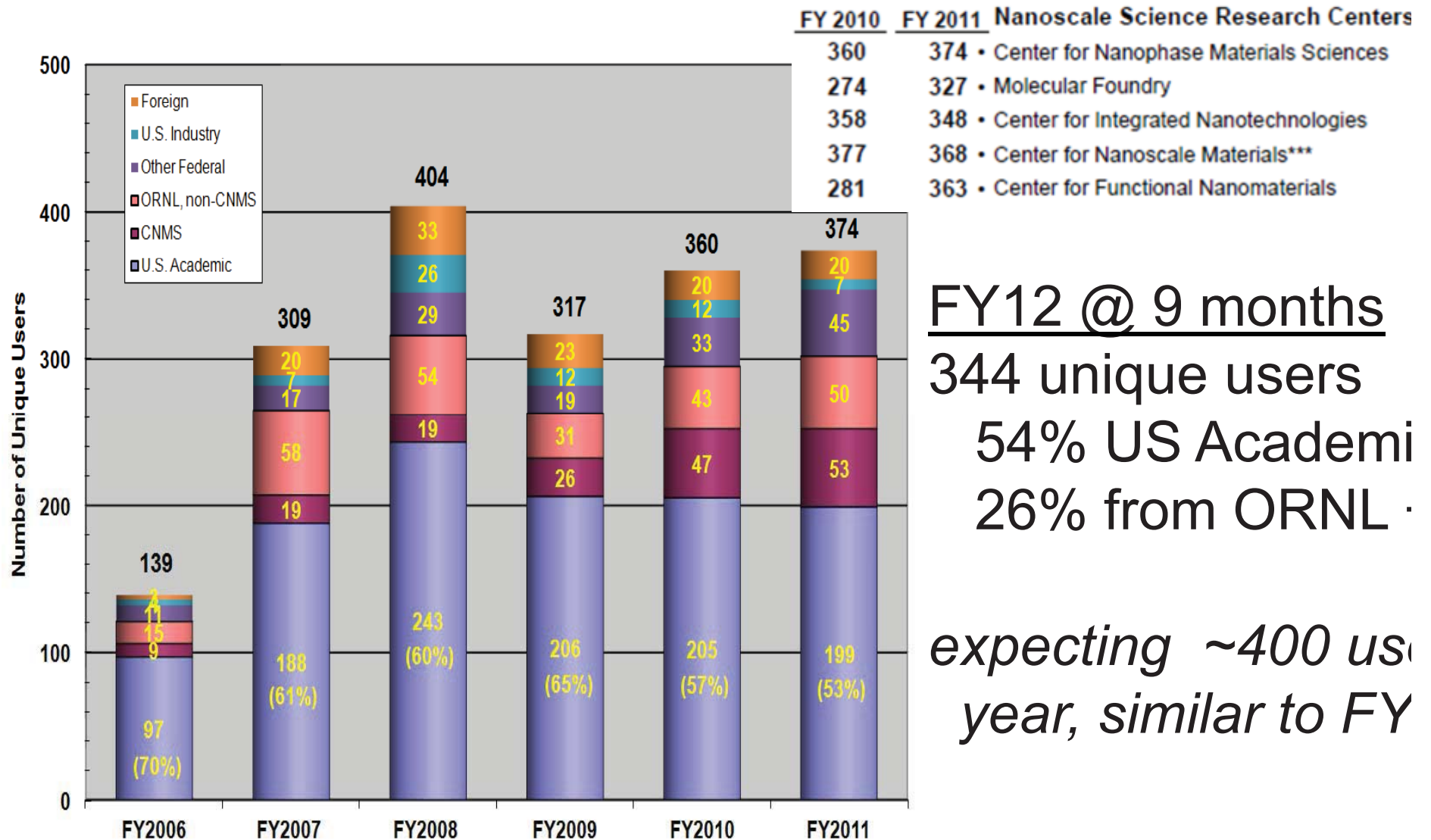
- Discipline-based groups support the users**
 - Primary group assigned**
 - Multiple groups usually involved**
- Scientific themes focused on impact areas**
- Maintain and expand capability base**
 - Annual capital planning**

Links with SUFD and ORNL Capabilities

- **Neutron Scattering**
 - CNMS a primary source of user proposals
 - Enhanced linkage through facility completion
- **Electron Microscopy**
 - Direct interaction with ShaRE
- **Leadership-class computational capabilities**
 - Signature Computational Endstation Initiative
 - Direct application to computational nanoscience
 - User access to leadership-class machines

Users at the CNMS

- Majority of users are US Academic, ~55%
- In FY11, 28% came from ORNL, CNMS



FY12 @ 9 months

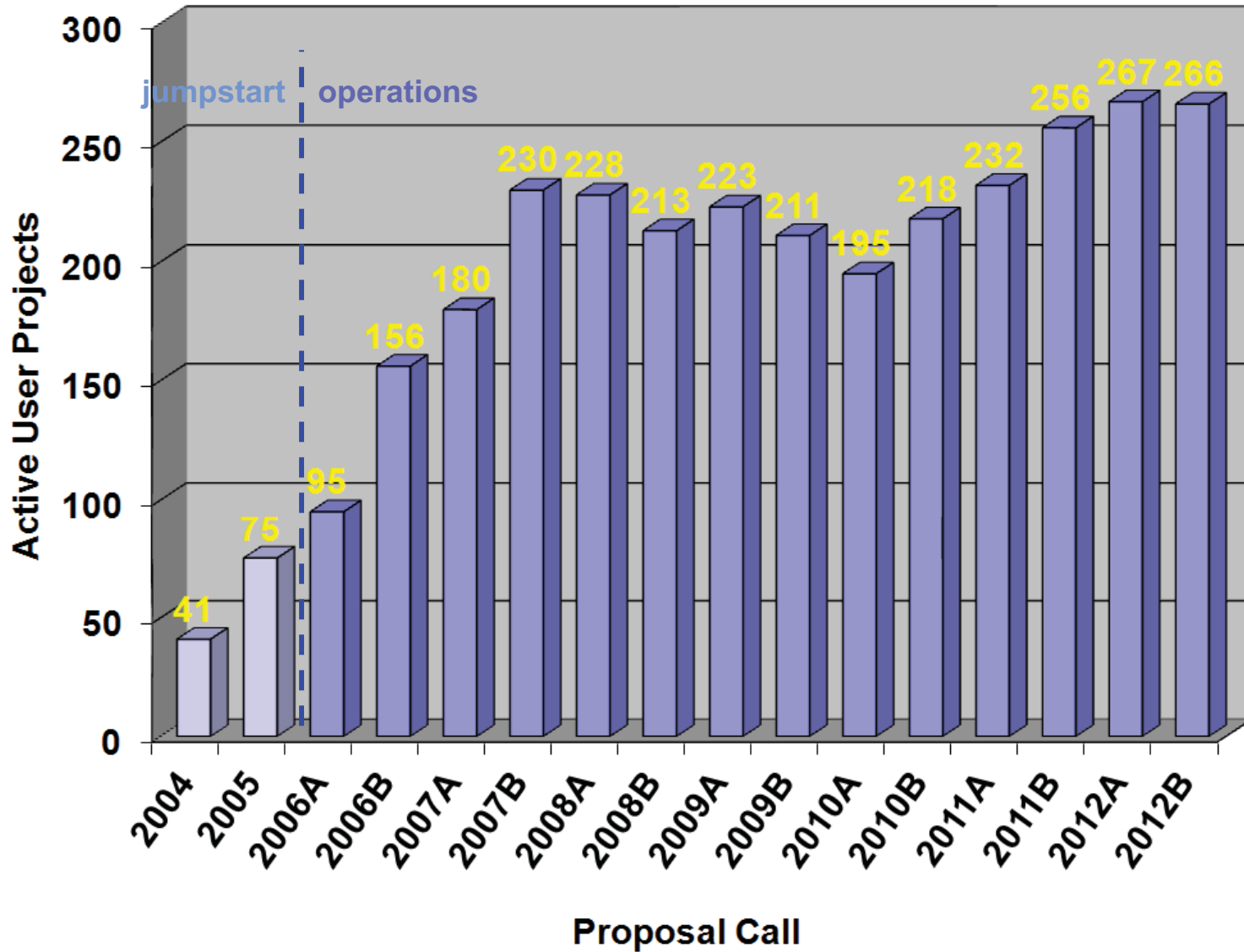
344 unique users

54% US Academic

26% from ORNL

expecting ~400 users per year, similar to FY

Timeline of User Program- Active User Projects



Line Management and
User Capabilities

August 2012

*Multiple Capacity †Theme Lead
(1) Joint Faculty (2) Distinguished Scientist
(3) Technician (4) Subcontractor
(5) Lab Waste Services (6) UT postdoc
(7) Integrated Res. Ops (8) Wigner Fellow
(9) OAS

CENTER FOR NANOPHASE MATERIALS SCIENCES

Sean Smith*, Director

Carole Holbrook, Division Secretary

Peter Cummings,*†(1) Principal Scientist

Tony Haynes,* User Program Manager

*Sandy Lowe,** Program Admin. Assistant

Operations

Kara Clayton, Finance
Scott Hollenbeck, Operations Manager⁽⁷⁾
*Lisa Goins**
Jason Taylor⁽²⁾, Michaela Hall⁽⁴⁾

Macromolecular Nanomaterials

Mike Kilbey⁽¹⁾

*Erica Lohman**

Peter Bonnesen
Kunlun Hong
Brad Lokitz
Jimmy Mays^{†(2)}
Jamie Messman
Deanna Pickel
David Uhrig⁽³⁾

Postdocs: Suk-Kyun Ahn, Youjun He,
J.P. Hinestroza, Mike Kochemba,
Nathan Ramanathan, Jun Yang⁽⁵⁾

Imaging Functionality

Art Baddorf

*Lisa Goins**

Nina Balke
Zheng Gai
Stephen Jesse
Sergei Kalinin, Force-Based Probes Lead
An-Ping Li
Peter Maksymovych
Minghu Pan

Postdocs: Tom Arruda, Jennifer Black, Kendal
Clark, Simon Kelly, Amit Kumar, Qing Li,
Wenzhi Lin, Geoffrey Rojas, Evgheni
Strelcov, Alexander Tselev⁽⁴⁾

Functional Hybrid Nanostructures

Dave Geohegan, Interim

Amanda Zetans^{(9)}*

Mike Biegalski
Hans Christen
Pam Fleming⁽³⁾
Iliia Ivanov
Alex Puzetzy
Chris Rouleau
Kai Xiao

Postdocs: Liang Qiao, Ming Shao

Nanofabrication Research Laboratory

Mike Simpson⁽¹⁾

Jessica Garner

Dayl Briggs⁽³⁾
Pat Collier
Mitch Doktycz
Jason Fowlkes
Dale Hensley⁽³⁾
Ivan Kravchenko
Nick Lavrik
Kevin Lester⁽³⁾
Philip Rack⁽¹⁾
Scott Retterer
Teri Subich⁽³⁾
Bernadeta Srijanto⁽⁴⁾

Postdoc: Jonathan Boreyko, Elizabeth Vargis

Student: Paul Mruetusatorn

Nanomaterials Theory Institute

Bobby Sumpter

*Erica Lohman**

Gonzalo Alvarez-Campot
Miguel Fuentes-Cabrera
Brandon Cook⁽⁴⁾
Peter Cummings^{*†(1)}
Panchapakesan Ganesh
Jingsong Huang
Jacek Jakowski
Paul Kent
Thomas Maier
Matt Reuter⁽⁸⁾
Sean Smith*
Michael Summers
Ye Xu*
Bin Wu⁽⁴⁾
Mina Yoon
Xiaoguang Zhang

Postdocs: Khaled Al-Hassanich, Alejandro Lopez-
Bezanilla, Monojoy Goswami, Rajeev Kumar,
Jose J. Jimenez Rincon

Chemical Functionality

Adam Rondinone, Interim

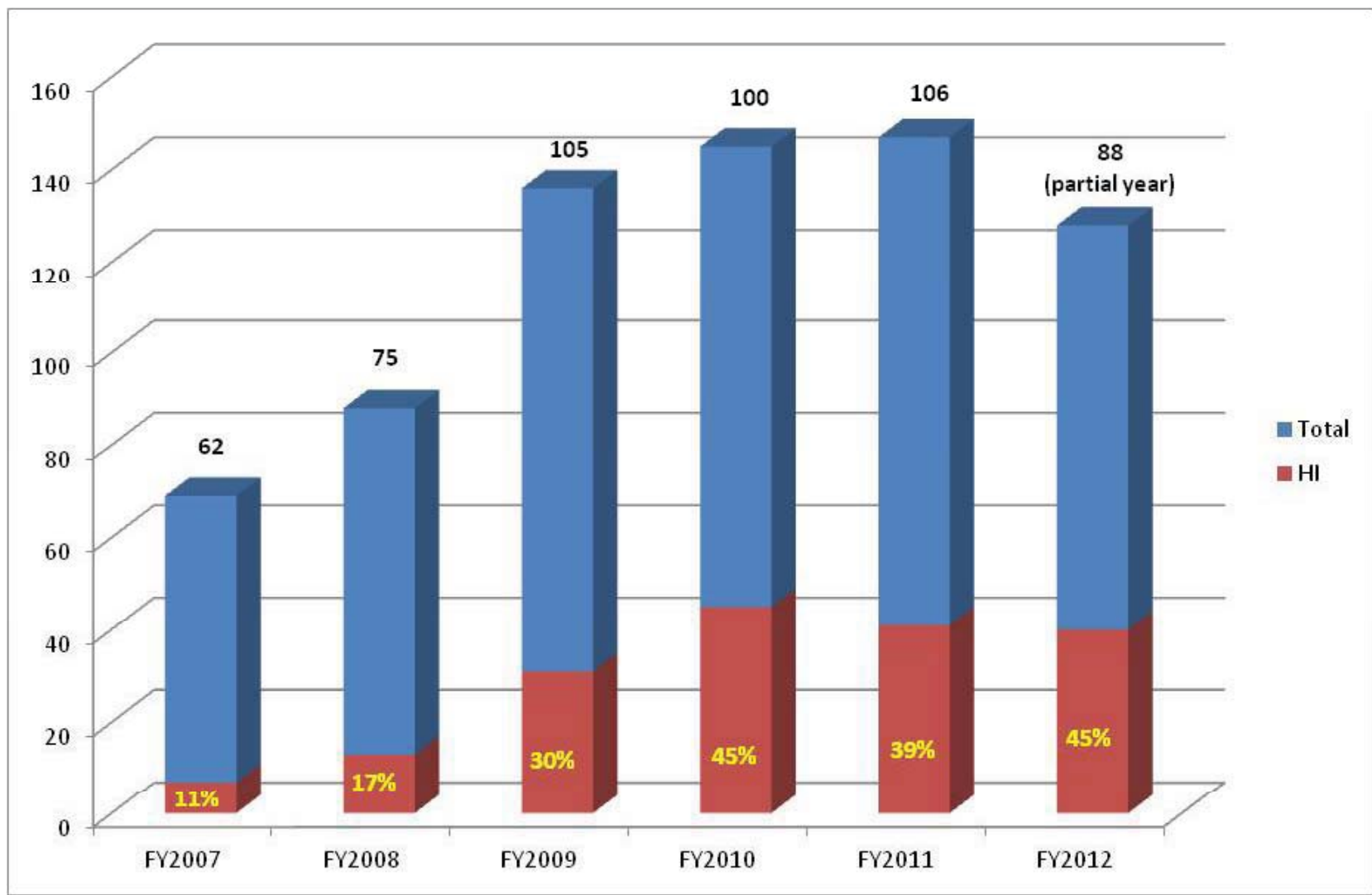
Amanda Zetans^{(9)}*

Jihua Chen
Sheng Dai
David Joy^{†(1)}
Chengdu Liang
Steve Overbury
Michelle Pawel⁽³⁾
Viviane Schwartz
Zili Wu
Ye Xu*

Postdocs: Phani Dathar, Eric Formo,
Brad Habenicht, Zengcai Liu,
Yu-Tung Tsai

Highlights and Achievements

- **User Interactions**
 - 374 users in FY11
 - On track for ~400 users in FY12
 - **User Executive Committee actively engaged**
- **High-impact research results**
 - Continuing to increase percentage in HI journals
- **Successful competitive NSRC equipment proposal:**
 - He ion microscope \$1.4M (Dr David Joy lead)
- **Significant early career awards to Dr Nina Balke and Dr Gonzalo Alvarez (5-Yr; \$0.5M pa)**

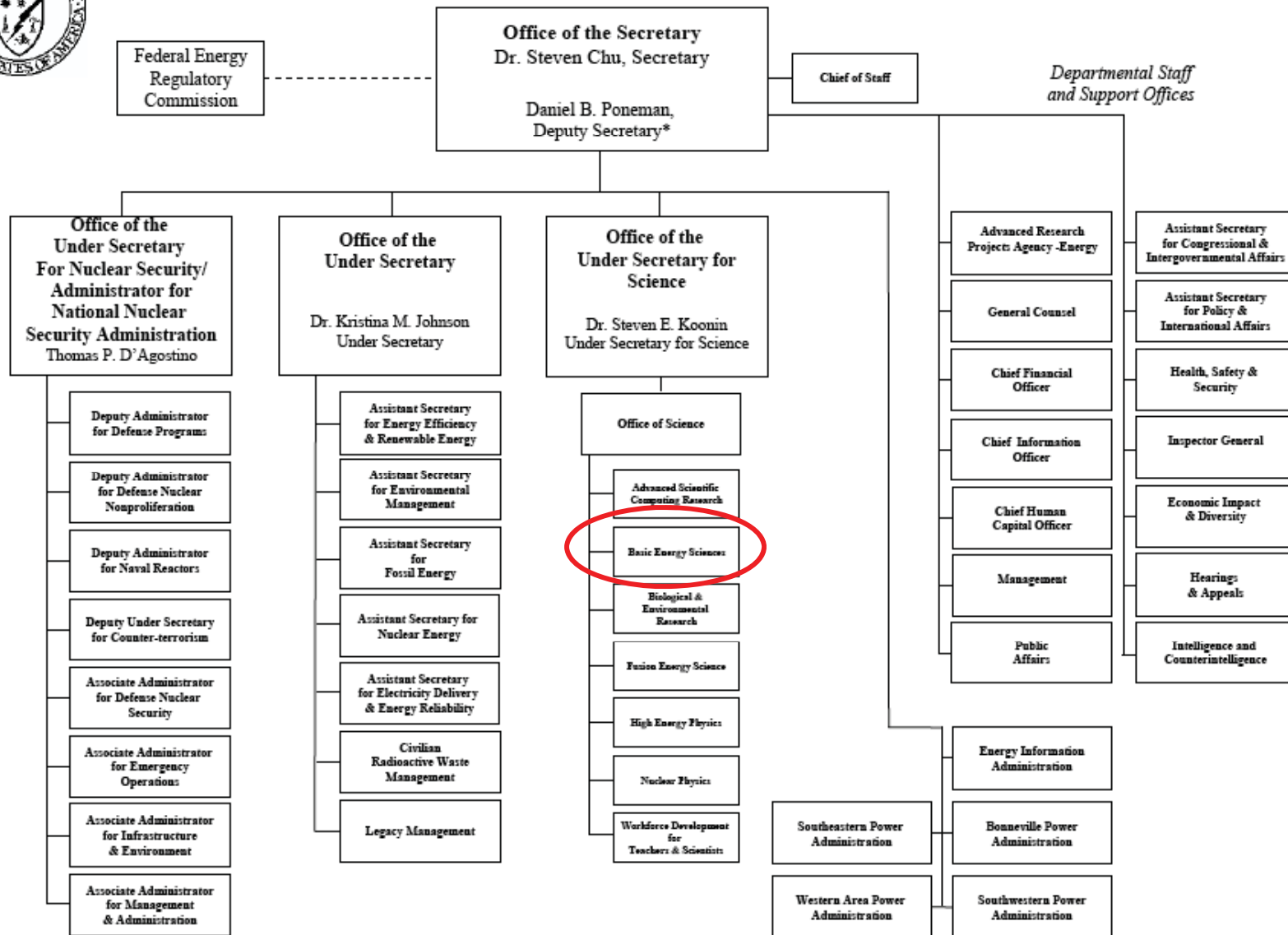


(Includes CNMS and CNMS-User shared publications)

Where are we?



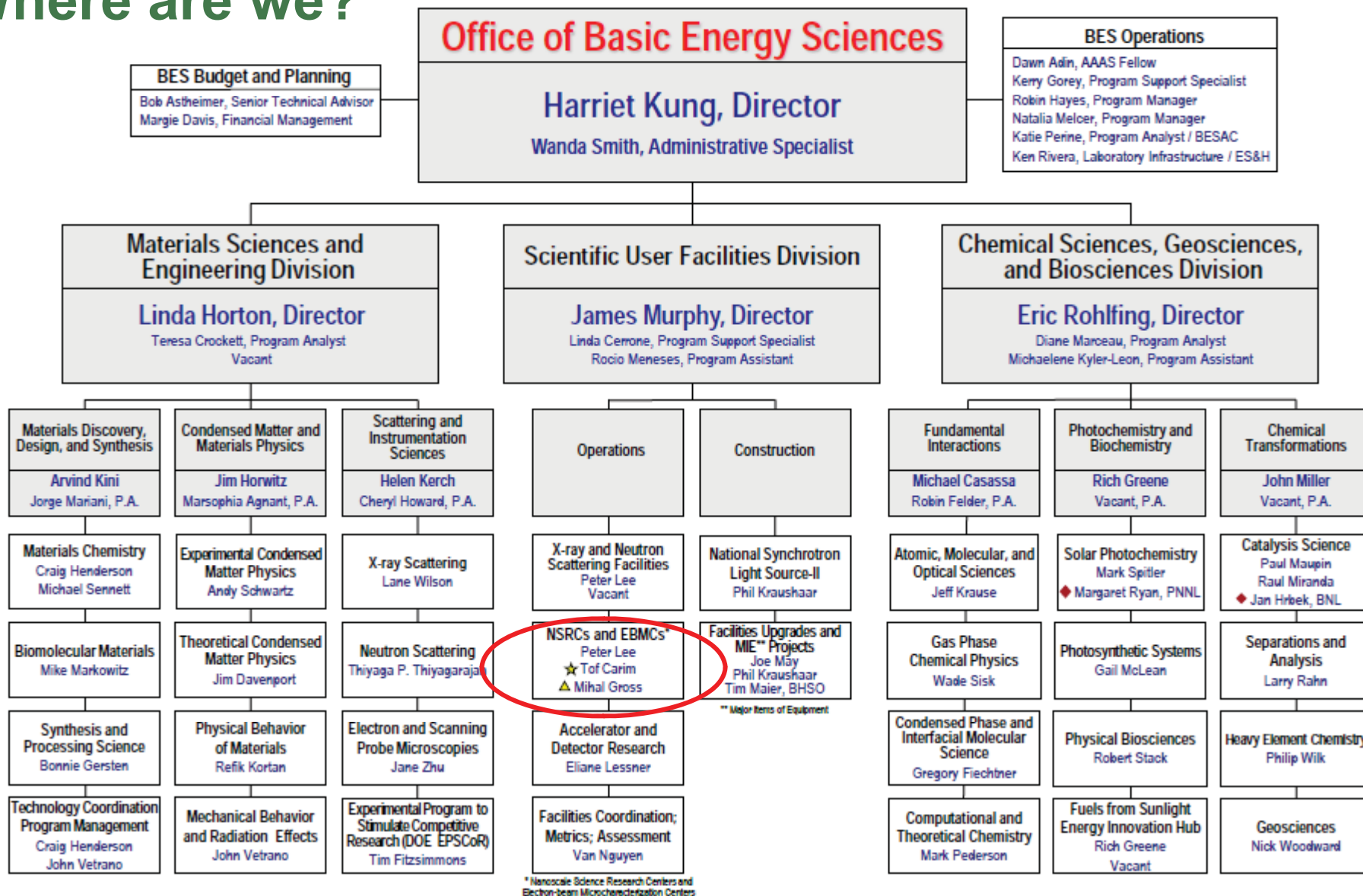
DEPARTMENT OF ENERGY



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* The Deputy Secretary also serves as the Chief Operating Officer

Where are we?



LEGEND

- ◆ Detailee (from DOE laboratories)
- ★ On Detail to OSTP
- ▲ On Detail to CSGB Division
- P.A. Program Assistant

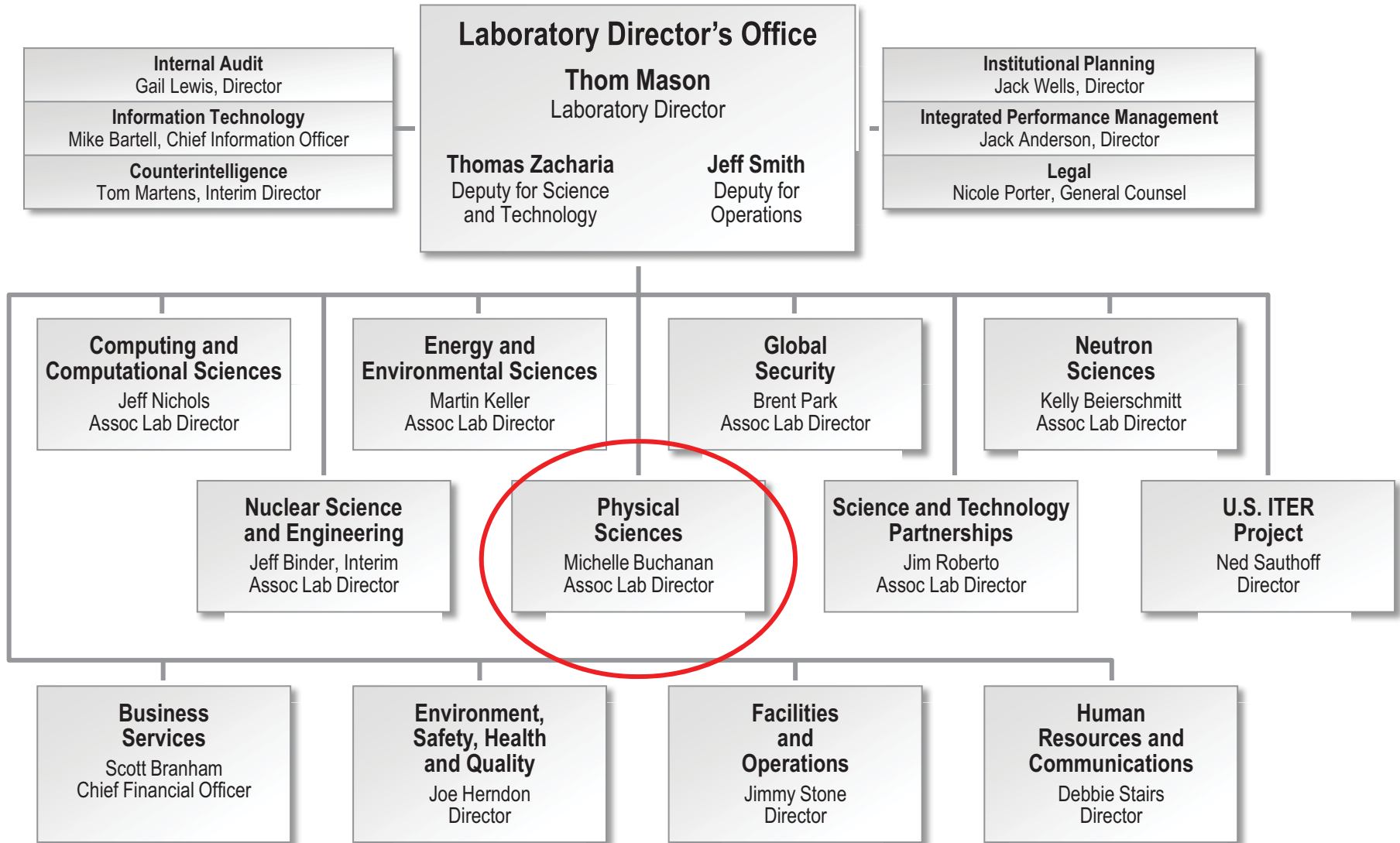
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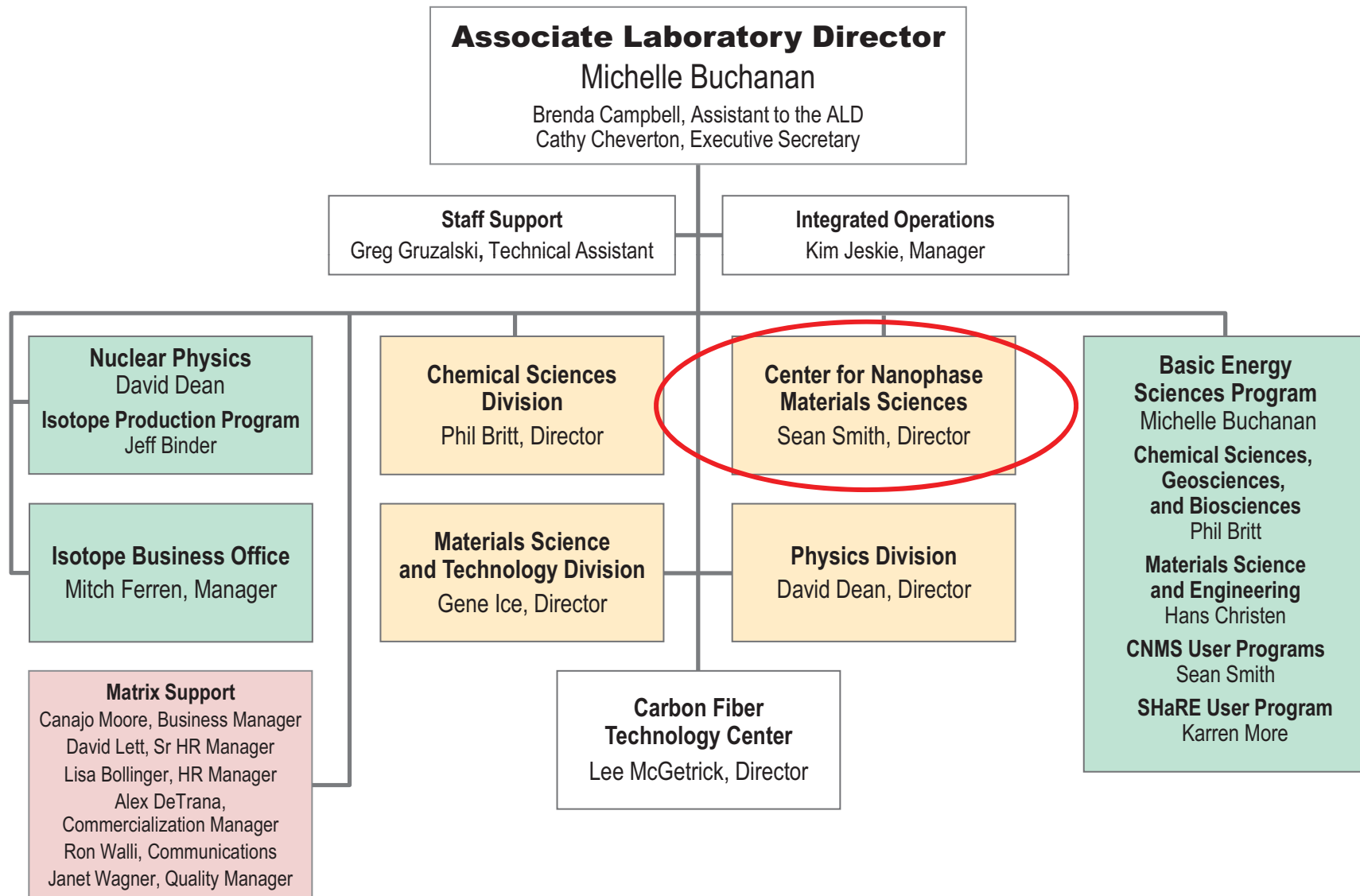
Where are we?

Oak Ridge National Laboratory



Where are we?

Physical Sciences Directorate



Consultative Committees

- **Advisory Committee**
 - Reports to Michelle Buchanan on science program and user program issues
- **Users Executive Committee**
 - Reports to CNMS Director on issues affecting user program
- **Proposal Review Committee**
 - External reviewers (~70) of user proposals
- **Management Integration Team**
 - Coordination group to address integration concerns with other research organizations at ORNL
 - Membership includes:
 - Directors of the Condensed Matter, Chemical Sciences, and Computation Sciences and Mathematics, and SNS Experimental Facilities Divisions
 - Director of the BES Materials and Engineering Physics Program
 - Associate Laboratory Director for the Physical Sciences (other ALDs as required)



Advisory Committee Feedback **in 2011:**

- **Need to bring out more clearly the cross-center & cross-lab synergies and collaborations in our presentation of the research themes.**
- **Multiscale Functionality of Nanostructures still a bit broad.**