Implementing ISO 9001:2008: Process Mapping to Support Process Management

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Agenda

- Introduction
- Requirements of ISO 9001:2008 audits
- Basics of Process Mapping
  - Symbology -- keep it simple
  - Top Level Process Map -- the basic organization and what it does
  - Lower Level Process Maps -- the rest of the story
- Summary

Introduction

- Why this topic?
  - June 13, 2009, Board Retreat
    - Link between process and strategy
    - Helped Board look at the effectiveness of strategy implementation
  - Personal experiences in ISO audits
    - Links between processes and the Standard
    - Depiction of company's processes

What ISO 9001:2008 Requires

- 4.1 General requirements
  - The organization shall:
    - Determine the processes needed for the QMS..
    - Determine the sequence and interaction….
    - Determine criteria and methods needed….
    - Ensure availability of resources and information
    - Monitor, measure, analyze these processes…
    - Implement actions to achieve planned results and continual improvement of these processes

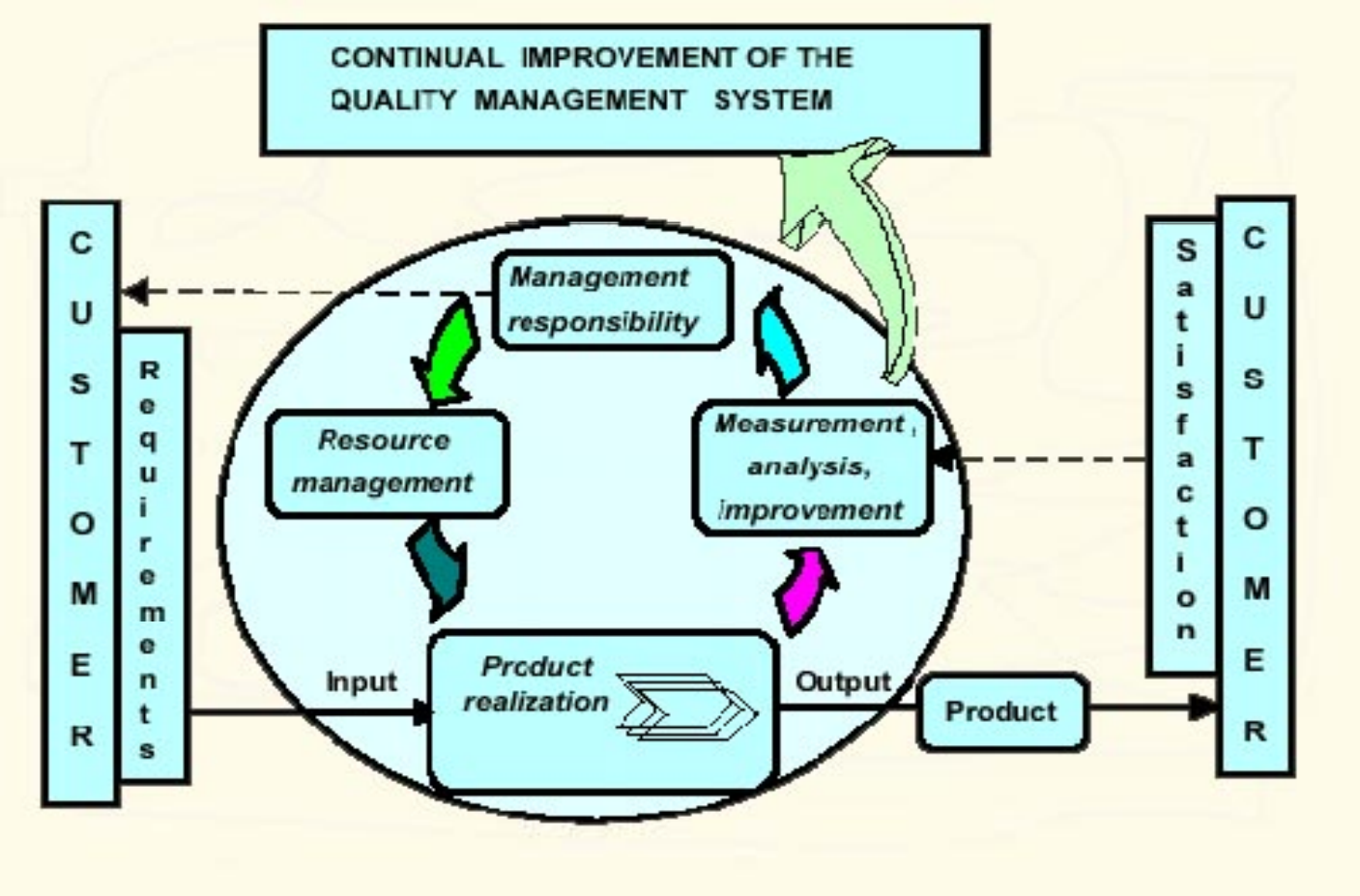
ISO 9001:2008 Principles

- 0.2 Process approach
  - …promotes the adoption of a process approach when developing, implementing and improving the effectiveness of a quality management system…
  - "For an organization to function effectively, it has to determine and manage numerous linked activities."

ISO 9001:2008 Principles

- 0.4 Process approach
  - “An activity or set of activities using resources, and managed in order to enable the transformation of inputs into outputs, can be considered as a process.”

ISO 9001:2008 Model



Other Standard Models

- Standard software development model
- Engineering development model
- Waterfall model of development

- …right out of the textbook

- But…what is THEIR process???

Purpose of the Model

- Introduce the auditor (and customers or employees) to the company's processes
- Link the key business processes to the Clauses in the Standard
- Show how the organization actually implements the Standard

Process and Auditing

- Auditors are starting to:
  - Analyze processes for problem areas
  - Analyze product/service delivery
    - Evaluate customer complaints
    - Look at effectiveness of countermeasures
  - Evaluate interface effectiveness
    - Effect on variation
  - Assess risk to customers

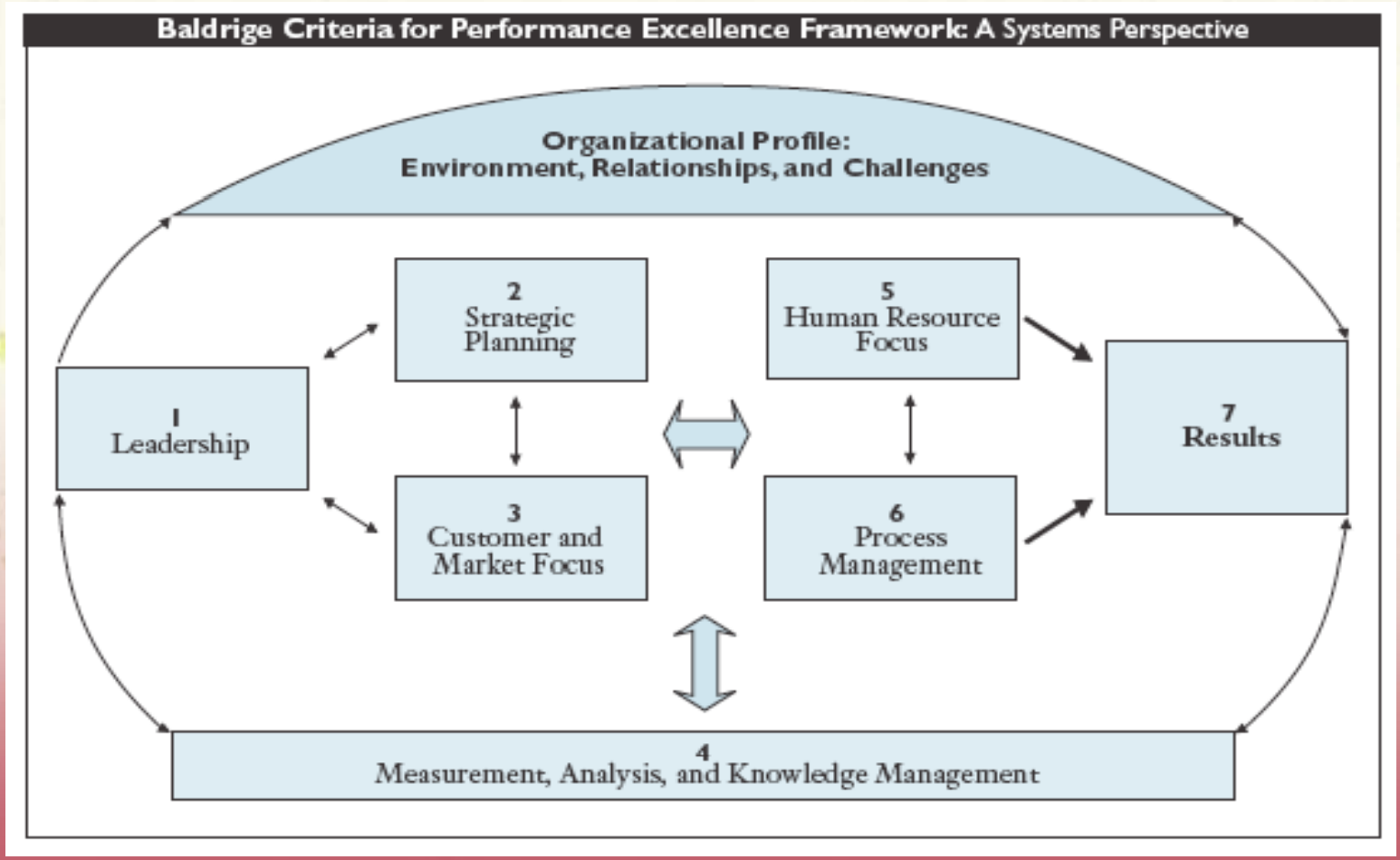
What do we Audit?

- Worksheets include:
  - Process being audited
  - Standard Clauses for that process
  - Inputs/linkages from other processes
  - Outputs
  - Measures related to strategic or process objectives
  - Effectiveness of the process audited

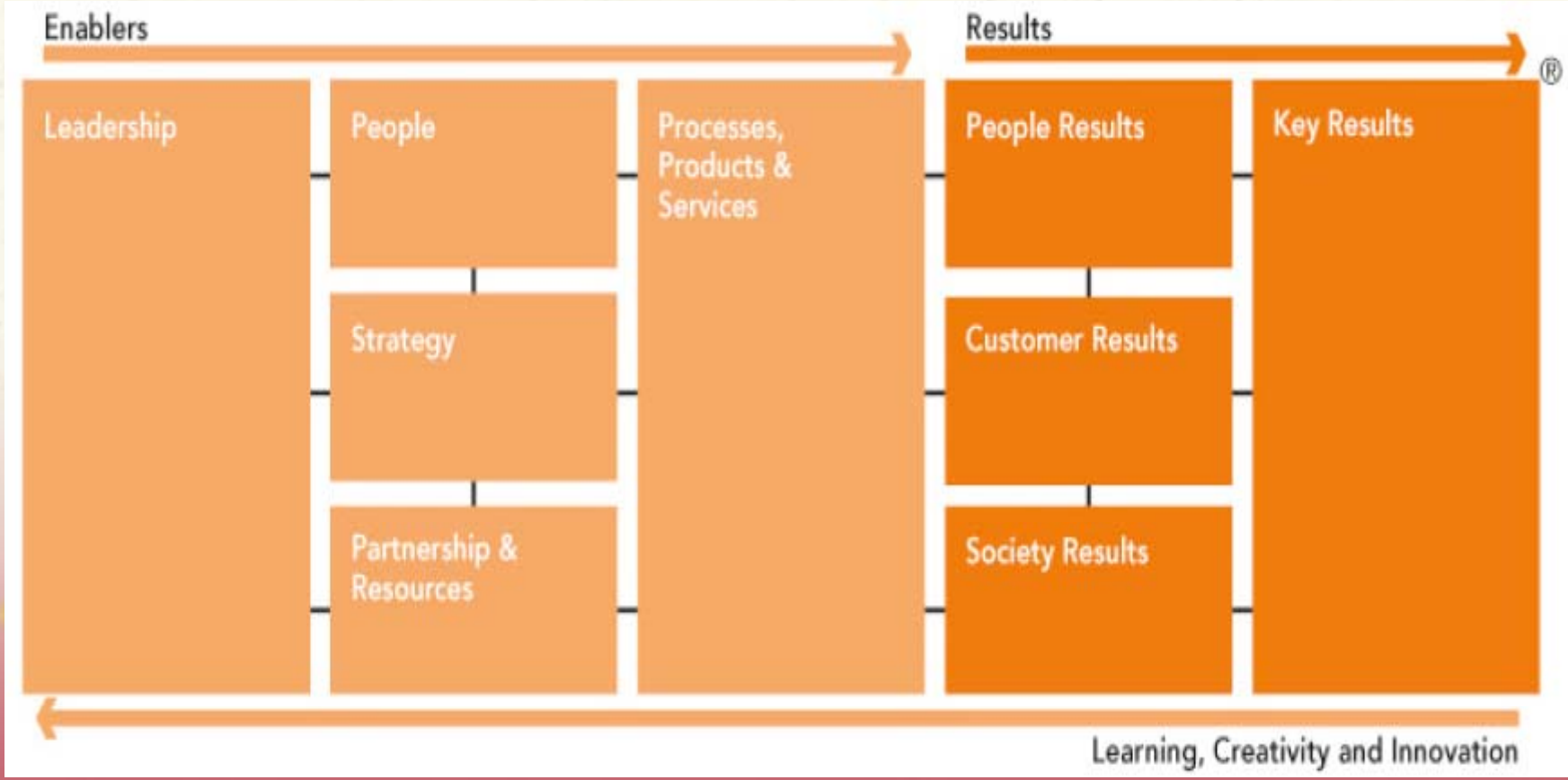
Importance of Process in Excellence Models

- The two leading world models of operational excellence have Process as key measures of excellence:
  - Malcom Baldrige National Quality Program
    - Category 6: Process Management
  - EFQM Quality Model 2009
    - Category 5: Processes, Products and Services

Malcom Baldrige National Quality Program



European Quality Model 2009 (EFQM)



What is a Process Map?

Begin with the end in mind.

S. Covey

What's Important About Process?

- Take a trip with me…
  - Identify the destination
  - Identify the mode of travel
  - Identify the constraints
  - Identify the route
  - Estimate the time
  - Locate intermediate stops/places to stay
  - Make appropriate arrangements

What is a Process?

- Remember the ISO 9001:2008 definition:
  - "An activity or set of activities using resources, and managed in order to enable the transformation of inputs into outputs, can be considered as a process."
  - Key Ideas:
    - Inputs = Supplies, Resources, Customer
    - Outputs = product/service satisfying Customer requirements, needs and expectations
    - Activity = actions to transform inputs into outputs

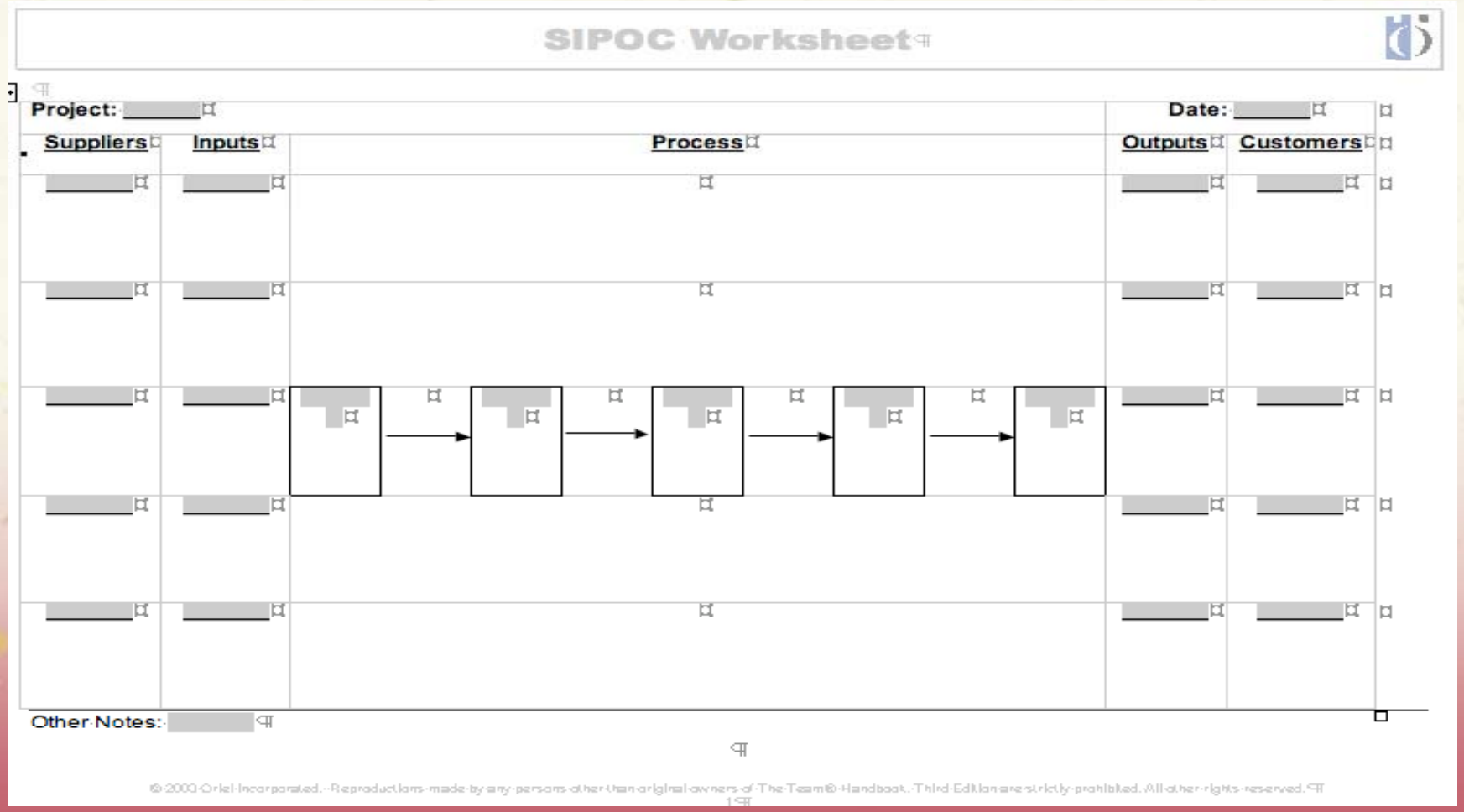
Steps in Process Mapping

- Start with the Macro-Process
  - Don’t be tempted to begin with the micro-process or -processes
  - Use the SIPOC diagram
  - Expect between 3 and 6 major Activities
  - Get agreement on the depiction!
  - List Micro-processes below Macro-process activities on the diagram

Steps in Process Mapping

- Define the Output
  - What does the Customer require, need and expect?
- Define the Input
  - Suppliers, resources, other inputs
- Create the 3 to 6 Activities needed to create the desired Output
  - List micro-processes for each Activity
- Define the Feedback mechanism
  - Continual improvement and Preventive Action

Oriel SIPOC Model from *The Team Handbook*


SIPOC Worksheet

Project: _____ Date: _____

Suppliers	Inputs	Process	Outputs	Customers

Other Notes: _____

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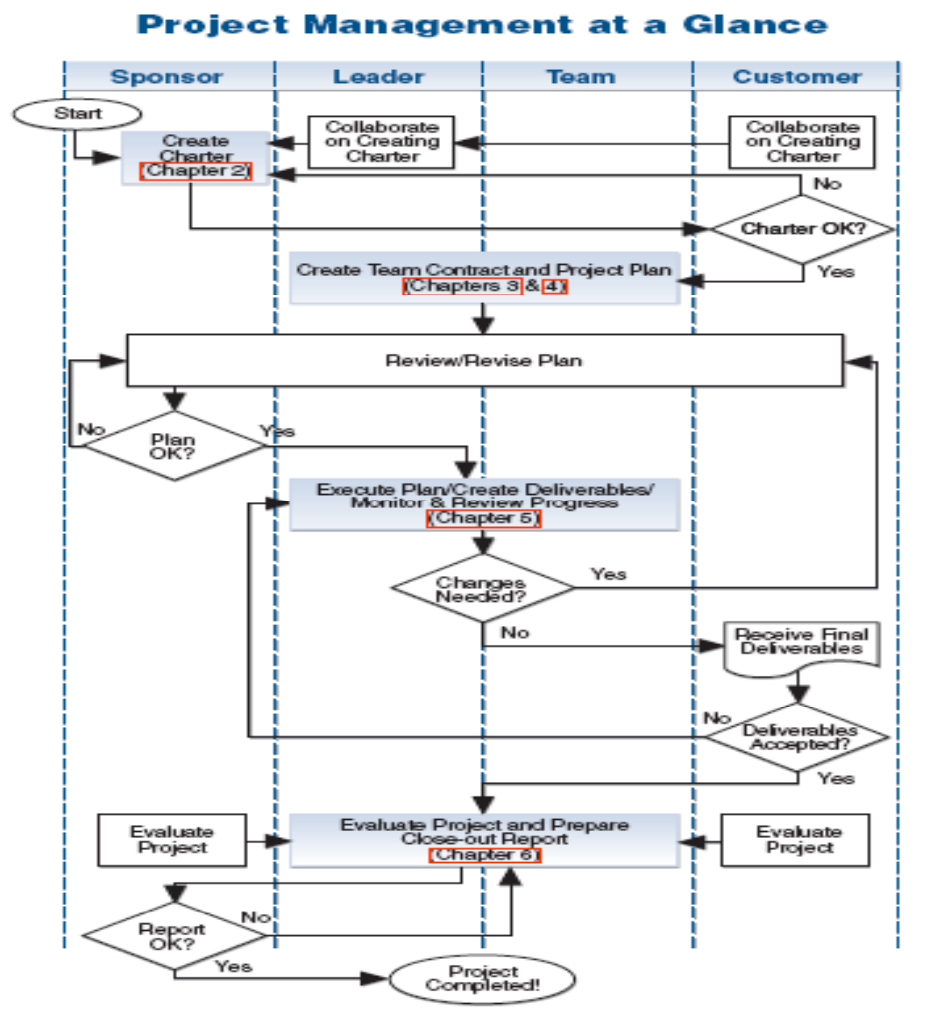
Macro- Micro- Example



From: GoalQPC Project Management Memory Jogger

The Activity: From Waking to Arrival at Work

- Steps:
  - Set Macro-process boundaries
  - Using SIPOC:
    - Describe the Macro-process Outputs
      - in customer terms
    - Describe the Macro-process Inputs
    - Identify in flowchart form the Key Activities to transform the Inputs into the Outputs
    - List some of the Micro-processes

Relating SIPOC to ISO

- Create the Macro-SIPOC for your QMS
  - May need more than one to describe your organization's processes
  - Depict the Activities of your company
  - Determine the Micro-processes for each Macro-Activity
    - Create Micro-SIPOC's or procedures for each
    - For each Micro-process Activity, show the applicable ISO Clauses

Conclusion

- Process Maps
  - Help auditors understand how to structure an audit
  - Can show the link between processes and the ISO 9001:2008 Standard
  - Provide a starting point for continual improvement
  - Form the basis for procedures

References

- Peter Scholtes et al., The Team Handbook, 3rd ed., Oriel
- Diane Galloway, Mapping Work Processes, ASQ Quality Press, 1994
- Robert Boehringer et al., The Process Management Memory Jogger, GOALQPC, 2008
- Dan Madison, Process Mapping, Process Improvement and Process Management, Paton Press, 2005

About the Speaker

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