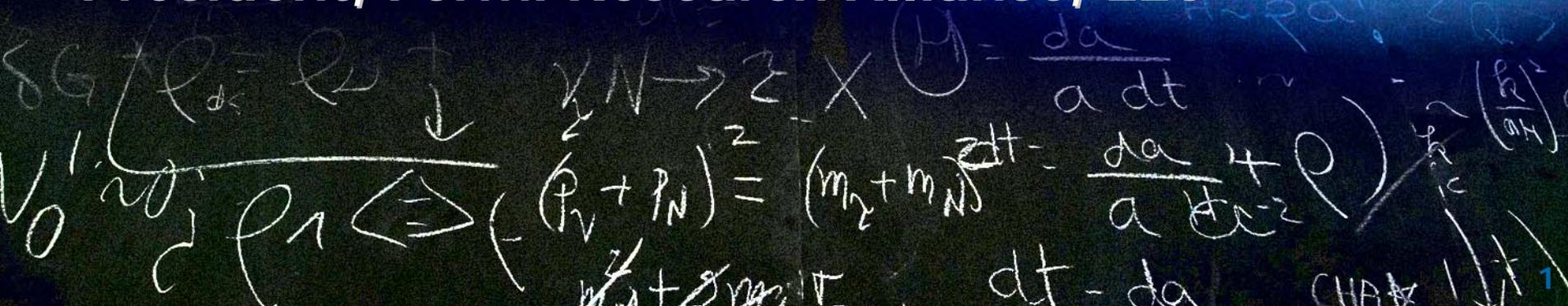


All Hands Meeting November 7, 2006

Piermaria Oddone, Ph.D.
Director, FNAL
President, Fermi Research Alliance, LLC



The Partners of Fermi Research Alliance



THE UNIVERSITY OF
CHICAGO

Robert Zimmer, President



Fred Bernthal, President



Robert Zimmer, Chair
Fred Bernthal, Vice-Chair
Pier Oddone, President

Illinois Universities



- Northern Illinois University
- Illinois Institute of Technology
- Northwestern
- University of Illinois

Adding Value Through Parent Organizations

◆ Leadership

- ◆ Oversight, Assurance
- ◆ Single point accountability
- ◆ Board Committee reviews
- ◆ Support for Tevatron-ILC science

◆ Resources

- ◆ Joint appointments, institutes
- ◆ State of Illinois support
- ◆ Technology Transfer, R&D
- ◆ International research collaborations

◆ Reachback

- ◆ UChicago, local universities and URA universities
- ◆ Subject matter experts, best practices
- ◆ Business school resources
- ◆ FNAL-ANL Laboratory Collaboration Council

FRA Board Members

◆ URA Representatives

- ◆ Frederick Bernthal, Vice Chair—President, URA
- ◆ David Hitlin—Professor of Physics, California Institute of Technology
- ◆ Jack Ritchie—Professor of Physics, University of Texas at Austin
- ◆ Heidi Schellman—Professor of Physics, Northwestern University
- ◆ Frank Sciulli—Professor Emeritus, Columbia University
- ◆ Gregory Snow—Associate Professor of Physics, University of Nebraska, Lincoln
- ◆ Sheldon Stone—Professor of Physics, Syracuse University
- ◆ Thomas Weiler—Professor of Physics and Astronomy, Vanderbilt University

FRA Board Members

◆ University of Chicago Representatives

- ◆ Thomas Rosenbaum—Vice President for Research and Argonne National Laboratory, University of Chicago
- ◆ Michael Turner—Rauner Distinguished Service Professor, University of Chicago
- ◆ Robert Zimmer, Chair—President, University of Chicago

◆ Illinois University Presidents

- ◆ Henry Bienen (or designate)—President, Northwestern University
- ◆ Lewis Collens (or designate)—President, Illinois Institute of Technology
- ◆ John Peters—President, Northern Illinois University
- ◆ Joseph White (or designate)—President, University of Illinois

FRA Board Members

◆ Industry Representatives

- ❖ James S. Frank—President and CEO, Wheels, Inc.
- ❖ Judd Haverfield—Former VP, Business Operations, Weyerhaeuser Company
- ❖ Jill Wittels—Vice President, Business Development, L-3 Communications
- ❖ Randall Wotring—President, EG&G Division, URS Corporation

FRA Board Members

◆ National Laboratory Representatives

- ❖ Dan E. Arvizu—Director, National Renewable Energy Laboratory
- ❖ Persis Drell—Deputy Director for Particle Physics and Particle Astrophysics, Stanford Linear Accelerator Center
- ❖ Charles Shank—Former Director, Lawrence Berkeley National Laboratory

◆ International Representatives

- ❖ Ian Halliday—Former Chief Executive, UK Particle Physics and Astronomy Research Council; President, European Science Council
- ❖ Yoji Totsuka—Former Director, KEK (High Energy Accelerator Research Organization, Japan)

Corporate Oversight—Board Committees

◆ *Executive Committee*

- ◆ Acts on behalf of Board when necessary; approves executive compensation

◆ *Physics*

- ◆ Oversees science programs, scientific appointments

◆ *ES&H*

- ◆ Oversees worker and public ES&H

◆ *Audit*

- ◆ Oversees and approves internal and external audits

◆ *ILC*

- ◆ Builds awareness and support for the ILC

◆ *Administration*

- ◆ Ensures quality and effectiveness of operations and business management

◆ *Nominating*

- ◆ Recommends new members, composition

Approach for Providing Corporate Oversight



4

Laboratory Director accountable to the Chairman of the Board for FNAL performance

3

Committees report to Board on contract performance in assigned areas of responsibility

2

Committees evaluate contract performance and provide support to such activities as science, ES&H, best practices, lessons learned, and continuous improvement

1

Director holds key employees accountable to communicate with appropriate Board standing committees

Fermi Research Alliance Oversight



◆ Rationale

- ❖ Director holds key personnel accountable to maintain transparency and communications with FRA Board oversight committees



FRA Corporate Commitments

| Donors by Commitment Type | Resource Name | Total 5-Year Commitment (\$K) |
|----------------------------------|--|-------------------------------|
| Mission Support | | |
| FRA | A. Director's Discretionary Fund | \$2,500 |
| URA | B. Strategic Collaborative Initiatives | \$2,000 |
| FRA | D. Key Personnel Salary Augmentation | \$875 |
| UChicago | F. Strategic Collaborative Initiatives | \$1,250 |
| University of Illinois | H. Strategic Collaborative Initiatives | \$430 |
| Northern Illinois University | I. Strategic Collaborative Initiatives | \$150 |
| Northern Illinois University | L. Joint Scintillator R&D Facility | \$625 |
| Northwestern University | N. Strategic Collaborative Initiatives | \$950 |
| Illinois Institute of Technology | P. Strategic Collaborative Initiatives | \$500 |
| Business Operations | | |
| UChicago | E. Laboratory Collaboration Council / Management and Decision Support Dashboard Initiative | \$500 |
| EG&G/URS | S. Preliminary Assessment of Maintenance and Work Control Practices | \$43 |

FRA Corporate Commitments

| Donors by Commitment Type | Resource Name | Total 5-Year Commitment (\$K) |
|-----------------------------------|--|-------------------------------|
| Education Commitments | | |
| FRA | C. Scholarships for Children of FRA Employees | \$1,000 |
| UChicago | G. Executive Education for FNAL Staff and Scientists | \$250 |
| Northern Illinois University | J. Scholarships for Children of FRA Employees | \$140 |
| Northern Illinois University | K. Joint Education Programs | \$150 |
| Northwestern University | M. Scholarships for Children of FRA Employees | \$125 |
| Northwestern University | O. Executive Education for FNAL Staff and Scientists | \$75 |
| Illinois Institute of Technology | Q. Scholarships for Children of FRA Employees | \$250 |
| Illinois Institute of Technology | R. Education for Fermilab Staff and Scientists | \$300 |
| Total Value of Commitments | | \$12,113 |

FRA Corporate Commitments



THE UNIVERSITY OF
CHICAGO

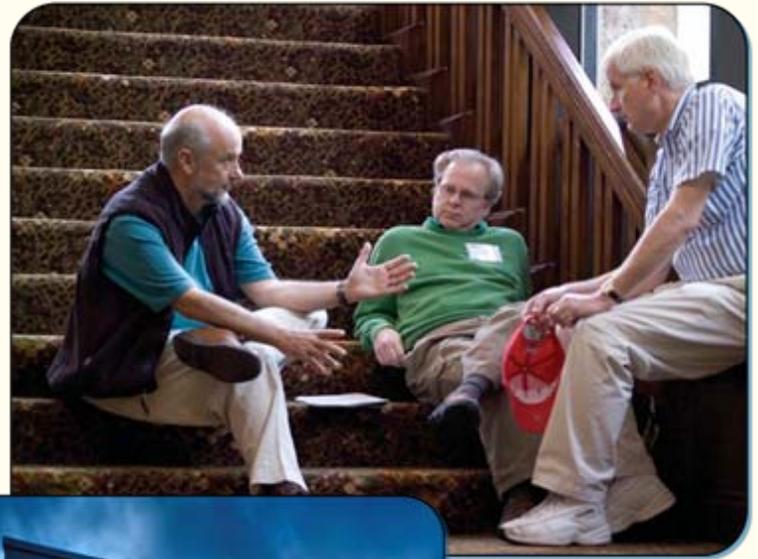
- ◆ Recent New Commitment from the University of Chicago
 - ❖ Children of FRA employees enrolled at the University of Chicago will receive a 50% reduction in tuition.

Vision



Vision—Deliver on DOE's Mission for Fermilab

- ◆ Science: Be the world leader in the coming revolution in particle physics
- ◆ Operations: Be the leader within the DOE system in the integration of excellence in ES&H and efficient business systems into our work
- ◆ Make FNAL the place where physicists want to spend their most creative years
- ◆ Use all the assets that the new FRA organization brings to FNAL

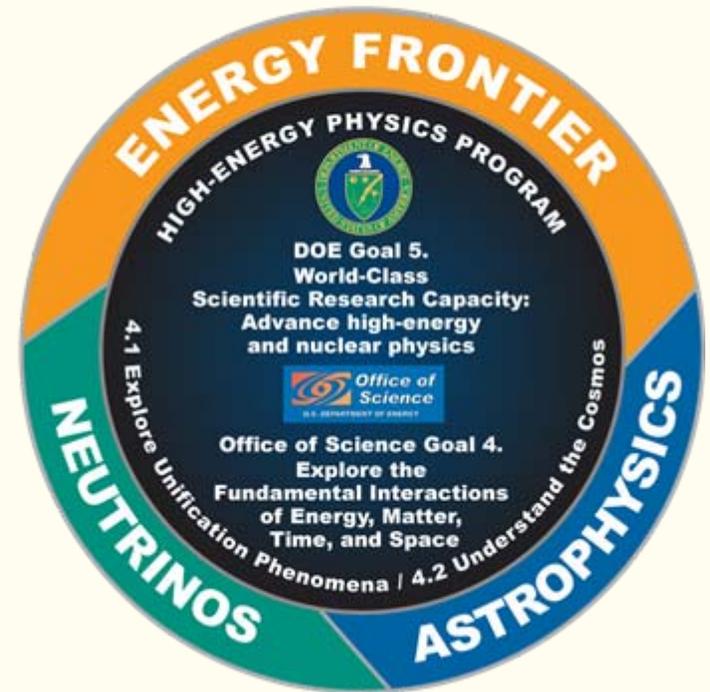


*Pier Oddone,
Robin Staffin, and
Fred Gilman at
2005 Snowmass
ILC Workshop*



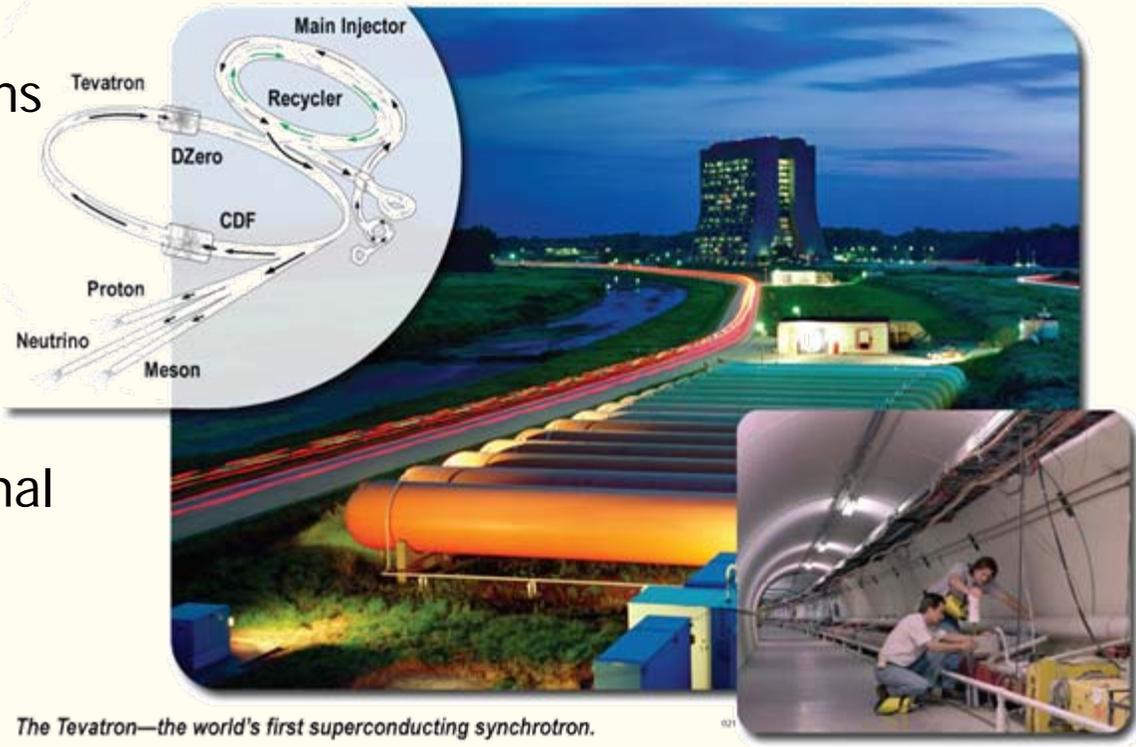
Vision—World Leadership in Science

- ◆ Aligned with DOE's grand goals for high energy physics
- ◆ The greatest opportunities in my lifetime
- ◆ Three frontiers with astounding potential:
 - ◆ Energy Frontier: Tevatron, LHC, ILC
 - ◆ Neutrinos
 - ◆ Particle Astrophysics
- ◆ The central focus: hosting the ILC



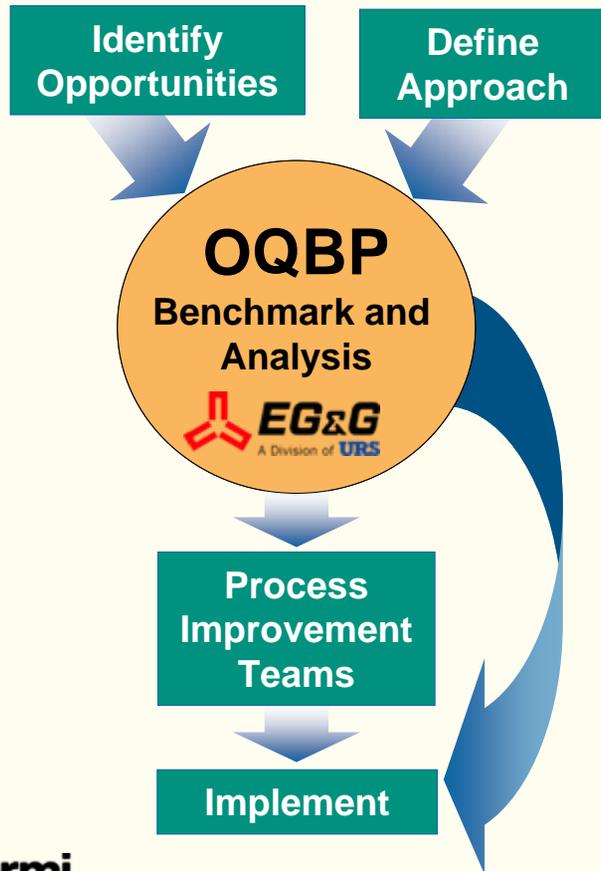
Vision—World Leadership in User Facility Operations

- ◆ World-class excellence in research capacity with world-class staff and users
- ◆ World-class excellence in user facility operations—User support has been the primary focus of Fermilab from the beginning
- ◆ Integrated support of national and international programs



The Tevatron—the world's first superconducting synchrotron.

Vision— Best in Class in Operations



- ◆ Excellence in ES&H: built into all our systems and integrated with our work
- ◆ Full transparency to DOE and stakeholders
- ◆ Drive best practices into FNAL and ANL through the LCC

Vision—An Environment for Innovation

- ◆ Multiply people connections and networks
- ◆ Deliver innovation to the DOE by creating an environment to attract and retain the best and brightest
- ◆ Maintain discipline in facility operations and project management without stifling scientific creativity



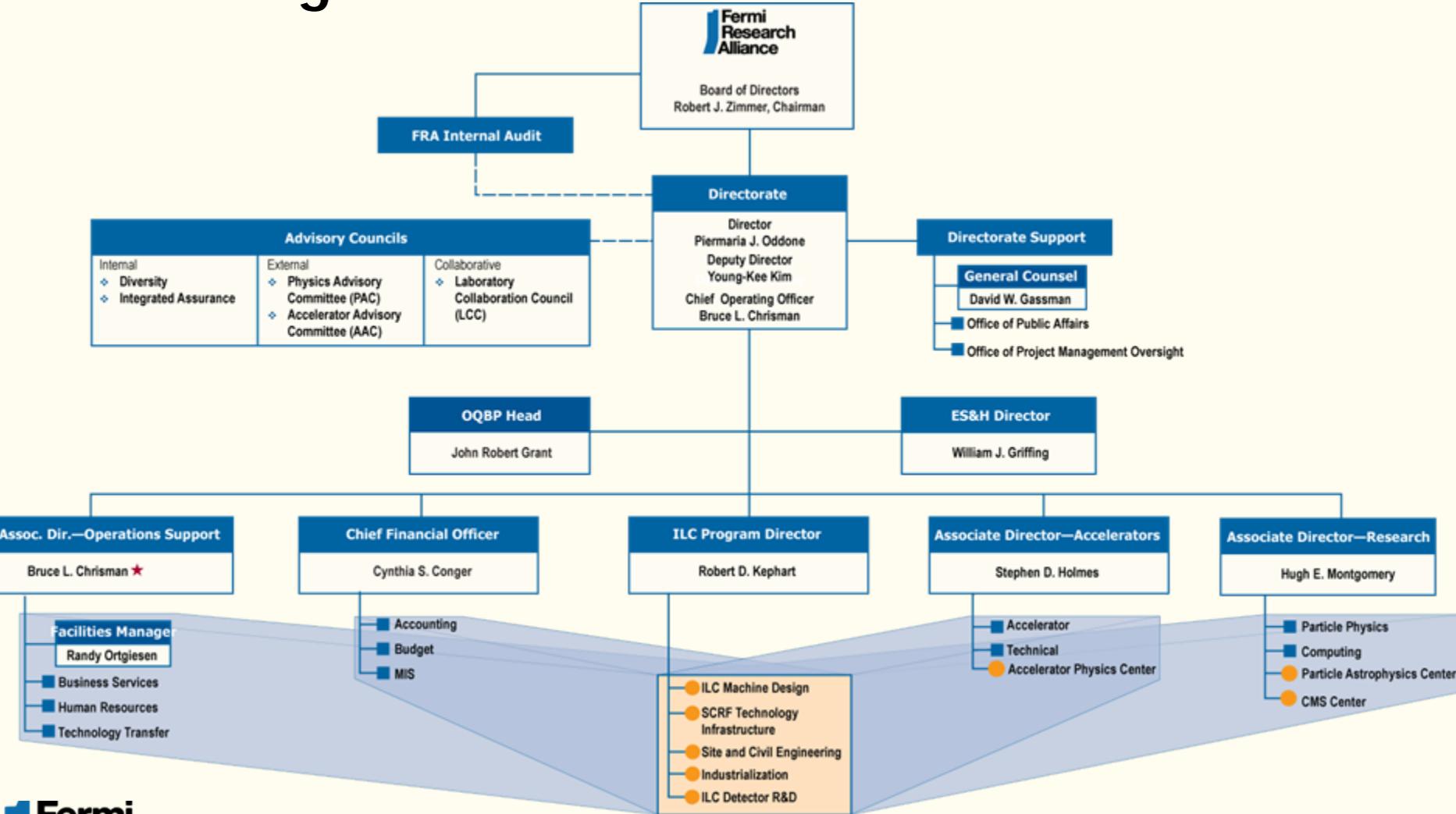
Photo Credit of Peter Ginter

Vision: FRA Will Be Proactive and Involved

- ◆ Active Oversight: predictive and comprehensive
- ◆ Fully exploit the concentric “spheres of influence” to bring ILC to the United States
 - ❖ Sphere 1: U of Chicago, ANL, FNAL, EG&G, URA
 - ❖ Sphere 2: Illinois Research Universities
 - ❖ Sphere 3: National Universities that form URA
 - ❖ Sphere 4: National and international partners



FRA Organization



Organizational Rationale

- ◆ Structured to further the achievement of world-class excellence in:
 - ◆ Research and user facility operations
 - ◆ Operations and business management
- ◆ The structure is streamlined to be responsive to DOE's organizational and contractual needs
- ◆ The organization is flexible and scalable to meet changing FNAL mission in both intramural and extramural research programs

Organizational Rationale



- ◆ The groupings within the organizational structure are arranged according to the frequency of interactions to maximize innovation
- ◆ ES&H, quality and best practices, and project management elevated to the Directorate level to allow me to drive new initiatives into the laboratory

Directorate

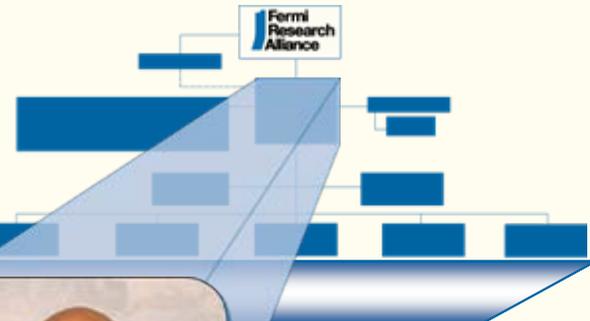


Directorate

Director
Piermaria J. Oddone

Deputy Director
Young-Kee Kim

Chief Operating Officer
Bruce L. Chrisman



FRA 10 HEP Community Partnership
New Initiative

FRA 18 Resource Loaded WBS
New Initiative

FRA 11 InterAction Collaboration Enhancements
New Initiative

FRA 19 Documented R2A2
New Initiative

FRA 26 Integrated Assurance Program
New Initiative

FRA 6 Illinois University Joint Appointments
New Initiative

FRA 7 International Fellow Program
New Initiative

FRA 8 Organization and Human Asset Plan
New Initiative

FRA 9 K-12 Educational Outreach
New Initiative

FRA 17 Strategic Planning Process Enhancement
New Initiative

◆ Rationale

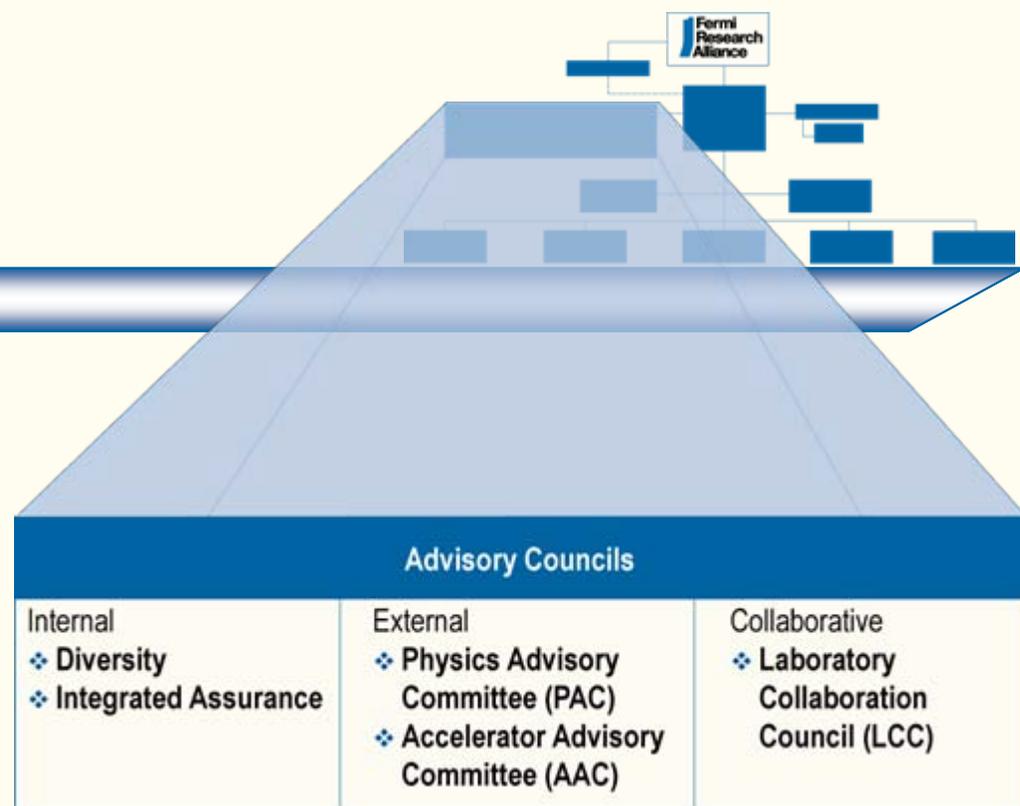
- ❖ Integrates scientific vision with strategic planning and operations support
- ❖ Created COO position and put it on par with science in the Directorate to ensure equal focus on both

Advisory Councils

FRA12 Laboratory
Collaboration
Council

FRA26 Integrated
Assurance
Program

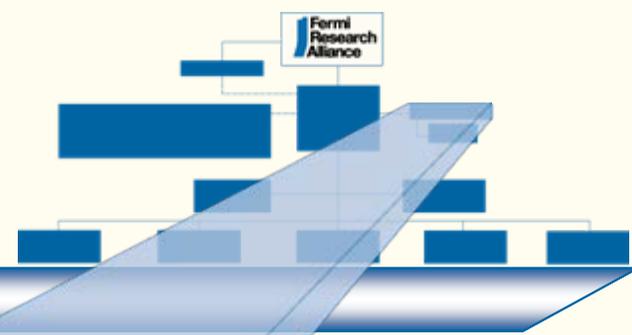
FRA27 Diversity
Council



◆ Rationale

- ❖ For generating advice to the Directorate needed to optimize science and operations
- ❖ New councils to (1) enhance diversity, (2) provide corporate assurance, and (3) to drive scientific and operational synergies between FNAL and ANL

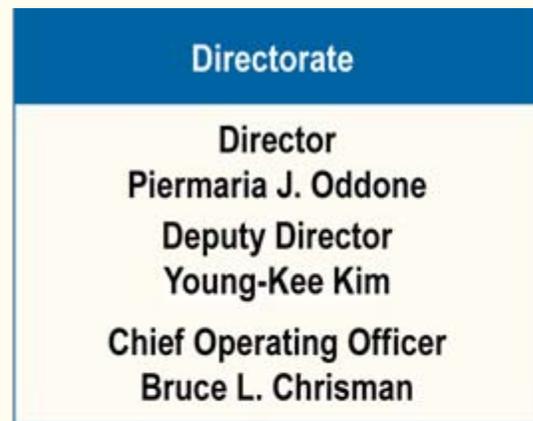
Directorate Support



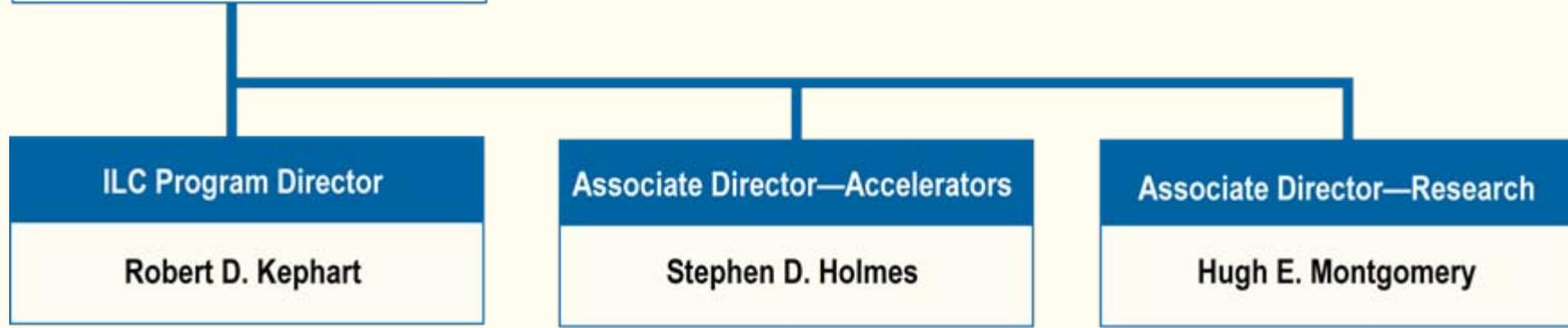
◆ Rationale

- ❖ Provide Directorate with needed legal/contract support
- ❖ Integration of public affairs in top leadership decision-making; integration of communication strategies with DOE and particle physics community
- ❖ Directorate-level focus on implementation of DOE O 413.3 for improved project performance and oversight

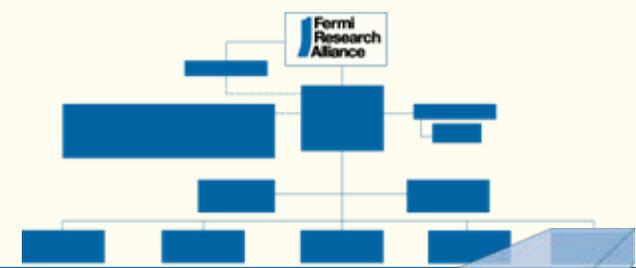
Organization and Leadership for Excellence in Research and User Facility Operations



- ◆ Drives the strategic plan and implements the scientific program
- ◆ Creates an environment to attract and retain the best scientific and technical personnel



Research Programs



◆ Rationale

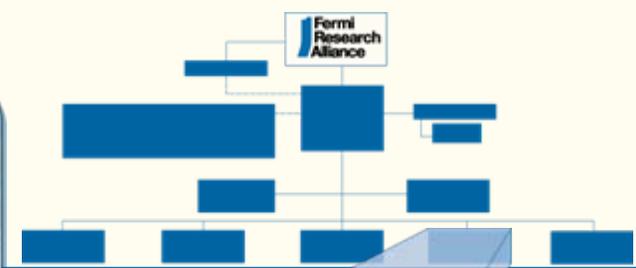
- ❖ New LHC/CMS Center enhances U.S. ability to exploit the LHC and attracts physicists to FNAL during the LHC era
- ❖ Restructured Particle Astrophysics Center adds focus to non-accelerator experiments and builds joint programs with the University of Chicago

Associate Director—Research

Hugh E. Montgomery

- Particle Physics
- Computing
- Particle Astrophysics Center
- CMS Center

Accelerator Programs



Associate Director—Accelerators

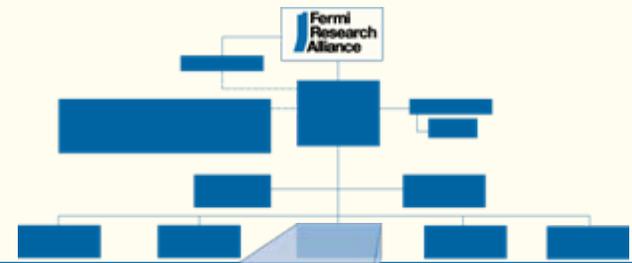
Stephen D. Holmes

- Accelerator
- Technical
- Accelerator Physics Center

◆ Rationale

- ❖ New Accelerator Physics Research Center ensures forward-looking R&D for LHC, ILC, and beyond
- ❖ Enhanced scope of division attracts new skill sets to adapt to changing mission

ILC Program



◆ Rationale

- ❖ Reports to the Director to underscore its importance, increase its visibility in the community, and provides strongest support and oversight
- ❖ Matrixed support from all FNAL organizations ensures efficient use of FNAL intellectual and material assets in support of ILC



Science Leadership

- ◆ Identify staffing requirements
- ◆ Interface with the national and international scientific community
- ◆ Remove roadblocks
- ◆ Set performance metrics
- ◆ Optimize R&D programs
- ◆ Manage transitions in the laboratory

Integration and cost reduction:

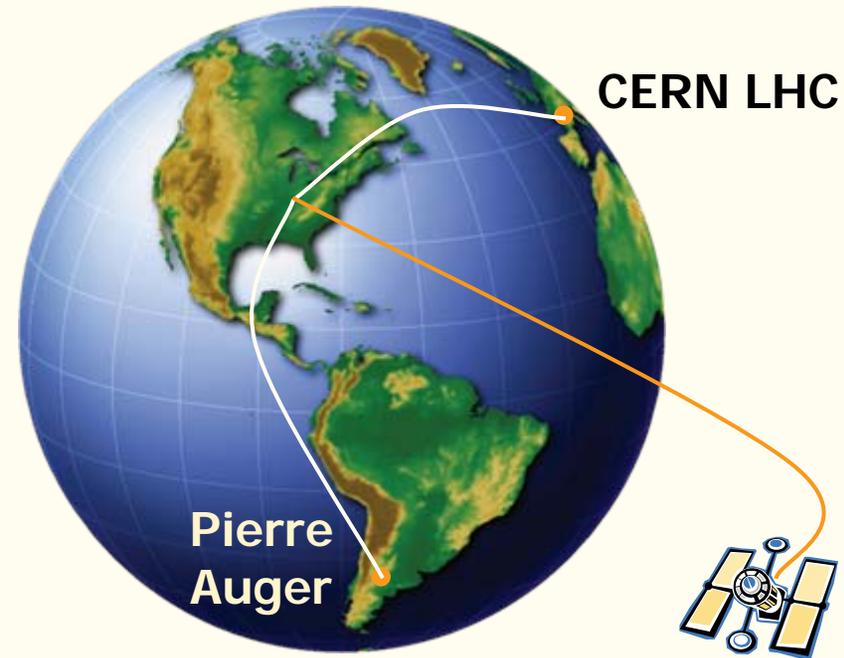
- Share resources with other departments
- Assist directorate in development of the OHAP

Interface and grow the laboratory

- Develop ties with peers around the globe
- Develop new programs that attract new scientific resources

Science Centers provide new collaboration opportunities...

- ◆ New management model is required to support remote facilities
- ◆ Restructured Particle Astrophysics Center to:
 - ◆ Manage strategically
 - ◆ Focus collaborations
 - ◆ Create synergies with UChicago
- ◆ New CMS center creates a critical mass of scientific and technical resources
- ◆ Cyber Security protocols in use to protect data integrity



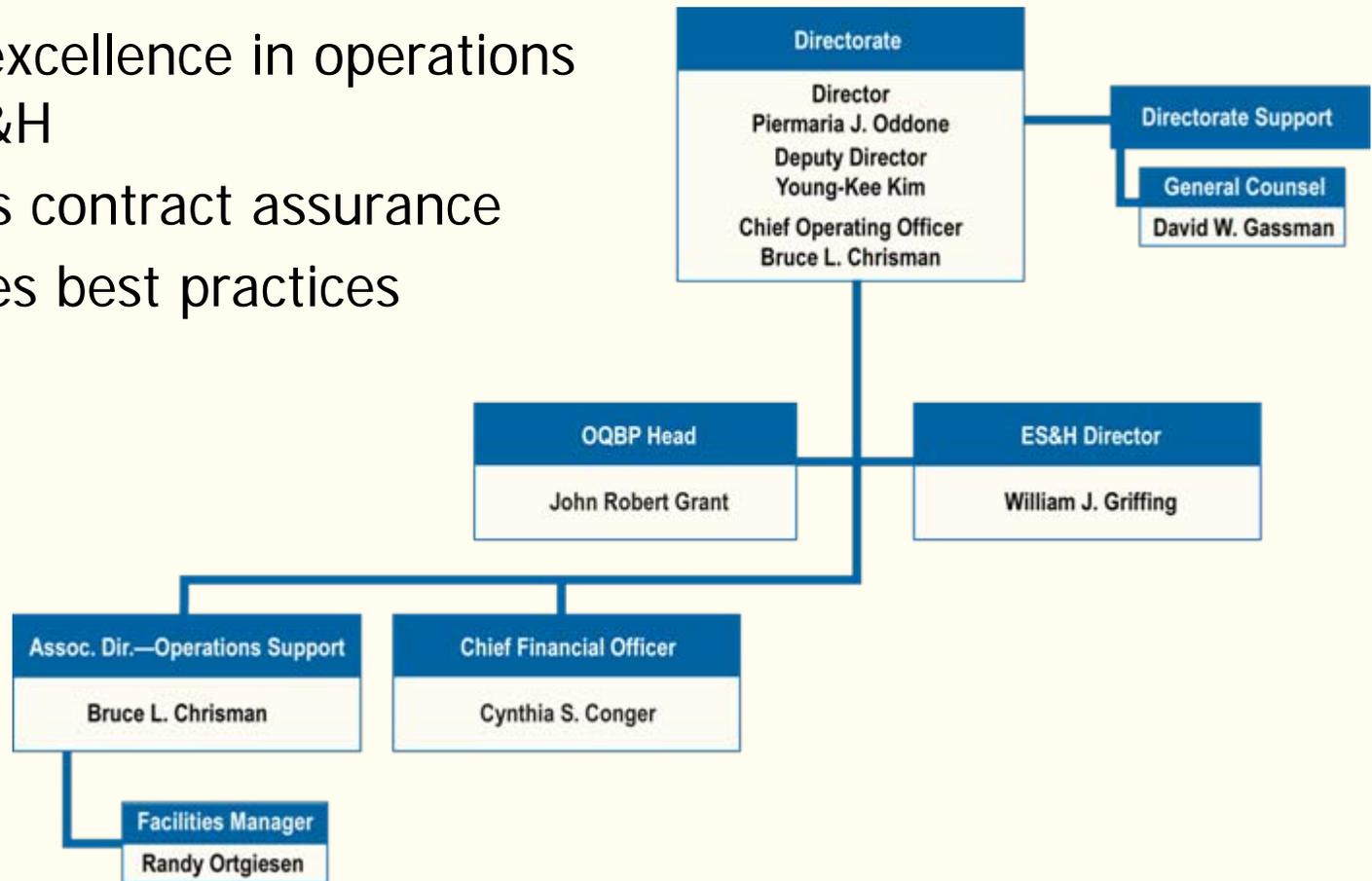
Science Centers provide the bridge to ILC...

- ◆ New APC will attract scientists to focus on accelerator R&D
 - ◆ Supports current and future facilities
 - ◆ Builds national and international collaborations
 - ◆ Provides a bridge from Tevatron to ILC at FNAL



Organization for Operations and Business Management

- ◆ Drives excellence in operations and ES&H
- ◆ Provides contract assurance
- ◆ Promotes best practices



Operations and Business Management

Strategic Plan and OHAP

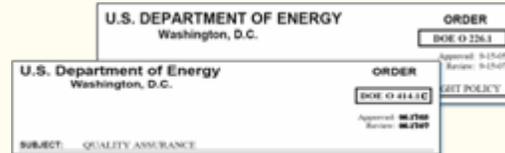
Optimized Operations and Business Management

Enhanced OPMO, IT Management, and Dashboard

- Expanded use of project management principles
- Performance metrics and change indicators
- Decision-making tools



OQBP and Corporate Reachback

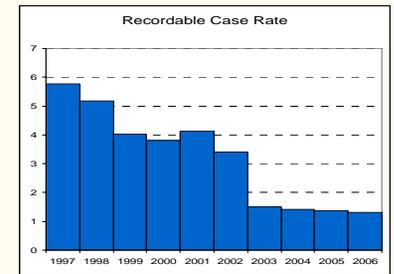


- Endorse change
- Provides full transparency
- Self Assessments
- Continuous improvement



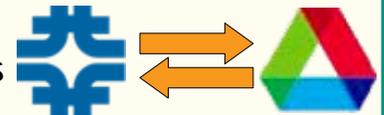
ES&H

- Zero accidents
- Achieve international safety certifications ISO 14001 and OHSAS 18001

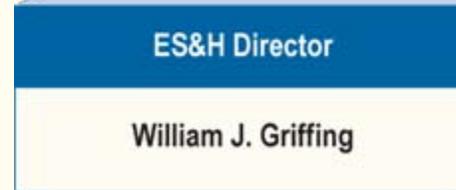
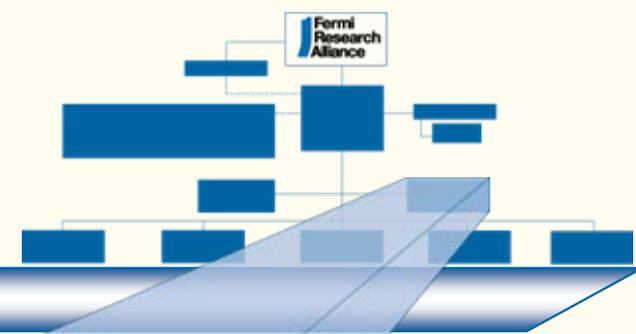


LCC

- Promotes best practices and scientific synergies



Environmental, Safety & Health



◆ Rationale

- ❖ Direct report to the Director to emphasize ES&H as Director's number one priority in management and operation of FNAL
- ❖ Incorporate ES&H in all activities starting with strategic planning

ES&H Initiative – ISO Registration



- ◆ We want to be recognized internationally as having best-in-class ES&H programs
- ◆ We will be seeking international registration of our ES&H programs
 - ◆ ISO 14001 – Environmental
 - ◆ OHSAS 18001 – Occupational Health and Safety

ES&H Initiative – Director’s Panel Follow Up

- ◆ Panel reviewed our safety program, interviewed many employees
- ◆ Eleven recommendations were offered, all are being addressed
- ◆ 2 key recommendations
 - ❖ Active management involvement
 - ❖ Communications

ES&H Initiative – Director’s Panel Follow Up



◆ Management involvement

- ❖ Most successful organizations are those in which managers are actively involved with the employees
- ❖ Managers from supervisor level on up have a performance goal that requires their presence in the work area and interactions with employees
- ❖ Employees have a performance goal to participate in our ES&H programs and to raise suggestions for improvements and concerns to their supervisor

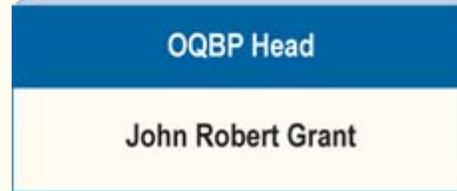
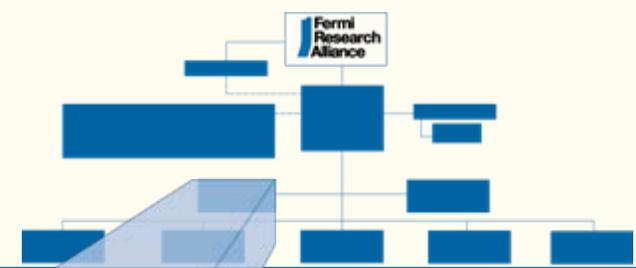
ES&H Initiative – Director’s Panel Follow Up



◆ Communications

- ❖ Supervisors and higher levels of management are expected to engage employees in discussions about ES&H and suggestions for improvements
- ❖ More information will be made available on incidents that occur at Fermilab and lessons learned that result from the analysis of those incidents

Office of Quality and Best Practices



FRA23
New Initiative
Office of Quality and Best Practices

FRA24
New Initiative
EG&G/URS Best Practices

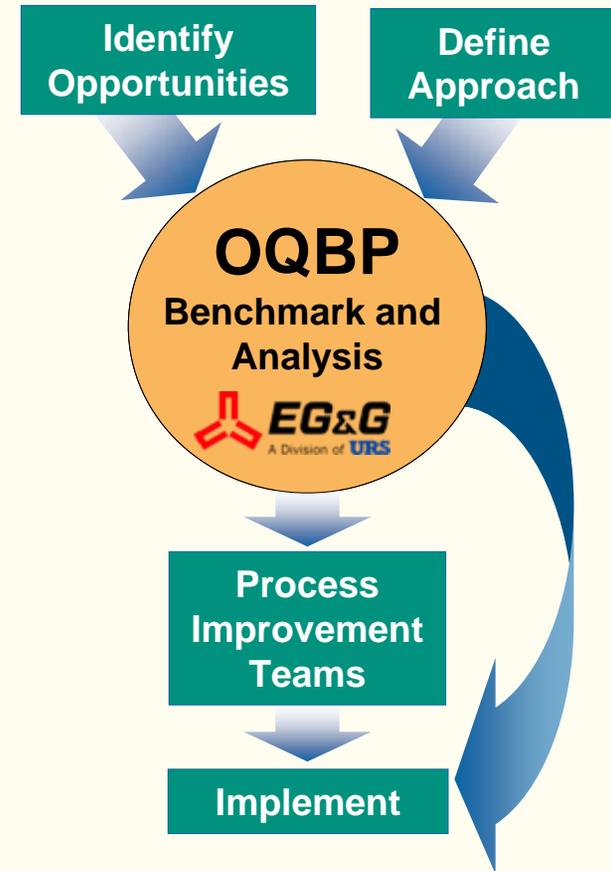
FRA25
New Initiative
QA Program Enhancements

◆ Rationale

- ❖ Reports to the Director to ensure focus on best practices and continuous improvement
- ❖ Laboratory-wide focus on productivity enhancement and cost savings

Role of EG&G at Fermilab

- ◆ Designated Subcontractor Reporting to the Office of Quality and Best Practices
- ◆ 3-5 FTEs on site
- ◆ Aids in the implementation of QA (DOE O 414.1C), Laboratory Assurance (DOE O 226.1), and self-assessment programs
- ◆ Assists in continuous improvement and best practices programs



Operations Support



FRA18 Resource Loaded WBS
New Initiative

FRA19 Documented R2A2
New Initiative

FRA20 Space-Utilization and Facility-Reuse Program
New Initiative

FRA26 Integrated Assurance Program
New Initiative

Assoc. Director—Operations Support

Bruce L. Chrisman

Facilities Manager

Randy Ortgiesen

Business Services

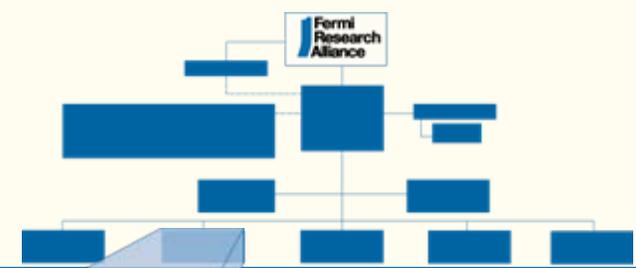
Human Resources

Technology Transfer

◆ Rationale

- ❖ COO is also the Director of Operations Support to avoid duplication of effort between the two organizations
- ❖ Dual role enhances the integration of business services and human resources with the line organizations

Financial



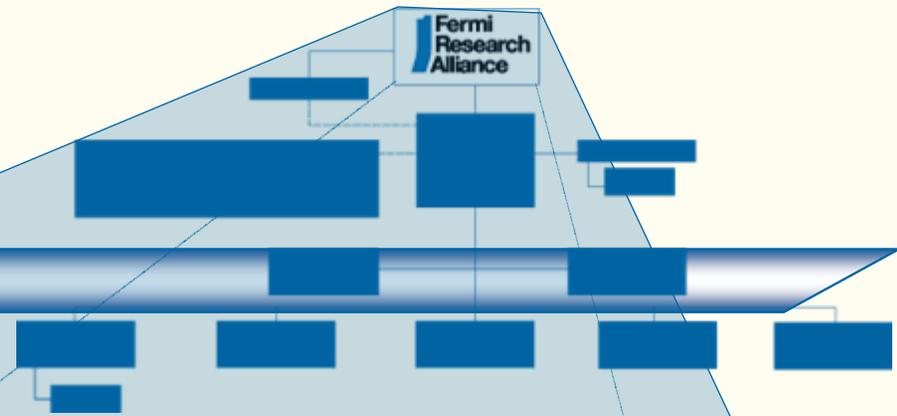
Chief Financial Officer
Cynthia S. Conger

- Accounting
- Budget
- MIS

◆ Rationale

- ❖ Reports to the Director to ensure focus on financial performance integrated with budgetary planning
- ❖ Financial, accounting, and MIS functions are combined into a single organization to increase efficiency in management and to foster cross-training

Management Team



Great and diverse individual skills matched to the organizational structure

FRA Management Initiatives



FRA Board of Directors



Organization and Human Asset Plan



Particle Astrophysics Center



Management Dashboard



Single-Point Accountability



K-12 Educational Outreach



Partnership in Grid Computation



Office of Quality and Best Practices



Partner University Resources



HEP Community Partnership



Strategic Planning Process Enhancement



EG&G/URS Best Practices



ILC Program Office



InterAction Collaboration Enhancements



Resource Loaded WBS



QA Program Enhancements



ILC Illinois Outreach



Laboratory Collaboration Council



Documented R2A2



Integrated Assurance Program



Illinois University Joint Appointments



Accelerator Physics Center



Space-Utilization and Facility-Reuse Program



Diversity Council



International Fellow Program



LHC Physics Center



OPMO Enhancements



ES&H Certifications

FRA Operations and Business Management Initiatives



Operations & Business Management Initiatives

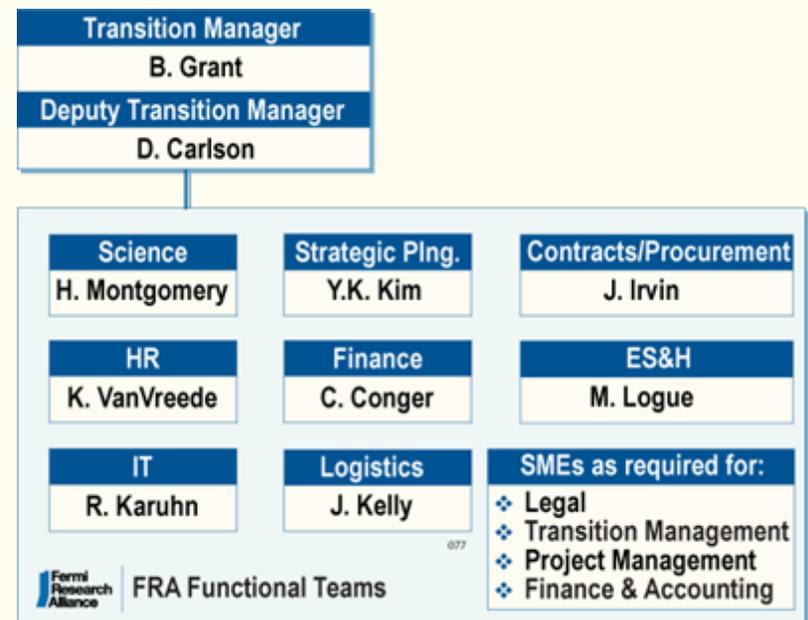


| | |
|--|---|
| 1. Office of Quality and Best Practices | ❖ Implements DOE, laboratory, commercial business, and standards agencies best practices to continuously improve FNAL systems |
| 2. Laboratory Collaboration Council (LCC) | ❖ Explores ways for FNAL and ANL to promote efficiencies, best practices, synergies and cost savings |
| 3. IT Management Information and Decision Support Systems Enhancements (Dashboard) | ❖ Provides FNAL and DOE with near real-time access to all operations and business management systems outputs |
| 4. Strategic Planning Process Enhancements | ❖ Articulates the Director's vision, guides budget and work plan establishment, and serves as a DOE communications tool |
| 5. QA Program Enhancements | ❖ Provides a robust QA program based on DOE O 414.1C that meets best practice standards of national and industrial labs |
| 6. Integrated Assurance Program | ❖ Provides a robust assurance program that integrates FNAL activities and initiatives |
| 7. Self-Assessment and Continuous Improvement Program Enhancements | ❖ Strengthens FNAL's self-assessment, continuous improvement, assurance, and QA programs |
| 8. Office of Project Management Oversight Enhancements | ❖ Provides FNAL with powerful project management assets and capabilities including training for managers |
| 9. Resource Loaded WBS | ❖ Creates a more comprehensive resource-loaded FNAL WBS with additional business, infrastructure and technical activities |
| 10. Organization and Human Asset Plan | ❖ Implements a forward-looking succession planning process, comprehensive workforce planning process, and written R2A2 |
| 11. ES&H Certifications—ISO 14001 and OSHA 18001 | ❖ Provides FNAL with ISO 14001 and OSHA 18001 certifications |

Transition Manager Bob Grant



- ❖ Safe, smooth 60-day transition ensuring:
 - ❖ Incumbent personnel hired and mapped to FRA organization
 - ❖ Business systems are functional
 - ❖ Key personnel onsite and ready to assume duties
 - ❖ Comprehensive inventory conducted
 - ❖ Transfer of responsibility for all facilities and programs to FRA



Transition of Employees to FRA, LLC



- ◆ All employees will become employees of FRA, not URA
- ◆ Employee's service dates will not change
- ◆ All employees will receive a letter transitioning their employment
- ◆ The transition will not affect employees' salary and benefits
- ◆ Vacation and sick leave accruals will not change
- ◆ There will be no layoffs as a result of the transition

Inventory in Process



- ◆ The Property department is conducting a wall to wall inventory of the assets of Fermilab.
- ◆ Please lend them your assistance in accomplishing this task
- ◆ The workload in the Sections will be very heavy, please be patient during the transition

