The ASQ Global State of Quality Research

Princeton Section 307
Dinner Meeting
Sept 11, 2013
Richard Herczeg
Presentation Goal

- Encourage Dialogue
- Share Knowledge & Experiences
- Gain Insights
- Input to future programs
Presentation Outline

- Survey Background
  - What is the research?
  - Where can I get a copy?
  - Types of questions that were asked
  - Why was research conducted?
  - Who was surveyed?
  - Sample Analysis

- Results & Findings
What is the ASQ Global State of Quality Research?

- The ASQ Global State of Quality Research is a groundbreaking initiative that identifies quality successes and opportunities from around the world. The unprecedented worldwide research has taken over 1.5 years to compile, with more than 2,000 survey responses from organizations in more than 22 countries.
- 50,000 ft. view of the quality discipline. Answers basic questions about how quality is practiced.
Where can I get my copy?

  - May 2013 - Discoveries
  - July 2013 - Analysis Trends & Opportunities
  - Nov. 2013 – Insights, case Studies and Continuing Conversations

- **Summary article on Discoveries** in August 2013 Quality Progress.

- Copy of slides from this presentation on ASQ Princeton 307 Website.
Types of questions that were asked on the survey.

- Quality Governance & Management
- Outcomes & Measures
- Competencies & Training
- Culture
Why was the research conducted?

- Gap in current research
- Establish a baseline
- Ignite wider conversation
- Future research
### Who was surveyed?

<table>
<thead>
<tr>
<th>Country</th>
<th>&lt; $100M</th>
<th>$100M to $1B</th>
<th>$1B to $5B</th>
<th>$5B to $10B</th>
<th>&gt; $10B</th>
<th>TOTAL</th>
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<tr>
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<td>0</td>
<td>0</td>
<td>1</td>
<td>18</td>
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<tr>
<td>Finland</td>
<td>71</td>
<td>53</td>
<td>17</td>
<td>6</td>
<td>4</td>
<td>151</td>
</tr>
<tr>
<td>France</td>
<td>50</td>
<td>22</td>
<td>15</td>
<td>17</td>
<td>24</td>
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<td>101</td>
<td>48</td>
<td>12</td>
<td>7</td>
<td>6</td>
<td>174</td>
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<td>8</td>
<td>14</td>
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<td>Mexico</td>
<td>50</td>
<td>20</td>
<td>11</td>
<td>3</td>
<td>5</td>
<td>89</td>
</tr>
<tr>
<td>Netherlands</td>
<td>57</td>
<td>25</td>
<td>34</td>
<td>16</td>
<td>17</td>
<td>149</td>
</tr>
<tr>
<td>Russian Federation</td>
<td>30</td>
<td>10</td>
<td>4</td>
<td>19</td>
<td>17</td>
<td>80</td>
</tr>
<tr>
<td>Spain</td>
<td>64</td>
<td>13</td>
<td>9</td>
<td>3</td>
<td>4</td>
<td>93</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>40</td>
<td>32</td>
<td>57</td>
<td>14</td>
<td>21</td>
<td>164</td>
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<tr>
<td>United States</td>
<td>122</td>
<td>74</td>
<td>52</td>
<td>33</td>
<td>40</td>
<td>321</td>
</tr>
<tr>
<td>Other</td>
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<td>7</td>
<td>3</td>
<td>4</td>
<td>3</td>
<td>51</td>
</tr>
<tr>
<td>TOTAL</td>
<td>871</td>
<td>423</td>
<td>309</td>
<td>169</td>
<td>219</td>
<td>1,991</td>
</tr>
</tbody>
</table>
Who was surveyed?

**MANUFACTURING**
- **Durable Goods**
  - Aerospace: \(n = 46\)
  - Automotive: \(n = 39\)
- **Consumer Goods**
  - Consumer Products/Packaged Goods: \(n = 171\)
- **Industrial Products**
  - Industrial Products: \(n = 486\)
  - Petroleum/Chemicals: \(n = 75\)
  - Utility: \(n = 31\)
- **Food and Drug**
  - Agriculture: \(n = 13\)
  - Pharmaceutical: \(n = 77\)
- **High Tech**
  - Electronics: \(n = 104\)
  - Telecom: \(n = 52\)

**SERVICES**
- **Transportation and Retail**
  - Distribution/Transportation: \(n = 30\)
  - Retail and Wholesale: \(n = 29\)
- **Finance and Insurance**
  - Insurance: \(n = 26\)
  - Financial Services/Banking: \(n = 23\)
- **General Services**
  - Services (general): \(n = 635\)
  - Nonprofit: \(n = 14\)
  - Government/Military: \(n = 58\)
  - Healthcare: \(n = 82\)
Sample Analysis / Bias

- Representative Sample
  - Location
  - Size (based on annual revenue/budget)
  - Industry (Manufacturing or Service)
- Not Evenly Stratified
- No data captured on performance of the quality practices.
- Respondents were quality professionals in organizations already practicing quality.
- Findings and results in report display only statistically significant findings.
Presentation Outline

- Survey Background
- Results & Findings
  - Quality Defined
  - Outcomes & Measures
  - Training
  - Culture
  - Governance & Management
High Level Findings

• **Location** had the least impact on the variability of quality practices.
• The **Size of an organization** had some impact in explaining differences in variation in the use of mature quality practices - however not as much as
  
  ...... Industry
• **Industry** differences in quality practices were “drastic”.


Quality Defined

1. Efficiently providing products and services that meet or exceed customer expectations.
2. Adding value to the customer.
3. Continuously measuring and improving processes and services for customers.
4. Acting as promised and reporting failures.
5. Doing the right thing at the right time in the right way with the right people.
6. Ensuring customers come back and products do not.
7. Providing the best value to customers by improving everyday activities and processes.
8. Beyond delivering what the customer wants, anticipating what the customer will want when he/she knows the possibilities.
9. Delivering customer value across the company, services, and support.
10. Meeting and exceeding the expectations of clients, employees, and relevant constituencies in the community.
Reporting Quality Measures

The chart to the left shows the percentage of respondents that are reporting quality measures at each staff level and the frequency indicated. The frequencies are the most common used by manufacturing organizations to highlight the differences between service organizations.
Figure 4  **Quality measures are available for review by staff across the entire organization.**

<table>
<thead>
<tr>
<th>Country</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>51.3%*</td>
</tr>
<tr>
<td>Brazil</td>
<td>43.0%</td>
</tr>
<tr>
<td>Canada</td>
<td>47.0%</td>
</tr>
<tr>
<td>China</td>
<td>53.1%</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>72.2%</td>
</tr>
<tr>
<td>Finland</td>
<td>60.0%</td>
</tr>
<tr>
<td>France</td>
<td>54.3%</td>
</tr>
<tr>
<td>Germany</td>
<td>59.5%</td>
</tr>
<tr>
<td>India</td>
<td>50.0%</td>
</tr>
<tr>
<td>Mexico</td>
<td>51.1%</td>
</tr>
<tr>
<td>Netherlands</td>
<td>48.6%</td>
</tr>
<tr>
<td>Russian Federation</td>
<td>45.0%</td>
</tr>
<tr>
<td>Spain</td>
<td>45.1%</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>47.3%</td>
</tr>
<tr>
<td>United States</td>
<td>51.0%</td>
</tr>
<tr>
<td>Other</td>
<td></td>
</tr>
</tbody>
</table>

*Response rate for all participants.*
Reporting Quality Measures

... to drive higher performance by promoting challenging goals.

- 18% agree
- 72% disagree

... as part of variable performance compensation.

- 28% agree
- 52% disagree

... for trending and/or predictive analytics.

- 20% agree
- 65% disagree

All participants n=1,991

Healthcare n=82

Manufacturing n=1,094

Services n=897

Neutral responses removed from percentages.
Figure 7: Quality measures are used for trending and/or predictive analytics in either operations or business processes.

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than $100 million</td>
<td>72.2%</td>
</tr>
<tr>
<td>Between $100 million and $999 million</td>
<td>69.8%</td>
</tr>
<tr>
<td>$1 billion to $4.9 billion</td>
<td>51.3%</td>
</tr>
<tr>
<td>$5 billion to $10 billion</td>
<td>54.4%</td>
</tr>
<tr>
<td>More than $10 billion</td>
<td>55.7%</td>
</tr>
</tbody>
</table>

*Response rate for all participants.*
# Training

Does your organization provide training (either through direct training or compensate for external training) to staff working on quality-related activities?

<table>
<thead>
<tr>
<th>Method</th>
<th>No</th>
<th>&lt; $100M</th>
<th>$100M to $1B</th>
<th>$1B to $5B</th>
<th>$5B to $10B</th>
<th>&gt; $10B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Six Sigma</td>
<td>16%</td>
<td>16%</td>
<td>27%</td>
<td>47%</td>
<td>36%</td>
<td>63%</td>
</tr>
<tr>
<td>Lean</td>
<td>23%</td>
<td>23%</td>
<td>39%</td>
<td>49%</td>
<td>54%</td>
<td>69%</td>
</tr>
<tr>
<td>Auditing</td>
<td>68%</td>
<td>68%</td>
<td>72%</td>
<td>74%</td>
<td>53%</td>
<td>81%</td>
</tr>
<tr>
<td>ISO</td>
<td>66%</td>
<td>66%</td>
<td>59%</td>
<td>55%</td>
<td>38%</td>
<td>63%</td>
</tr>
<tr>
<td>Quality Management</td>
<td>76%</td>
<td>76%</td>
<td>76%</td>
<td>55%</td>
<td>49%</td>
<td>62%</td>
</tr>
<tr>
<td>No Training Provided</td>
<td>6%</td>
<td>6%</td>
<td>3%</td>
<td>2%</td>
<td>5%</td>
<td>0%</td>
</tr>
</tbody>
</table>

Princeton Section
The Global Voice of Quality™
Figure 6  Types of training provided to staff working on quality-related activities.
Training

Figure 6  Types of training provided to staff working on quality-related activities.
Information on our product or Service quality is shared with customers.
Figure 11  The Qustomer™.
(Note: respondents answered with “agree” or “highly agree”)

- **74.2%**
- **68.6%**
- **61.4%**
- **49.1%**
- **60.3%**
- **67.3%**

<table>
<thead>
<tr>
<th>Category</th>
<th>Bar 1</th>
<th>Bar 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than $100 million</td>
<td>74.2%</td>
<td>85.0%</td>
</tr>
<tr>
<td>Between $100 million and $999 million</td>
<td>68.6%</td>
<td>83.0%</td>
</tr>
<tr>
<td>$1 billion to $4.9 billion</td>
<td>61.4%</td>
<td>78.8%</td>
</tr>
<tr>
<td>$5 billion to $10 billion</td>
<td>49.1%</td>
<td>76.3%</td>
</tr>
<tr>
<td>More than $10 billion</td>
<td>60.3%</td>
<td>72.6%</td>
</tr>
<tr>
<td>All respondents</td>
<td>67.3%</td>
<td>81.5%</td>
</tr>
</tbody>
</table>

- **Information on our product quality performance is shared with customers.**
- **Our organization seeks to understand product performance through our customers’ eyes.**

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Culture - Qustomer

Figure 10  **Quality performance data is gathered from first-tier suppliers or contractors.**  
(Note: respondents answered with “agree” or “strongly agree”)

![Bar chart showing response rates by company size range.]

- Less than $100 million: 73.8%*  
- Between $100 million and $999 million: 79.3%  
- $1 billion to $4.9 billion: 74.9%  
- $5 billion to $10 billion: 81.7%  
- More than $10 billion: 83.9%

*Response rate for all participants.
## Governance & Management

<table>
<thead>
<tr>
<th>Quality is governed by</th>
<th>(CQD)</th>
<th>(LMBU)</th>
<th>(CCLMF)</th>
<th>(SEL)</th>
<th>(BER)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A centralized quality department (CQD)</td>
<td>44%</td>
<td>25%</td>
<td>15%</td>
<td>5%</td>
<td>10%</td>
</tr>
<tr>
<td>Leadership located in multiple business units/parts of the organization (LMBU)</td>
<td>13%</td>
<td>38%</td>
<td>9%</td>
<td>6%</td>
<td>20%</td>
</tr>
<tr>
<td>A centralized committee of leaders from multiple functions (CCLMF)</td>
<td>15%</td>
<td>19%</td>
<td>54%</td>
<td>3%</td>
<td>10%</td>
</tr>
<tr>
<td>Senior executive leadership/officers (SEL)</td>
<td>27%</td>
<td>16%</td>
<td>22%</td>
<td>84%</td>
<td>30%</td>
</tr>
<tr>
<td>Board of external representatives (BER)</td>
<td>1%</td>
<td>2%</td>
<td>1%</td>
<td>2%</td>
<td>30%</td>
</tr>
</tbody>
</table>
Figure 14  Governance model for the quality process.
Governance & Management

Standard Framework for Quality Processes

Percentage of all organizations using ISO as a quality framework:
- Czech Republic: 83%
- Germany: 82%
- United Kingdom: 70%
- Spain: 69%
- Mexico: 69%
- France: 68%
- China: 67%
- Russian Federation: 67%
- Canada: 65%
- Netherlands: 64%
- Brazil: 64%
- India: 62%
- United States: 60%
- Australia: 57%
- Finland: 56%

Percentage of all organizations not using any quality framework:
- Czech Republic: 17%
- Germany: 8%
- United Kingdom: 8%
- Spain: 6%
- Mexico: 6%
- France: 10%
- China: 6%
- Russian Federation: 11%
- Canada: 11%
- Netherlands: 14%
- Brazil: 23%
- India: 16%
- United States: 16%
- Australia: 17%
- Finland: 12%
Further Findings & Insights

- Organizations that have executive leadership directly govern or manage quality process are 30% more likely to view quality as a continuous improvement activity.
- Manufacturing based organizations are twice as likely than service-focused organizations to use quality measures for increase performance, compensation and predictive analytics.
- Organizations that govern quality with a centralized group are approx. 30 percent more likely to provide quality training than when senior executives govern the process.
- Only 68% of all organization share information on product quality or service quality with customers.