

VCAT Meeting – October 28-29, 2008

Boulder, Colorado

Update and Priorities

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Outline

- Changes At NIST
- NIST Staff Recognition
- Update on FY 2009 Budget
- Priorities
- What you will see today

NIST Leadership

- Department of Commerce Made a Change in Leadership
 - Jim Turner accepted position at NOAA
 - Deputy Assistant Secretary for International Affairs
 - Pat Gallagher
 - New Deputy Director
 - Carrying out the responsibilities of the Director until a new Director is appointed by the next President

Awards and External Recognition of NIST Staff

NIST Physicist David J. Wineland 2007 National Medal of Science

- Presented September 29 by President George W. Bush
- The nation's highest honor for researchers, inventors and innovators.

For “outstanding leadership in developing the science of laser cooling and manipulation of ions, with applications in extremely precise measurements and standards, quantum computing, and fundamental tests of quantum mechanics, and for his major impact on the international scientific community through training scientists and outstanding publications.”



FY 2009 Budget

- Continuing Resolution through March 6, 2009
 - Limits spending to FY 2008 levels
 - Gives employees a 3.9% pay increase
 - Things are tight – we need to hold down spending during this period
- Working with OUs and Chiefs to determine specific impacts across the agency
- Work with the next Administration and Congress to support NIST as full-year funding is finalized
- High likelihood could have a Continuing Resolution for the full year

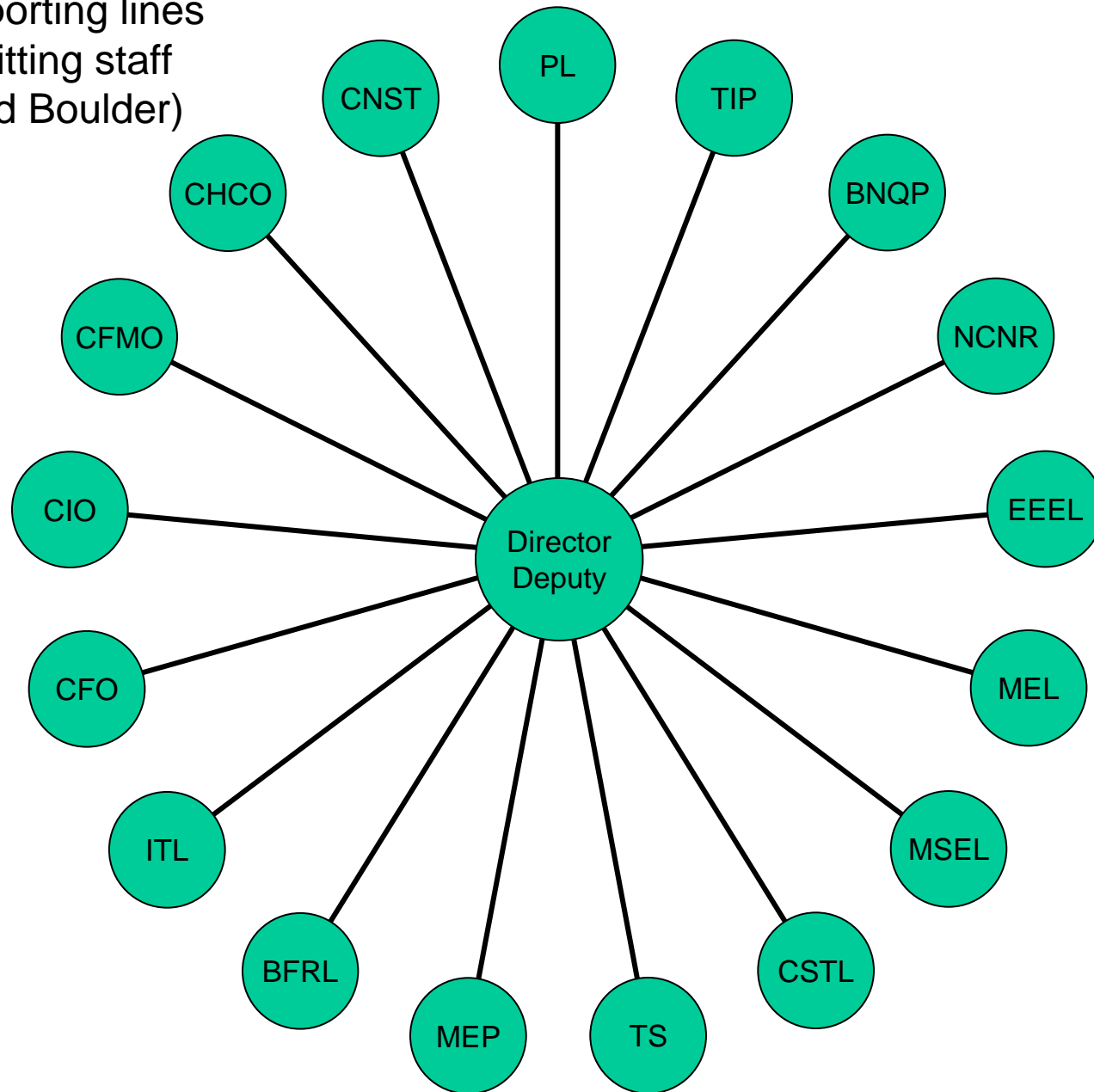
Priorities

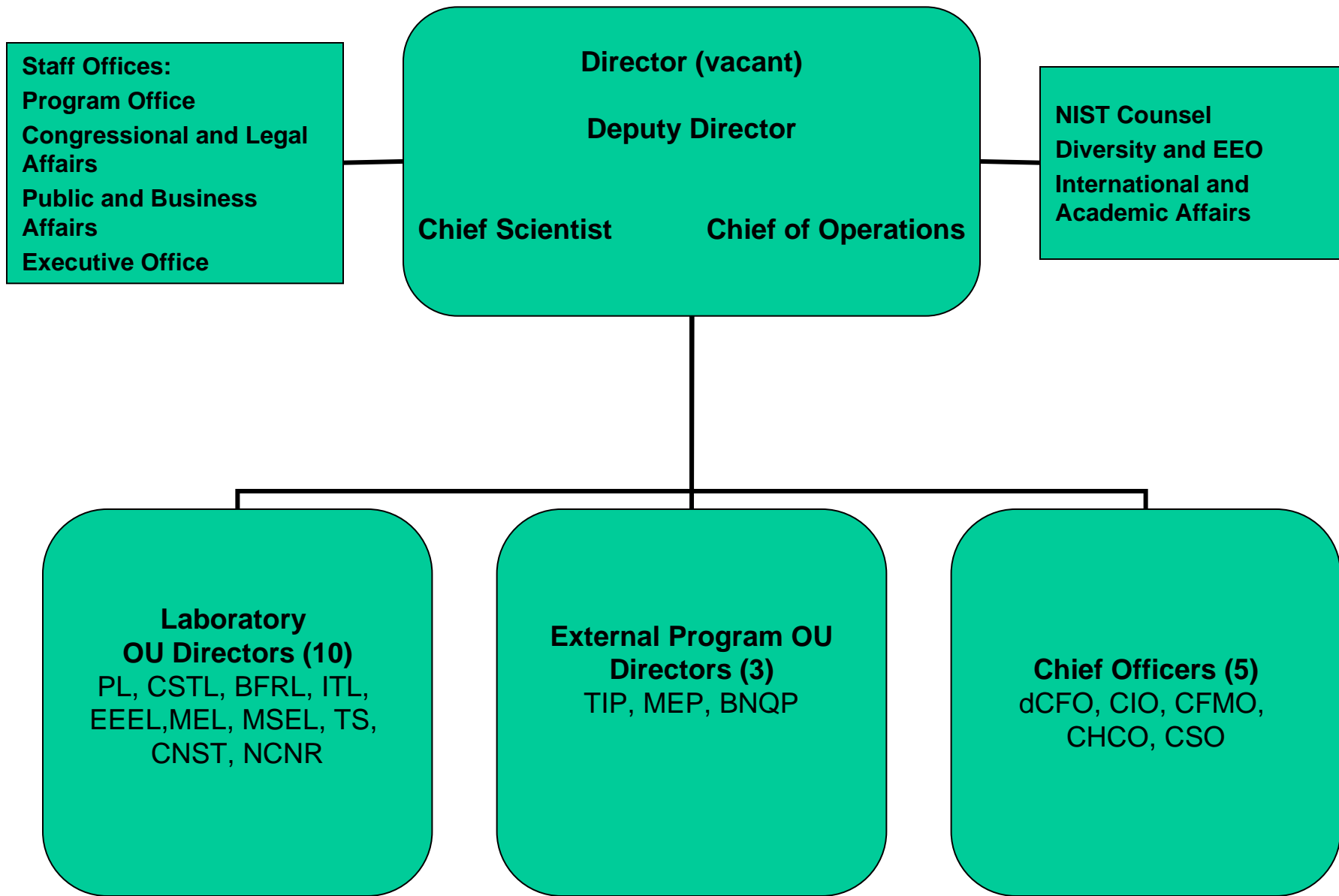
- 1) **Leadership** - To improve our management systems, operations, and leadership to allow the organization to be as effective and efficient as possible.
- 2) **Safety** - To strengthen our safety program and to actively foster a culture where safety is expected to be an integral part of our work.
- 3) **Positioning NIST** - To ensure that NIST is on key policy makers' radar screens in discussions about and actions to address the nation's innovation and competitiveness needs.

Leadership

- Clear lines of responsibility
- Improve decision-making, communication and execution
- Minimize number of ad hoc committees
- Increase focus on operations

Previous reporting lines
at NIST (omitting staff
positions and Boulder)





Improving Leadership in Boulder

Any solution must ...

- Provide the responsibility and accountability for Boulder to manage its laboratory operations;
- Include site specific support operations and address multi-agency aspect of this site;
- Not foster an isolation of Boulder from the rest of NIST

Action:

- Moved EEEL OU Director position to Boulder, CO
- Assigned Kent Rochford (EEEL) as acting EEEL Director
- Establishing a Boulder site manager position

Safety At NIST

■ Status of Plutonium Incident

- Multiple Investigations
- Program stand-down
- Decontamination
- Corrective actions

■ Blue Ribbon Commission

- Focused on examining NIST as a whole and on how safety is managed and implemented Institute-wide
- Two meetings held
- Issued high-level findings to Secretary of Commerce

Safety Philosophy

- Safety foundations:
 - Leadership
 - Safety program
 - Participation

- Path forward:
 - Build a world class safety office
 - Integrate safety into our work
 - Phased approach

Positioning NIST

- America Competes framework is a unique opportunity for NIST
- NIST mission is to promote innovation and competitiveness through measurement science, standards, and technology = perfect match to this environment
- We must define our role and communicate the possibilities to
 - Commerce Transition Team
 - Next Administration (OMB, OSTP)
 - Congress

Positioning NIST – VCAT's Role

- Created as a high-impact entity
 - Powerful ally in giving high-level advice on how NIST addresses national priorities
- Agenda: Direction of agency
 - NIST to share “early thoughts”
 - VCAT provides critical critique of that direction and thoughts
- VCAT is uniquely positioned to talk to
 - Commerce, Administration, Congress

What you will see today

■ Chip-scale Atomic Clocks, Magnetometers and Gyroscopes

Dr. John Kitching and Dr. Elizabeth Donley,
Time & Frequency Division, Physics Laboratory

- NIST's pioneering development of a chip-scale atomic clock and new spin-off technologies

■ Quantum Computing with Superconducting Artificial Atoms

Dr. Katarina Cicak and Dr. Robert Schwall

Quantum Electrical Metrology Division, Electronics and Electrical Engineering Laboratory

- NIST's progress toward harnessing the unusual rules of quantum mechanics for quantum computing

■ How Symmetric is the Electron? The EDM Project and More

Dr. Eric Cornell

Quantum Physics Division, JILA-University of Colorado

- NIST's state-of-the-art precision measurement of the electron's electric dipole moment (EDM)

■ Ultracold Gas of Polar Molecules

Dr. Debbie Jin

Quantum Physics Division, JILA-University of Colorado

- NIST's recent creation of an ultracold gas of polar molecules

■ Frequency Comb "Breathalyzer"

Dr. Jun Ye

Quantum Physics Division, JILA-University of Colorado

- NIST's demonstration of a practical health application for optical frequency combs