Quality in Outsourcing

Based on the Quality Progress Article:
Quality in Outsourcing - Essentials for Today’s Global Marketplace

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http://www.asq.org/sixsigma/about/govind.html
What Is Outsourcing?

- Outsourcing involves the transfer of products, services, and business processes to an external service provider.
- The outsourcing organization and the outsourcing partner enter into a service level agreement that defines the contractual conditions for transferred products and or services.
- “Outsourcing” and “offshoring” are used interchangeably. However there are technical differences. Outsourcing involves contracting with an outsourcing partner, which may or may not involve offshoring.
- Offshoring is the transfer of an organizational function to another country, regardless of whether the work is outsourced or stays within the same corporation/company.
- Other terms used in the outsourcing world are “multisourcing”, “nearshoring”, etc.
Why Outsourcing?

- Significantly reduce overall costs by generating products and services from locations that have lower labor, materials, infrastructure and maintenance costs.
- Reduce “time to volume” (TTV) for new products.
- Access to an abundance of human resources, localized skills and knowledge, unique patented supplies.
- Supply chain efficiencies when products are shipped directly to customers. (Drop Ship)

3 Minutes –
Allow audience to interact and provide any other reasons for outsourcing.

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Poll Reference: http://www.sourcingmag.com/content/what_is_outsourcing.asp

As of 13th Oct 2008
What Does “Quality” Have to Do with Outsourcing?

- Quality is not limited to product or service issues*. Quality is also applicable to the overall process of creating products and or services.
- Quality considerations apply to every aspect of outsourcing, not just auditing and surveillance.
- Lack of quality at any point in the outsourcing process can result in product recall or major outsourcing risks.
- Without due diligence and appropriate controls, outsourcing could end up being costlier than in-house manufacturing or service, resulting in high defect rates, late deliveries, poor service and customer dissatisfaction.

July 2008 Quick Poll Quality Progress Site
Which Quality myth is hardest to disprove to management?
#1 : Quality is strictly about product or service issues- 35.4%

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What Does ISO9001:2008 say about Outsourcing?

- An "outsourced process" is identified as one being needed for the organization’s quality management system but chosen to be performed by a party external to the organization.

- Ensuring control over outsourced processes does not absolve the organization of the responsibility of conformity to all customer, statutory and regulatory requirements. The type and nature of control to be applied to the outsourced process may be influenced by factors such as:
  - a) the potential impact of the outsourced process on the organization’s capability to provide product that conforms to requirements;
  - b) the extent to which the control for the process is shared;
  - c) the capability of achieving the necessary control through the application of clause 7.4.

(ISO 9001:2008 4.1 Notes 2 and 3)
15 Minutes –
Take an example of process within Outsourcing and brainstorm with the audience. Example: “Testing Equipment Transfer” process.

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When to Apply Quality in Outsourcing?

- Quality for the outsourcing process must commence at the planning stages of new product development.
- For an existing product or service, a comprehensive plan also must be developed for the outsourcing process prior to execution.
- Planning must cover material, equipment, manufacturing and transactional processes, hardware, software, domain knowledge, skill sets, people availability, communication protocol and more.

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Considerations for Quality in Outsourcing?

Two high-level requirements for successful outsourcing:

- Due diligence in applying quality basics that might seem generic to any program. (Example: scope management, roles and responsibilities, risk management, communication protocol, lessons learned, etc.)

- Careful advance consideration of the special circumstances presented by projects and programs in the current global economy. (Intellectual property, trade compliance, cultural differences, communication, virtual teams, tacit knowledge, logistics, process maturity, etc.)

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Quality in Outsourcing Body of Knowledge

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Body of Knowledge development

SIPOC for quality in outsourcing BoK

**Supplier**
- Outsource SMEs, BoK expert
- Sourcing managers
- Project managers
- Product safety and liability prevention forum
- U.S. Consumer Product Safety Commission
- ASQ certification offerings
- Quality Press publications
- International Organization for Standardization

**Input**
- Knowledge and experiences
- Lessons learned
- Product recall reports
- Past articles, discussion on outsourcing
- Project management BoK
- 14 ASQ certification BoK
- Bloom’s Taxonomy

**Process**
- Brainstorm and consolidate the inputs from SMEs, sourcing managers, project managers, BoK experts and decide on major BoK categories and subsections.
- Compare recent reports and discussions of global product recalls to understand possible root causes, opinions, facts and conclusions.
- Compare the resulting draft with the existing BoKs for ASQ’s 14 certifications and important areas relevant to quality in outsourcing.
- Mind map major categories and subsections of the potential BoK.
- Finally, review the draft BoK with SMEs, sourcing managers and project managers for final agreement and fine tuning. Assign weights and cognitive levels as a team.

**Output**

**Customer**

**Supplier**
- Outsourcing organizations
- Program managers
- Outsourcing consultants
- Supply chain organizations
- Quality management professionals

**Main output**
- Quality in outsourcing comprehensive BoK—mind map
- Item level contents
- Weights for major categories
- Cognitive levels
- Byproducts
- Comparison sheets, graphs of quality in outsourcing BoK with existing ASQ certification BoK.
# Comparison of Bodies of Knowledge

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<thead>
<tr>
<th>Overarching Text</th>
<th>Strategic</th>
<th>PMBOK</th>
<th>COE</th>
<th>COA</th>
<th>COG (New)</th>
<th>CRE</th>
<th>CSSM</th>
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Exploring Major categories of Body of Knowledge

Allow audience to interact and provide any feedback on additional challenges & issues faced in every major category discussed in subsequent slides. (3 minutes / Category)

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Project Management

- Statement
  - Scope & Boundaries
  - Objectives

- Project Charter
  - Project & Financial Metrics
    - ROI, Payback
    - NPV, IRR
    - Cost Variance
    - Schedule Variance

- Project Estimation & Tracking tools
  - WBS
    - PERT & CPM
    - Gantt Chart
    - Activity Network Diagram
    - Toll Gate review
    - Scrum burn down

- Project Risk management
  - Methods
    - SWOT
    - PEST
    - FMEA/FMECA
  - Identification, control, mitigation
  - Safety & Hazard Analysis
  - Evaluation, Categorization
  - documentation
  - dissemination

Lessons learned

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Quality in Project Management

- **Scope Creep**: Scope creep can result in cost overrun and project delays, causing frustration and strain in the relationship with outsource partners.

- **Risk Management**: Do not underestimate the importance of a substantive approach to risk management. Quantifying risks in terms of dollars is one way to guarantee attention from team participants.

- **Lessons Learned**: Sharing project experiences can reduce waste, keep costs down and prevent embarrassment for management. Report items relevant to the current project in the first planning meeting.

Related Reading:
ISO 10006:2003, Quality management systems - Guidelines for quality management in projects
*Project Management: A Systems Approach to Planning, Scheduling, and Controlling* – Harold Kerzner

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Team Management

Types
- Functional interdependence
- Stages & Challenges

Managing virtual team
- Managing Multi Cultural team

Conflict Resolution
- Facilitation

Transitionsing
- Empowerment

Nominal Group Technique
- Multi voting

Team-building techniques
- Roles & responsibilities

Team decision making tools

Team performance and evaluation

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Quality in Team Management

- **Managing multicultural team**: Cross-culture training for all team members will reduce the impact of cultural differences.

- **Roles & responsibilities**: A RACI or RASCI* format approach to roles and responsibilities can help identify gaps, overlap, and other aspects like accountability, consultation, support and information.

- **Challenges**-
  - **Team attrition**: Booming economy creating high demand for quality human resources.
  - **Virtual teams**: Productivity, tracking progress, lack of participation (cultural, communication), morale issues not visible.

Related Reading:
*RASCI- [http://www.valuebasedmanagement.net/methods_raci.html](http://www.valuebasedmanagement.net/methods_raci.html)
The Team Handbook, Third Edition, Joiner, Brian L.; Streibel, Barbara J.; Scholtes, Peter R.

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Quality in Communication Management

- **The lost art of listening**: Active listening helps focus on the critical aspects of the communication from the noise around the process.
- **Protocol**: Develop communication and escalation protocol between the teams.
- **Challenges**:
  - **Technical interpretation**: We might need more than department admin asst and pocket translator. Develop a glossary of common vocabulary and operations definitions to be used consistently across both sides.
  - **Virtual teams**: Impact to the advantages gained from face-to-face interaction, nonverbal communication and personal relationships.

Related Reading:
*Project Management: A Systems Approach to Planning, Scheduling, and Controlling* – Harold Kerzner

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Quality in Knowledge Management

- **Structured Approach**: Understand the DIKW chain—the metaphorical link, pace and mode of transfer.
- **Infrastructure**: Explore web portal, SharePoint®, custom database with intelligent query options, etc. Wealth of information is useless if we cannot retrieve.
- **Scope**: Knowledge management should extend beyond domain expertise. Should also cover statutory, regulatory, legal requirements.
- **Challenges**:
  - **Tacit Knowledge**: Encourage documenting tacit knowledge by driving out fear.

Related Reading:
*Managing Industrial Knowledge: Creation, Transfer and Utilization*, Editors: Nonaka & Teece
Sage Publications

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**Quality in Supply Chain Management**

- **Maturity Assessment**: Effective supplier relationships are built on comprehensive maturity assessments, and understanding the gap.

- **Service Level Agreements**: Cost reduction from outsourcing partner should come from efficiency and not compromising the requirements.

- **Partnership-Collaboration**: The fundamentals at each location must first be in place. The maturity assessment should reveal the outsource partner's readiness for such collaborations.

- **Challenges**:
  - **Intellectual Property**: Your outsourcing partner likely also provides service to your competitors, so you should assess the controls in place for the security of your intellectual property.

Related Reading: *Purchasing and Supply Chain Management*, by Robert M. Monczka (Author), Robert B. Handfield (Author), Larry C. Giunipero (Author), James L. Patterson (Author)
Quality Engineering and Management

- **Business model**: Awareness of the outsource partner's business model, strategic planning and deployment helps in identifying any synergy between the organizations and areas to strengthen future collaboration.

- **Traceability-record retention**: This suddenly becomes very important in times of field failures and subsequent product recalls. The level and depth of traceability is usually an economic decision.

- **Third party surveillance**: Organization should set up an independent third party to periodically certify product safety. Products' and services' overall life cycle costs should always be kept in mind while outsourcing.

- **Challenges**:
  - **Failure cost**: One major product recall, liability suit or intellectual property violation might wipe out the initial savings.

Related Reading:
Acronyms & Abbreviations

- CAPA = corrective and preventative actions
- CPM = critical path method
- COQ = cost of quality
- DIKW = Data, information, knowledge, and wisdom
- DFA = design for assembly
- DFM = design for manufacturability
- DFX = design for excellence
- DFT = design for test
- FMEA = failure mode effects analysis
- FMECA = failure mode effects criticality analysis
- IRR = internal rate of return
- NPV = net present value
- PDPC = process decision program chart

- PEST = political, economic, social and technological analysis
- PERT = program evaluation and review technique
- ROI = return on investment
- SWOT = strengths, weaknesses, opportunities and threats
- SW = software
- TQRDC = technology, quality, responsiveness, delivery and cost
- WBS = work breakdown structure
Recommended Reading

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- Mr. Pradip Mehta, P.E, ASQ Fellow, Principal Mehta Consulting, LLC, for the initial review and feedback.