Risk and Controls 101
Agenda

- What is a Risk and Control?
- Controls 101
  - What is Risk and Control?
  - Control Types
  - Control Execution
  - Control Categories
- A-123 Process here at LBNL
  - Process
  - Risk Map
  - Control Summary
- Wrap-up
What is Risk?

A risk is a possibility of suffering harm or loss, or “what can go wrong”

Example:
The Airline Industry Risks: Terrorism, Bankruptcy…
What is a control?

A control is an **activity** that **prevents** or **detects** errors to mitigate risks

Example: The Airline Industry Controls: Security measures…
# Two Basic Types of Controls

<table>
<thead>
<tr>
<th>Control Types</th>
<th>Description</th>
<th>Examples</th>
</tr>
</thead>
</table>
| Preventive Controls| Prevent undesirable events from occurring | - System controls preventing unauthorized access  
|                    | Facilitate desirable events | - Restrictions of user overrides  
|                    |                              | - Segregation of duties  
|                    |                              | - Dual entry of sensitive managerial transactions |
| Detective Controls | Identify/Detect undesirable events | - Exception reports, management review and action taken on the exceptions |

**Example:**

The Airline Industry  
Preventive?  
Detective?
Two Ways Controls are Executed

- **Manual** (performed by people)
  - Examples: Authorizations, Management reviews

- **Automatic** (embedded in application code)
  - Examples: Exception reports, Interface controls, System access

*Example:* The Airline Industry
Manual controls? Automatic controls?
<table>
<thead>
<tr>
<th>Control Category Legend</th>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Authorization</td>
<td>Approval of transactions executed and access to assets and records only in accordance with management’s general or specific policies and procedures.</td>
<td>Authorization limits.</td>
</tr>
<tr>
<td>Configuration/ Account Mapping</td>
<td>&quot;Switches&quot; to secure data against inappropriate processing.</td>
<td>Screen layouts with required fields.</td>
</tr>
<tr>
<td>Exception/ Edit Reports</td>
<td>Reports are generated to monitor something and exceptions are followed up to resolution. (Exception - a violation of a set standard, Edit - a change to a master file).</td>
<td>Reports of transactions exceeding limits.</td>
</tr>
<tr>
<td>Interface/ Conversion Controls</td>
<td>Controls over moving data between computer systems. Process used to migrate data from a legacy system.</td>
<td>Interface between AP system and GL system.</td>
</tr>
<tr>
<td>Key Performance Indicators</td>
<td>Financial and non-financial quantitative measurements that are collected by the entity and used to evaluate progress toward meeting objectives.</td>
<td>A/R over 90 days.</td>
</tr>
<tr>
<td>Management Review</td>
<td>A person different from the preparer analyzing evidence and performing oversight of the activities performed.</td>
<td>Manager review of reconciliations.</td>
</tr>
<tr>
<td>Reconciliation</td>
<td>Check whether two items (account balances, computer systems) are consistent. Items must be from different systems or records.</td>
<td>Reconciliation of A/R to G/L.</td>
</tr>
<tr>
<td>Segregation of Duties</td>
<td>Separation of duties and responsibilities for authorizing transactions, recording transactions and maintaining custody.</td>
<td>Staff who bill accounts receivable do not post cash collections.</td>
</tr>
<tr>
<td>System Access</td>
<td>Capabilities that individual users or groups of users have within a computer information system as determined by access rights are configured in the system.</td>
<td>Password protection linked to level of access.</td>
</tr>
</tbody>
</table>
LBNL Process

- **Risk Assessment**
  - Perform a risk assessment using the financial statements

- **Document Controls**
  - Identify controls in processes

- **Test Controls**
  - Test controls for their effectiveness by pulling a sample of transactions

- **Remediate**
  - Identify control deficiencies and create a corrective action plan (CAP)

- **Report to DOE**
  - Report in FMA Tool and Annual Assurance letter
Risk Ranking

1. General Ledger Management
2. Funds Management
3. Cost Management
4. Property Management
5. Environmental Liabilities
6. Payroll
7. Acquisition Management
8. Payables Management
9. Project Cost Management
10. Receivables Management
11. Benefits Administration
12. Revenue Recognition
13. Travel

Inherent Risk Key:
- High
- Medium
- Low
# Key Control Summary-FY12

<table>
<thead>
<tr>
<th>Process</th>
<th>Manual</th>
<th>Automated</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Funds</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Cost</td>
<td>3</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>GL</td>
<td>5</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>Property</td>
<td>5</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>AP/Improper Payments</td>
<td>8</td>
<td>3</td>
<td>11</td>
</tr>
<tr>
<td>Project Cost Management</td>
<td>20</td>
<td>3</td>
<td>25</td>
</tr>
<tr>
<td>Acquisitions</td>
<td>19</td>
<td>6</td>
<td>25</td>
</tr>
<tr>
<td>Payroll</td>
<td>10</td>
<td>9</td>
<td>19</td>
</tr>
<tr>
<td>Environmental Liabilities</td>
<td>16</td>
<td>3</td>
<td>19</td>
</tr>
<tr>
<td>IT*</td>
<td>5</td>
<td>7</td>
<td>12</td>
</tr>
<tr>
<td>Totals</td>
<td>91</td>
<td>32</td>
<td>123</td>
</tr>
</tbody>
</table>

* Internal Audit to Test
Wrap-Up

Questions?

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