Using Knowledge Management to Improve Project Success

KMWorld
Real World KM: Project Management & Driving Adoption
September 23, 2008

Jim Lee, PMP
KM Practice Leader
Our agenda

> What is project knowledge?
> KM and the PMBOK©
> A case study in KM
Project Knowledge \( \equiv ? \)

- Re-usable
- Shareable
- Repeatable
- Contextual
Aren’t project archives enough?

> What’s in it?
> Who does it?
> When do you do it?
> What do you do with it?
Our agenda

> What is project knowledge?
> KM and the PMBOK®
> A case study in KM
PMBOK® Knowledge Areas

> Integration management
> Scope management
> Time management
> Cost management
> Quality management
> Human resources management
> Communications management
> Risk management
> Procurement management
Integration management

> WBS of similar projects
> Re-use of elements of previous project plans such as performance records and project charters
> Sharing stakeholder skills and knowledge
> Change control systems and configuration management
> Lessons learned
Scope management

> Previous project selection decisions
> Decision modeling and expert judgment
> Previous project deliverables
> Previous errors and omissions
> WBS templates
> Lessons learned
Time management

- Activities from previous projects
- Activity and WBS templates
- Discretionary dependencies, or “best practices”
- Network templates, or “fragnets”
- Duration estimates and actual performance from previous projects
- Lessons learned
Cost management

> Specialized resource knowledge; skills required on previous projects
> Using expert judgment to assist with resource planning
> Re-using previous projects’ actual costs in analogous, or “top-down” estimating
> Lessons learned
Quality management

> Systems*: ISO9000, PDCA
> Benchmarking against previous or similar projects
> Checklists
> Quality improvement, or “working smarter, not harder”
> Lessons learned from quality audits

* Not from the PMBOK©
Human resource management

> Personal and organizational relationships often temporary and new in projects
> Project interfaces: organizational, technical, interpersonal
> Templates and HR policies
> Training for performance improvement
Communications management

> Technology as enablers to project communications
> Information retrieval and distribution systems
> Project archives
> Lessons learned
Risk management

> Historical information from previous projects, such as project archives
> Project team knowledge
> Checklists
> Mitigating risk using expert judgment
> Previous contingency plans against risk events
Procurement management

> Using expert judgment to assist with procurement planning
> Contracts from similar, previous project procurement activities
> Standard forms, such as RFP, RFQs
> Contract change control system
> Lessons learned from performance audits
Our agenda

> What is project knowledge?
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US Navy Carrier Team One
US Navy Carrier Team One

> Responsible for all maintenance
> Mantra: “Improving Carrier Availabilities…and we can prove it”
> Two coasts—right and left
> Private and Public shipyards
Team One’s Challenge

> PIA: Six months of intensive maintenance and testing
  • Execute 2-3 per year
  • Budgets in excess of $100M
  • More than 200,000 man days of work often performed by more than 50 maintenance organizations

> DPIA: Dry docking availabilities last 10 ½ months and are twice as big

> RCOH: Refueling overhauls (one per carrier lifetime)
  • $2.9B, 40-month availabilities
  • Planning starts 3 years in advance
BLENDED KM APPROACHES

Lower

Human Interaction

Higher

Tacit

Explicit

Knowledge Transfer

- Team One Portal

- Process-based KM
  - After Action Reviews
  - Lessons Learned
  - Project Milestone Reviews

- Network-Based KM
  - CoP’s
  - Team Meetings
  - Virtual Collaboration

- Facilitated Best Practice Transfer
  - Peer Assists

- Proven Practice
  - Replication DB & Peer Assists

Self-Service +

- Portals
- Repositories
- CRM Systems
- Email/Discussion Boards
- Expertise Locator
- Systems
- Taxonomy/Classification Systems
- Search Engines

- After Action Reviews, Lessons Learned & Hotwashes

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US Navy Carrier Team One

> Learn before
  • Project Management College I, II, III
  • Proven Practice Replication
  • Peer Assists

> Learn during
  • Proven Practice Replication
  • Lesson Learned
  • KSN Meetings

> Learn after
  • Hotwashes
  • Proven Practice Replication
## Types of Team One knowledge transfer

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<th>EXPLICIT</th>
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<tr>
<td>• Project Team member-to-Project Team member&lt;br&gt;• AAR&lt;br&gt;• Retrospect&lt;br&gt;• Hotwash&lt;br&gt;• KSN meetings&lt;br&gt;• IPTD&lt;br&gt;• In-person training&lt;br&gt;• Mentor-to-Mentee</td>
<td>• Project Team member-to-PPR&lt;br&gt;• KSN member-to-PPR&lt;br&gt;• Retrospect minutes&lt;br&gt;• Hotwash minutes&lt;br&gt;• PM-to-Portal</td>
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<td>• Focal Point reviews&lt;br&gt;PPR DB&lt;br&gt;• Anyone reviews and downloads content from Team One Portal&lt;br&gt;• CBT&lt;br&gt;• IPT4ACM&lt;br&gt;• Previous KS Strategy&lt;br&gt;• Metrics</td>
<td>• Team One Portal to PPR&lt;br&gt;• KS Strategy to Portal&lt;br&gt;• Useful documents to Portal (eg, Hotwash minutes, meeting agendas)</td>
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The Results?

CVN-73 USS George Washington

- 40-month, 5-million+ man-day project
- Hampton Roads PMI Chapter 2005 Project of the Year Award
Questions?.... Thank you!

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Who We Are

- **APQC is a member-based, non-profit organization**
  - Founded in 1977
  - Started with donations from 100 corporations
  - Non-profit, tax-exempt 501(c)(3)
  - Serves more than 500 organizations around the world

- **30-year reputation founded on integrity and the support of rapid innovation through**
  - Performance measurement
  - Best practice research and implementation
  - Knowledge capture, transfer, and reuse

- **Quick facts:**
  - Board of Directors: 45 senior executives from corporations, education, and government
  - Staff of 80
APQC’s Mission

To work with people in organizations around the world to improve productivity and quality by:

• **discovering** effective methods of improvement,
• **broadly disseminating** our findings, and
• **connecting** individuals with one another and with the knowledge they need to improve.
Select APQC Members
What We Offer

> Membership & Community

> Advisory Services
  • Knowledge Management
  • Performance Measurement
  • Organizational Improvement & Change
  • Finance & Accounting
  • Supply Chain
  • Customer Service

> Consortium Benchmarking Studies
Our Services

- Professional Development
- Research and Reports
- Consulting and Facilitation

Membership
Professional Development

> Conferences
> Workshops
> Training
  • On-site services
  • E-learning courses
  • Curriculum design
  • Licensing

“APQC has ushered Siemens into the world of benchmarking. We have accomplished this in a fraction of the time it would have taken if we had attempted to do this on our own. The return to our business from these efforts over the next few years will be measured in the millions of dollars.”

Edward W. Zazenski, Assoc. Director, Quality Siemens
Consulting and Facilitation

> Benchmarking and Best Practices

> Knowledge Management
  • Methodology licensing
  • Assessment
  • Strategy design
  • Communities of practice
  • Implementation

> Measurement

> Process Improvement

> Project Management
Research and Reports

> APQC’s Knowledge Sharing Network

> Best Practices Database

> Consortium Benchmarking Studies

> Metrics

> Custom Research Services

> Publications
  - Study reports
  - White papers
  - Case studies
  - Books

“APQC’s best-practice study extended our knowledge in the e-learning arena, and gave us a great network for continuing our knowledge with those in the e-learning field. We found the study to be value added to our implementation.”

Stacy Valdez with study sponsor Occidental Petroleum Corporation
We study all management processes in the APQC Process Classification Framework (PCF)
APQC’s Three Types of Research

1. **OSBC**—global metric research and benchmarking based on Open Standards

2. **Consortium**—multi-company best-practice collaboration around a common set of issues or processes

3. **Custom**—for unique needs
Open Standards Benchmarking Collaborative℠

> **Goal**: To create the most reliable, comprehensive database of process information worldwide

> Database includes over 1,200 individual metrics:
  - Supply Chain
  - Finance & Accounting
  - Human Resources
  - Information Technology
  - Knowledge Management
  - Customer Service

> Surveys (free to complete) capture and compare performance data and identify leading practices
APQC’s KM Consortium Studies

> Knowledge Management and Emerging Technologies (2007)
> Retaining Today’s Knowledge for Tomorrow’s Workforce (2006)
> Leveraging Knowledge Across the Value Chain (2006)
> Using Communities of Practice to Drive Organizational Performance and Innovation (2005)
> Integrating KM and Organizational Learning (2004)
> Measuring the Impact of Knowledge Management (2003)
> Using Knowledge Management to Drive Innovation (2002)
> Retaining Valuable Knowledge (2001)
> Managing Content and Knowledge (2001)
> Building and Sustaining Communities of Practice (2000)
> Successfully Implementing KM (1999-2000)
> Creating a Knowledge Sharing Culture (1998-99)
> Expanding KnowledgeExternally (1998)
> Europe - The Learning Organisation & KM (1997)
> Using Information Technology for KM (1997)
Questions?...

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