Agenda

• Objectives of Integrated Self-Assessments
• Standards/Models and Maturity Levels
• How to Develop an Integrate Self-Assessment Model
• How to Execute an Integrated Self-Assessment
Objectives of Integrated Self-Assessments
Objectives of Integrated Self-Assessments

• Support continual business improvement
• Manage organizational and cultural change
• Encourage and manage innovation
• Leverage technology and knowledge management
• Enhance strategic partnerships, (e.g., supply chain management)
• Validate life-cycle planning and management
• Optimize time-to-market
• Improve efficient product/service delivery and support
• Increase reliability and availability
Standards/Models and Maturity Levels
Standards and Models

Common Standards/Models (Examples)
- SOx – Sarbanes Oxley
- ISO 14001:2004 – Environmental Management System
- CMMI – Capability Maturity Model Integrated
- ITIL – Information Technology Infrastructure Library
- MBNQA – Malcolm Baldrige National Quality Award

Industry Specific Standards/Models (Examples)
- ISO/IEC 12207, ISO/IEC 90003 and ISO/IEC 15504—SW development
- Military Standards (Examples)
  - MIL-STD-1835 Electronic Component Case Outlines
  - MIL-STD-202 Test Method Standard, Electronic and Electrical Component Parts

Organizational Specific Standards/Models (Examples)
- Values
- Policies
- Procedures
Rubik's Scalable View of an Integrated Assessment

Typical audit scope: **One** standard or model at a time

Integrated Assessment Tool: **More** than one

Future “n” Standards and Models
**Many** combinations of standards and models
Maturity Model Example

Quality System Maturity

- Low Conformance Driven: ISO 9001
- Base Standards
- Software “Add-ons”
- Testing Standards (Specific)
- TL 9000
- Software Best-Practices
- MIL-STD 202
- Performance Excellence

Business Results

- Performance Driven
- CMMI
- MBNQA

Organizational Performance

High to Low
Integrated Assessment - Components

External
- Process Maturity
- Path to Process Maturity
- CMMI
- ISO 9001:2000
- MIL-STD 202
- Certification
- Dynamic View into Processes
- Industry Standards
- Industry Best Practices

Internal
- Product Lifecycle
- Lifecycle Management
- Internal Policies
- Assessment Questions
- Governance
- Consistent Expectations
- Organizational Application Relevance
- Path to Product Maturity

AVAYA

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Improving Software Economics
Integrated Assessment - Advantages

Integrated Assessments Provide Value-Added Feedback to the Organization
Evaluate Organizational Processes & Practices Against Best-of-the-Best Methods
Effectively Utilize Resources Throughout the Assessment Process
How to Develop an Integrated Self-Assessment Model
Steps to Developing an Integrated Model

1. Determine the values, policies, objectives, standards, and models that are important to your organization and provide value-add

2. Establish the necessary knowledge and competencies regarding the selected components, and in the assessment practices

3. Map associations to the various standards and models

4. Establish the assessment methodologies, guides, and guidelines

5. Develop assessment resource knowledge and competency against the integrated model
1. Determine the values, policies, standards, and models

1a. Each organization has established its own set of values and policies that underlay the culture of the organization.

1b. Identify standards and models that enable and drive the values and policies of the organization.

1c. Certification standards are valuable, and contribute to the components of most management and performance excellence systems.

1d. Certification and accreditation standards and models can be used – without an organization goal to become certified or accredited. In most cases this is preferred, as it drives the organizational culture rather than a certification goal.

1e. Utilize the components of standards and models that best fit your organization – you don’t always need to adopt the entire standard.

*High performing organizations utilize three or more standards in their management system – many times creating their own hybrid*
2. Establish model/standard knowledge and competencies

For each standard or model the organization must – or chooses to – adopt, it is imperative to:

2a. Develop resources with *expertise* in each model and standard utilized

   Expertise is defined as:

   - **Knowledge** – the demonstrated ability to interpret the standard/model and its application within the organization’s structure, practices, and processes
   - **Competency** – the demonstrated ability to execute training, consulting, and unbiased assessment against the standard/model

2b. Involve stakeholders, registrars, and accrediting bodies
3. Map associations to the various standards and models
4. Establish the assessment methodologies, guides, and guidelines

Assessment methods can vary as much as the standards themselves; and can be conducted as:

- Desktop reviews
- Onsite
- Remote
- Compliance reviews/audits
- Gap analysis
- Evaluation and improvement
- Progress evaluations

Each organization must determine the methods and objectives that provide value-add, are practical, and achieve the desired results.
## 4. Establish the assessment methodologies, guides, and guidelines

<table>
<thead>
<tr>
<th>Rating</th>
<th>Definition</th>
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</table>
| **Red** | **Major:**  
- Noncompliance to corporate policy, procedure, or integrated standards,  
- Risk to attaining objectives, or  
- Systemic issues |
| **Orange** | **Minor:**  
- Nonconformance to corporate policy, procedure, or integrated standards  
- Risk to attaining objectives, or  
- Isolated issues |
| **Yellow** | **Observation:**  
- Opportunity for improvement, or  
- Direct evidence not always found to demonstrate noncompliance |
| **Green** | **Acceptable practices that contribute to:**  
- Achieving objectives  
- Mitigating or eliminating risk  
- Following policies and procedures |
5. Develop Integrated Assessment expertise

The knowledge and competency of an integrated assessor far outreaches the expertise of an individual with single or multiple standard experience.

The integrated assessor must be able to:

• Understand how the models and standards map
• Know how to interpret organizational policies, practices, processes and results relate to the rigor of the integrated model
• Portray findings (best practices, opportunities for improvement, and/or nonconformances) to an audience that does not necessarily understand – or care – about the integrated methodology.
## 7.3.2 Design and Development Inputs

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Conceptual Questions</th>
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<tbody>
<tr>
<td>Inputs relating to product requirements shall be determined and records</td>
<td>These inputs shall include:</td>
</tr>
<tr>
<td>maintained (see 4.2.4).</td>
<td>a) functional and performance requirements,</td>
</tr>
<tr>
<td></td>
<td>b) applicable statutory and regulatory requirements,</td>
</tr>
<tr>
<td></td>
<td>c) where applicable, information derived from previous similar designs, and</td>
</tr>
<tr>
<td></td>
<td>d) other requirements essential for design and development.</td>
</tr>
<tr>
<td></td>
<td>e) What are the required inputs for this phase of development? May I see them?</td>
</tr>
<tr>
<td></td>
<td>f) These inputs shall be reviewed for adequacy. Requirements shall be complete, unambiguous and not in conflict with each other</td>
</tr>
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### CMMI Process Area & Practices

<table>
<thead>
<tr>
<th>CMMI Process Area &amp; Practices</th>
<th>ISO Comments</th>
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<tbody>
<tr>
<td>RD SP 1.1, 1.2, SP 2.1 SP 3.2</td>
<td>Determine Inputs to development processes</td>
</tr>
<tr>
<td>RD SP 1.1, 1.2 SP 2.1</td>
<td>Inputs include product, regulatory and other requirements</td>
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<tr>
<td>RD SP 3.3, 3.4, 3.5</td>
<td>Review Inputs</td>
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<tr>
<td>RD GP 2.7, 2.10</td>
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</tr>
<tr>
<td>RD SP 3.3, 3.4, 3.5</td>
<td>Requirements are consistent and clear</td>
</tr>
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</table>
How to Execute an Integrated Self-Assessment Model
How to Execute an Integrated Self-Assessment

Plan Assessment (Scope)
  Conduct Opening Meeting
  Review Documentation
  Interview Organizational Members
  Compile Observations
  Conduct Closing Meeting
  Prepare Final Report
  Share Best Practices
  Develop Improvement Plan
  Monitor Plan Execution
  Determine Effectiveness of Improvements
Thank You!

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