

Facilitated Workshops in Software Development Projects

Members of an IT team spent a lot of time and effort working on the requirements for a major project. At the end of three weeks, they had produced a number of use case diagrams along with some text documentation, and the team members thought they were finished. But when the business customer saw the materials, she was puzzled. She said to the business analyst, "Why am I being asked to sign off on these requirements? They don't seem finished to me." The business analyst suggested having a workshop, assisted by a neutral facilitator, that would include both the IT and business teams. This kind of workshop would get everyone in a room at the same time to focus on the requirements. The goal would be to verify the requirements, reach closure on them, and gain approval to start design. The client agreed that this workshop was a good idea.

To prepare for the two-day event, the facilitator reviewed the existing work products and interviewed participants to gain their perspectives on the project and work products. She recommended that numerous work products be crafted to supplement the requirements already drafted.

As a result of these preparations and the group's focused efforts, the IT and business team members accomplished in two days what probably would have taken another two to three weeks. They elicited many additional specific user requirements and reached closure on each user requirement. In the process, the customers discovered how to specify and represent their requirements so that they would be understandable to IT. For their part, the IT participants learned a lot about the users' needs. Together, they enjoyed a sense of accomplishment and motivation.

A facilitated workshop is a planned collaborative event in which a group of stakeholders and content experts works together to create, correct, and document a predefined *deliverable*, or *work product*. The group agrees ahead of time on the deliverables, and the participants often produce some of them before the workshop. They also collaborate on ground rules for their interaction, including decision rules for reaching closure.

Successful workshops are composed of a healthy mix of business experts, or product development people representing those experts, and IT people. A neutral

facilitator leads them and a scribe documents the group's work as it proceeds. The workshop process exploits the power of diverse groups of people joined together for a common goal. Participants act as a sophisticated team, working in a manner to achieve what psychologists call "consensual validation." A successful and productive workshop is fun and energizing.

Workshops for software projects have their roots in Joint Application Design (JAD), a workshop technique developed and trademarked by IBM in the late 1970s. Since then, the process has evolved and been tailored to a variety of project types and technologies. According to industry metrics guru Capers Jones, well-run JAD-like (facilitated) workshops "still rank as one of the best methods for dealing with user requirements". The data supporting increasing quality and reducing costs using workshops are impressive. For example, facilitated workshops:

- Reduce the risk of scope creep from 80% to 10%
- Accelerate the delivery of early lifecycle phases by 30% to 40%
- Increase function points by 40% to 85%
- Provide a 5% to 15% overall savings in time and effort of the whole project

Workshops Versus Meetings

Workshops are not meetings in the generally accepted meaning of that term. On the surface, workshops are like meetings in that both types of gatherings involve people meeting together at the same time and both follow a logical flow, but there are significant differences, as listed in Table 1. Among them is the presence of two people who fulfill two specific process roles: facilitator and scribe.

The facilitator is responsible for managing the group's activities, dynamics, and work products. The scribe documents the group's work as it proceeds. Neither facilitator nor scribe operates as a content expert nor collaborates in product creation. As a result, they are free to focus on the process: the facilitator to lead the process, and the scribe to capture the content. Another important difference between a workshop and a meeting is

that a workshop is authorized by a sponsor, who ensures that the right participants are present, verifies the workshop's purpose, and ensures that the workshop outcomes are implemented.

Table 1
Differences between Meetings and Collaborative Workshops

<i>Meeting</i>	<i>Workshop</i>
Information exchange.	Information discovery and creation.
Led by manager or leader.	Led by neutral facilitator or by a leader who remains neutral during the session.
Documents or information is shared, and rarely are work products or deliverables created.	Work products (or deliverables), such as models, are created and verified by the participants.
Rarely requires input work products.	Almost always requires input work products to be created beforehand, such as draft or candidate models, deliverable templates, lists, and so on.
Little documentation.	Much documentation.
Minimal preparation.	Intensive preparation.
Tends to be ongoing.	Tends to be periodic, woven into a project life cycle.
One to three hours per meeting.	Three hours to four or more days per workshop.
Little or no use of visual media.	Heavy use of visual media (posters, sticky notes, cards, diagrams, etc.).
Sponsorship rests primarily with meeting leader.	Sponsorship rests with the workshop sponsor, who may or may not be a participant.
Little or no pre-work required of attendees.	Some pre-work usually required, including creating candidate input products.

Attendees are homogeneous.	Participants are heterogeneous: a mix of users and IT specialists.
Decision making rests with the meeting leader and may not even be a topic of discussion in the meeting.	Decisions are explicitly delineated before the meeting; each decision has a decision rule and accompanying process.
Power is centralized in the meeting leader.	Power is distributed among all participants.
Minimal or no time for playful activities.	Serious play is encouraged to foster teamwork, motivation, and creativity.
Attendees need to only “show up.”	Attendees are active participants and content experts.
Little interaction among all attendees.	Interactions among all participants are intense and varied and may iterate between individual, subgroup, and whole group activities.
Orientation or pre-meeting not needed.	Orientation or pre-workshop meeting may be used for workshops that extend more than one day, have broad scope, must deliver complex products, or require participants to do pre-work.

In effective collaborative groups, energy is high, individuals respect one another, skills are complementary, and responsibilities and roles are clear both inside and outside the group setting. To maintain energy, creativity, and motivation, the facilitator uses interactive as well as parallel group activities. For example, in a user requirements workshop, subgroups can be formed to work on portions of a single deliverable, such as business rules. Alternatively, subgroups might be assigned to work on entire work products, such as one group working on use cases while another drafts a prototype and yet another creates a high-level class model. The subgroups then reconvene in a plenary (whole group) activity to share and critique their work.

Participants create deliverables using visual tools--pictures, diagrams, and text. Use of both text and diagrams maximizes the best of both sides of our brains - the "right" (creative, nonlinear, visual) and the "left" (logical, analytical, linear). Text contributes to accuracy, whereas diagrams contribute to speed.

To make workshops active, I incorporate both "high-tech" and "low-tech" documentation tools. A scribe, acting like a "technographer" captures text-oriented work on a laptop, projecting it real-time on the wall. Participants use low-tech tools such as flip charts, colored pens, cards, and "sticky" walls - PASE (Post-its TM Assisted Software Engineering) – to work quickly and flexibly. Later, the scribe "cleans up" the work products by documenting them using a visual modeling tool. In this way, workshop products are documented and stored in a central repository, which serves as group memory.

Working in Workshops

Workshops are powerful devices to deliver work products of the project chartering, planning and requirements phases. After going through team-development stages such as "forming, storming, norming and performing," a group can become very productive, very fast. Not only can a well-run workshop provide project artifacts (models, decisions, etc.) in a fast and high-quality manner, but it also has the benefit of building a team and establishing a spirit of real collaboration among all team members. Therefore, facilitated debrief workshops (retrospectives) are essential to team and project process improvement. Don't wait until the end of the project to conduct debriefs. Take the "pause that refreshes" by incorporating them at major project milestones.

The following are real examples of the work products created in facilitated workshops:

- In 75 minutes, a chartering workshop team delivered and categorized nine risk areas and created 13 risk-mitigation strategies for the two high-probability/high-impact risks.
- In a half-day midpoint debrief (retrospective), a beleaguered project team created an action plan for correcting critical project problems, re-established how and when team

communications will occur and redefined several key roles, including that of the project sponsor.

- In two hours, workshop participants generated 119 business events, classified them and then removed those not in scope during their requirements scoping workshop.
- In a use-case modeling workshop, business participants were able to test their use case model and structural business rules using 55 scenarios in less than 90 minutes.
- In three hours, a team validated a medium-complexity data model and made decisions about the scope of the data about which business performance metrics would be based.
- In a four hours, a project team defined the deliverables necessary for the upcoming design phase, who owned, reviewed and created each deliverable, what their quality criterion would be, and mapped them into dependencies along a timeline

Mind Your Six P's

How is this achieved? Planning is all. A facilitated workshop must be well designed and planned in order to be successful, and it requires a *process*. My facilitation essentials method employs the Total Quality Management cycle of “plan, do, check, act” (PDCA), ensuring that the process is continually working. For example, a workshop contract, sometimes in the form of an agenda, will delineate decision rules and products. In other cases, an orientation is conducted to ensure agreement on the workshop process and understanding of the products and pre-work.

To design a workshop, a framework (See Figure 1), helps me manage the quality of the process. Like John Zachman's framework for information systems architecture (*IBM Systems Journal*, vol. 26, no. 3, 1987), the “six P's” in my framework represents all the interrogatives necessary to plan a successful workshop: purpose, participants, principles, products, place, and process. They answer the questions why, who, how, what, where, and when. Attention to all these dimensions is paramount. Customers are involved from the start of the workshop-planning process, beginning with identifying the

workshop goals. This promotes a shared sense of purpose for the workshop—and the project.







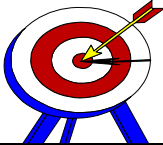




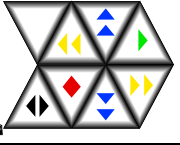
Purpose	Participants	Principles	Products	Place	Process
					
<u>Why</u> do we do things?	<u>Who</u> Is involved?	<u>How</u> do we function?	<u>What</u> do we do?	<u>Where</u> Is it located?	<u>When</u> do things happen?
<ul style="list-style-type: none"> • goals • need • motivation • justification 	<ul style="list-style-type: none"> • people • roles • players • contributors 	<ul style="list-style-type: none"> • guidelines • rules of engagement • ground rules • group process rules 	<ul style="list-style-type: none"> • deliverables • models • decisions • plans • next steps • issues for resolution • outputs 	<ul style="list-style-type: none"> • location • venue • space • time 	<ul style="list-style-type: none"> • steps • activities • concurrency • sequence • order
					

Figure 1

Purpose

The statement of the workshop’s purpose outlines the reason and justification for the workshop. It explains why you’re conducting the workshop and serves as a frame of reference.

It may seem obvious, but it’s important to remember that a workshop delivers work products that are needed by the project. Because the workshop’s context is the project, the workshop’s purpose is linked to the project’s purpose, which describes the business reason for undertaking the project. The statement of the project’s purpose usually references the current business situation, the desired situation, the obstacles to achieving the desired situation, and the changes that are desired. Similarly, the

workshop's purpose describes the business reason for gathering the players together. The link must be evident to all stakeholders.

Participants

The people involved in a facilitated workshop are the workshop sponsor, the participants, a facilitator, a scribe, observers, and on-call subject matter experts. Another term often used to describe the various people involved in collaborative project is *role*. When you explicitly define the individuals who are to play each role, the group can better plan the session, the participants are better prepared, and the event is more likely to succeed. You can develop skilled facilitators within your organization or use outside help. Some roles, such as the sponsor, may not be present throughout an entire workshop.

Principles

Also called *ground rules*, principles are guidelines for participation, or the codes of conduct that participants agree to follow. Groups need these precepts to maintain socially acceptable behavior and to promote the goals of the workshop: delivering the appropriate work products in the allotted time. The principles serve as a process guide for the facilitator as well as the participants.

The facilitator works with the workshop sponsor and group to establish principles, which must be clear and acceptable to all participants. The facilitator and participants are responsible for monitoring the adherence to the principles.

Product

The work products, or deliverables, of a workshop take the form of text or diagrams. For user requirements workshops, they are lists of business policies, use case text, use case diagrams, atomic business rules, and the like. These workshop deliverables, in turn, serve as input to project activities, including design, development, or additional workshops, such as definition or design workshops.

To accelerate the delivery of workshop products, the participants need certain input products such as draft models, text, and documentation. These materials may already exist or may need to be created before the workshop. In one requirements

workshop, for example, I asked the team to produce prototype screens and a list of free-form business rules for each of the use cases that had already been drafted. These additional input products proved to be critical in accelerating the delivery of higher-quality use cases.

Place

The location of a workshop can influence the outcome. If you're using a technique that requires the use of giant pieces of paper mounted on the walls, for example, the room needs plenty of wall space. If the room is crowded, subteam activities might be impossible. It's also important that the room have the space and amenities you need to serve refreshments.

Process

Activities in a workshop should follow a logical flow whereby the outputs from one activity are used by another activity in the session or in a post-workshop project task. The outputs in turn related to the workshop products. An activity may consist of several steps in which members work individually, in small teams (subteams), or as a whole group.

Best Practices in Workshops

In my experiences as both participant and facilitator, I've discovered these collaborative workshop best practices:

- Delineate decisions as intangible work products.
- Make the space visually rich.
- Make sure that the right participants are in place.
- The sponsor should lead by showing up, if only to kick off or close the workshop.
- Reach closure.
- Keep energy high.
- Iterate the interactions from individual to subgroup to whole group.
- Build in a methods for verifying the quality of the work products.

- Incorporate play and fun.
- Orient the participants if necessary.
- Allow time for planning and pre-work.
- Use a skilled facilitator.
- Open and close each activity.
- Open and close the workshop.
- Continually review the workshop purpose and explain how it fits into the project goals and objectives.
- Vary the verbal, tactile and visual techniques you use.
- Use sponsor and stakeholder show-and-tell sessions to inform them what happened and what issues emerged.

Summary

To build planning and requirements products quickly and efficiently, consider using facilitated workshops. In your workshops, participants should be active, engaged, committed and task-oriented. A well-run workshop builds trust and mutual understanding among all the participants. Workshops are not new, but are proven best practices in software development. They can go a long way not only in product delivery, but also in building a “jelled” team.