

OXFORD
SOFTWARE ENGINEERING
LIMITED

Process Workshop Procedure

(a method for making process revisions)

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1 Introduction

1.1 Purpose of this Document

This document describes and provides guidance on the implementation of fixes or improvements to software development practices using the OSEL Process Workshop (PW) procedure.

1.2 Scope of this Document

This document describes a method for conducting PWs. These workshops may be facilitated by OSEL staff as a service to clients or provide the basis for the development of a client's own PW process.

2 Background and Purpose

2.1 Background

Process improvement activity can focus too much on analysis and planning, with the ability to actually change working practices following analysis and planning remaining implicit. What is implicit is often not done, or done poorly.

The procedure outlined here has been developed to meet the need for an explicit mechanism for making changes (fixes or improvements) to software development working practices, or processes.

2.2 Purpose of Process Workshops

The purpose of PWs is to give project or function staff a simple and explicit mechanism to discuss and document changes to their working practices. The focus of workshop is the revision or production of documentation of working practices, as practiced.

It should always be borne in mind that while the documentation is the focus, it should represent actual practice, not ideal or intended practice, and the PW objective is change to actual practice; working on the documentation, making revisions and changes, records and communicates change to actual practice.

Note: PWs should be performed when a well-scoped change or fix to working practices or supporting methods and tools has been identified, perhaps as a result of post implementation reviews or the work of a process group. Where problems exist for which no solutions have been identified TCM should be used. PWs are for implementing solutions.

3 Conducting a Process Workshop

3.1 Overview

The process has three steps:

- a) Step 1 – Preparation;
- b) Step 2 – Workshop, and Follow-up;
- c) Step 3 – Review and Approval.

These steps are described below. For each step the objectives, entry criteria, conduct, exit criteria, and deliverables are described.

3.2 Step 1 – Preparation

3.2.1 Objectives

The objectives of the Preparation step is:

- a) To ensure contributors to the PW are adequately prepared to contribute to the selection and implementation of a good fix to a working practice needing revision.

3.2.2 Entry Criteria

The Preparation step has the following entry criteria:

- a) There is a clear statement of the issue, or opportunity, that the PW is to fix or implement.
- b) Authorization to conduct a PW has been obtained.
- c) Someone is assigned responsibility for the conduct of the PW and the delivery of the fix. This person is also the change authority for the working practice documentation.
- d) Contributors to the PW have been identified and have agreed to participate. Participants are representatives of those using or affected by the working practice. They should be a mix of experienced and new staff affected by the issue or opportunity. In this way a variety of perspectives can be included and education of those not familiar with the working practice also takes place. 4 to 5 contributors is a good number.
- e) A date time and venue for the PW meeting is arranged. The meeting should be set 1 to 2 weeks ahead of the beginning of preparation.

3.2.3 Conduct

A clear and concise statement of the issue to be addressed by the workshop is made available to the participants for them to consider.

Contributors review the current work practice, as practiced.

All documentation relevant to the working practice is made available to the participants. This material may include:

- a) Policy statements and current process documentation; procedures, guidelines and work instructions;
- b) Templates and exemplars;
- c) Training materials;
- d) Information and data collected about the performance of the working practice.

Contributors review this material with a view to better understanding how the working practice is performed and supported, and to compare the working practice as practiced, with the

working practice as documented. Those familiar with the working practice should reinforce their understanding and begin to identify potential fixes or improvements. (Should there be limited documentation available about the working practices this may raise issues about the robustness of the practice.)

Those new to the working practice will gain an understanding of the working practice and may be in a position to question the organization's assumptions about the practice, and perhaps identify novel fixes or improvements.

Contributors should record their comments and potential fixes to bring to the process workshop.

Contributors may work together during the preparation, perhaps to clarify the issue to be addressed, but should not pre-empt the PW meeting.

3.2.4 Exit Criteria

The exit criteria are:

- a) Contributors have a clear understanding of the issue to be addressed.
- b) Contributors have reviewed current practice.
- c) Contributors have reviewed existing process documentation.
- d) PW meeting scheduled.

3.2.5 Deliverables

The deliverables/outcomes produced are:

- a) Increased contributor's 'know how' of the working practice.
- b) Potential fixes or improvements identified.

3.3 Step 2 – Workshop, and Follow-up

3.3.1 Objective

The objective of the workshop meeting is to identify, agree and document the fix or improvement to the working practice and to make this known and available to all users of the practice.

3.3.2 Entry Criteria

The Workshop and follow-up step has the following entry criteria:

- a) Contributors have undertaken adequate preparation and are familiar with the working practice and documentation. (If some contributors have not prepared consider either proceeding with the workshop without them or postponing the workshop. These actions are necessary because inadequate preparation will reduce the effectiveness and value of the workshop.)
- b) Potential fixes may have been identified.

- c) An agenda for the meeting is prepared and distributed.

3.3.3 Conduct

A chairman is appointed to lead the meeting.

It is useful to appoint a scribe to make a record of the meeting. The scribe should keep an itemized record of all the points raised during the meeting and make the agreed fixes or improvements – although this activity may be shared among the participants.

It is useful to have an agenda to structure the meeting:

- a) *Review Preparation for the PW* - Confirm that all contributors have prepared.
- b) *Documentation* - Ensure that editable copies of relevant process documentation are present. This may be on shared drives, intra nets, wikis, twikis or similar.
- c) *Review Issue or Opportunity* - Review the issue that led to the PW. Establish scope of this and look for consensus on the nature of the issue.
- d) *Root Cause Analysis (Optional)* - Look for root causes of the issue. Consider using problem solving techniques:
- Ishikawa diagrams
 - Pareto Analysis (where data is available)
 - Brainstorming
 - Why-why analysis
 - List reduction
 - Failure mode analysis guidelines
- e) *List Fixes* - List and review potential solutions. It is expected that there will be a degree of commonality in the solutions. If widely divergent solutions are presented this may be because either a) the issue has not been well defined, in which case redefine the issue or consider postponing the workshop, or b) a genuinely innovative solution has been identified which deserves close examination.
- f) *Select and Develop Fix* - Working together contributors select and develop the fix incorporating the best aspects of the potential solutions. Begin revising the documentation as the workshop converges on an acceptable fix. If contesting solutions are being argued for, or an unhelpful atmosphere prevails the chairman should work to restore a collaborative working environment. If this cannot be achieved the chairman may stop the workshop.
- g) *Walkthrough* – With the fix agreed walkthrough the working practice (either as documented in the processes documentation, or in notes that will be used by a follow-up session) to find any errors, ambiguities or misunderstandings.
- h) *Notification of Fix* – Let users of the working practice and those affected by it know of the fix. This may be by email, posting on the organization's intranet, wiki or the customary communication methods are.

The duration of the workshop meeting may be up to 3 to 4 hours. After this period contributors enthusiasm and attention may be flagging, and if more effort is required the change may be too large to be dealt with by a single workshop meeting. Consider deferring some of the work to a follow-up session.

A follow-up session may be required where routine work, editing documents, revising diagrams and training materials, as agreed in the workshop meeting, needs to be completed. The follow-up session should work in accordance to the workshop notes and instructions. In effect the follow-up finishes up the time consuming work not completed in the workshop. The follow-up session should be completed within a day or two of the workshop meeting.

3.3.4 Exit Criteria

The following exit criteria are required:

- a) Fixes to working practices have been agreed and documented and are ready for review.
- b) Fixes have been publicized to all users of the working practice.

3.3.5 Deliverables

The deliverables of the PW are:

- a) An agreed fix, or improvement, to the working practice.
- b) The fix or improvement is documented in revised documentation that is ready for review and approval.
- c) Users of the working practice and those affected by the fix are notified of the fix.

3.4 Step 3 – Review and Approval

3.4.1 Objective

The objective of Review and Approval Step is:

- a) To review the fix (as documented) to ensure that the documentation is free of errors and can be approved for publication or distribution, and placed under change control.

3.4.2 Entry Criteria

The Review and Approval step has the following entry criteria:

- a) All relevant working practice or process documentation is completely revised and ready for review.

3.4.3 Conduct

Refer to the OSEL, or your organization's, review and approval procedure.

See guidance notes for notes on participants for review and approval.

3.4.4 Exit Criteria

The Review and Approval step has the following exit criteria:

- a) Process documentation is reviewed, with all defects removed, and approved for publication or distribution.

3.4.3 Deliverables

The deliverables from the Review and Approval step are:

- a) Defect free process documentation approved for publication or distribution.

4 Guidance

PW should be authorized when a well understood deficiency or opportunity for improvement has been identified.

If the fix becomes problematic the PW should be cancelled and the problem reconsidered – perhaps using TCM or similar problem solving techniques.

The fix will usually be straightforward and self evident although innovative fixes or improvements may be revealed. The PW is used to develop the solution, achieve consensus on the fix and also to inform and educate. The overall effect is to maintain ownership of the processes and working practices, as practised, by those actively working to improve them.

The process group or quality assurance manager may wish to maintain a log of process workshops conducted. Changes to process documentation should be reflected in a change log and/or versioning of the process documentation.

4.1 Preparation

This step is critical, and also the step that is most likely to be neglected by busy people. It is essential that those new to the working practice undertake the preparation to avoid wasting time during the PW asking for background information. Similarly if no potential solutions are identified prior to the PW the PW will be used to identify fixes rather than select and refine and implement the best.

If the level of preparation is judged to be poor cancel the PW. If a particular contributor has not prepared they will have little value and should not participate in the PW.

4.2 The Workshop Meeting

Important to keep relaxed and open. This is *not* a formal meeting.

The intent is to work quickly and collaboratively to develop an acceptable fix and put this in place, but not to pass over difficulties or ambiguities without addressing them adequately. Where difficulties that are not readily resolvable are encountered this should be logged as issues or action points and the meeting moves on.

The chairman's role is critical in setting the tone for the meeting. He should welcome all contributions and ensure that all do contribute.

At the end of the meeting the chairman should ensure that record and notes from the meeting are complete and that all contributors can accept the outcome.

4.3 Review and Approval

The R&A is intended to act as a standard FTR however it may be worth considering it as a user review as described in Proc. Defn. This will give the working practice, and the fix, wider circulation.

Consider including interested parties not included in the PW in the R&A.

The R&A acts to increase understanding and knowledge of the working practice, and visibility of process improvement work in general.

Annex A

Process Workshop Diagram

