Idaho National Laboratory Business Systems and Processes Evaluation

June 2013

Idaho National Laboratory

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Business Management Systems and Processes Evaluation Steering Committee

June 2013

**Idaho National Laboratory
Business Management
Idaho Falls, Idaho 83415**

http://www.inl.gov

Business Management

Idaho National Laboratory
Business Process and System Evaluation

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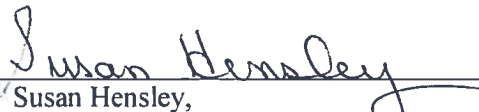
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EXECUTIVE SUMMARY

Idaho National Laboratory (INL) completed a comprehensive review and evaluation of its business processes and systems during Fiscal Year (FY) 2013. Business systems and processes have evolved over the past several years. This evolution, coupled with recent and significant changes resulting from workforce restructuring and cost reduction activities, resulted in a determination that the timing is right to assess if systems and processes are keeping pace with mission organization needs.

The objective of the review and evaluation is to identify strengths and opportunities to improve Business Management's systems, processes, and organizational alignment to better enable INL mission accomplishments. The scope of the review and evaluation included business systems and processes that were determined to be of primary importance and impact to the INL mission organizations. Initial scoping and chartering of INL teams was informed by an external review team's observations and recommendations, direction from the Steering Committee, and input from key stakeholders.

The review included input from an external review team as well as evaluations conducted by a robust network of INL teams. The external review team (comprised of Business Management personnel from Oak Ridge National Laboratory and Pacific Northwest National Laboratory) identified seven main themes as they interviewed and discussed INL processes and systems with more than 40 INL representatives during their 1-week visit (Figure ES-1). A targeted external review of the contract and agreement process also resulted in recommendations for improvement and was reported separately

The external review team's reports included recommendations to further assess and make improvements in the following areas:

- Indirect budget and planning process
- INL cost model
- "Graded approach" to project panagement
- Streamlining requirements and oversight
- Staff development
- Agreements and contracts for "selling" INL services.

Figure ES-1. Seven themes from external peer review activities.

The Steering Committee (comprised of the INL Chief Financial Officer, Deputy Chief Financial Officer, the managers of General Accounting and Supply Chain Management, and the General Accounting assurance lead) identified four primary focus areas (Business Systems, Business Processes, Cost Model, and Functional Alignment and Performance Management) and 15 sub-topics for further evaluation (additional topics were defined by focus area leads).

Focus area leads, team leads, and an initial list of team members were designated by the Steering Committee. Team evaluations took place between December 2012 and April 2013. The teams used a variety of approaches to complete their evaluations with common themes being obtaining stakeholder input and benchmarking with other U.S. Department of Energy (DOE) national laboratories. The Steering
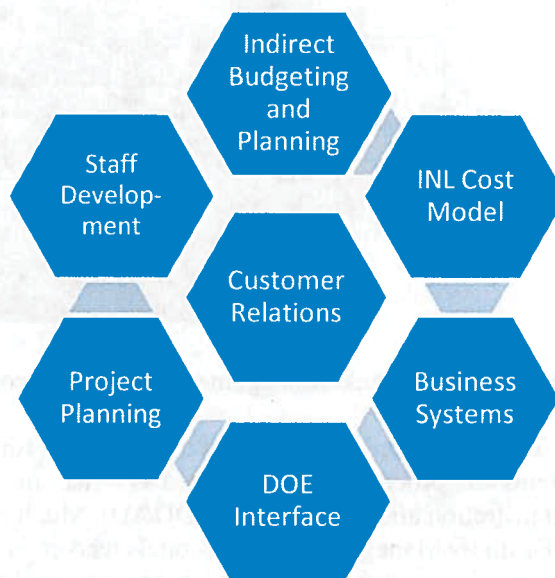
Committee and an advisory group made up of senior managers remained engaged throughout the evaluation process. Meetings were held with DOE Idaho Operations Office leadership to brief them on the evaluation status and obtain their input.

Results of the team evaluations were integrated into three themes (Enable Mission-Driven Planning and Decision Support, Integrated and Seamless Project Life Cycle Support, and Optimize Performance and Processes) that converge to provide enhanced support to INL mission areas through enabling the accomplishment of strategic outcomes as depicted below in Figure ES-2. Underpinning these themes is a cost model aligned with the Laboratory's objectives and strategies that facilitates mission outcomes.
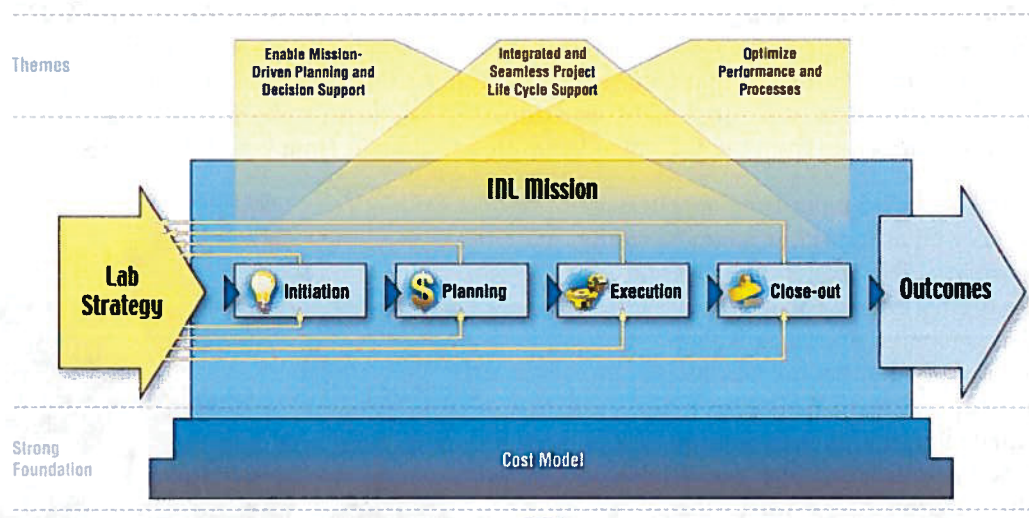
Figure ES-2. Business Management themes and cost model foundation support mission execution.

Teams reported strengths and opportunities for improvement in all areas assessed. In most cases, systems and processes were assessed as functioning adequately to support research, development, demonstration and deployment (RDD&D). Much of the feedback from stakeholders reflected high regard for Business Management professionals who engage with the processes and systems to help achieve outcomes even where system and/or process weaknesses exist. From the RDD&D perspective, the areas assessed to have the highest priority for improvement and key recommendations are listed in Table ES-1.

Table ES-1. Highest Priority Areas and Key Recommendations

Theme	Key Recommendations
Enable Mission-Driven Planning and Decision Support	Implement a single integrated planning process
	Establish portfolio-based planning to align strategy with resources
	Perform multiyear indirect planning
	Maintain Executive Council role in the Indirect Review Board function
	Employ an "Enterprise Bus" to manage system integration
	Conduct an Oracle "Insight" review to target optimization opportunities
	Upgrade to Oracle V12
	Designate a Business Systems Lead to develop a business system vision and roadmap and to drive the laboratory intelligence initiative
Integrated and Seamless Project Life Cycle Support	Clearly define projects that require full project management rigor
	Revise, document and implement a graded approach to work scope management
	Clarify roles responsibilities, accountabilities and authorities for work scope management
	Consolidate the "selling" contract function in Business Management
	Enhance the contracting capability by having a single organization responsible for stewardship, standards, and human capital development
Cost Model Changes	Restore Waste Generator Services and Chemical Management Service Centers in FY 2014, additional service centers established in FY 2015
	Propose an alternative model for applying indirect costs to Post Docs for 2014
	Apply Common Support to final cost objectives only, and eliminate its application to indirect cost objectives. Implement in 2015
	Implement a revised model for standard labor rates in 2015
	Evaluate pros and cons of an MFC charge-back model for facility and equipment sustainment needs. If approved, implement in 2015 or 2016

In addition, opportunities to continue improving and streamlining accounting and acquisition processes and staff development are high priority for the Business Management leadership team and staff. Rotational assignments, job shadowing, and process improvement initiatives are some of the strategies currently in place to achieve performance goals.

The full report details the strengths, opportunities for improvement, and actions identified by the teams, as well as the many actions already implemented to improve performance of INL business systems and processes. As workforce restructuring has occurred, many of the business processes and resource allocations have been stream-lined and optimized to ensure the Laboratory mission areas continue to receive the necessary support to achieve their outcomes. Also included in this report are priority recommendations that have been translated to action plans for continuous improvement. *The timing of future actions requiring monetary investment is dependent on the availability of investment funds and their relative importance when considered with other Laboratory priorities.*

CONTENTS

FIGURES

TABLE

ACRONYMS

ACT	Agreements for Commercializing Technology
BCP	Baseline Change Proposal
BDSIS	Business Decision Support Information System
CABS	Contract Accrual Bolt-on System
CDRL	Contract Data Requirements List
COTS	Commercial Off-The-Shelf
DOE	U.S. Department of Energy
DOE-ID	U.S. Department of Energy Idaho Operations Office
GTRI	Global Threat Reduction Initiative
INL	Idaho National Laboratory
MFC	Materials and Fuels Complex
NEUP	Nuclear Energy University Program
NGBM	Next Generation Business Model
OPW	Other Productive Work
ORNL	Oak Ridge National Laboratory
PEMP	Performance Evaluation and Measurement Plan
P&FC	Planning and Financial Controls
PI	Principal Investigator
PNNL	Pacific Northwest National Laboratory
RDD&D	Research Development, Demonstration, and Deployment

Idaho National Laboratory Business Systems and Processes Evaluation

1. OBJECTIVE, SCOPE, AND EVALUATION APPROACH

In November 2012, Idaho National Laboratory (INL) began a significant evaluation of its business management systems and processes. This evaluation was driven by:

- A strong desire to improve service delivery that enables research, development, demonstration, and deployment (RDD&D).

- Significant changes over the last few years in the business environment in which the Laboratory operates, including:

  - Unprecedented federal deficits and debt levels driving dramatic reductions in federal discretionary budgets, resulting in major workforce restructuring actions and cost reductions at INL. This trend also magnifies the need for national laboratories to demonstrate value.

  - Continued debate concerning the nation's energy strategy and the role of national laboratories, and the role of INL as the nation's national nuclear laboratory and its complimentary national and homeland security and energy and environment missions. This is driving new business models such as "virtual" user facilities and commercial-friendly contracting mechanisms (e.g., Agreements for Commercializing Technology [ACT]).

  - The fast pace of technology changes in the business world, including cloud computing, mobile devices, and real-time access to decision support data and information.

This evaluation was also documented in the FY 2013 INL Performance Evaluation and Measurement Plan (PEMP):

> "5.6.1 Business Systems: INL shall perform a critical self assessment / evaluation of the current Business Management Systems employed by the contractors for alignment with timely program mission accomplishment and needs. A report comprising the results of this evaluation, including process and system realignment changes deemed necessary as a result of the review, shall be submitted to DOE by June 30, 2013. The report shall also contain descriptive action plans and scheduled completion dates for the business system changes identified as a result of this review."

In summary, the objective of this evaluation was to ensure the Laboratory's business systems and processes are well positioned to operate in today's dynamic environment, with the ultimate goal of providing the most efficient and effective business resources and methods to facilitate mission outcomes.

The scope of this evaluation is targeted to the business areas of finance, accounting, procurement, contracting, planning/budgeting, and project and financial controls support (i.e., primarily subject areas under the purview or have strong overlap with the Business Management directorate). The scope did not include other business support areas such as human resources, legal, audit, etc., nor did it include operational business areas such as facilities management, site services, and environment, safety, and health. Broader topics such as the governance and management structure of the Laboratory were outside the scope of this assessment.

The scope of this evaluation is to assess, evaluate, and make recommendations; it is not an implementation project. However, many changes and actions have already been implemented or are in process, and priority actions have been identified. These items are noted in the report.

Our focus has been, and will continue to be, improving those areas of the highest priority from the perspective of the INL RDD&D mission organizations. Figure 1 below illustrates the fundamental thrust of this evaluation, which creates a stronger foundation of business management support to enable the conversion of Laboratory strategy into positive mission outcomes. The recommendations and actions described in this evaluation support at least one of the three themes depicted in Figure 1:

- Enable Mission-Driven Planning and Decision Support

- Integrated and Seamless Project Life Cycle Support

- Optimize Performance and Processes.

Underpinning these themes is cost model alignment with the Laboratory's objectives and strategies to facilitate mission outcomes. Given the crosscutting nature of this area, recommendations and actions for the INL cost model are shown separately.
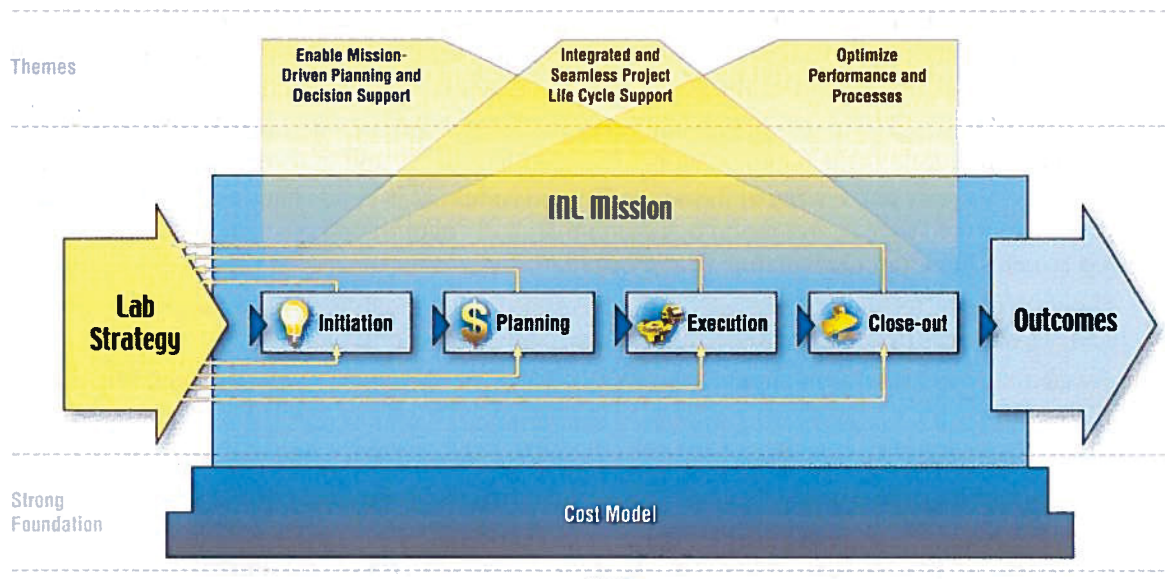
Figure 1. Business Management themes and cost model foundation support mission execution.

The following structure and approach was used to conduct this evaluation:

- A Steering Committee made up of the INL Chief Financial Officer, Deputy Chief Financial Officer, the Manager of General Accounting, the Manager of Supply Chain Management, and the General Accounting Assurance Lead. This committee established the evaluation framework and day-to-day oversight of the assessment. Regular meetings were held to status progress, provide resources, resolve issues, and provide guidance to the evaluation teams.

- An Advisory Team, made up of Associate Laboratory Directors from the Laboratory's five S&T/mission organizations, the Deputy Director for Management, and the Director for Laboratory Performance. This group ensured high-level stakeholder engagement as well as consistent focus on mission-driven outcomes.

- An external peer review team with representatives from Oak Ridge National Laboratory (ORNL) and Pacific Northwest National Laboratory (PNNL). A preliminary two member team visited INL in the spring of 2012, followed up by a four member team visit in the fall of 2012. This external team was familiar with national laboratories and the U.S. Department of Energy (DOE) operating environment, and provided an outside perspective and additional insight into high potential opportunities for

improvement. Appendixes E and F contain the external peer review reports. In addition, INL staff visited PNNL and ORNL to benchmark best practices in primary assessment focus areas.

From the outset, the evaluation approach emphasized significant engagement with the Laboratory's RDD&D and stakeholder communities (as members of evaluation teams, through focus group interviews, and one-on-one conversation).

Four focus areas (Business Systems, Business Processes, Cost Model, and Functional Alignment and Performance Management) derived from initial stakeholder input and the external peer review formed the basis for the team evaluations. Focus area leads, team leads, and an initial list of team members were designated by the Steering Committee. Appendix A of this report contains a complete list of the evaluation teams and focus and team leads. An evaluation kickoff meeting with focus area and team leads was held on November 29, 2012. Guidance included a discussion of the following guiding principles:

- Conduct evaluations from a customer viewpoint

- Ask the questions "are we enabling RDD&D?" and "how do we know?"

- Incorporate integration with other focus areas into evaluations as necessary

- Ensure that each evaluation includes a bias toward action and a balance of near and long-term actions

- Vet impacts with customers/impacted organizations

- Focus on two to four "hot spots."

Team evaluations took place between December 2012 and April 2013. The teams used a variety of approaches to complete their evaluations with common themes being obtaining stakeholder input and benchmarking with other DOE national laboratories. Appendix B contains a list of stakeholders and external sources interviewed during the evaluations. Appendix C contains a list of documents reviewed.

Team leads provided interim briefings to the Steering Committee in January and February 2013. The Steering Committee met regularly throughout the assessment process to discuss progress, provide feedback, and course correct as necessary. Meetings were held with DOE Idaho Operations Office (DOE-ID) leadership to brief them on the evaluation status and obtain their input. Evaluation teams provided initial areas for improvement and recommended actions to the Steering Committee in March. The Steering Committee met twice with the Advisory Team in March and April to provide initial evaluation results and obtain feedback/course correction input. Results of the teams' evaluations were integrated into the three themes and cost model as depicted in Figure 1 above.

The remainder of this report details the evaluation results under the three themes plus the foundational cost model area. A detailed breakdown of actions taken or in progress during FY 2013 and of those planned/recommended for FY 2014 and beyond is included in Appendix D.

As noted above, although an evaluation project, several changes and actions have already been implemented or are in process. Many of the remaining recommendations will be subject to funding and resource availability. Recommendations requiring incremental resources will go through the Laboratory's planning and decision-making process, and will be evaluated against other priorities. Given the constrained funding environment and significant workforce reductions incurred by the Laboratory over the last few years, it is highly likely some actions will not be implemented or planned execution dates will be extended into the future. This report identifies the highest priority items.

2. EVALUATION RESULTS

2.1 Theme: Enabling Mission-Driven Planning and Decision Support

This theme is primarily informed by assessments conducted by the Business Systems focus area and the Planning sub team (under the Business Processes Focus Area).

2.1.1 Business Systems – Assessment of Current State

INL business systems are comprised of a collection of integrated commercial off-the-shelf (COTS) systems, contractor developed "bolt-on" systems, and contractor developed systems (see Figure 2 below).
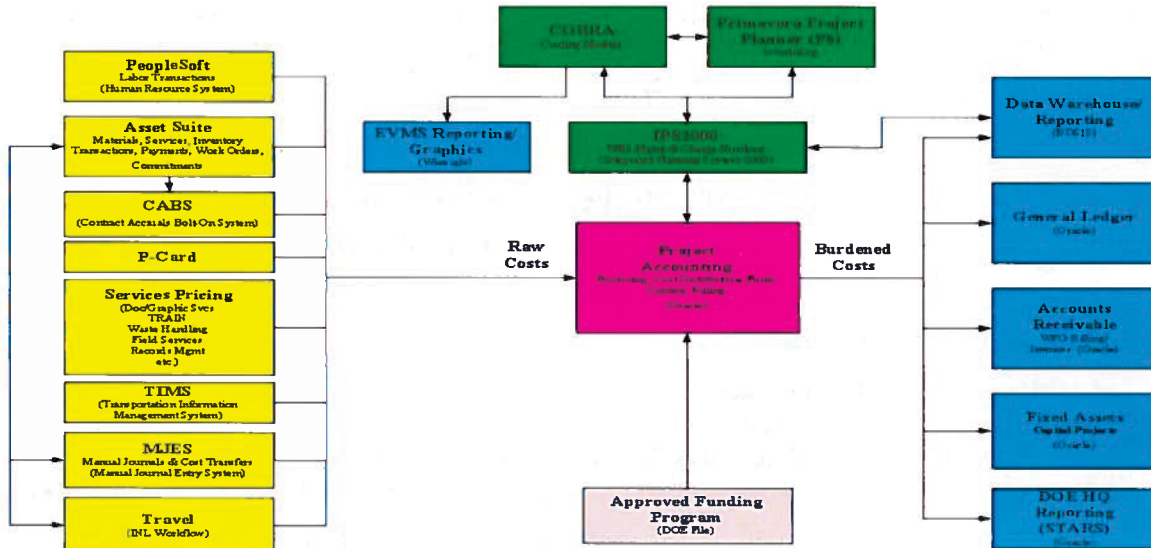
Figure 2. INL Business Information Management System.

Overall, the team determined that while the INL business systems function satisfactorily to achieve Laboratory objectives, there are several challenges and opportunities for improvement. In general, business systems require minimal intervention during normal processing and produce adequate data to support Laboratory requirements. Currently, integration between systems is adequate; however, given the system complexity and our reliance on subject matter-based expertise, maintaining the interface is a clear challenge and a high priority. Our Oracle e-Business Suite is outdated and requires an upgrade, which is recognized to be a complex undertaking. Additionally, while quality of financial data is considered to be "good," it is generally perceived to be difficult to extract and translate into actionable information that is useful from a project manager's perspective.

Other observations include:

- The current financial reporting system (Business Decision Support Information System [BDSIS]/Data Warehouse) is outdated, has limited drill-down capabilities, does not have the additional flexibility that new technology offers, and is not user friendly

- Financial information is not available in a timely manner and is difficult to retrieve

- INL continues to maintain and operate a number of workarounds, bolt-ons, and custom code that requires specialized skills and additional resources to maintain and operate

- COTS software is not being fully utilized in all cases

- Cloud computing may offer efficient and effective solutions to meet future INL business system needs, but needs more time to mature and must be reassessed.

2.1.2 Business Systems – Recommendations/Actions

The recommendations and actions identified below for INL Business Systems are primarily driven by the following:

- Continued reliability of integrated business systems
- Improved delivery of timely business decision data to support INL mission organizations
- Maintenance of business system viability at reduced cost.

    Our highest priority recommendations include:

1. Incorporate business system investments into the annual planning and budgeting process in 2013
2. Establish an ongoing Business Systems Engagement Working Group 2013
3. Conduct an Oracle "Insight" Review to better understand the potential for Oracle modules and future upgrade in 2013
4. Designate a Business System Lead to develop a business system vision and roadmap and to drive the Laboratory Intelligence initiative in 2013 to 2014
5. Develop a Business Systems strategy and roadmap that aligns with the Laboratory's 2020 Vision in 2013 to 2014
6. Implement an Enterprise Bus to improve business system integration in 2014
7. Upgrade to Oracle V 12 including investigating and prioritizing replacement of existing bolt-ons and custom applications with Oracle COTS capabilities in 2015 to 2018.

2.1.3 Planning – Assessment of Current Status

Based upon feedback from the external review team and known challenges with INL strategic planning and indirect planning processes, the team focused on evaluating the manner in which the Laboratory links strategy development with strategy execution. Process reviews and feedback from stakeholders revealed that both the strategic planning and indirect budget planning had some strengths and opportunities for improvement. Further, the assessment team concluded that from most perspectives, the two planning stages (strategy and execution through indirect budgeting) were not effectively linked to achieve optimal results. It is not always clear which organization within the Laboratory has responsibility and authority to manage an effective strategy development and execution process.

Fundamentally, strategy development within each mission organization is viewed to be very well-led and consistently implemented; however, integration between mission organizations and understanding at all levels within the Laboratory could be improved. In addition, multiyear strategy implementation planning is not clearly evident, nor are adequate measures of success in place (beyond yearly performance metrics) to evaluate progress towards achieving outcomes over time. The level of rigor associated with strategic investment decision-making is not adequate to ensure full lifecycle costs, facility availability, and staffing resources are planned and available.

The indirect planning process is not clearly aligned with strategy and is fraught with uncertainties (many of which are outside of the Laboratory's ability to address) that result in crisis management and rework. Most impactful concerns include the perception that budget decisions seem to be based upon across-the-board spending cuts rather than upon strategic priority and the frequency of cost model changes that make it difficult to anticipate and plan costs from year to year. Additionally, budget decisions do not appear to be strategy based. Many have the perception that budget/investment decisions are made based upon urgency, crisis of the moment, or traditional approach rather than upon strategic priority. Given the predominance of the above perceptions, it is evident that additional transparency and better communication regarding the planning processes is warranted.

Other observations include:

- The strategic investment decision making process has not been defined and documented and is not well-understood

- The indirect planning process is not well-documented, clearly understood, and consistently implemented

- Cost model changes are made too frequently and are not always aligned with the funding cycle

- There is limited knowledge of top down budget planning, which prioritizes scope required to execute the laboratory strategy and defines what scope will not be completed based on affordability levels and resource availability prior to issuing targets.

2.1.4   Planning – Recommendations/Actions

The primary recommendations associated with planning involve:

- Conducting a single integrated, multiyear, and dynamic planning process that links Laboratory budgets to strategic priorities in a more transparent manner

- Implementing a portfolio based approach for establishing the strategic framework and investment allocations.

Our highest priority recommendations include:

1. Integrate Laboratory planning efforts (lab agenda, indirect and direct planning) in 2013

2. Incorporate portfolio planning into Laboratory strategy meeting in May 2013

3. Develop indirect planning guidance based upon initial portfolio funding profiles in 2013 for FY 2014 planning

4. Define and implement an approach for managing both indirect revenue and costs that allow organizations to achieve cost objectives by both cutting costs and/or increasing revenue (within established scope) in 2014

5. Implement multiyear indirect planning/forecasting in 2014

6. Submit planning and execution year indirect rates to DOE-ID concurrently in FY 2014.

The boxes in Section 2.1.5 provide more detail regarding the actions completed or in progress, and recommended future actions related to this theme.

2.1.5 Evaluation Results – Enabling Mission-Driven Planning and Decision Support

Actions Completed or In Progress	Recommended Future Actions
Business Systems • Participating in an Oracle "Insight" Review (2013) to obtain expert advice on optimization of Oracle modules to inform future e-Business Suite upgrades and investments • Developing a Business System Strategy and Roadmap that aligns with the Laboratory's 2020 vision (2013 to 2014) to ensure integration of future business system investments with strategy • Identifying a Business System Lead (likely an Information Management position matrixed to Business Management) to develop a Business Systems Strategy and Roadmap and to drive the Laboratory Intelligence initiative (2013 to 2014) to meet data, analysis, and information demands of INL mission organizations • Establishing an ongoing Business Systems Engagement Working Group (2013) to enable ongoing cross-organizational communication and prioritization to address business system needs. **Planning** • Implemented new tools, templates, and analyses to better inform planning, including: "steady state" analyses, multi-scenario revenue forecasts (likely, upside, and downside), home organization – work organization full-time equivalent (FTE) planning, and more rigorous planning for out-year mortgages. • Incorporated portfolio planning into the May Laboratory strategy meeting (2013) to improve the integration between Laboratory strategy and investment decisions • Developed indirect planning guidance based upon initial portfolio funding profiles (2013) to improve the integration of Laboratory strategy and investment decisions • Integrated Laboratory direct and indirect planning efforts (2013) to enable planning integration • Implemented multi-year indirect planning/forecasting (2013 to 2014) to enable lifecycle investment decisions • Submit planning and execution year rates to DOE-ID concurrently (2013 for FY 2014) to increase the efficiency of the indirect planning process and enable program/project planning.	**Business Systems** • Implement an Enterprise Bus (2014 Request) to improve the efficiency of system integration • Upgrade to Oracle, V 12 (2015 to 2016 Request) to bring a critical element of the Oracle e-Business Suite up to current industry standard to ensure continued uninterrupted support to INL mission organizations • Investigate and prioritize replacement of existing bolt-ons, custom applications, and other software (PeopleSoft, P6/Cobra, Asset Suite) with Oracle capabilities (2015 to 2018 Request) to reduce the cost and difficulty of system maintenance • Expand the current Laboratory Intelligence pilot Laboratory-wide (2014) to accelerate making increased functionality available to all INL mission organizations • Replace the current data warehouse with Laboratory Intelligence (2015) to make access to program/project data easier to retrieve • Conduct a review of the Contract Accrual Bolt-on System (CABS) and upgrade to a current industry standard solution (2015 to 2016 Request) to lessen the cost of system maintenance and improve user interface • Conduct a cloud computing readiness assessment and implement selected cloud computing, as appropriate (2016 to 2018). **Planning** • Revise procedures for indirect budget management (2014) to reflect the portfolio management process implemented for FY 2014 indirect planning • Perform lessons learned on changes made to the 2014 planning process (2014).

2.2 Theme: Integrated and Seamless Project Life Cycle Support

This theme is focused on improvement to project management and contract management to better enable RDD&D throughout a project lifecycle—from proposal to close out.

2.2.1 Project Management – Assessment of Current Status

While there was not a team chartered to review project management processes and systems, the peer review team and many of the business system and process teams did receive feedback regarding the need for a "graded approach" to managing work scope. Significant improvements have been made in how we apply project management principles and techniques to the management of capital asset projects. While current work scope management processes are working as designed to prevent cost overruns, feedback indicates that there is room for improvement in how we manage noncapital asset projects. Of particular concern to many of the Principal Investigators (PIs) is the requirement to apply the planning and monitoring rigor associated with using Primavera Project Planner (P6) to all direct and indirect-funded work. Many believe that small dollar and short duration direct-funded projects cannot afford the resources necessary to meet this requirement and that the benefit may not justify the cost. In most cases, little or no benefit is derived from including indirect-funded ongoing operations (many of which are level of effort activities) in the rigorous planning and monitoring approach entailed in using P6. This concern was also noted by the external review team.

Another concern voiced by mission area managers regarding support for managing project costs is timely reporting of cost data and information; currently, labor costs are not reported until mid week rather than on Monday as most would prefer. Delay in reporting compounds the issues managers have with unanticipated use of project charge numbers and the difficulty managers have in reconciling the costs with planned activities. Too much effort is required to adjust to the unanticipated labor charges.

Other observations include:

- Current charge number usage controls are not working effectively to prevent inappropriate charge number usage

- There is a lack of knowledge regarding the charge number close process and the impacts to individual organization when charge numbers are not closed

- There is a need to clearly define the roles and responsibilities of Planning and Financial Controls specialists, project managers, and schedulers

- The monthly system processing schedule must be more flexible to accommodate programmatic needs.

2.2.2 Project Management – Recommendations/Actions

The recommendations and actions identified below are primarily driven by the following:

- Reduce the administrative burden on INL programs and projects while preserving the principles of sound work scope management

- Eliminate duplication of functions between Business Management and the Project Management Office.

Our highest priority recommendations include:

1. Clearly define projects that require full project management rigor (2013)

2. Revise, document and implement a graded approach to work scope management, including clarifying roles, responsibilities, accountabilities, and authorities (R2A2s) (2013 to 2014).

2.2.3   Contract/Agreement Support – Assessment of Current Status

The primary focus of this evaluation is on contracting to "sell" INL services. Bruce Simanton from PNNL provided the external review findings (see Appendix F). As currently organized, the contracting function is ancillary to core functions in many areas (Technology Deployment, Education Programs, Legal, etc.) and is not consistently focused on supporting the full project life cycle. There appears to be excessive "stove piping" and handoffs, which leads to inefficiencies, duplication of effort, and undue complexity when navigating multiple processes. In addition, agreement processing does not consistently utilize the appropriately skilled resources to perform contract functions. Combined, these elements create institutional risk management concerns that are not fully mitigated by application of consistent management controls. As a result, there is potential for proliferation of rogue and orphaned agreements.

Other observations include:

- Lack of consistency in requirements and use of systems and tools
- Lack of consistent bid/no bid decision in the research directorates.

2.2.4   Contract/Agreement Support – Recommendations/Actions

Again, the primary thrust for the recommendations in this area are to:

- Reduce the administrative burden on INL programs and projects while preserving the principles of sound work scope management
- Improve the user experience and reduce the risk associated with the currently fragmented "selling" function
- Enhance the contracting capability by having a single organization responsible for stewardship, standards, and human capital development.

Our highest priority recommendation is to consolidate the "selling" contract function in Business Management. The recommendation was approved by the Executive Council and is currently in process. A manager has been identified and a comprehensive transition plan is being developed to ensure uninterrupted support for projects.

2.2.5 Evaluation Results – Integrated and Seamless Project Life Cycle Support

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Actions Completed/In Progress

Project Management

- Clearly define projects that require full project management rigor (2013) to support implementation of a graded approach to project management
- Revise, document, and implement a graded approach to work scope management (including clarification of R2A2s for project management/ project controls (2013 to 2014) to improve life cycle support to INL programs and projects
- Post hours to the Laboratory Intelligence tool daily (2014) to begin the process of providing more timely access to cost data to INL programs/projects
- Analyze and recommend charge number control changes (2013 Summer Intern project) to begin the process of implementing changes that will decrease the likelihood of inappropriate charge number usage
- Consolidate project management financial tools in Business Management (2013) to begin the process of increasing system processing efficiency and flexibility.

Contract/Agreement Support

- Consolidate the contracts/agreements function in Business Management (in progress to be completed in 2014) to improve the user experience and decrease risk to the Laboratory.

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Recommended Future Actions

Project Management

- Post weekly payroll costs on Monday rather than Wednesday (2015) to provide more timely access to cost data to Laboratory programs/projects
- Evaluate and implement real time system processing of Baseline Change Proposals (BCPs) (2014) to increase system processing flexibility to accommodate programmatic needs
- Select and implement a scheduling tool to process weekly (2014) to enable more timely financial data
- Develop a tool to assist in determining when a charge number can be closed (2014–checklist; 2015–tool).

Contract/Agreement Support

- Reassess contract function support (2015) to determine if objectives have been achieved.

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2.3 Theme: Optimize Performance and Processes

2.3.1 Procurement and Accounting Processes – Assessment of Current Status

This theme included evaluations of procurement and accounting processes, as well as staff development and the management of requirements. In general, all areas evaluated are functioning adequately with the following observations noted:

- A hardworking, dedicated staff are able to meet customer needs despite occasional process inefficiencies and reduced resources
- Business Management consistently submits contract data requirements lists (CDRLs) on time; however, in some cases the value is not evident
- Opportunities for improvement exist in several procurement and accounting processes
- Funding challenges have resulted in inadequate resources being devoted to staff development.

  Other observations include:

- The current process for obtaining a procurement status is cumbersome and time consuming for INL programs/projects

- The search capability in the procurement catalog is limited
- Users lack adequate knowledge of procurement requirements resulting in rework
- The process for prioritizing procurements is not functioning adequately
- The efficiency of the invoice process (by Accounts Payable and Accounts Receivable) must be improved
- The efficiency of the manual accrual process must be improved
- The process and usage of the V19 expenditure type (an expenditure type used to distribute or move project costs within the same customer or prior year costs) must be improved
- Staff development funding has been significantly reduced leading to an increased risk that staff are inadequately trained
- Limited use of rotational assignments has resulted in a staff with a narrow set of knowledge, skills, and abilities
- Opportunities exist to better align skill sets and core capabilities with the best organizational home (for example the Property and Logistics function was determined to better align with the warehousing function in Facilities and Site Services organization and has since been moved).

2.3.2   Procurement and Accounting Processes – Actions/Recommendations

The recommendations and actions identified below are primarily driven by the following:

- Enhancing the user experience and increasing functionality of tools that support the procurement process
- Enhancing staff capabilities and development to better support INL mission accomplishment
- Eliminating low value added CDRL items and financial oversight to devote additional resources to process improvements and other high value added activities
- Enhancing process understanding and reducing rework with regard to accounting processes.

Our highest priority recommendations include:

1. Establish a business analysis capability (including cost/price) in Business Management in 2013
2. Implement rotational assignments to develop staff skills and build capability in 2013–ongoing
3. Leverage the Job Shadow program to build staff capability in 2013–ongoing
4. Work with IM to backfill critical staff openings in 2013 to 2014
5. Implement a Qualified Requestor Base for acquisitions in 2014
6. Refine and implement a Business Management succession planning process in 2014
7. Implement an automated status tool for purchases/subcontracts in 2015.

The boxes in Section 2.3.3 provide more detail regarding the actions completed or in progress, and recommended future actions related to this theme.

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2.3.3   Evaluation Results – Optimize Performance and Processes

Actions Completed/In Progress	Recommended Future Actions
• Automated the Accounts Payable invoice process (2013 to 2014) to reduce invoice processing cycle time • Reduce/eliminate the usage of the V19 expenditure type in the formulation and revision of budgets (2013 to 2014) to improve visibility of costs • Process recommended CDRL changes with DOE-ID (2013) to reduce time spent on low-value activities • Transferred Logistics and Property to Facilities and Site Services (2013) to better align core capabilities • Implemented rotational assignments (2013–ongoing) to develop staff skills and build capability • Leverage the Job Shadow Program (2013–ongoing) to build staff capability • Re-establish a business analysis capability (including cost/price) in Business Management (2013–ongoing) to ensure provision of a critical skill set to INL programs/projects • With Information Management, backfill critical staff support openings (2013–in progress; 2014–completed) to ensure adequate technical support to key business systems that enable INL mission accomplishment • Establish a risk-based approach to contractor oversight (2013 to 2015) to improve the oversight paradigm • Increased span of management control in Business Management (2012 to 2013) to fully utilize capability and reduce cost • Eliminated non-value added assessments and reports (2012 to 2013) to improve efficiency • Redistributed work throughout Business Management (2012 to 2013) to capitalize on skill strengths and accommodate workforce restructuring • Streamlined and automated processes/reports (such as the check request process where paper forms were eliminated and all reviews and approvals are fully automated) (2013) to improve process efficiency • Leveraged commodity buying through a DOE Contractor Blanket Ordering Agreements (2013) to increase process efficiency • Leveraged vendor investments in eMarketplace tools (2013) to increase process efficiency.	• Implement enhanced iBuy and Asset Suite Search capabilities (2014) to improve the user experience • Implement a Qualified Requestor Base for Acquisitions (2014) to improve the user experience/decrease rework • Implement an automated status tool for purchases/subcontracts (2015) to improve the user experience • Re-establish a priority system for procurements (2015) to ensure that the highest priority procurements are processed first according to Laboratory guidelines • Publish monthly data regarding acquisition route groups (2015) to increase accountability for timely processing and approval of acquisitions • Revisit the assigned roles and responsibilities for manual accruals (2014) to improve process efficiency • Automate the Accounts Receivable invoice process (2014) to improve process efficiency • Develop an automated tool to allow easy transfer of prime expenditure types while preserving the use of V19 to cost multi-funded projects to the penny (2016) to improve the visibility of costs and our ability to forecast and implement budget reductions • Refine and implement a Business Management succession planning process (2014) to meet future needs • Identify Subject Matter Experts in key functional areas, and publicize and make available to provide training to staff as needed (2013–ongoing) to ensure that all Business Management staff are adequately trained to provide needed support to INL programs and projects • Align additional/specific notes as an additional description of a procurement request (2014) to improve the efficiency of the procurement process.

2.4   Foundation: Cost Model Improvements

2.4.1   Cost Model – Assessment of Current Status

The INL cost model is compliant, results in a reasonable allocation of indirect costs to final cost objectives, and is understood by the accounting, finance, and other business staff responsible for its operation. Understanding of the cost model by non business staff is mixed.

Several cost model changes were implemented in 2012 as a result of the Next Generation Business Model (NGBM) initiative. This evaluation was an opportunity to assess the results of those changes. In general, the NGBM changes were found to be effective, with a few exceptions:

- NGBM may have gone too far in eliminating all service centers except two
- The proposed model for implementing standard labor rates was overly complex and not sustainable
- NGBM did not address some of the overhead on overhead aspects of the INL cost model that add complexity to understanding, managing, and forecasting costs and revenue. For example, the application of Common Support overhead to indirect-cost objectives, and the proliferation of Organizational Management pools.

Other observations include:

- The overheads applied to post docs appear high when compared to other laboratories and the causal/beneficial relationship of indirect activities to post docs
- A sound basis and rationale must be developed for alternative rates applied to service acquisitions for specific programs (Nuclear Energy University Program [NEUP] and Global Threat Reduction Initiative [GTRI] programs)
- The need to clarify and document the subcontract rate for construction projects
- INL includes the double counting of indirect costs in its reporting, which overstates its true indirect cost. This not only confuses both internal management/staff and external customers, but may also lead to incorrect conclusions about the true cost of doing business at INL
- There is a disconnect in how the Laboratory manages cost and recovery for Organization Management and for services provided to site contractors and others. The managing organizations are responsible for the cost, but not the associated recovery (managed at the laboratory level)
- Programs and customers want sufficient advance notice of cost model changes so they can plan for the impacts
- Much progress has been made at simplifying, understanding, and managing the cost of doing business at the Materials and Fuels Complex (MFC). This includes:
  - Established a new MFC organization, including its own Organization Management rate and indirect baseline
  - Established Other Productive Work (OPW) and Standby accounts so downtime could be explicitly captured and managed
  - Recognized and established an indirect budget for workforce development
  - Developed charging practice guidance and trained staff
  - Restructured workforce to position for 2014 and beyond
  - Implemented and continued maturing an Annual Mission Plan to better align MFC resources with programmatic work.

These actions have gone a long way in achieving the objectives established for the new MFC organization and its financial model: simplicity, transparency, predictable cost, fair, and equitable allocation to benefitting programs/projects, clear recognition of risk, and clear accountability.

2.4.2 Cost Model – Recommendations/Actions

The recommendations and actions identified below for the INL cost model are primarily driven by the following:

- Simplifying to better understand and manage cost

- Enabling project and work scope management
- Better aligning resource allocation decisions with the execution of the work.

  Our highest priority recommendations include:

1. Propose an alternative model for applying indirect to post docs (i.e., reduce the burden on post docs). This action is in progress with a target for implementation in 2013 for FY 2014 planning

2. Restore selected service centers. Waste Generator Services and Chemical Management Services will be officially recognized as service centers starting in 2014. Additional candidates have been identified for implementation in FY 2015

3. Implement a revised model for standard labor rates in 2015. (Note: May be deferred to FY 2016 depending on the level of program impacts)

4. Apply Common Support to final cost objectives only, and eliminate its application to indirect cost objectives. Implement in 2015

5. Evaluate the pros and cons of an MFC charge back model for facility and equipment sustainment needs. If approved, implement in 2015 or 2016.

For recommendations to be implemented in 2015 or later, the plan is to more fully assess the implementation details, including the impacts of the proposed changes on programs, and obtain final management decisions by December 2013.

The complete set of cost model actions already taken or in progress, plus those recommended future actions, are listed in the boxes in Section 2.4.3.

2.4.3   Evaluation Results – Cost Model Improvements

Actions Completed/In Progress	Recommended Future Actions

• Develop a strategy and cost allocation/burdening structure for Post Docs and Joint Appointments (2013–in progress; 2014–implemented) to improve the cost competitiveness of INL	• Implement approved Cost Model changes (2015 to 2016) to further simplify the Cost Model
	  – Standard Labor Rates (2015 to 2016)
	  – Eliminate application of Common Support to other indirect cost elements (2015)
	  – Restore selected service centers (2015)

• Establish the Waste Generator Services and Chemical Management Service Centers (2013 for FY 2014 indirect planning) to begin to reinstate functions that are best operated as service centers and eliminate the previous non-transparent cost transfer process	• Final decision regarding chargeback model for MFC (2014)
• Implement Portfolio Stack reporting (2014) to begin the process of integrating the indirect planning and execution processes with Laboratory strategy	• Consider changes in material and subcontract rates including special rates (2015)
• Implement the philosophy that mission directorates are responsible for both the budgeting and collection of indirect revenue (2013)	• Evaluate reducing number of Organization Management rates and changing base from labor dollars to labor hours (2015)
• Complete analysis of the cost impacts and present proposed Cost Model changes (including evaluating establishment of a "cradle-to-grave" cost recovery model for newly generated waste) to the Executive Council for approval (2013–impact analysis; 2014–present proposed changes to Executive Council for approval) to continue the process of further simplifying the INL Cost Model	• Evaluate space charge back model (2015).
• Completed several actions related to understanding and managing cost at MFC, including establishing home organization rate, indirect baseline, OPW, and workforce development accounts, and develop charging practice guidance (2013).	

3.   CONCLUSION

INL completed a comprehensive evaluation of business processes and systems and the effectiveness of support for RDD&D. The evaluation results were informed by considerable engagement from stakeholders throughout the Laboratory, and focus on RDD&D outcomes was reinforced by involvement of Associate Laboratory Directors on the Advisory Team. Given the objective to improve the delivery mechanisms and the impact of business management systems and processes on enabling RDD&D, actions were aggressively implemented throughout FY 2013, and future actions have been defined. Significant progress has already been achieved, particularly in the areas of integrating strategic and baseline planning, streamlining processes and leveraging staff skills, and improving alignment with project lifecycle performance. Actions associated with this assessment have established the foundation for continuous improvement as the Laboratory continues to drive towards outstanding performance as the nation's nuclear laboratory.

Appendix A

Evaluation Team Roster

Focus Area	Sub-Team(s)	Team Members
Business Systems Dave Searle, Focus Area Lead	None	Dave Searle, Lead Lisa Harvego, Project Management Office Doug Parker, Project Management Office Roland Smith, Information Management Linda Hergesheimer, Planning and Financial Controls (P&FC) Thane Price, Information Management John Anderson, Procurement Don Stevens, Procurement Paul Fielding, Business Manager Keith Barney, Modeling and Reporting Andrea Gilstrap, System Trustee
Business Processes Bob Crowton, Focus Area Lead	Planning	Susan Hensley, Lead Deborah Tate, Executive Secretariat Kathy Borland, P&FC Jere Smith, P&FC Nick Case, Campus Development Office Troy Lark, Procurement Zane Mickelsen, P&FC
	Reporting	Jacob Goss, Lead Benjamin Butcher, P&FC Jeannie Ellis, P&FC Marcia Lindsay, P&FC Paul McQuivey, P&FC John Sanders, P&FC
	Accounting Processes	Joe Gunter, Lead Susan Smith, Policy & Assurance Brett Robbins, Payroll
	Acquisition Processes	Sam Grover, Lead Sam Dixon, Procurement Anita Gianotto, Executive Secretariat Karen Miller, EES&T Patty Perez, Logistics
	Funds Management	Michelle Crane, Lead Linda Hergesheimer, P&FC Brittany Cook, P&FC Susan Smith, Policy & Assurance Darlene Kalbeitzer, P&FC Zane Mickelsen, P&FC
	CDRL Review	Diana Skoy, Lead

Focus Area	Sub-Team(s)	Team Members
Cost Model Susan Hensley, Focus Area Lead	Post-Doctoral Burdening	Gregg Landon, Lead Erin Hanson, Human Resources Paul Fielding, Business Manager Julie Hart, Education Programs Marsha Lambregts, Education Programs Kara Gallagher, Human Resources
	Common Support	Gregg Landon, Lead Tory Crane, Modeling and Reporting Darin Stockstad, P&FC Jason Arnold, P&FC Brad Carlson, P&FC Paul Fielding, Business Manager
	Alternative Rate for Service Acquisitions	Gregg Landon, Lead Tory Crane, Modeling and Reporting Brett Brewerton, P&FC DeeAnn Thompson, Business Manager Michelle Wiest, Procurement Diana Skoy, Policy & Assurance Jodi Bragassa, Business Manager Bob Crowton, Procurement
	Service Centers	Mary Dee Grimm, Lead Kent Browning, Business Manager
	Org. Mgmt Rates	Jodi Bragassa, Lead Paul Fielding, Business Manager Jackie Morrison, Business Manager DeeAnn Thompson, Business Manager Kodi Holdaway, P&FC
	MFC Cost Recovery Pool	Bob Miklos, Lead Jackie Morrison, Business Manager Brad Carlson, P&FC David Start, Engineering Julie Baker, Materials and Fuels Complex (MFC) Mark Henry, MFC Keith Penny, MFC
	Program Ready – MFC and Non-Nuclear Facilities	Bob Miklos, Lead Paul Fielding, Busines Manager and Non-Nuclear Lead Jackie Morrison, Business Manager Sandi Drussel, P&FC Julie Baker, MFC Tim O'Rourke, Program Integration Office and INL Charging Practices Committee
	Budget and Collect Indirect Revenue	Tory Crane, Lead Gregg Landon, Modeling and Reporting Brett Brewerton, P&FC Kathy Borland, P&FC Kristen Morgan, P&FC Cameron Cutler, P&FC
	Capital Construction Project Subcontracts	Gregg Landon, Lead Brady Orchard, Project Management Office Mary Dee Grimm, Business Manager Diana Skoy, Policy & Assurance Michelle Crane, P&FC

Focus Area	Sub-Team(s)	Team Members
Functional Alignment and Performance Management Lisa Sehlke, Focus Area Lead	Contracts	Lisa Sehlke, Lead Rafael Soto, EES&T Chief Operating Officer Jason Stolworthy, Technology Deployment Dana Storms, Prime Contract Michelle Wiest, Procurement
	Project Management	Dennis Newby, Chief Financial Officer Randy Bargelt, Project Management Office Jodi Bragassa, Business Manager John Baker, Project Management Office

Appendix B

Stakeholder and External Sources Interviewed

Internal Stakeholders	
Organization	**Representatives**
Director's Office	Deputy Laboratory Director for Science and Technology Deputy Laboratory Director for Management General Counsel Internal Audit Staff
Energy and Environment S&T	Chief Operating Officer Business Manager Energy Systems and Technologies Manager Process Science and Technology Manager Environmental Engineering Technology Manager
National & Homeland Security S&T	Chief Operating Officer Technical Program Managers Field Intelligence Element Manager
Nuclear S&T	Chief Operating Officer Technical Program Managers
Project Management Office	Director Cost Estimating Manager Capital Construction Project Managers
Laboratory Protection	Director
Materials and Fuels Complex	Steering Committee
Advanced Test Reactor	Director of Programs
Center for Advanced Energy Studies	Deputy Director
Environmental Safety and Health	Director Deputy Director
Facilities and Site Services	Director Facility Support Services Manager Campus Development Office Staff
Information Management	Director IT Architect Information Delivery Manager IM Strategic Planning/Management System Lead Cyber Security R&D Core Services

Internal Stakeholders (continued)	
Organization	**Representatives**
Human Resources and Diversity	Director and Line Managers Leadership and Org. Development Manager
Executive Secretariat	LDRD Program Manager Prime Contract and Performance Management Manager
Business Management	Chief Financial Officer General Accounting Manager Business Managers Numerous Planning and Financial Controls Specialists General Accounting Staff Payroll Staff
Laboratory Performance	Director and Staff
Technology Deployment	Director Commercialization Managers Work for Others Administrators

External Sources

Oak Ridge National Laboratory

Pacific Northwest National Laboratory

Argonne National Laboratory

Lawrence Berkeley National Laboratory

Los Alamos National Laboratory

Appendix C

List of Documents Reviewed

2001 National Laboratory Postdoctoral Programs – Post Doctoral Program Information Report and Summary.

2014–2023 INL Ten Year Site Plan, DOE/ID-11474.

CDRLs assigned to Business Management.

Cost Accounting Standards, 2008, Thomson Reuters/West, ISBN 978-0-314-98-723-5.

Council Charters.

DOE Order 430.1B, "Real Property and Asset Management."

Draft MFC/ATR Work Acceptance Procedures.

External Peer Review Report, "INL Business Processes and Systems," November 2012.

Form 415.30, "BEA/INL Control Account Variance Analysis Report," January 10, 2012, Rev 2.

Form 415.42, "Performance Summary Report," Rev 2.

FY 2011 Budget Officers Matrix.

"FY 2012 INL Site Sustainability Plan," DOE/ID 11383, Rev. 4, December 2012.

"FY 2013 Indirect Budget Call Letter," May 30, 2012.

FY 2015 Field Budget Call (NE) Guidance.

IAS 13978, "Independent Assessment of INL Research Work Acceptance," November 29, 2012.

"INL Financial Management Systems FY 2013 Annual Plan," September 2012.

"INL Laboratory Plan," INL/MIS-12-27417, September 2012.

"INL Management Model," Revision 1, December 7, 2012.

Integrated Planning Model.

Laboratory Financial Report.

Laboratory Intelligence Dashboards.

LWP-3405, "Funding Request and Determination," November 2008, Rev 3.

LWP-7390, "Project Management Process," Rev 6.

MCP-3334, "Indirect Budget Development," December 4, 2012, Rev 3.

MCP-3335, "Monitor and Control Indirect Budgets," December 4, 2012, Rev 2.

MCP-3356, "DOE Budget Formulation Process," September 1, 2011, Rev. 0.

MCP-7348, "Project Data Accumulation, Reporting, and Variance Analysis," January 12, 2012, Rev 2.

October 2012 Management Primer.

Plan 4053, "Software Maintenance and Operations Plan for Business Management Application," November 2012.

Plan-25010, "Human Capital Management Plan," December 23, 2010, Rev 3.

"Post-Doctoral Business Case," June 2006 (draft).

"Post Implementation Optimization Study Report," October 2009.

Program Strategic Plans.

"Research and Development Experience Study," February 2013.

WSU vs. INL Post-Doctoral Cost Comparison Spreadsheet.

Appendix D

Summary of Evaluation Themes, Recommendations and Action Plans

Theme	Recommendation	Issue Addressed	Priority	Action Plan	Responsible Person/Org.	Status	Proposed Timeline	Cost Estimate
Enable Mission Driven Planning and Decision Support	Optimize existing business system infrastructure	Current systems are difficult and costly to maintain; data is difficult to retrieve; and systems are outdated and not user friendly	High	Implement an Enterprise Bus	Business Management-Bryan Larson	Not started	2014 Request	$400K
			High	Oracle upgrade to Version 12	Business Management – Bryan Larson	Not started	2015 to 2016 Request	$750K
				• Oracle Insight Review		In progress	2013	$0
				• Investigate and prioritize replacement of existing bolt-ons and custom applications with Oracle COTS capabilities		Not started	2015 to 2018 Request	$500K
			Medium	Implement sub-ledger accounting STARS interface		Not started	2016 Request	$500K
			Medium	Conduct a review of CABS and upgrade to a current industry standard solution	Business Management-Bryan Larson	Not started	2015 to 2016 Request	TBD
			Low	Investigate and prioritize replacement of existing bolt-ons, custom applications and other software (PeopleSoft, P6/Cobra, Asset Suite) with Oracle capabilities	Business Management-Bryan Larson and Michelle Wiest	Not started	2017 to 2018 Request	TBD
			Low	Conduct a cloud computing readiness assessment and implement selected cloud computing as appropriate	Information Management	Not started	2016 to 2018 and beyond	TBD

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Theme	Recommendation	Issue Addressed	Priority	Action Plan	Responsible Person/Org.	Status	Proposed Timeline	Cost Estimate
Enable Mission Driven Planning and Decision Support (continued)			High	Designate a Business Systems Lead to develop a business system vision and roadmap and to drive the Laboratory Intelligence initiative	Business Management-Dennis Newby and Information Management—Denise Stephens	In progress	2013 to 2014 Request	$200K
			Medium	Expand the current laboratory intelligence pilot to the entire Laboratory	Business Management-Dennis Newby and Information Management—Denise Stephens	Not started	2014	TBD
			Medium	Replace BDSIS with Laboratory Intelligence	Business Management-Dennis Newby and Information Management—Denise Stephens	Not started	2015	TBD
	Implement FY 2014 indirect planning improvements	Budgets rather than user demand are driving decisions	High	Incorporated portfolio planning into May Laboratory strategy meetings	Business Management-Bryan Larson	Complete	2013	$0
		Lack of integration between Laboratory strategy and investment decisions	High	Developed indirect planning guidance based upon initial portfolio funding profiles	Business Management-Bryan Larson	In progress	2013 for FY 2014	$0
			High	Define and implement an approach for managing both indirect revenue and costs	Business Management-Bryan Larson	In progress	2014	$0
			High	Implement multi-year indirect planning/forecasting	Business Management-Bryan Larson	In progress	2013 for FY 2014	$0
			High	Planning and execution year rates submitted to DOE-ID concurrently	Business Management-Bryan Larson	In progress	FY 2014	$0
			High	Integrate Laboratory planning efforts (Laboratory Agenda, Indirect Planning, Direct Planning)	Business Management-Bryan Larson	In progress	2013	$0

Theme	Recommendation	Issue Addressed	Priority	Action Plan	Responsible Person/Org.	Status	Proposed Timeline	Cost Estimate
Enable Mission Driven Planning and Decision Support (continued)			High	Implemented new tools, templates, and analyses to better inform planning, including "steady state" analyses, multi-scenario revenue forecasts (likely, upside, and downside), home organization-work organization FTE planning, and more rigorous planning for out-year mortgages	Business Management-Bryan Larson	Completed	2013	$0
			Medium	Revise procedures for indirect budget management	Business Management-Bryan Larson	Not started	2014	$0
			Medium	Perform lessons learned on changes made to the 2014 planning process	Business Management-Bryan Larson	Not started	2014	$0
	Enhanced business systems governance structure	Lack of formalized cross-organizational mechanism to address business system needs	High	Develop a strategy and roadmap that aligns with the Laboratory's 2020 vision	Business Management-Business Systems Lead	In progress	2013	$0
			High	Establish an ongoing Business Engagement Working Group	Business Management-Business Systems Lead	In progress	2013	$0
Integrated and Seamless Life-Cycle Support	Enable more timely data access	Current business systems do not provide timely information to meet program/project needs	Medium	Select and implement scheduling tool to process weekly	Business Management – Bryan Larson	Not started	2014	$25K
			Medium	Post hours to LI daily	Business Management – Bryan Larson	Not started	2014	$0
			Medium	Post weekly payroll costs on Monday	Business Management – Bryan Larson	Not started	2015 request	$50K
			Medium	Evaluate and implement real time system processing of BCPs	Business Management – Bryan Larson	Not started	2014	$0
	Implement a graded approach to work scope management	One-size fits all approach to project management creates non-value added process steps and increases project cost	High	Clearly define projects that require full project management rigor	Project Management Office – Randy Bargelt	Completed	2013	$0

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Theme	Recommendation	Issue Addressed	Priority	Action Plan	Responsible Person/Org.	Status	Proposed Timeline	Cost Estimate
Integrated and Seamless Life-Cycle Support (continued)			High	Revise, document and implement a graded approach to work scope management (including clarification of R2A2s for project management/project controls)	Business Management-Dennis Newby/Project Management Office-Randy Bargelt	In progress	2013 to 2014	TBD
	Create a consolidated "selling" function within Business Management	Increased risk, poor user experience due to decentralized "selling" function	High	Consolidate the contract/agreements function in Business Management	Business Management-Dana Storms	In progress	2014 ongoing mortgage	$150K
			M	Reassess contract function support to determine if objectives have been met	Business Management-Dana Storms	Not started	2015	$0
	Enhance charge number controls and improve the charge number close process	Increased risk of improper charge number usage	Medium	Analyze and recommend charge number control changes	Business Management-Kodi Holdaway	In progress	2013	$0
				Develop a tool to assist in determining when a charge number should be closed	Business Management-Bryan Larson	Not started	2014-checklist; 2015-tool	TBD
	Enhance functional alignment and program/project support		Medium	Consolidate project management and financial system tools and administrators in Business Management	Business Management – Bryan Larson	Completed	2013	$0
Optimize Performance and Processes	Enhance the user experience and increase functionality with the procurement process	Manual process results in poor user experience	High	Implement an automated status tool for purchases/subcontracts	Business Management-Michelle Wiest	Not started	2015 request	$250K
		Current search capabilities require significant rework that leads to increased user frustration	Medium	Implement enhanced iBuy and Asset Suite Search capabilities	Business Management – Michelle Wiest	In progress	2014	$48K
		Currently every procurement is No. 1 priority which results in no priority	Low	Implement a formal priority system for procurements	Business Management – Michelle Wiest	Not started	2015 request	$35K

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Theme	Recommendation	Issue Addressed	Priority	Action Plan	Responsible Person/Org.	Status	Proposed Timeline	Cost Estimate
Optimize Performance and Processes (continued)		Current procurement request process is cumbersome particularly for infrequent users	High	Implement a Qualified Requestor Base for acquisitions	Business Management – Michelle Wiest	In progress	2014	$30K
		Current process is cumbersome for procurement staff and not efficient	Low	Improve accessibility of special notes in for purchase requisitions in iBuy	Business Management – Michelle Wiest	Not started	2014	$10K
		Lack of performance data regarding routing groups	Low	Publish monthly metrics for requisition approval	Business Management – Michelle Wiest	Not started	2015 request	$40K
	Implement accounting process improvements	Lack of process understanding leads to rework	Medium	Automate the Accounts Payable (AP) and Accounts Receivable (AR) invoice processes	Business Management – Bryan Larson	AP-in progress; AR-in progress	2013 to 2014	$14K-AP; TBD-AR
			Low	Reduce/eliminate use of the V19 expenditure type in the formulation and revision of budgets	Business Management – Bryan Larson	In progress	2013	$0
			Low	Develop an automated tool to allow easy transfer of prime expenditure types while preserving the use of V19 to cost multi-funded projects to the penny	Business Management – Bryan Larson	Not started	2016	TBD
			Medium	Revisit the assigned roles and responsibilities for manual accruals	Business Management – Bryan Larson	In progress	2014	$0
	Eliminate low-value added CDRL items	Devoting staff to low-value-added activities results in reduced time available to perform key task such as process improvement	Low	Process CDRL changes with DOE-ID	Business Management – Bryan Larson	In progress	2013	$0
	Enhance staff capabilities and development	Additional staff development is required to address need to prepare for upcoming staff retirements	High	Implement rotational assignments to develop staff skills and build capability	Business Management Managers	In progress	2013-ongoing	$0
			High	Leverage the Job Shadow program to build staff capability	Business Management Managers	In progress	2013-ongoing	$0

Theme	Recommendation	Issue Addressed	Priority	Action Plan	Responsible Person/Org.	Status	Proposed Timeline	Cost Estimate
Optimize Performance and Processes (continued)			High	Work with IM to backfill critical staff openings	Business Management Managers	In progress	2013-ongoing	$0
			High	Refine and implement a Business Management succession planning process	Business Management Managers	Not started	2014	$0
			Medium	Identify SMEs in key functional areas, publicize, and make available to provide personal training to staff as needed	Business Management Managers	In progress	2013-ongoing	$0
			High	Re-establish a business analysis capability (including cost/price) in Business Management	Business Management – Bryan Larson and Michelle Wiest	In progress	2013-ongoing	$0
			High	Establish a risk-based approach to contractor oversight	Business Management – Dennis Newby	In progress	2013 to 2015	$0
Cost Model	Establish and implement cost model changes to be implemented in FY 2014	Budgets driving service level decisions rather than user demand	High	Develop a strategy and cost allocation/burdening structure for Post Docs, Joint Appointments, and Interns	Business Management-Paul Fielding	In progress	2013 for FY 2014 indirect planning	$0
		Cost of Post docs, Joint Appointments and Interns too high	High	Establish the Waste Generator Services and Chemical Management Service Centers	Business Management-Bryan Larson	In progress	2013 for FY 2014 indirect planning	$0
			High	Implement Portfolio Stack Reporting	Business Management-Bryan Larson	Not started	2014	$0
			High	Implement a philosophy that mission directorates are responsible for both the budgeting and collection of indirect revenue	Business Management-Bryan Larson	In progress	2013	$0
	Develop an integrated strategy and approach to implement additional cost model changes for implementation in FY 2015 to 2016	Need for continued simplification of the INL Cost Model	High	Complete analysis of cost impacts and present proposed Cost Model changes to the Executive Council for approval (cost model changes under consideration include Standard Labor Rates, application of Common Support, alternative rates for service acquisitions and capital construction subcontracts, reinstatement of additional service centers) including a "cradle to grave" cost recovery model for newly-generated waste)	Business Management – Bryan Larson	In progress	2013-impact analysis; 2014-present to Executive Council	$0

Theme	Recommendation	Issue Addressed	Priority	Action Plan	Responsible Person/Org.	Status	Proposed Timeline	Cost Estimate
Cost Model (continued)	Continue pursuing actions to increase understanding of the cost of doing business at MFC	Lack of complete understanding of what it costs to do business at MFC	High	Implement approved Cost Model changes	Business Management-Bryan Larson	Not started	2015 to 2016	TBD
			High	Evaluate the pros and cons of an MFC charge-back model for facility and equipment sustainment needs	MFC Management	In progress	2014 – evaluate 2015 or 2016 implement if approved	TBD

$0 Cost Estimate = Self-investment, with no incremental investment required.

$ Cost Estimate = Preliminary amount of incremental investment requested.

Appendix E

External Peer Review Report

External Peer Review

Idaho National Lab Business Processes and Systems
Executive Summary

The Business Processes and Systems External Review Team conducted a peer review at the Idaho National Laboratory (INL) November 12-16, 2012. The scope of the review focused on business systems and processes within the cognizance of INL's Business Management Directorate. The overall objective of the review was to identify strengths and opportunities to improve Business Management's systems, processes, and organizational alignment in order to better enable INL mission accomplishments. The review was also part of a larger effort to address measures 5.6.1 and 5.6.2 from INL's FY 2013 Performance Evaluation and Measurement Plan.

The review team met with 36 INL representatives during the one-week visit. The majority of the representatives were from the Business Management Directorate, but representatives from the R&D community, Information Management, and the Project Management Office were also interviewed in order to gain the perspective of Business Management's internal customers and key interfaces. Discussions covered key business processes and questions designed to encourage dialog on current strengths and suggested improvements.

This report includes several recommendations for the INL to consider. However, for the greatest impact in support of PEMP goals 5.6.1 and 5.6.2, we suggest the Lab concentrate its efforts in the following four areas:

(1) **Improving the Planning Process** – The primary recommendation in this area is to designate a single organization that is *clearly* identified as the owner of the Lab's annual planning process, providing a single process that links strategy development with strategy execution. We also recommend the Modeling and Reporting team taking a greater leadership role in driving the annual planning process through the development and implementation of a Lab Level reporting structure.

(2) **Project Management** – We recommend that the Lab continue down the path of implementing a "graded approach" in order to optimize the cost and benefit of project management requirements. This would include eliminating the requirement that all indirect funded activities must be planned and monitored in Primavera Project Planner (P6). Although this level of project planning may be suitable for certain indirect funded activities, such as IGPP activities, the vast majority are simply level of effort and do not require the level of planning and tracking currently required. In this area we also suggest that the CFO organization engage the recently established Integrated Planning Office (IPO) to fully understand their role and how the new "high risk" project management requirements being developed will impact the PFC organization. On the surface it appears that these are being developed unilaterally by the PMO, which may or may not be appropriate from an *overall* risk management standpoint.

(3) **Business Systems** – The primary recommendation in this area is to conduct a review of all the business systems and develop a 3-5 year strategy for systems improvements. As part of this system strategy as well as a move to a more integrated planning process, we would recommend that the

Laboratory centralize the funding for all major system improvements and manage this as part of the planning process to ensure that the highest priority investments are getting funded.

(4) **DOE Interface** – We recommend that the Business Management organization partner with their DOE counterparts to kick off an initiative to review all contract requirements and deliverables related to Business Management with a goal of reducing transactions to become more effective and efficient. We believe there are some assessments and requirements that are lower value to both the Laboratory and DOE that could be removed or reduced without compromising DOE's ability to evaluate the effectiveness of the Business Management function.

External Peer Review

# Idaho National Lab Business Processes and Systems

INTRODUCTION

The Business Processes and Systems External Review Team conducted a peer review at the Idaho National Laboratory (INL) November 12-16, 2012. The review team included staff members with a broad range of experience in accounting, business management, business systems, financial analysis, and project management and included representatives from the Oak Ridge National Laboratory and the Pacific Northwest National Laboratory.

The scope of the review focused on business systems and processes within the cognizance of INL's Business Management Directorate. The overall objective of the review was to identify strengths and opportunities to improve Business Management's systems, processes, and organizational alignment in order to better enable INL mission accomplishments. The scope and objective were also designed to help the INL address the following measures from INL's FY 2013 Performance Evaluation and Measurement Plan (PEMP):

- 5.6.1. Business Systems: INL shall perform a critical self assessment/evaluation of the current Business Management Systems employed by the contractor for alignment with timely program mission accomplishment and needs. A report comprising the results of this evaluation, including process and system realignment changes deemed necessary as a result of the review, shall be submitted to DOE by June 30, 2013. The report shall also contain descriptive action plans and scheduled completion dates for the business system changes identified as a result of this review.

- 5.6.2 Indirect Baseline Management: Establish and maintain a responsive, flexible, and efficient indirect cost management planning and execution process focused on INL program mission accomplishment that results in predictable and constant to decreasing indirect labor multiplier to programs and a fiscal year end indirect cost recovery position as close to zero as possible, but not exceeding -$3M (under-recovered). Continual evaluation of indirect services/efficiencies needs to be maintained to focus INL funds availability for mission accomplishment.

The review team met with 36 INL representatives during the one-week visit. The majority of the representatives were from the Business Management Directorate, but representatives from the R&D community, Information Management, and the Project Management Office were also interviewed in order to gain the perspective of Business Management's internal customers and key interfaces. Discussions covered key business processes and questions designed to encourage dialog on current strengths and suggested improvements.

The review team's observations and recommendations are presented in the following main themes with the final section of the report summarizing the areas we suggest INL concentrate its efforts:
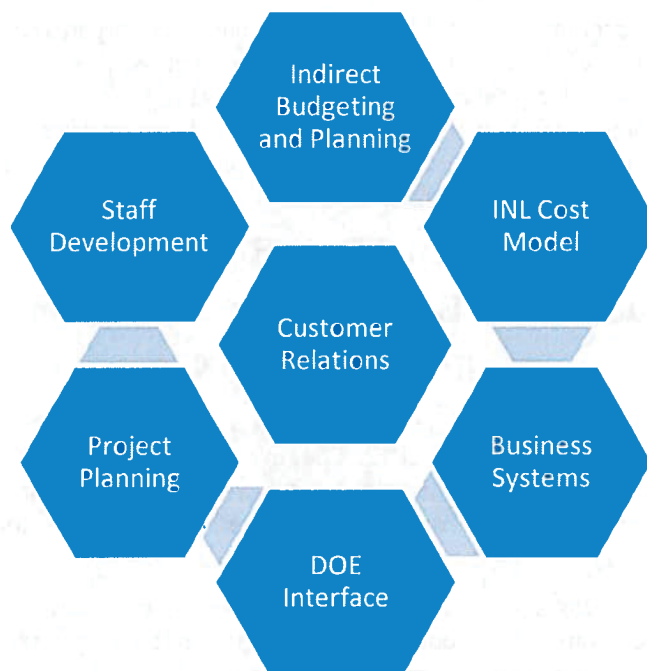
INDIRECT BUDGETING AND PLANNING

An area of focus for the review team was the Indirect Budgeting and Planning Process at the INL. From a high-level, strategic planning standpoint it appears that the INL has a solid process in place to drive the Lab Agenda, and is in sync with the DOE-Idaho Field Office (DOE-ID) on the critical missions and capabilities of the Laboratory. However, the annual process to determine key initiatives, including scope, milestones, performance indicators and resources needs is less clear. Based on our interviews, we suggest that the Lab should focus in on two areas, (1) enhancing the annual planning process to better represent annual (tactical) elements necessary to execute the strategy, and (2) engagement of DOE-ID in the planning process.

Enhancing the Planning Process

A recurring theme in our meetings with INL staff was the lack of consistency in the planning process from year to year. Many feel that the annual planning process is re-invented each year, which could be the unintended result of changes in Lab leadership. Whether or not this is the case, lack of consistency in the annual planning process can lead to poor execution and R2A2s that are not clearly defined. To address this we recommend having a single organization that is clearly identified as the owner of the Lab's annual planning process, providing a single process that links strategy development with strategy execution.

Currently the annual overhead budgets are strictly grouped into organizational bins. While individually those bins are important to each directorate, collectively they cannot describe how the INL is investing its resources to achieve its strategy. We recommend developing a portfolio view of the Lab's overhead resources (reference Exhibit 1) that would provide the Lab greater insight into what the annual overhead dollars are allocated to (core functions, fixed costs, organizational burden or strategic laboratory investments). Regular reporting of budget status and costs should be aligned with this portfolio view. Of course, below the portfolio view are lower levels of details that can still be tracked for organizations; the portfolio view is a management tool designed to focus leadership on the major components of costs.

In this area we also recommend the Modeling and Reporting team taking a greater leadership role in driving the annual planning process, while working closely with the CFO office and responsible planning organization. Delivering information to support strategy to Management is a critical responsibility of the finance function. This will require the Modeling and Reporting team to take the lead in developing the Lab Level reporting structure described above.

Additional recommendations to enhance the planning process include:

- Develop (or procure) a central repository for gathering current planning and out year estimates. This will reduce the possibility of errors, provide for central reporting and analysis which increases transparency, and identify out-year planning impacts on rates for proper bidding.

- Gather rolling institutional forecasts during the fiscal year. This will enhance the Lab's ability to manage to the rates which mitigates project impacts.

- Indirect FTE targets should be developed and established prior to 10/1 so that any impacts (or required staffing action) on the approved Direct Ratio can be worked.

- Consider starting the year with a planning reserve in place. In today's funding environment a reserve will provide the Lab with flexibility to adapt and react. This will require full support of Lab leadership not to cannibalize, with funding decisions driven by data - not decibels.

- Develop a clearly defined, transparent, and *cohesive* M&O strategy. The current planning process appears to be organizationally driven, which can create silos with the mindset of 'what is best for my world' vs. aligned organizational behavior.

Stack Element	Portfolio
Research Org OH	Org OH
Support Org OH	
S&T Initiatives / Seed	Research
IR&D	
Program Development	
GRE	
IGPP / PE	F&I Capital
M&O Core (incl. BIS)	M&O
Planning Reserve	Risk Mitigation
LDO Reserve	
Fixed Cost	Fixed Cost

Exhibit 1: Stack by Portfolio Element (example)

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	Stack Element	Evaluation Process	
Org. OH Portfolio	Research Org OH	Standards based on organization size / function	
	Support Org OH	Standards based on organization size / function	
Research Portfolio	S&T Initiatives / Seed	Evaluation process led by DDS&T	
	IR&D	Evaluation process led by TDO	
Capital Portfolio	Program Development	Metric as starting point with strategic investments	
	GRE	Evaluation process led by DDS&T	**Linkage to Strategy**
	IGPP / PE	Evaluation process led by F&I	
M&O Portfolio	M&O Core (incl. BIS)	Evaluated through use of Unit Management standards, Cost Metrics, ISIC recommendations on BIS, Mgmt Initiatives evaluated and prioritized by Research Operations Council	
	Planning Reserve	Held to allocation above guidance requests - eliminated 10/1	
	LDO Reserve	Lab Director Reserve - available for allocations during the FY	
	Fixed Cost	Evaluated by BD&A	

Exhibit 2: Consider an evaluation process for *each* portfolio element

Engaging DOE

Another observation of the review team is the current requirement of the DOE Site Office for the Lab to lock in a labor multiplier nine months in advance of the planning year. We understand the potential benefits of this related to cost containment and planning, but this process could potentially lead to decisions impacting operations and business development because related labor and benefit costs are not well understood that far in advance. We recommend the Lab work with DOE to develop an alternative solution that would both meet the Site Office needs as well as retain the flexibility to make more accurate strategic investment decisions during the annual planning process. Strategy and the annual planning process should drive resource allocations resulting in rate development. The partnership would certainly involve INL Leadership's commitment to cost containment and rate stability to enable successful operations of the Lab. (Note that even with costly facilities, the INL labor multiplier remains *very* competitive amongst multi-program Labs in the DOE complex and is amongst the lowest in 3rd Party cost multipliers.)

INL COST MODEL

In FY12 the INL adopted a new burdening structure referred to as the Next Generation Business Model (NGBM). This model was developed during a period of growth for the Laboratory with the intention of simplification. However, like most DOE National Laboratories, the INL now finds itself facing reduced funding levels with a renewed focus on cost containment, which is not facilitated by this model.

During the interview process the Assessment review team heard concerns from several staff members that the cost model is always changing, which not only impacts the ability to plan and execute project work, but also impacts delivery of services on the M&O side.

Based on our review, following is a summary of recommendations for the INL to consider.

- Simplify organizational management by eliminating Org OH rates for core groups that charge primarily indirect. Charge the office space cost, with any associated burdens, directly to the G&A accounts. Additionally, consider higher level grouping of organization burdens to eliminate the number of required pools and rates.

- Eliminate the application of Common Support on Common Support, which raises issues on compliance with Cost Accounting Standards (CAS) 410(a)1. Our recommendation is to consider eliminating the application to all indirect cost pools and applying to final cost objectives only.

- Service centers – review to ensure that only two service centers are needed, as it seems likely this is too few. Moving all of the service centers to G&A may not drive the appropriate behavior since the possibility of misuse is greater because the client/user is not charged directly for the services they receive (i.e., this breaks the 'user pays' philosophy). Our experience is that service centers, when deemed appropriate, drive proper decision making and resource allocation decisions.

- Standard Labor Rates – although we understand how the proposed model works, and the benefit of going to such great lengths to appease internal customers, the model is overly complex by attempting to incorporate over 200 work disciplines. We also have some concern as to whether the grouping is compliant with Cost Accounting Standards (CAS) 418-50. We recommend implementation be put on hold until a simple and manageable model is agreed to by the EC, with the understanding that there will be winners and losers in the process but changes get incorporated into the planning process to mitigate current year impacts.

- Variance policy – consider establishing a policy where acceptable variance thresholds are established for organizational management and service center pools, with lab level pools managed in aggregate based on materiality to final cost objective level. In conjunction, change the management of overheads from a total 'revenue' view to having each pool owner responsible for cost, recovery, and variance which has the result of increasing coordination and integration across organizations. Currently the pools owners are only responsible for cost, which can lead to fluctuating rates, and managing from a total revenue standpoint is complicated by recycled overheads.

- Review the current Space chargeback model as it does not appear the outcome of the current model incentivizes effective space management. Currently only office space is charged direct to the organizations with Lab space managed centrally in G&A (excluding nuclear space).

- Consider implementing an overhead 'stack' view that eliminates recycled overheads with a focus on net recovery from Final Cost Objectives. This view will aid in financial reporting, decision making, modeling, and will increase transparency to both the EC and the DOE Site Office.

- Review current pricing strategy. Based on FY11 Budget Officers data, the INL is the cheapest Lab for Subcontracts and amongst the lowest for Materials. A shift of burdens to 3rd party would provide flexibility within the Labor Multiplier for strategic investments while keeping the Lab competitive on 3rd party cost.

We strongly encourage the Lab to take its time in implementing any further revisions to the cost model with the goal in mind that they will live with the next version for a period of time to gain much needed continuity and consistency.

BUSINESS SYSTEMS

The INL's system strategy has been to implement the "best of breed" system for the particular business area. This strategy has seen INL implement a mix of commercial off the shelf (COTS) solutions (PeopleSoft, Oracle, and Asset Suite) and homegrown solutions. The main advantage of this strategy is the functionality of each system is the best fit for the business process. The main disadvantage is the loss of integration that would occur if the systems were all on the same software package. We met with several IM and Business professionals and in our discussions several themes emerged in the business systems area.

Systems Strategy

The INL does not seem to have a business systems strategy that is integrated either with the Laboratory level strategy or even the Business Management strategy. In general, it appears like the Mission Enabling Organizations that have money have the ability to do system enhancements while other Mission Enabling Organizations might have to do without. An example of this appears to be in the strategy for the new Laboratory Intelligence tool where it appears IM Services has been demonstrating the capabilities to various organizations and have then been funded by several of these organizations to enhance the product for items that are of interest to those organizations.

Overall the systems that support the Business Management organization appear to generally perform the required activities for the individual business segments (AP versus AR, etc.) but in general it was not clear how system enhancements and changes are gathered and prioritized. In addition, the lack of Laboratory strategy and funding has caused some systems to age to the point where in the near future they will either be required to pay additional maintenance for support or not be supported at all by the vendors. Another factor of the age of the Oracle modules, specifically, is an increase in cyber security vulnerabilities given that they have not been upgraded in several years. However, not all systems are out of date as PeopleSoft Time and Labor was recently upgraded to version 9.1.

There are two recommendations in this area to improve the INL's systems strategy. First, we recommend someone do an overall assessment of the systems at the INL and work with the directors of the Mission Enabling Organizations to put a systems roadmap together that describes where INL would like to go in the next three to five years. As a part of this roadmap we would suggest INL evaluate the "best of breed" strategy that has been implemented to date. We heard from several individuals that system integration was one of the biggest pain points. Secondly, as part of the moving to a portfolio approach to managing indirect budgets, we recommend the system improvement budgets be centralized and managed by a committee to achieve the direction set in the roadmap described above.

Impactful Information in a Timely Manner

As we met with a cross section of Accounting, Planning and Financial Controls, Modeling, and Research staff, a consistent theme that emerged was getting timely, impactful information to make decisions.

The timeliness of financial data was a big concern from staff both from a project management perspective as well as a STARS perspective. Currently, labor costs are not published to BDSIS until Wednesday morning which makes them available in reports and for querying. All other costs are generally available in BDSIS on Monday mornings. The delay in labor is because there are three different work schedules with one schedule ending at 7:00 AM on Monday morning. It then takes payroll approximately a day and a half to process time cards and release the job to process cost. Once this job is complete than labor costs can be published to BDSIS.

The second theme that emerged was access to the essential information that staff require to make decisions. This need was the basis of the Laboratory Intelligence project which is designed to give staff the required information to do their jobs. In many cases this information might not be financial in nature. An example might be publications on a LDRD project or the safety record of a particular technical group. However, for this project to be successful it is recognized that the financial information will be a key piece of the puzzle.

We had two recommendations regarding providing timely and impactful information to decision makers. First, we recommend that the INL pursue consistent cut-off times for feeder systems to improve the timeliness of information to project managers. The biggest area of opportunity in this area is creating a cutoff for processing labor cost on Friday evenings. This may require that the processes for time reporting and payroll be thought of as two separate processes. While the INL would still have 3 distinct payroll schedules all labor cost to projects would be reported on a Saturday to Friday basis. So in the case of a

swing shift worker whose week ended on Monday morning, their time for Saturday and Sunday would not be processed until the following Friday. This should allow for the posting of labor cost to occur and data to be published to BDSIS by Monday morning giving project managers much more timely information than they currently get today. Secondly, as noted above we think that a centralized system strategy is required at the INL. One piece of this strategy should be determining what the highest priority tasks are for the Laboratory Intelligence project and ensure that they are completed first.

Additional Business Systems Recommendations

- Evaluate if single point of failures exist in IM support to business systems and find ways to mitigate the risk. We heard in several cases that there was one IM staff member that supported a specific system or group of systems. For example, it was mentioned that one key resource supports most of the PeopleSoft systems.

- When upgrading systems continue to evaluate delivered functionality to see if out of the box functionality can replace bolt on systems. This will reduce the cost of future upgrades and improve system integration. An example is the application of the Federal Administrative Charge (FAC) might be able to be incorporated within Oracle which would eliminate the need for the FAC bolt on system.

- Evaluate using Oracle to perform retroactive rate adjustments. The current practice is to make a prospective change in Oracle and then manually book the adjustment using MJES for the retroactive distribution to projects. If this is done then users need to understand the timing of that adjustment because if they are doing cost adjustments in the future they need to know if it was before or after the rate change in Oracle. If the cost they are adjusting was incurred prior to the adjustment they need to include the manual journal entry in their cost adjustment.
  - Evaluate whether you could test a retroactive rate adjustment in development first to ensure that it works as planned

- Evaluate where the biggest pain points are in current systems and determine if system improvements could mitigate these issues. An example would be modifying the CABS system to allow accruals on multi-funded acquisitions. Currently all multi-funded acquisitions are manually accrued using the MJES system.

- Evaluate whether a centralized approvals tool would add enough benefit to staff to justify the cost.

DOE INTERFACE

Background

DOE Idaho is a key partner and customer of the INL and of the Business Management organization. They are required to provide the necessary oversight of the contractor to ensure that the INL is performing against their prime contract and not putting the government at undue risk. A primary strategic goal of DOE Idaho is "Ensure the safe, reliable, and efficient completion of DOE/INL missions."

Observations

Many of the INL representatives discussed their working relationship with DOE Idaho and the requirements that they follow at the request of DOE Idaho. DOE Idaho is very engaged in the day to day Business Management operations of the INL. An advantage of this engagement is demonstrated by the fact that DOE Idaho has been extremely helpful in the collection of some old outstanding receivables from other federal agencies. Unfortunately, this level of engagement also has some disadvantages. It appeared to us that DOE believes they have more of an operational role rather than an oversight role. The disadvantages centered around two main themes. First, they can be a barrier to change because they know the current systems and reports and sometimes resist change. Secondly, there are numerous requirements that are imposed on the INL where the benefit does not seem worth the effort. Some examples of the onerous requirements include:

- The initial submission and ongoing maintenance of the annual contract baseline documents
  - Many times this effort is duplicative of other DOE headquarters systems such as PICS
  - Requirements within DOE Idaho are not consistent
- Tracking of all project deliverables
- The high number of DOE Assessments
- The scrutiny and low tolerance for differences on accruals
- Observation of 50% of A123 tests
- Control of the INL Labor Multiplier

Recommendations

We believe that an opportunity exists for INL and DOE Idaho management to partner together to improve the efficiency of the Laboratory during challenging budget times. Given that both the Laboratory and DOE Idaho have new CFOs the timing is right to try and work together to reduce requirements and transactions to lower cost without decreasing the effectiveness of the Laboratory. In addition, we believe the INL could use their contractor assurance process to encourage DOE to lower the number of annual assessments and observations they conduct. We recommend that INL partner with DOE to review all DOE deliverables and the requirements behind the deliverables to try and take lower value work out of the system and rely more on the contractor assurance process.

PROJECT PLANNING

The Project Management Office (PMO) establishes and monitors INL's project management requirements and guidelines. Currently, all direct and indirect funded work must be planned and monitored in Primavera Project Planner (P6). The two primary drivers for this requirement are to collect information facilitating scheduling of critical resources (e.g., facilities and staff) and to facilitate project management practices enabling results that meet customer expectations.

The advantages and disadvantages of INL's planning requirements were discussed during multiple sessions of the review and included perspectives from the PMO, the R&D community, and the Planning and Financial Controls (PFC) organization.

- Advantages
  - Providing information to track status of milestones and deliverables to customers
  - Providing information that can be helpful for planning and allocating critical resources
  - Providing information to monitor and forecast FTEs
- Disadvantages
  - Small dollar and short duration direct funded projects cannot afford the resources required to meet the requirement, and the benefit may not justify the cost
  - Little or no benefit to indirect funded ongoing operations many of which are level-of-effort activities
  - Considerable time and effort required to process Baseline Change Proposals

Graded Approach

A common thread through many of the discussions was the suggestion that INL adopt a "graded approach" as a means of optimizing the cost and benefit of project management requirements. We recommend the Business Management organization pursue this by discussing the following opportunities for improvement with the PMO and other key stakeholders:

- *A Guide to the Project Management Body of Knowledge (PMBOK)* defines a project as a temporary endeavor undertaken to create a unique product, service, or result. Ongoing operations do not meet this definition since they do not have a definitive beginning and ending point, and their purpose is to sustain the business rather than create a unique result. While some elements of project management can provide benefit to managing ongoing operations, we recommend the requirement to plan, monitor, and status these functions in P6 be reviewed to evaluate the cost and benefit.

- The Triple Constraints Model is a project management concept used to facilitate defining requirements and managing change control for a project. The concept basically addresses priorities pertaining to the project's scope, time and cost. If one of these triple constraints is changed, it will most likely affect one or both of the other constraints as well as the quality of the final deliverable. We recommend the Business Management organization and the PMO utilize the philosophy of this concept to critically evaluate and develop a graded approach to application of project management practices across INL. For example, how does the requirement to utilize P6 affect the cost, time and quality of a small dollar/short duration research project? Does it make sense to apply specific project management requirements based on established criteria (e.g., projects with budgets/schedules greater than specific dollar/time period threshold, other specific risk factors)?

- The Planning and Financial Controls (PFC) organization serves a key role in the execution of project management activities (see Personnel and Staff Development section for additional comments). We recommend the Business Management organization establish a formal, ongoing working group comprised of PFC and PMO representatives to facility continuous process improvement for project management requirements and business processes.

High Risk Projects

The PMO representatives briefed us on a new initiative related to project management that warrants additional follow-up by the Business Management organization. Based on a request from the INL Director, the PMO recently established the Integrated Planning Office (IPO). The IPO is charged with ensuring "high risk" projects are planned and executed according to standards that will lead to meeting customer expectations. High risk projects will be identified based on seven criteria, which include cost and risk factors. Approximately 50 projects had been identified as meeting the high risk criteria at the time of our discussion. Since the PFC plays a key role in application of project management business processes across INL, we recommend the Business Management organization learn more about this initiative and its effect on roles and responsibilities and project execution.

STAFF DEVELOPMENT

The majority of the INL representatives interviewed currently work in the General Accounting, Planning and Financial Controls, and Modeling and Reporting organizations. The observations and opportunities for improvement are offered in the context of these organizations unless otherwise noted.

Knowledge Base

The general format for the discussions provided opportunities for the representatives to explain their business processes, actual work steps completed, and suggested improvements. Staff members demonstrated a thorough knowledge of their business processes and were very engaged in the discussions. The knowledge base is a valuable asset to the Business Management organization and INL.

- We recommend Business Management implement a more structured approach to investigate and implement operational improvement ideas from staff members. Some groups within Accounting and the business managers stated that periodic meetings are held within their groups to discuss issues and suggestions. All groups should be encouraged to do so. In addition, cross-functional teams within the Business Management organization should be considered as a mechanism to address issues affecting multiple organizations and the R&D community and as a means to provide staff with diverse perspectives of issues.

- We recommend Business Management establish rotational assignments as another way to leverage the knowledge base. In this context, a rotational assignment is defined as moving to a new set of responsibilities in another area of the organization as part of a career path rather than a temporary assignment where the staff member returns to his or her previous job. Rotational assignments offer several benefits, including:

  – Opportunities for staff to gain and share knowledge and to learn about different facets of the organization. For example, the business managers stated they try to rotate Planning and Financial Controls staff within and across business offices to provide opportunities to work on different types of projects.

  – A "big picture" perspective which can lead to operational improvements as staff members work business processes from a new perspective and set of responsibilities.

  – New challenges for the staff which can improve job satisfaction.

  – Proactive means to mitigate "single-point-of-failure" situations where only one staff member is trained to complete a job function.

  Rotational assignments should be carefully planned so both the employee and the organization benefit from the rotation. For example, consideration should be given to the time and energy involved in teaching staff new skills and to the career path and goals of the staff.

Roles and Responsibilities

Representative from the R&D community were very complimentary of the services provided by the Planning and Financial Controls (PFC) organization. The services cover several key business processes, including, financial management, financial administration, lab level reporting, program/project planning, project controls, and project management. PFC roles and responsibilities in the project planning and project management business processes include coordination and support for schedule development, cost estimates, input to P6/Cobra, status reporting, including EVMS, estimates-to-complete, and milestones. We also met with representatives from the Project Management Office to discuss their roles and responsibilities, which include cost estimating, scheduling, and development and application of project management practices.

- We recommend R2A2s be developed for both organizations and reconciled to provide clear guidance on responsibilities and to help ensure activities supporting project management are completed efficiently and effectively.

- The PFC organization is uniquely positioned to provide strategic analysis and advice to the R&D and support organizations they serve. During the review we were provided a seven-page spreadsheet summarizing many of the PFC's roles and responsibilities. The spreadsheet included columns indicating whether a role and responsibility was (1) currently performed and (2) appropriate for the PFCs to perform. We recommend Business Management update this exercise as part of the R2A2 development process and identify responsibilities that may need to be eliminated or reassigned to other organizations so the PFC can focus attention on the business processes most critical to support of R&D and operations.

Other Observations

Based on the September FY12 "Laboratory Financial Report," the Business Management headcount decreased from 213 to 194 since September 2011. Part of the decrease included elimination of group leaders which created "self-directed" groups (e.g., Field Deployed Business Managers and Modeling and Reporting) and increased the number of direct reports to the CFO. We recommend Business Management re-evaluate the organization structure to determine if the current model is optimized to provide the best support to Lab operations and to perform human capital activities and development for the self-directed groups.

The scope of our review did not include the Logistics and Services organization. However, we recommend Business Management consider reviewing the functions performed by the organization to determine if it would be better aligned with the expertise of another organization. For example, materials management/receiving/distribution and packaging/shipping functions are part of the ORNL Facilities and Operations organization.

CUSTOMER RELATIONS

Customer relations are difficult to measure and evaluate as part of a peer review since conclusions are primarily based on comments and observations rather than quantifiable data. However, this is an important business environment factor affecting continuous process improvement. As noted in other sections, the review team heard favorable comments about the overall service provided by the Business Management organization. However, our discussions did include comments indicating opportunities for improvement. For example:

- The urgency of the indirect budgeting process leads to a "spreadsheet driven approach" with little time to discuss objectives, commitments, desired outcomes, and impacts.

- Management systems are perceived as pushing requirements instead of seeking to understand customer needs.

- R&D representatives questioned some requirements as outdated, redundant, and/or no-value added.

Since INL has several new Leadership Team members, the Business Management organization has a rare opportunity to implement new practices and to create communication channels to improve customer relations. We recommend:

- Identifying and evaluating existing mechanisms used to obtain customer feedback. For example, how are customer satisfaction surveys and responses utilized to improve services?

- Encouraging managers and staff to incorporate face-to-face meetings into communication plans for:

  - Key business processes, such as the indirect budgeting process

  - Resolution of issues and complaints

  - Introduction of new business processes, business systems, and business requirements

- Encouraging managers to get away from their desks and formal meetings on a regular basis to talk to customers and staff members. The idea is to make themselves accessible so they can learn about issues first hand and build relationships that encourage exchanging ideas and continuous process improvement.

SUMMARY

This report includes several recommendations for the INL to consider. However, for the greatest impact in support of PEMP goals 5.6.1 and 5.6.2, we suggest the Lab concentrate its efforts in the following four areas:

(1) **Improving the Planning Process** – The primary recommendation in this area is to designate a single organization that is *clearly* identified as the owner of the Lab's annual planning process, providing a single process that links strategy development with strategy execution. We also recommend the Modeling and Reporting team taking a greater leadership role in driving the annual planning process through the development and implementation of a Lab Level reporting structure.

(2) **Project Management** - we recommend that the Lab continue down the path of implementing a "graded approach" in order to optimize the cost and benefit of project management requirements. This would include eliminating the requirement that all indirect funded activities must be planned and monitored in Primavera Project Planner (P6). Although this level of project planning for may be suitable for certain indirect funded activities, such as IGPP activities, the vast majority are simply level of effort and do not require the level of planning and tracking currently required.

In this area we also suggest that the CFO organization engage the recently established Integrated Planning Office (IPO) to fully understand their role and how the new "high risk" project management requirements being developed will impact the PFC organization. On the surface it appears that these are being developed unilaterally by the PMO, which may or may not be appropriate from an *overall* risk management standpoint.

(3) **Business Systems** – The primary recommendation in this area is to conduct a review of all the business systems and develop a 3-5 year strategy for systems improvements. As part of this system strategy as well as a move to a more integrated planning process, we would recommend that the Laboratory centralize the funding for all major system improvements and manage this as part of the planning process to ensure that the highest priority investments are getting funded.

(4) **DOE Interface** – We recommend that the Business Management organization partner with their DOE counterparts to kick off an initiative to review all contract requirements and deliverables related to Business Management with a goal of reducing transactions to become more effective and efficient. We believe there are some assessments and requirements that are lower value to both the Laboratory and DOE that could be removed or reduced without compromising DOE's ability to evaluate the effectiveness of the Business Management function.

We appreciate the opportunity to assist the INL with this peer review and thank the numerous INL staff members we were fortunate enough to meet with during our week on site. Their willingness to take the time out of their schedules, and provide candid feedback, armed us with the information and background required to perform the review.

Also, a very special thank you to Lisa Sehlke and Susan Hensley for being gracious hosts and facilitating the peer review. Their hard work, coordination efforts, and insights provided us the ability to spend our time at the INL in an efficient and effective manner.

Lastly, we hope that Lab management finds this review and subsequent recommendations informative and useful in their endeavor to improve operations. We fully understand that there is no 'one-size-fits-all 'answer to operating a DOE National Laboratory. Our goal was simply to share our thoughts and observations with you not only from the perspective of our individual areas of expertise, but from the experience of managing and operating a DOE Multi-Program National Laboratory as part of the Battelle family.

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Appendix F

External Peer Review Report

External Peer Review

INL Business Process and Systems Assessment - Contracting

The CFO at the Idaho National Laboratory (INL), Dennis Newby, requested Pacific Northwest National Laboratory (PNNL) staff to conduct a peer review of the finance, contracts and business processes at INL. This review was conduct the week of November 12, 2012. This report addresses the Contracting function at INL as it is organized and conducted for all non-DOE funded projects that would include WFO, NF-WFO, CRADAs, ACT and other agreements such as MOUs, University Joint Appointments, and other non DOE funded agreement forms (non-DOE agreements).

Interviews were conducted with the organizations, system owners, and staff that are accountable for the administration of agreements, and the internal customers that use these agreements for conducting research. During the interviews with the organizations and staff responsible for agreements it was apparent that:

- Ownership and accountability for proposing, negotiating, and administering agreements, and the success of this process was highly diffused between several organizations

- Concerns exist on whether the right skill mix and an appropriate level of staff are engaged

- With lack of clarity on accountability and ownership, document control and a centralized repository for all agreements doesn't exist

- Subject matter experts are not being developed, and instead the agreement process becomes an ancillary function for the staff.

In interviews with the research customers who use these services there were consistent themes including:

- Lack of consistency in requirements and use of system and tools

- Accountabilities and ownership are not clear and are not driving the process

- Duplication of effort exist across many staff and functions

- Success of the process is "people driven" and often dependent on the research staff having experience and knowledge of the process and which staff to work with

- There is no consistent bid/no bid decision in the research directorates and there is no institutional risk management review

- A recognition that with declining DOE budgets they will need to utilize more non-DOE mechanisms with efficiency and compliance.

PNNL Observations:

PNNL's organizational model for managing, administering, and providing oversight to non-DOE agreements is very different. All non-DOE agreements are under the Contracts organization (equivalent to the SCM at INL). There is a core group of three staff (Sponsored Programs Office that I lead) that

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provides the policy, training, oversight, and DOE interface on all of these agreements. This core group has both depth and breadth of SME knowledge of the mechanism and work closely with the staff that are preparing the agreements and management in the lab, and approve all proposals for submission to DOE. This delivers quality and consistency. This core group is centralized and is also responsible for all CRADAs, university Joint Appointments, MOUs, and AWAs. At PNNL, we have a lower volume of transactions under these mechanisms and, combined with their complexities and sensitivities, they don't lend themselves to decentralization.

WFO (Fed and Non-Fed), DHS, ACT, and IPAs are administered by Contract Professionals (CPs) who are decentralized and co-located with the research divisions. These CPs are on teams of ~5-10 and provide all contract support (procurement, subcontracts, WFO, DHS, ACT, and IPAs) in a "one-stop shop" for a researchers contract needs. They are the QB for a proposal taking the SOW from the PI, the cost estimate from the Division Business Office (also co-located) and calling on other SMEs (legal, insurance, quality, security) as may be needed. They are responsible and accountable for getting it out and bringing it in within PNNL policies for risk and financial terms. Because of their contract knowledge they are very adept at terms and conditions, regulations, and negotiations that occur in these mechanisms. In this way we minimize the hand offs and only involve other SMEs (like Legal) when there is a specific need or issue. On high risk proposals, the CP is responsible for calling a "risk management meeting" with the appropriate SMEs, the PI and management

This model is supported by a consistent bid/no bid process and risk management review and approval process that the management in research division conduct by staff (Project Management Office Directors, formerly Product Line Managers) that are responsible for risk management and approval within a mission area. They require a SOW and cost estimate before they approve a proposal going forward so when a CP gets the SOW and cost estimate, they know it's been approved.

This is a model that INL might consider in organizing to address the issues that were found in the 2 1/2 days of this peer review.

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