

# Integrated Self-Assessments

Maggie Cronin & Norma Krech, **AVAYA**

Roger Campbell, **cognence**<sub>inc</sub>  
Improving Software Economics

**AVAYA**

© 2008 Avaya Inc. All rights reserved.

**cognence**<sub>inc</sub>  
Improving Software Economics

©2008- cognence, inc.

# 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

**AVAYA**

© 2008 Avaya Inc. All rights reserved.

**cognence**inc  
Improving Software Economics

©2008- cognence, inc.

# 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

**AVAYA**

© 2008 Avaya Inc. All rights reserved.

**cognence**inc  
Improving Software Economics

©2008- cognence, inc.

# Standards and Models

## Common Standards/Models (Examples)

- SOx – Sarbanes Oxley
- ISO 9001:2000 – Quality Management System
- 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)

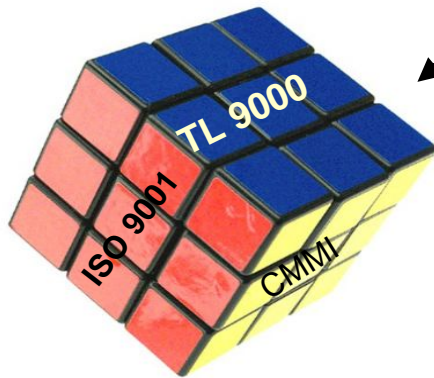
- Values
- Policies
- Procedures

# Rubik's Scalable View of an Integrated Assessment

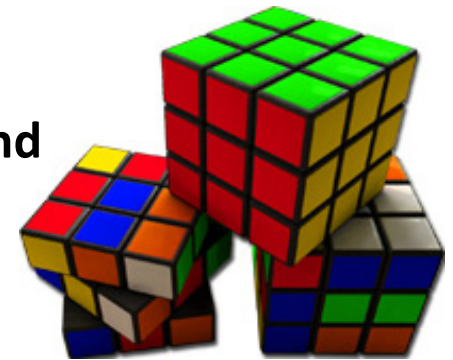
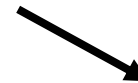
Typical audit scope:  
**One** standard or  
model at a time



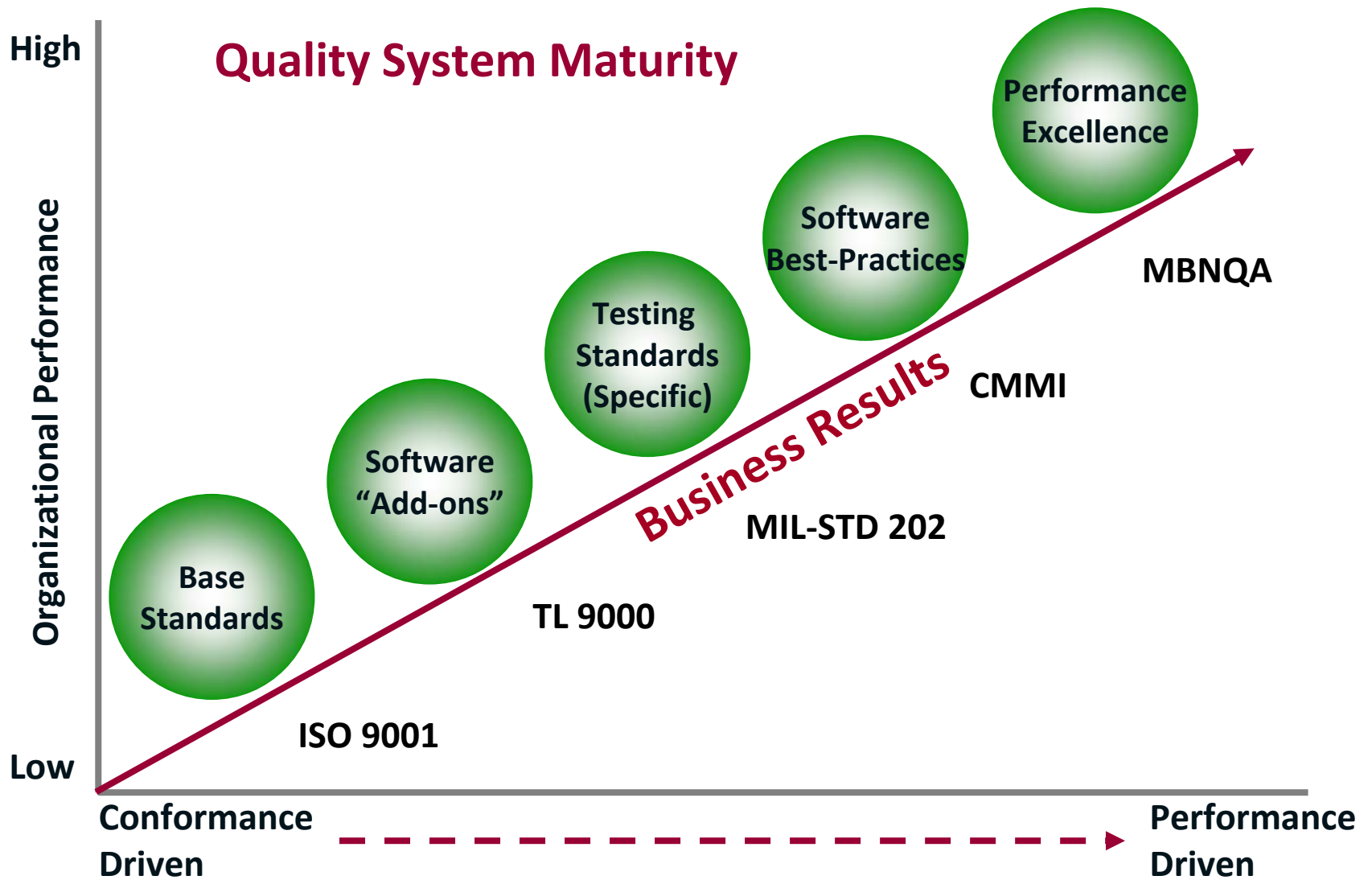
Integrated Assessment Tool:  
**More** than one



Future "*n*" Standards and Models  
**Many** combinations of standards and  
models



# Maturity Model Example

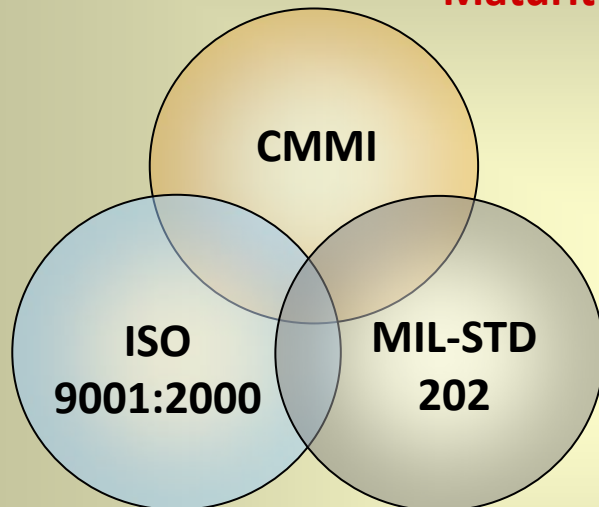




# Integrated Assessment - Components

## External

Process Maturity  
Path to Process Maturity

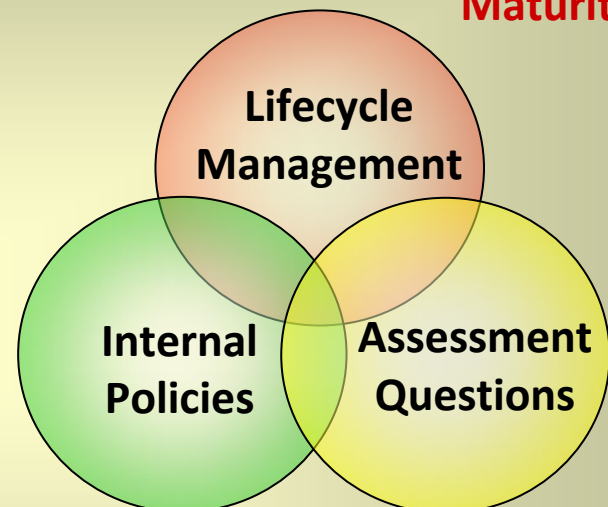


Certification  
Dynamic View  
into Processes

Industry Standards  
Industry Best Practices

## Internal

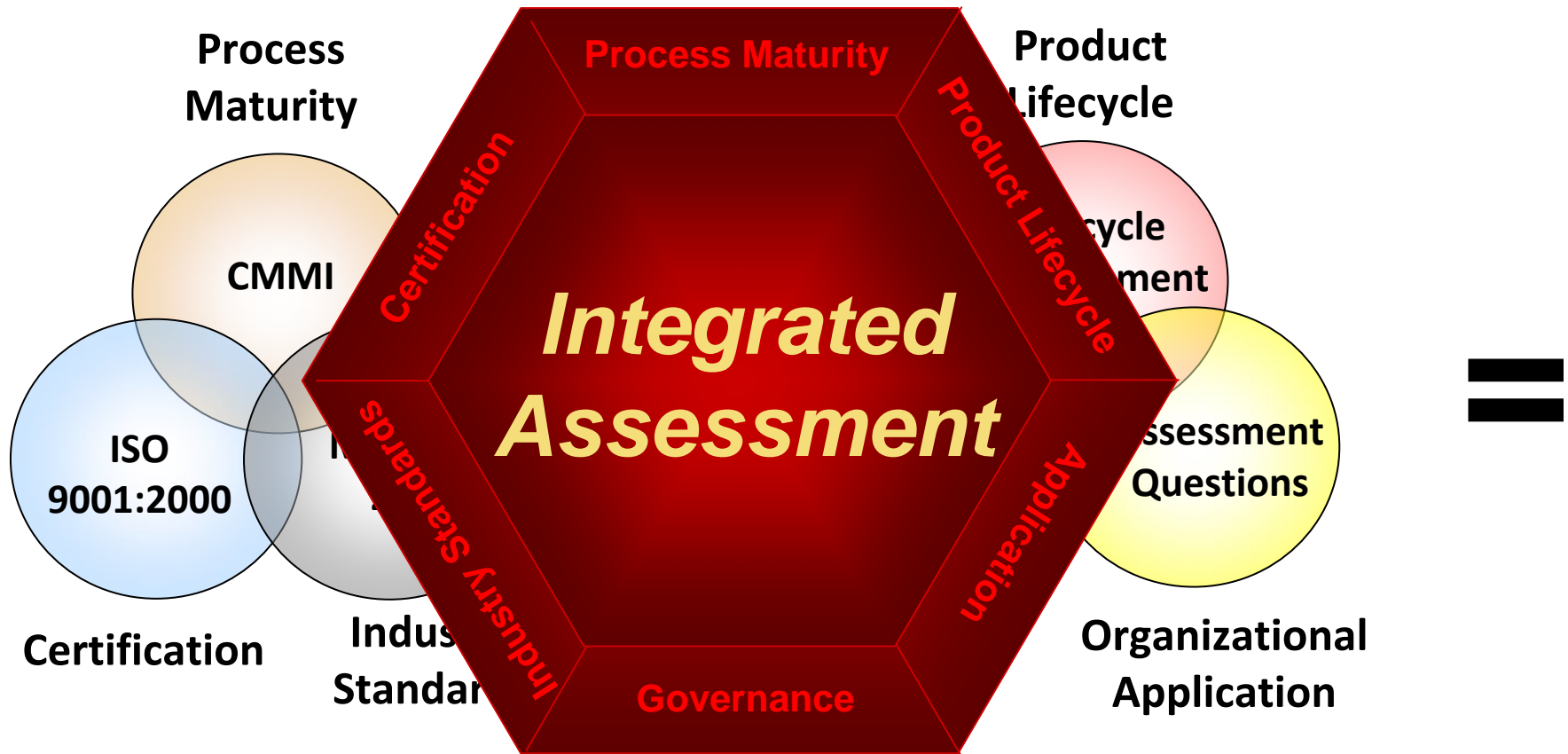
Product Lifecycle  
Path to Product Maturity



Governance  
Consistent Expectations

Organizational Application  
Relevance

# 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

**AVAYA**

© 2008 Avaya Inc. All rights reserved.

**cognence**inc  
Improving Software Economics

©2008- cognence, inc.

# 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

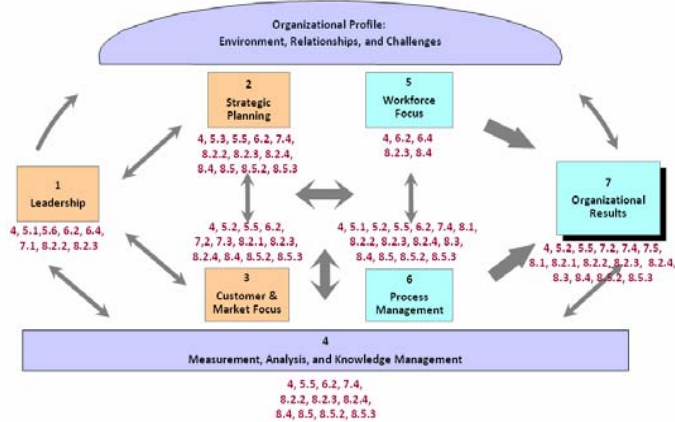
Expertise is defined as:

- ***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

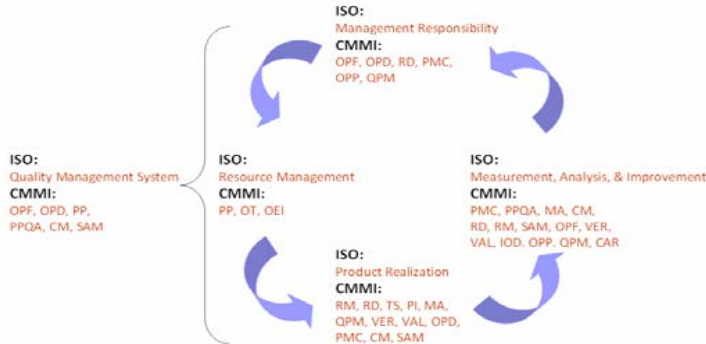
### 2b. Involve stakeholders, registrars, and accrediting bodies

# 3. Map associations to the various standards and models

Baldrige – ISO Model



ISO – CMMI Model



ISO 9001:2000 Element

	4 Quality Mgmt System	5.1 Mgmt Commitment	5.2 Customer Focus	5.3 Quality Policy	5.4 Planning	5.5 Resp. Authority	5.6 Mgmt Review	6.1 Provision of Resources	6.2 Human Resources	6.3 Facilities	6.4 Work Environment	7.1 Planning of Product	7.2 Cust. Related Processes	7.3 Design/Development	7.4 Purchasing	7.5 Prod/Service Ops	7.6 Control of Meas. Devices	8.1 General	8.2.1 Customer Satisfaction	8.2.2 Internal Audits	8.2.3 Meas. of Processes	8.2.4 Meas. of Product	8.3 Nonconforming Product	8.4 Analysis of Data	8.5 Improvement	8.5.2 Corrective Action	8.5.3 Preventive Action
1	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong
2	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong
3	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong
4	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong
5	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong
6	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong
7	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong	Strong

## 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

Rating	Definition
Red	<b>Major:</b> <ul style="list-style-type: none"><li>• Noncompliance to corporate policy, procedure, or integrated standards,</li><li>• Risk to attaining objectives, or</li><li>• Systemic issues</li></ul>
Orange	<b>Minor:</b> <ul style="list-style-type: none"><li>• Nonconformance to corporate policy, procedure, or integrated standards</li><li>• Risk to attaining objectives, or</li><li>• Isolated issues</li></ul>
Yellow	<b>Observation:</b> <ul style="list-style-type: none"><li>• Opportunity for improvement, or</li><li>• Direct evidence not allways found to demonstrate noncompliance</li></ul>
Green	<b>Acceptable practices that contribute to:</b> <ul style="list-style-type: none"><li>• Achieving objectives</li><li>• Mitigating or eliminating risk</li><li>• Following policies and procedures</li></ul>

## 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

Requirement	Conceptual Questions	
<p>Inputs relating to product requirements shall be determined and records maintained (see 4.2.4).</p>	<p>These inputs shall include:</p> <ul style="list-style-type: none"> <li>a) functional and performance requirements,</li> <li>b) applicable statutory and regulatory requirements,</li> <li>c) where applicable, information derived from previous similar designs, and</li> <li>d) other requirements essential for design and development.</li> <li>e) What are the required inputs for this phase of development? May I see them?</li> <li>f) These inputs shall be reviewed for adequacy. Requirements shall be complete, unambiguous and not in conflict with each other</li> </ul>	
CMMI Process Area & Practices		ISO Comments
RD	SP 1.1, 1.2, SP 2.1 SP 3.2	Determine Inputs to development processes
RD	SP 1.1, 1.2 SP 2.1	Inputs include product, regulatory and other requirements
RD	SP 3.3, 3.4, 3.5 GP 2.7, 2.10	Review Inputs
RD	SP 3.3, 3.4, 3.5	Requirements are consistent and clear

# How to Execute an Integrated Self-Assessment Model

**AVAYA**

© 2008 Avaya Inc. All rights reserved.

**cognence**inc  
Improving Software Economics

©2008- cognence, inc.

# 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!

**Maggie Cronin**

**[mcronin@avaya.com](mailto:mcronin@avaya.com)**

**303-538-1086**

**Norma Krech**

**[krech@avaya.com](mailto:krech@avaya.com)**

**303-538-3690**

**Roger Campbell**

**[Roger\\_campbell@cognence.com](mailto:Roger_campbell@cognence.com)**

**720-971-7652**