Operational Risk Management + Six Sigma = Success

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Freddie Mac
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Learning Outcomes

Provide practical ideas & tools your organization can use to:

- Create a workforce focused on identifying & managing operational risk
- Teach employees to operate as risk managers
- Foster a culture of accountability & transparency

Lean/Six Sigma techniques support these efforts.
Freddie Mac: Making Home Possible

• Provide liquidity, stability & affordability to the housing market

• Support the nation’s housing recovery
  – Provide access to affordable homeownership and rental housing
  – Help borrowers avoid foreclosure and stabilize communities
  – Freddie Mac provided Foreclosure Alternatives to nearly 525,000 Families since the start of 2009

• Foster responsible lending & servicing practices, while minimizing exposure to risk
Operational Risk Awareness: Make It Real

Risk is

- “squishy”
- an abstract concept for many employees but they act as the first lines of defense to identify, assess & manage it.
- the uncertainty around some future event

Operational Risk focuses on issues related people, process, technology and external events

- What can go wrong?
- How bad could it be if it goes wrong?
- How likely is it to go wrong?
- What should I do about it?
The 3 Cs: Drivers of Operational Risk

Each driver indicates a potential operational risk. When layered, risk rises rapidly.

What processes in your organization coalesce in the red zone?
# Linking Operational Risk & Lean Six Sigma

<table>
<thead>
<tr>
<th>Operational Risk</th>
<th>Lean /Six Sigma</th>
<th>Tools</th>
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</table>
| What can go wrong?             | Define         | ▪ Stakeholder Analysis  
▪ Voice of the Customer  
▪ Affinity Diagrams  
▪ SIPOC  
▪ Risk & Control Self Assessment |
| How bad can it be?             | Measure        | ▪ Data sampling & collection  
▪ Failure Modes & Effects Analysis |
| How likely is it to go wrong?  | Analyze        | ▪ Process Mapping  
▪ Loss event data analysis  
▪ Root Cause Analysis (5 Whys)  
▪ Hypothesis Testing |
| What should we do about it?    | Improve/Control| ▪ Pilot a process  
▪ Control Charts  
▪ Standardize for Repeatability |
Tools to Help Identify Operational Risk: Risk and Control Self Assessments

“What can go wrong?”

<table>
<thead>
<tr>
<th>People</th>
<th>Process</th>
<th>Technology</th>
<th>External Events</th>
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</thead>
<tbody>
<tr>
<td>Employee Fraud and Theft</td>
<td>Data Quality</td>
<td>Planning and Organization</td>
<td>Business Continuity</td>
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<tr>
<td>Workplace Safety</td>
<td>Process Execution</td>
<td>Acquisition and Implementation</td>
<td>Damage to Physical Assets</td>
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<tr>
<td>Compensation</td>
<td>Process Management</td>
<td>Delivery and Support</td>
<td>External Fraud and Theft</td>
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<tr>
<td>Staffing Expertise and Adequacy</td>
<td>Monitoring and Evaluation</td>
<td>Vendors and Suppliers</td>
<td>Information Privacy</td>
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</table>
The Heat Map: A Tool to Quantify “Squishy”

<table>
<thead>
<tr>
<th>SEVERITY</th>
<th>LOW</th>
<th>MODERATE</th>
<th>HIGH</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; $</td>
<td>L L</td>
<td>M L</td>
<td>H L</td>
</tr>
<tr>
<td>$ to $$$</td>
<td>L M</td>
<td>M M</td>
<td>H M</td>
</tr>
<tr>
<td>&gt; $$$</td>
<td>L H</td>
<td>M H</td>
<td>H H</td>
</tr>
</tbody>
</table>

An event can be reasonably expected

<table>
<thead>
<tr>
<th>LIKELIHOOD</th>
<th>Between 10 Years and 100 Years</th>
<th>Between 1 Year to 10 Years</th>
<th>Within 1 Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOW</td>
<td>1% to 10% chance of occurrence</td>
<td>10% to 50% chance of occurrence</td>
<td>&gt; 50% chance of occurrence</td>
</tr>
</tbody>
</table>

“How bad can it be?”
“How likely it is to go wrong?”
Controls: “What should I do about it?”

Controls are activities that help to reduce the likelihood of a negative (bad) outcome from some future event.

- Risk and controls are linked – you need to look at both sides of the issue.

Controls apply to the:

- Appropriate use, handling and physical safeguarding of corporate assets and records such as laptops, computers, file room data.
- Processing of transactions from initiation to recording in the general ledger.
- Use of standard operating procedures to reduce variability (also known as noise) allowing for a repeatable process.

Mapping the end to end processes provides a roadmap to risk and control self assessment.
The Sticky Note Method: Place key stakeholders in a room with sticky notes & craft paper. Walk the widget through the process
Putting It Together at the Business Line

Risk
“What can go wrong?” “How bad can it be?” “How likely is it to go wrong?”

Transactions are processed incorrectly by less seasoned staff resulting in rework.

Control Objective
Process the transaction correctly the first time every time.

Control Activities
Standard operating procedures, job aids, partnering new hires with more experienced staff, feedback on error rates, & targeted retraining.
Employee Accountability: Becoming Risk-Aware Starts on Day One

• New Hire Orientation drives the message that as a member for the Freddie Mac team, you are a manager of risk, regardless of the job title.

• Every employee, from individual contributors to executive management, has a risk accountability objective which they are measured against in their performance review.

  ▪ Conducting business in a risk-aware manner
  ▪ Identifying, assessing, and managing the risks within the context of the specific job position
  ▪ Reviewing existing controls to identify any gaps, ineffective, poorly designed or unnecessary controls
  ▪ Escalating an issue quickly to management
Employee Accountability: Becoming Risk-Aware Starts on Day One

For **people managers**, the risk management objective covers key areas:

- Setting the tone for risk accountability in the workgroup
- Building risk management into operating plans
- Reviewing opportunities to simplify controls
- Conducting business in a risk aware manner
- Encouraging employees to escalate issues quickly
- Ensuring all employees effectively identify, assess and manage risk
Fostering Accountability & Transparency: Each Level Has a Role

- Board
- Enterprise Risk Management Committee
- Operational Risk Management Sub-Committee
- Enterprise Risk Oversight Division
- Business Line / Operational Risk Managers
Becoming Risk Aware……

• Starts on day one for each employee
• The tone is set at the top levels of the organization with clear roles and responsibilities
• Drive the right behaviors and accountability via performance goals around risk mitigation
• Make it real for the employee…..everyone has the responsibility to identify, assess and manage risk
• Provide tools empower the employee. They are the front lines of risk mitigation