

4.Yokogawa

Codification of KM initiatives to a tangible engineering standard

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The Background and Purpose

The primary objective for developing Yokogawa's Global Engineering Standard (GES) is to establish One Yokogawa approach for global project realization, to cope with being separated by many miles, by diversity of cultures and languages.

The secondary objective is to maximize Yokogawa global project realization capability by use of standard and field proven solutions as well as expanding and visualizing knowledge.

Before GES we used mainly on-job training to transfer knowledge from experienced engineers to the juniors. Peer reviews were also used to share the dos and don'ts. Project close-out reports captured the lessons learned.

The targeted group was the global operations of about 3000 engineers.

What We Did

What: Change the local working culture to one that recognizes the importance of regional and global sharing of Lessons Learned from projects.

Platform: The collaboration function of SharePoint at that time was quite poor and access issues were a recurring problem so we changed to a fully web enabled portal and will adopt Livelink ECM in the future.

How: We set-up a global taskforce of the best lead engineers which met every month to record the Work Breakdown Structure (WBS) of our daily activities in projects.

Top Management sponsored this work, and joined the various meetings to promote teamwork among the regional representatives. The team was given the Yokogawa IA business award in 2005, as recognition by management.

Steps: We started with common naming definition for metadata and then planned the work in the same QA stages as actual projects. Also we finished one engineering domain before starting on the next.

Processes used: embedding GES in outsourcing process and accounting and setting up an Engineering Principal Network to maintain and improve GES.

Progress was initially monitored using Balanced Scorecard but later changed to a set of KPI's: Contribution and portal hit-rates. Now the whole company switched to BSC and engineering operations has again adopted the structure we defined 5 years ago.

Lessons Learned

The main barrier we faced was the result oriented culture in the company. The high degree of growth and resulting priority on completion of projects made it hard to get the taskforce together and delaying the completion.

We could speed up the process by creating the global standard from the best in class design specification of one representative project.

Success in a standardization project of this nature is increased by bringing a knowledgeable team together for short period, close the door and just do it.

If we could start again, we would start with roll-out of corporate EDMS and not raise expectations so high before roll-out. Don't over-sell it.

My recommendation to other companies is: Consistency in performance requires a WBS as a basis of all work. A working Lessons Learned process keeps a standard in line with the changing technology and design issues.

Impact and Benefits of Global Engineering Standard

The benefits of our effort are the consistent definition of projects activities across projects teams, and reduced risk when outsourcing work.

Our global customers see an improvement of consistency of design across offices, and come to see the benefits of sharing lessons learned with us.

We now have a solid basis to improve from and to initiate engineering projects with less effort. As scope is clearly defined in projects, we can reduce risk, speed up delivery and reduce the skill required to do the work from both Yokogawa and our customers. This results in improving profitability of projects and increased satisfaction of our customers.

Insights and lessons learned from case study discussions

1. KM need to be embedded in daily work.
2. KM need to use "recognition" as reward system.
3. Tag lessons to various phases of business so that they can be retrieved as relevant information for future.
4. Involve HR in any KM initiative → professional recognition as a form of reward is important to motivate participation.
5. A KM initiative is more likely to succeed if management has committed resources in it such as money.
6. If you replace the word 'engineer' with 'teacher' and 'product' with 'goods', Cor was talking about a problem that we face in education.
7. Key success factor to break down silo or culture is to create common vision and keeping the same vision and repeating the vision to them.
8. Tap on what the staff knows and use (WBS) to push KM.
9. How do you make multiple parties agree on one method? By compelling arguments.
10. Create a tangible result with actual buy-in from division through budget and resources.
11. Share lessons learnt on projects.
12. Resources employed / deployed to do KM initiatives and having it part of KM process.
13. Linking KM to internal and external standards.
14. A standard of working processes is not the same as QA. This verifies it is applied.
15. Get tangible results in KM to get the momentum going.
16. Developing a useful KM framework does not always equate to people remembering it.