A practical guide to
Lightweight Post Mortem Reviews

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Purpose
This is a practical description of how to conduct a *lightweight Post Mortem Review* to capture experience from a finished project, with 3 to 10 project participants in one meeting. This method is suitable when a project has been finished, or has completed a phase, and you want to capture general experience. It is easy to use and is positively received by the people participating because it gives new views on known issues, elicits issues that people usually do not think of themselves, and is an efficient way of documenting experience. It is possible to modify the steps given. For example, if you want to focus on a particular issue, like "estimation", you should rather use interviews to collect more specific information, instead of the brainstorming mentioned below.

Prerequisites
This method requires that as many as possible of the project participants to use five hours, and the two persons in charge of doing the review use around eight hours each for preparation and documenting the results. You also need:
- Post-it notes
- Pencils with thick ink
- A meeting room with a blackboard or whiteboard
- Sound recording equipment (optional)

People Roles
- Moderator – will announce a Post Mortem Meeting, and moderate discussions.
- Secretary – will document the results of the meeting. If possible, the secretary can use recording equipment, and later transcribe important parts of the meeting.
- Project participants – will contribute with their experience to get it documented.

Usually the process manager and secretary rotate between each part given below.

Processes
For both problems and successes in the project, we use the following processes to elicit them:
- *Brainstorming* – to find important aspects from the completed project, we use a brainstorming technique (the KJ Method, see [4]). Each participant gets four Post-it notes (reduce the number or increase the time usage if many are participating), and is told to write one topic in large letters about a special issue. This will take some minutes. Then, each of the participants attaches one of their Post-it notes to a whiteboard, and explains why this issue was important in the project. Then the next participant presents an issue and so on... See figure 1.
- *Structuring* – after each brainstorm session, we structure the result by placing Post-it notes with similar or related topics close to each other, and give each group a name

that describe the content. We also give priorities to each of these topics, so that we can analyze the most important ones.

- *Analysis* – to find causes for the most important issues, we use a technique called "fish bone" or Ishikawa diagrams – see [4]: start by drawing an arrow on the whiteboard with one issue. Then, indicate with other arrows what the causes for this issue was, possible also with subcauses. See figure 2 for an example.
- *Reporting* – to document the result, we usually write a report with 0) Abstract 1) Introduction to the project and the method applied in the lightweight Post Mortem Review. 2) The main problems in the project, with explanations from the Post-it note presentations, and fish bone diagrams showing causes. 3) The main successes in the project, presented in the same way as the problems. 4) Appendixes: All information from the Post-it notes, and transcription of the presentations of the issues on the notes (if using sound recording equipment).
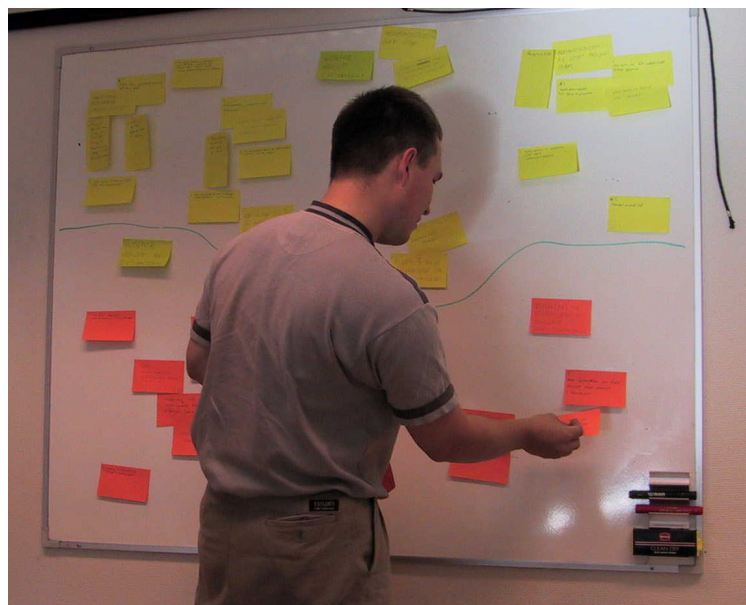

Figure 1: A participant in a lightweight Post Mortem Review attaching a Post-it note during a brainstorm session.

The Agenda

Part	Duration	What?
1	10 mins.	Introduction: Present the purpose of the meeting and the agenda.
2	1 hour	Brainstorm part one: What went well in the project? (20 minutes) Presentation of the issues on the Post-it notes (30 minutes) Structure and give priority to the issues (10 minutes)
-	10 mins.	Break
3	1 hour	Brainstorm part two: What did not go well in the project? (20 minutes) Presentation of the issues on the Post-it notes (30 minutes) Structure and give priority to the issues (10 minutes)
-	30 mins.	Break
4	1 hour	Analysis part one: What were the causes for the things that went well?
-	10 mins.	Break
5	1 hour	Analysis part two: What were the causes for the things that did not go well?

Results

The results of the lightweight post mortem review should be a report with documented experience from the project, as described in process "reporting". When using the agenda above, the length of the report is typically around 15 pages. If you want a shorter one, reduce the time spent on each part. We usually send this document to all participants to collect their feedback before it is made available to others. This report should be given to other project that are likely to experience similar problems, and to anyone interested in knowing more about how the project was conducted.
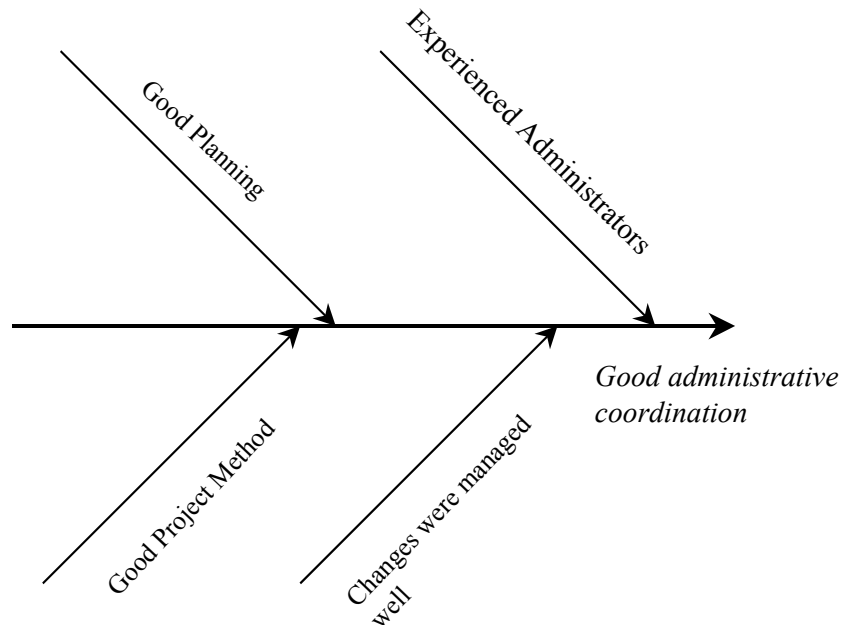

Figure 2: An example of a resulting fish-bone diagram.

References

For more information about lightweight Post Mortem Reviews, and about Post Mortem Review in general, have a look at:

[1]   B. Collier, T. DeMarco, and P. Fearey, "A Defined Process For Project Post Mortem Review," *IEEE Software*, vol. 13, pp. 65-72, 1996.

[2]   Torgeir Dingsøyr, Nils Brede Moe, and Øystein Nytrø, "Augmenting Experience Reports with Lightweight Postmortem Reviews," in *Third International Conference on Product Focused Software Process Improvement, Lecture Notes in Computer Science*, vol. 2188, F. Bomarius and S. Komi-Sirviö, Eds. Kaiserslautern, Germany: Springer Verlag, 2001, pp. 167 - 181.

[3]   Tor Stålhane, Torgeir Dingsøyr, Nils Brede Moe, and Geir Kjetil Hanssen, "Post Mortem - An Assessment of Two Approaches," EuroSPI, Limrerick, Ireland, 2001.

[4]   Straker, David. A Toolbook for Quality Improvement and Problem Solving, Prentice Hall International (UK) Limited, 1995

[5]   Andreas Birk, Torgeir Dingsøyr, and Tor Stålhane, "Postmortem: Never leave a project without it," *IEEE Software, special issue on knowledge management in software engineering*, no. 3, vol. 19, pp. 43 - 45, 2002.