Linking Knowledge Management and Employee Engagement

Will They Tell You What They Know?

2017 Mid-Atlantic Lean Conference

Dr. Robert Downing
Date: 11/14/17
Newport News Shipbuilding

• Sole Supplier of U.S. Navy Aircraft Carriers
• One of Two Builders Constructing Virginia Class Nuclear Submarines
• Exclusive Provider of Refueling Services for Nuclear-Powered Aircraft Carriers
• Largest Non-Governmental Provider of Fleet Maintenance Services to the Navy
• Largest Industrial Employer in Virginia – More Than 23,000 Employees
• Home of the Western Hemisphere’s Largest Dry Dock and Crane
Quotes from Survey Participants

• I usually **only share info when asked**.

• **I don't offer** and do not press if the suggestion is not well received.

• Basically, I will share and ask for advice from anyone… **I wouldn't share/ask** for information from people who are extremely high up in management or people who are arrogant.

• **If you think** you can just flip a switch and I’m **going to give you my best ideas** – that’s **never going to happen**.
Types of Knowledge

Tacit Knowledge:

Is inside of peoples’ heads or in the “Brains of Employees”. It has not been captured, so it has not been formalized or organized. The knowledge can not be easily accessed by other employees.

Explicit knowledge:

Knowledge that has been articulated, captured, or codified (Nichols, 2000) – “Written down”.
Problem:
Losing Tacit Knowledge at a Faster Rate

- Potential exists for significant knowledge loss.
- Large portion of workforce moving to retirement years
- Employees retire before their knowledge can be captured
- What are you experiencing?
Manufacturing Workforce
Age as a percentage of Total US manufacturing workforce - 2012

Median Age = 44.7
Fear of Losing Your Knowledge

• Exercise
  – Interview each other to determine knowledge at risk in your organization. Think about age demographics (how many and when they might leave), complexity of the knowledge:
    • 5 minutes
    • 15 minutes to report-out
  – Goal: To capture the unique/perishable knowledge
Increased Retirement – Continuing Knowledge Loss

Smaller Pool of Qualified Applicants

Increased Retirements (and other attrition)
The Sources and Transfer of Knowledge

Where is knowledge when you need it?
From an organization that spent 5 years to capture their tacit Knowledge

- Paper Documents: 7%
- Electronic Documents: 16%
- Electronic Mail Files: 13%
- Electronic Knowledge Bases: 13%
- Brains of Employees: 51%

At most companies, **80 - 90%** of the corporate knowledge is in peoples’ heads.
Problem with Sharing Knowledge

Slightly over 10% of the “knowledge transfer events” involved hiding knowledge.

Connelly, Zweig, Webster & Trougakos (2012).

From a Gallup Perspective – “Disengaged Employees”

Are you concerned with “Employee Engagement”? 
A common management assumption is that employees freely and openly will share their knowledge. This assumption seems to be based on the attitude that the company owns the knowledge that resides within the employees’ heads.

*Jarvenpaa & Staples (2001).*

**However,** almost no objective evidence exists to support that this is how employees feel about sharing or transferring their tacit knowledge.
What does this impact Process Improvement?

- Capture participants’ ideas
- Discuss implications
The *purpose of this study* was to develop predictors or indicators of tacit-knowledge transfer.

30 questions / 5 categories
- Perceived management commitment
- Social interaction
- Trust
- Rewards
- Status

Scoring was based on a seven point Likert Scale

*Administered to employees from DOE labs (Navy Nuclear)*
### Results of Simple Linear Regression

<table>
<thead>
<tr>
<th>Variable composite</th>
<th>$B$</th>
<th>$SE\ B$</th>
<th>$\beta$</th>
<th>$t$</th>
<th>$p$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trust</td>
<td>0.50</td>
<td>0.14</td>
<td>.43</td>
<td>3.51</td>
<td>.001**</td>
</tr>
<tr>
<td>Perceived management commitment</td>
<td>0.41</td>
<td>0.13</td>
<td>.40</td>
<td>3.26</td>
<td>.002**</td>
</tr>
<tr>
<td>Social-interaction climate</td>
<td>0.32</td>
<td>0.12</td>
<td>.36</td>
<td>2.82</td>
<td>.007**</td>
</tr>
<tr>
<td>Reward</td>
<td>0.40</td>
<td>0.16</td>
<td>.32</td>
<td>2.49</td>
<td>.020*</td>
</tr>
<tr>
<td>Status</td>
<td>0.29</td>
<td>0.17</td>
<td>.22</td>
<td>1.67</td>
<td>.100</td>
</tr>
</tbody>
</table>

Table 6

*Simple Linear Regression With Each Variable Predicting Knowledge Sharing (p value = below .05 is significant)*

*p < .05. **p < .01.

Trust is the #1 predictor of knowledge sharing
## Tacit KM Survey Questions and Scores

<table>
<thead>
<tr>
<th>Question</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>You and Pat both work at your company. Both of you started work at the same time and have been friends ever since. Would you share with Pat?</td>
<td>“Friend”</td>
</tr>
<tr>
<td></td>
<td>Mean Score 6.7 (out of 7) on KM Sharing Survey</td>
</tr>
<tr>
<td></td>
<td>Note: This is the highest mean score of all the survey questions. 95.7% will share</td>
</tr>
<tr>
<td>You and Pat both work at your company in completely different divisions and have never met each other. Would you share with Pat?</td>
<td>“Don’t Know Them”</td>
</tr>
<tr>
<td></td>
<td>Mean Score 5.0 on KM Sharing Survey</td>
</tr>
<tr>
<td></td>
<td>71.4% will share</td>
</tr>
<tr>
<td>You and Pat both work at your company. Pat has a reputation for never helping anyone. Would you share with Pat?</td>
<td>“Perhaps, Don’t Like Them”</td>
</tr>
<tr>
<td></td>
<td>Lowest Mean Score 4.5 on KM Sharing Survey</td>
</tr>
<tr>
<td></td>
<td>64.3% will share</td>
</tr>
</tbody>
</table>

Based on seven point Likert Scale: Seven is likely to share, one is not likely
## Tacit KM Survey Questions and Scores

<table>
<thead>
<tr>
<th>Question</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>You and Pat both work at your company in completely different divisions. The two division have been fighting over turf and responsibilities for some time. Would you share with Pat?</td>
<td>“Fighting over Turf”</td>
</tr>
<tr>
<td></td>
<td>6.4% will share</td>
</tr>
<tr>
<td>You and Pat both work at your company. Pat stabbed you in the back two weeks ago. Would you share with Pat?</td>
<td>“Stabbed you in the Back”</td>
</tr>
<tr>
<td></td>
<td>2.1% will share</td>
</tr>
</tbody>
</table>

Based on seven point Likert Scale: Seven is likely to share, one is not likely
Significance

• Knowledge sharing is “Situational” – it depends on the Situation and how the employees feels about sharing.
  – Note: This is not just “bad employees” not sharing. This is “good employees not sharing” – depending on the situation.

• Question: Does this apply to all discretionary effort from employees? Gallup says “Yes”
Employee Engagement, the Missing Link

Black Box “Magic Occurs”

Employee Engagement → Knowledge Sharing → Productivity & Profitability

Culture Impacts Productivity
Finding the Right Questions

In 1994, Gallup Changed The Model

• 1,000s of different questions
• More than 1 million employees
• Identify the factors common to productive workplaces
• Identify the best questions to measure these factors - questions where the best said Yes and the rest said No
The Science of the Sorting Effect

**Poor Item**

```
Low rating    High rating
```

“**I receive recognition.**”

**Great Item**

```
Low rating    High rating
```

“In the last seven days, I have received recognition or praise for doing good work.”

- Higher performing units
- Lower performing units
Q12® Employee Engagement

- I know what is expected of me at work.
- I have the materials and equipment I need to do my work right.

- At work, I have the opportunity to do what I do best every day.
- In the last seven days, I have received recognition or praise for doing good work.
- My supervisor, or someone at work, seems to care about me as a person.
- There is someone at work who encourages my development.

- At work, my opinions seem to count.
- The mission/purpose of my company makes me feel my job is important.
- My associates (fellow employees) are committed to doing quality work.
- I have a best friend at work.

- In the last six months, someone at work has talked to me about my progress.
- This last year, I have had opportunities at work to learn and grow.
Why Is Employee Engagement So Important?
PROVING THE VALUE OF THE Q12®:
META-ANALYSIS OUTCOMES

TOP-QUARTILE ENGAGEMENT WORK UNITS HAVE SUBSTANTIALLY BETTER OUTCOMES THAN THEIR BOTTOM-QUARTILE COUNTERPARTS

Business units in the top engagement quartile have 48% fewer safety incidents and 41% fewer quality defects than their bottom-quartile counterparts.
Engagement = Performance

Grand Mean Shop A

- 2011: 3.76, ≈ 30th Percentile
- 2013: 4.34, ≈ 75th Percentile
Performance

**Accidents**  Shop A

- 2011: 14 accidents
- 2013: 5 accidents
- 64% Drop

**FTQ**  Shop A

- 2011: 98.1%
- 2013: 98.8%

**Manhours/Detail**  Shop A

- 2011: 9.3
- 2013: 6.3
- 32% Drop

**Cost Performance Index**  Shop A

- 2011: 0.94
- 2013: 1.13
- 20% Increase
If Knowledge Sharing is voluntary, how do we increase the likelihood that colleagues and customers will share their knowledge…?
Knowledge Sharing Improvement Areas

- Organizational Level
- Departmental Level
- Supervisory Level
- Personal Level

How can you personally be more successful in getting others to share their knowledge?
Strategic Approach (vs. Piece-meal)

• “a strategy and/or practice used to identify, capture and retain knowledge, information, skills and relationships that are critical to the current and future performance of an organization.

“Hope and handwringing is not a Strategy”
In Conclusion

• We can increase knowledge sharing (and Employee Engagement) by increasing “Trust” (Friend at work).

• Trust is necessary for employee engagement (and Knowledge Sharing), and Social Interaction is necessary to build that Trust.

• Part of the process to increase Trust is to allow/encourage more social interaction at work (developing the Friend at work). And, there is also the outside of work interaction and relationships.

• The actions that increase Knowledge sharing are also likely to increase Employee Engagement.

• It is also necessary that our employees perceive that our management is committed to knowledge sharing (and Employee Engagement).
Really - In Conclusion

- Knowledge Sharing is a gift.
- So, how do you encourage gift giving?
- And, are you ready to receive the gift?
Options for Action

• Do Nothing
  – Expected Results?

• Do Something
  – Expected Results?
Contact Information

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  red100u@hotmail.com
Resources

• Conoco-Phillip’s knowledge retention strategy slides and presentation materials:
  – - Slides: http://www2.apqc.org/aug2014kmcc
  - Recording:
    http://webmedia.apqc.org/il80web20025/Marketing/2014_Webinars/2014.8.21_August_KM_CC.wmv

• Additionally, The Tennessee Valley Authority (TVA) freely shares their KM materials:
  http://www.tva.gov/knowledgeretention/index.html

• Finally, let me also suggest that the Knowledge Management materials from The America Productivity and Quality Center (APQC) offer a wealth of information.
  http://www.apqc.org/
References


• Longwood, Nancy : Leveraging Employee Engagement for Competitive Advantage : HR’s Strategic Role (2007).


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• Knowledge Retention

• Step 1: Conduct Assessment

• Step 2: Determine Approach

• Step 3: Evaluate

• Glossary

http://www.tva.gov/knowledgeretention/index.html

TVA has given us permission to share their materials - 05/06/14
Facing the Attrition Challenge
Critical Management Issues

• Focusing on the critical positions where knowledge loss is the greatest threat

• Identifying and prioritizing the specific knowledge and skills at risk

• Developing concrete, actionable responses to mitigate this loss.

The Knowledge Retention Process

• Three main questions:

• 1. Specifically, what knowledge is being lost?

• 2. What are the business consequences of losing each item of knowledge?

• 3. What can we do about each item?

## Knowledge Retention Overall Process

<table>
<thead>
<tr>
<th>Who?</th>
<th>So What?</th>
</tr>
</thead>
</table>
| • Garner support and resources  
• Establish sponsors and agents  
• Define near- and long-term objectives | • Assess consequences of loss  
• Categorize and prioritize  
• Confirm |

<table>
<thead>
<tr>
<th>What?</th>
<th>Now What?</th>
</tr>
</thead>
</table>
| • Determine relative risks  
• Identify positions/people  
• Prepare interviewers and interviewees  
• Conduct interviews/info gathering  
• Compile lists of knowledge/skills  
• Confirm | • Identify responses  
• Establish schedules, responsibilities, measures, etc.  
• Approve and implement  
• Monitor and extend |
Knowledge Loss Through Attrition
Strategic Lessons Learned

• There is a logical process

• Focus on Critical Positions -- One job at a time

• Lots of detailed work, analysis, planning, and project management

• Limited number of ways to deal with it.

• Everyone must do their part - management, HR, supervisors, process owners, KM professionals

Knowledge Loss Through Attrition

Tactical Lessons Learned

• Clarify purpose to employees & defuse concerns

• Include newer employees as “observers”

• “How did you learn it?” enlightening

• Clusters of knowledge based on career path

• Safety and reliability/risk drive priorities

• Retirees can be a continuing resource

Questions and Answers

Please upload your feedback into the Presenter’s data port!

This session is:

132 Downing

Are you a future presenter? Contact Jeff Fuchs at jeff@leanmaryland.com about presenting at next year’s conference.

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