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Using Team Assignments To Support Process Improvement

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Introduction

The challenge in process improvement in the Software Industry is persistence. How do you change and how do you sustain change. We believe that this problem has to do with time and timescale. In the manufacturing industry, process improvement has been performed with great success since the sixties (Deming 1986). The repetitive nature of the manufacturing process allows for quick feedback on improvements. Therefore improvements may be performed in small steps, or as it is popularly called, Kaizen (Imai, 1986). The manufacturing process is also equipped with natural metrics which are connected directly to the performance of the current process, e.g. the thickness of a coat of paint or the assembly time of a device.

In the software industry things are different. The time scale is measured in years rather than the minutes of the manufacturing process. It adds up to being quite a challenge to repeat the success of the Kaizen ideas in SW industry.

Shortened feedback and learning loops can be achieved also within software development by basing projects on teams working on assignments with limited scope in terms of leadtime, number of people and technical work. A team assignment model emulates the repetitiveness of the manufacturing process and it assures that all teams pass through a team assignment life cycle several times during the project. This creates natural opportunities for the introduction of quick changes and quick feedback.

We have worked with large scale introduction of a team assignment based process in a large telecom project spread over North America and Europe. The team assignment process was geared to assuring team as well as individual commitments, correctness, empowerment, a strong sense of project purpose as well as process adherence and improvement. This paper will focus on the aspect of continuous sustained improvement.

The Team Assignment Model

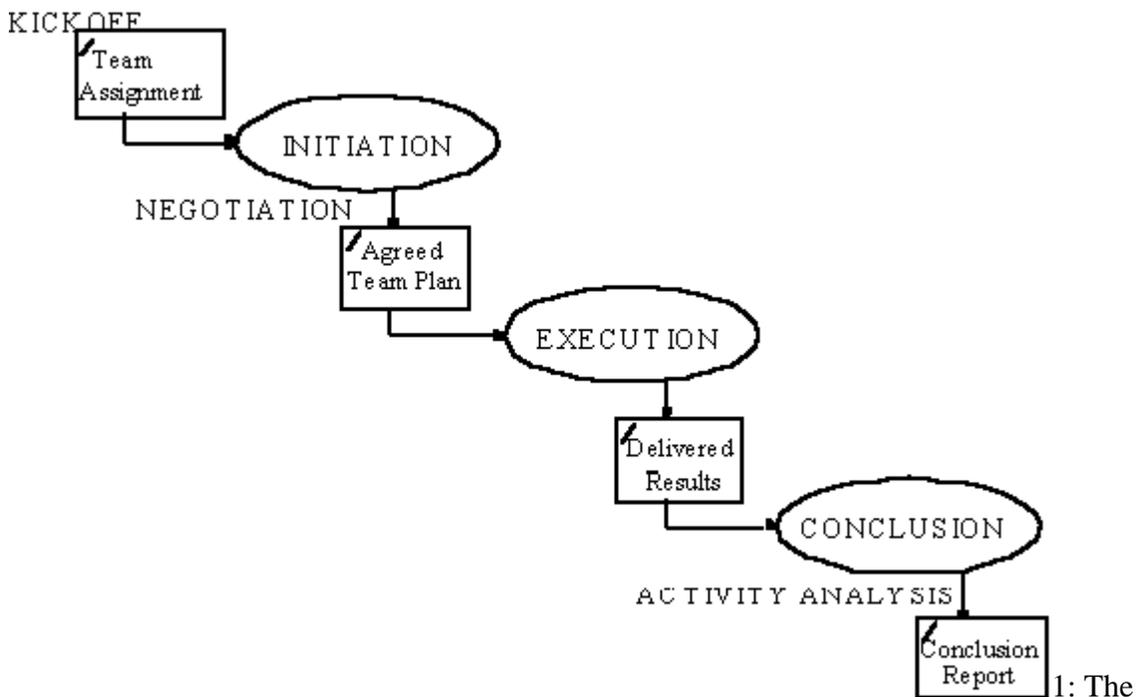
A team assignment is a project component or unit of work that is to be completed by a team. An assignment is typically given to a team based on the team's technical competence, availability, or other factors that impact the successful completion of the project. The size of the assignment is based on factors such as team composition of new/experienced members, time and cost constraints, and complexity associated with the level of reuse from existing components. A team will complete an assignment by performing three phases: initiation, execution, and conclusion. These phases are referred to as the *Team Assignment Mode*, see figure 1. They are defined as:

Initiation - The purpose of the initiation phase is to start work on an assignment. The team assignment activities are launched at a kick-off meeting at which time the team receives their assignment and supporting information required for its successful completion. The team members analyze the requirements of the assignment, define common plans and goals, and establish work methods and team routines for the

assignment execution. Based on the outcome of this activity, the team may need to negotiate with management the terms of assignment execution due to a lack of resources, time, expertise, or other factors.

Execution - The purpose of the execution phase is to begin work on the assignment as defined in the team plan. The execution is done according to the Team Assignment Plan and the process agreed upon, following the schedule of tasks, and using resources effectively in order to achieve the goals. The work is actively controlled by tracking and assessing task completion. Renegotiation on the team plan may be initiated when management or teams cause major deviations from the agreed upon plan.

Conclusion - The purpose of the conclusion phase is to compile experiences of the team effort and communicate them to management for future improvement. The assignment is brought to closure by documenting team experiences regarding the effectiveness of technical, process, and quality aspects of activities that were performed. In addition, teams can identify areas for future improvements in any of these aspects. The conclusion phase provides an effective means for communication between teams and management which is necessary for ongoing performance evaluation and improvement. This approach supports a higher-level of organizational maturity as feedback mechanisms are in place and have become part of the assessment process. To exit the conclusion phase the team presents their compiled experiences to management at an Activity Analysis meeting.



Team Assignment Model

In the Team Assignment Model, roles have been predefined for both management and the teams. The management roles include the roles of the Assignment Orderer and Resource Responsible, and the team role is the Assignment Performer.

Assignment Orderer : The Assignment Orderer is typically a project manager that is responsible for effective work flow within and across projects. He/she defines the team assignments and negotiates with the other two parties in order to reach agreement on the team plan. During execution of the assignments, the Assignment Orderer monitors the team's progress and acts on deviations from the team plan.

Resource Responsible : The Resource Responsible is typically a line manager and is responsible for assigning individuals to teams based on competence, skills, experience, interest or other factors. The Resource Responsible is also responsible for providing each team adequate resources including a sufficient number of team members, access to external expertise (i.e. technical support) work methods, processes, and tools in order for the team to successfully complete the assignment.

Assignment Performer : The Assignment Performer is the team that has accepted an assignment and is committed to its successful completion.

How Team Assignments Support Continuous Improvement

The short duration of the team assignments combined with the participation of key persons in the team assignment evaluation activity assures that lessons learned are actually utilised in other assignments within the project. During kick-off of an assignment, experiences from previous assignments can be provided as input. The continuous participation of the key persons in the evaluation and kick-off activities will function as the means for sustaining the lessons learned.

Team assignments are limited in time and scope. Assignments may be process specific, i.e. limited to a certain phase of the process such as function design. This assures that feedback on process usage is collected after each process phase and not only at the end of the project.

The Assignment Kick off creates project awareness. The kick off can be used to brief team members about the process to be applied during the assignment execution. Process improvements, changes or exemptions can be presented and frequent mistakes made and improvement suggestions from other teams can be discussed thus creating process and quality awareness among the team members.

Negotiation is the prerequisite to process adherence. The most interesting aspect on process improvement through the Team Assignment Model comes from the notion of negotiation. The team is empowered to find the best possible solution to the assignment. The creativity of the team is focused on finding an innovative way of carrying out the assignment.

The negotiations forces the team to explain and defend the solution against the Assignment Orderer and the Resource Owner and thus also to the process owner. In this way the negotiation process catalyses discussions on versatility and efficiency of the process. The process is scrutinized and evaluated by those owning the process at the very edge of its use in a timely and direct manner.

The Activity Analysis assures active learning. On the other end of the cycle is the Activity Analysis of the Team Assignment. This corresponds to the "Check and Act" of the Deeming Cycle. Initially when a project starts all involved agree on the importance of "Check and Act". Still when pressure starts to build in the project this type of activities are often skipped. The Team Assignment Model assures that the Activity Analysis is planned and tracked just like all other activities of the Team Assignment. The date for the meeting is set up front and it is easy for the Assignment Orderer and the Resource Responsible to plan their participation. The actual execution of the Activity Analysis and the participation of the key persons is the backbone of the process improvement support from the Team Assignment Model

Increased maturity. The frequent evaluations in which team members participate leads to the development of a new skill within the organisation. All of staff will be trained as process improvement engineers. This leads to more improvement suggestion but also and more important to improvement suggestions of a higher quality and with larger innovative content.

References

Deming, W.E. (1986). *Out of the Crisis*. MIT Center for Advanced Engineering Study, MIT Press, Cambridge, MA.

Imai, M. (1986). *Kaizen The Key to Japan's Competitive Success*, Random House, Inc., New York.

Humphrey, W.S. (1989). *Managing the Software Process*, Addison-Wesley Publishing Co., Inc.

DeMarco, T., & Lister, T. (1987). *Peopleware*. Dorsett House, N.Y., N.Y.