How to Hold a Project Retrospective [1]

Jeff Oltmann

Purpose

Retrospective reviews help everyone in the organization benefit from the accumulated experience of many people. Participants at a retrospective extract what they learned during the project, summarize it, and decide how to take action to improve future projects. Retrospectives (also known as post-mortems and lessons learned reviews) can make a huge difference in improving the performance of an organization over a relatively short number of projects.

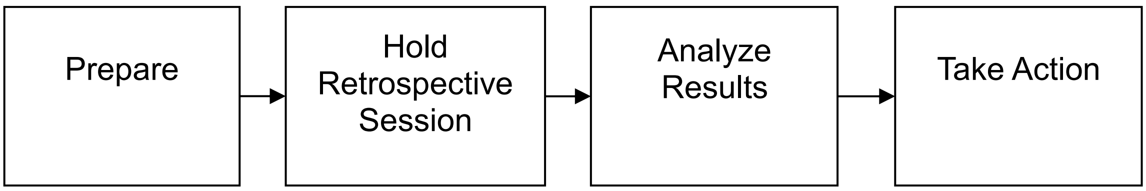
All projects should hold at least one retrospective, near the end of the project. For a long project, you may also want to hold small retrospectives periodically during the life of the project, rather than waiting until the end when people have forgotten the details of what happened earlier. Hold small retrospectives at the completion of key milestones or phases of work. Everyone's memory will be fresh, and the organization can start benefiting from the lessons immediately rather than waiting until the end of the project.

Every project is a little different, so fine tune each retrospective to fit the specific goals, needs, and team dynamics of the group that will participate in it. Typical goals of a retrospective include one or more of the following:

1. Capture data on how much effort was required to do the project
2. Get the story out about what the project did or did not accomplish
3. Improve upon the process, procedures, management, and culture
4. Capture collective wisdom
5. Repair damage to the team by recharging people and giving them closure
6. Enjoy the accomplishment!

Steps

A good retrospective is a structured way to gather "lessons learned" from those who know best – people who worked directly on a project. It looks backward at what happened in the past, and forward at what should be done to improve the future processes and skills of the organization.



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All retrospectives are based on an unshakeable ground rule: no blame allowed! Norm Kerth, known as the grandfather of retrospectives, puts it this way:

> **Kerth's Prime Directive**
>
> Regardless of what we discover, we must understand and truly believe that everyone did the best job he or she could, given what was known at the time, his or her skills and abilities, the resources available, and the situation at hand.

There are four primary steps to holding a retrospective:

Prepare: A retrospective session can go awry if the wrong participants attend, the agenda is poor, or people are unprepared, especially when emotions run high. Most retrospectives, even those about non-controversial projects, require careful preparation. In this step:

1. Select participants.
2. Find neutral facilitator
3. Select subject areas
4. Gather historical information about how the project went

Hold Retrospective Session: Once you get past issues of safety, blaming, self-protection, and poor memory, the learning starts to happen.

1. Gather highs and lows
2. Determine root causes
3. Repair damage

Analyze Results: Quality expert Joseph Juran was famous for saying that the vital few must be separated from the trivial many. That applies to a retrospective, too. Most likely the retrospective session generated a long list of comments and ideas. The full list may be overwhelming and thus unlikely to be acted on. In this step, pick just the vital few to act on.

1. Summarize observations
2. Make and prioritize recommendations

Act: Too many retrospectives stop with a report that gets filed and never seen again. That's a pity. The participants in the retrospective session will carry away some of the learning just by virtue of attending, but the real leverage of a retrospective comes when the organization agrees to change its tools, processes, and behaviors. Therefore, the keepers of these tools, processes, and behaviors - often management - must act.

1. Determine processes, tools, and behaviors to change
2. Create action plans
3. Manage the changes

Who Should Participate

Key stakeholders should attend the retrospective. But exactly who is that? The project team, of course. But don't leave out representatives of internal customers, as well as other projects that were dependent on this project. Often, they have different perspectives than the people who worked most closely on the project. Be sure to invite stakeholders who were unhappy because their observations may help avoid the unhappiness next time. Managers who were closely involved with the project should generally participate, too. The facilitator must make sure that participants feel safe enough to say what they really think even in the presence of people who are more senior.

If this results in a group that is too big to facilitate (upper limit of about 20 – 25 people, often fewer), consider holding hierarchical retrospectives. Have sub-teams hold smaller retrospectives focused on a specific aspect of the project, then invite a representative from each sub-team to represent the sub-team's findings at a summary retrospective.

Preparing to Facilitate a Retrospective Session

Prepare a clear agenda in advance of the retrospective session so there is a good framework that will keep it on track. Here are some agenda tips:

- Break the agenda into three major sections: establishing a safe environment, learning lessons and recharging participants, and recommending changes.
- Include frequent breaks. People will not be at their best if they are thinking about their next break rather than engaging in the discussion.
- Don't over-structure the agenda. Things will change, so leave enough time to allow the discussion to veer into unexpected but promising areas.

Unearth real historical data before the session, too. Some events in the project probably happened so long ago that memories are cloudy. Consider collecting the following kinds of information so that the session is based on facts:

- Effort data – how much work was invested in the project
- Performance and baseline information – how the project met objectives for schedule, budget, quality, and scope or features compared to the original plan or forecast
- Risk information – what risks were identified and acted on? What risks happened?

You can even turn this data gathering into a contest, awarding prizes to people who bring to the session the most artifacts, the most unusual artifact, and the most significant artifact. Although a contest may seem silly, there are several benefits based on adult learning theory (Project Retrospectives: A Handbook for Team Reviews, Norman L. Kerth, p.120):

- An effective and fun way to stimulate important memories about the entire project
- Encourage thinking about the project in creative ways that develop meaningful stories

- Encourage people to think about what was most important during the project
- Ease people into reviewing the project
- Arouse curiosity, which is key to learning

Holding the Retrospective Meeting

With the prework done, you are ready to hold the retrospective session. Here is an approach that works for many projects.

Beginning of session

Goal: build a good foundation

- Establish an environment of safety and engagement. Most participants must feel safe expressing their true observations.
- As a group, reconstruct the history of the project by creating a timeline that shows significant events. This will help tickle memories.

Middle of session

Goal: Discover lessons

- List the things that did and did not go well during the project.
- Understand the root causes and learn from these events.

End of session

Goal: Set the stage for action on the vital few

- Identify the highest priority learnings.
- Recommend actions that will affect skills, tools, processes, and behaviors.

Asking what did and did not go well opens up a lot of territory for most large projects. It helps to have a framework that will focus the group's attention on things that are likely to be important, as well as help them not miss key areas. Consider asking the group to focus on some of the topics in this list:

1. Definition of the product or research - including scope changes and feature creep
2. Planning
3. Interaction with partners
4. Quality and completeness of final product
5. Technical – including design process, architecture, and tools
6. Schedule, budget, and staffing levels
7. People and teams - including skills, training, and morale
8. Risk management
9. Communication - within teams, between teams, and with other parts of the organization and its partners
10. Subcontractor management

11. Organizational interaction – organizational support, interaction with higher management, handoffs, and integration with other teams
12. Project management methods

Act on the Learning

At this point in the retrospective session, lots of data and observations have been collected. Here is an example format for recording them.

Topic	**Issue**	**Suggestions for implementing next time**

This is good material to archive, but in raw form the sheer volume will overwhelm busy readers who did not attend the session. To increase the chances that the lessons will be acted on, select the vital few that are most important to act on. Summarize them and create recommendations for action plans. Recommendations should aim for long-term improvements in one or more of these areas:

1. Individual and team skills
2. Processes and tools
3. Organizational behaviors

Keep the final report short so people will read it and remember what it says. It also doesn't hurt to archive the backup data you collected, including effort data and performance vs. actual comparisons.

Don't just assume that the changes you recommend will happen when you publish the retrospective report. Establish the importance of making the change, build a steering team to keep pushing on its implementation, and arrange quick victories.

Tips

- Just do it! Retrospectives are extremely effective and are an excellent investment of your time.

- Create an environment that is non-threatening, constructive and facilitated by an unbiased person. The purpose is learning, not blaming. Focus on what you can do in the future.

- Include input from a broad spectrum of team members and stakeholders who have a variety of views. Include the people who will have to support or carry forward the results of your project.

- Cover both technical and non-technical areas of the project.

- Ensure that actions are prioritized, communicated, and followed up.

- Consider holding several small retrospectives throughout the project, such as at completion of key milestones or phases of work, rather than one big one at the end. Everyone's memory will be fresh, and your organization can start benefiting immediately rather than waiting until the end of the project.

About the Author

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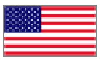

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