Decide How to Decide

January 2001 – Software Development Magazine, vol. 9, no. 1.

Half the job of decision-making is deciding how to decide. Here's how to use this collaboration pattern to make successful decisions.

by *Ellen Gottesdiener*

Of all the legacies of the 1986 *Challenger* space shuttle explosion, perhaps none is more chilling than the words of the Rogers Commission's report, the official analysis of what went wrong. "There was a serious flaw," says the report, "in the decision making process leading up to the launch." Among other problems it identifies, the report makes this telling observation: "NASA appeared to be requiring a contractor to prove that it was not safe to launch, rather than proving it was safe" (see "The Presidential Commission on the Space Shuttle Challenger Accident Report, June 6, 1986 p.82, p.104, p.117-118 available at: www.ksc.nasa.gov/shuttle/missions/51-l/docs/rogers-commission/table-of-contents.html. A detailed assessment of the decision making is described in Randy Hirokawa, Dennis Gouran and Amy Martz's "Understanding the Sources of Faulty Group Decision Making: A Lesson from the Challenger Disaster," *Small Group Behavior*, Vol. 19, No. 4, Nov. 1988).

One flaw that contributed to the tragedy was that no one had clearly defined what would constitute the components of the decision to launch the shuttle; no one had decided how to make the key go or no-go decision.

Chances are, the decisions made by your software development team do not have this kind of immediate, life-or-death impact. But the many decisions involved in a software project affect the professional lives of numerous stakeholders: users, designers, builders, testers, managers, marketers, customers and others. For some decisions, the financial stakes are high, while others may require organizational change.

These decisions range from determining which requirements to include in a given release to defining what "quality" means for a given product. They also involve project structural issues, such as which work products to create and how to distribute work on a team. While making other typical decisions you may ask, how do we involve users? When do we declare the design process finished? How will we know the test plan is complete? How will we know when the product is ready for release?

These kinds of decisions, and many others, require a *decision leader*—someone to "make the call." But the decision-making difficulties that plagued the *Challenger* and often software projects, reveal leadership alone is not the solution. The culprit is not a flawed

leader but rather a flawed decision-making *process*. If you care about a particular decision, it matters how the decision is made as well as who makes it.
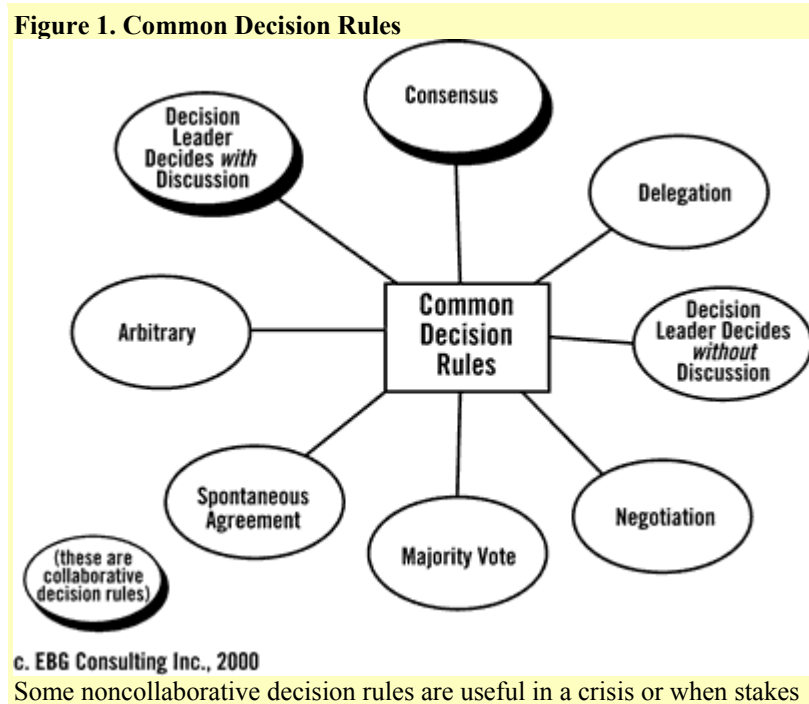
For decisions that will create important consequences and require support by all the team members, the best course is to follow a pattern of collaborative decision making.

Collaborative Decision Rules
A collaborative decision is one in which stakeholders participate in the decision-making process in a way that meets the needs of individuals and the group, includes the diverse views of all stakeholders, and enhances the group's ability to continue to work effectively together. In decisions that aren't collaborative, stakeholders aren't consulted or their input is obtained without inquiring into the reasoning behind their thinking.

According to Paul C. Nutt, in "Leverage, Resistance and Success of Implementation Approaches," the most successful decisions are those in which a decision leader gathers sufficient information and then enables the stakeholders to make the decision (*Journal of Management Studies*, Vol. 35, No. 2, Mar. 1998). This is another way to define a collaborative process (see Table 1). A collaborative decision requires skills in problem solving, facilitated discussions, group evaluation and decision making.

The first step in collaborative decision making is to determine the rule by which you will make the decision, known as the decision rule. Identifying the *decision rule* is the responsibility of the decision leader. This person has the authority to implement the decision or obtain resources to implement it, and she ensures that the decision is supported in the organization. In the organization chart, this person should be as high as necessary and as low as possible.

Figure 1. Common Decision Rules

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Some noncollaborative decision rules are useful in a crisis or when stakes

Some noncollaborative decision rules are useful in a crisis or when the stakes are very low (see Figure 1 and Table 2). A collaborative process tends to be lengthier than other methods because more players are involved, but when the stakes are high, a collaborative decision is more successful.

Two decision rules that are good strategies for medium- to high-stakes decisions: Consensus and Decision Leader Decides after Discussion (see Sam Kaner's *Facilitator's Guide to Participatory Decision-Making* published by New Society Publishers in 1996, and tutorial notes from Kaner's "Participatory Decision Making: Tools for Reaching Closure," given at the International Association of Facilitator's Annual Conference in Tulsa, Oklahoma in January 1997).

Consensus is a state of mutual agreement in which everyone's legitimate concerns are satisfactorily addressed. As a result, the group owns the decision, and the values of harmony and solidarity are promoted. The chief drawback of the Consensus rule is that it requires time to thoughtfully evaluate options, impact, risk and other elements. It also diffuses the power and authority of the leader.
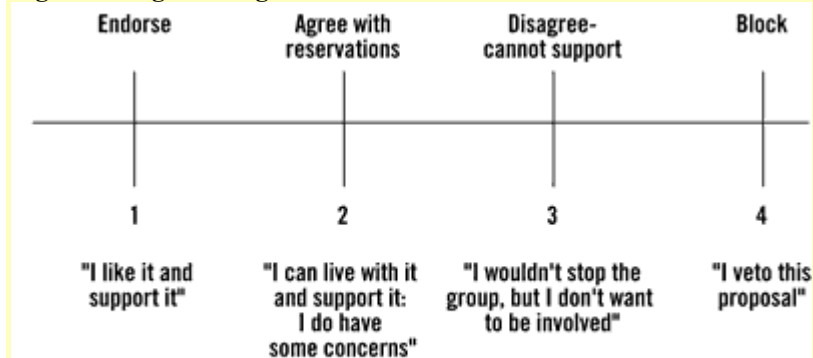
The Decision Leader Decides after Discussion rule is a consulting style of decision making. The leader obtains relevant information from stakeholders and then makes the decision. This style of decision making is collaborative when the decision leader gets valid infor-mation along with a high degree of commitment from the stakeholders in the decision.

A Useful Tool
To be effective, the two collaborative decision rules must use a mechanism to test the degree of agreement among the group members. This mechanism must be understood and accepted by everyone.

A tool I find useful is a four-point Degree of Agreement scale (Figure 2). All the participants indicate where they fall on the degree scale, indicating how strongly they agree with the proposed decision. To have consensus, everyone participating in the decision must be in the "zone of agreement," a one or two. All those who designate themselves as twos must share their

Figure 2. Degree of Agreement Scale

Endorse	Agree with reservations	Disagree-cannot support	Block
1	2	3	4
"I like it and support it"	"I can live with it and support it: I do have some concerns"	"I wouldn't stop the group, but I don't want to be involved"	"I veto this proposal"

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concerns. This further discussion may result in modifications to the proposed decision by the group.

With Consensus, the group must continue to work on the proposed decision if there are any threes or fours. However, if the decision rule is Decision Leader Decides After Discussion, the decision leader can either choose to make their decision at this point or ask for more discussion.

When I facilitate workshops in which a decision is being made, I use this scale to check for the degree of agreement. When a group is ready to consider a specific proposal, we clarify the proposal. I then poll each person using a polling process that varies depending on how controversial the proposed decision appears to be. I might poll the group anonymously, ask everyone to simultaneously hold up a single index card, or ask members of the group to explain their positions in one minute or less.

The group repeats this process for each decision, taking one minute or less for each round. If there are any twos, I always ask those individuals to share their reservations. The process creates a group norm for decision making.

Real-World Decisions
Recently I facilitated a two-day user requirements workshop for a purchasing application at a global consumer products company. The application was being designed for use by some 120 users in 60 countries, and the participants were the IT and business team responsible for delivering the system. I began by interviewing the potential participants to gauge their needs and perspectives and to nail down the workshop's purpose. I also inspected the work products: 12 use cases representing user requirements. For each use case modeled in the workshop, the group had to decide its disposition. We had to be able to answer, at the end of the workshop, "What is the disposition of use case one?" and so on through use case 12.

Having determined the workshop's purpose, my next step was to work with the decision leader to select the decision rule. Pamela, the business project manager, was responsible for representing the needs of this customer base. She and two business analysts would test and support the application and train end users after it went live in seven months. Pamela "owned" the requirements. She obtained the funding and would continue to play this role. It was Pamela's responsibility to make the decision rule.

Pamela initially selected the Consensus rule, seeking agreement among her staff of business analysts. Because the IT participants didn't have the content knowledge or authority to fully contribute to this decision, this rule made sense, but I was concerned about the time needed to achieve consensus. I knew there was a risk that we wouldn't cover all the use cases in a single workshop. Offsetting that concern was the fact that Pamela was a subject matter expert. After she went through the modeling and reviewing activities and received input from her team, she would likely be able to make the decisions.

I told Pamela I was concerned about the time required to reach consensus, and she reconsidered. She then selected the other collaborative pattern, Decision Leader Decides after Discussion. She realized that polling her team members for their degree of agreement would give her sufficient data to make a decision.

At the beginning of the session, I explained the decision rule choice and the process and polled the group to check their degree of agreement on using it for this workshop. The participants were all ones on the scale, so we used this process for each use case. In the end, using the decision rule accelerated the flow of the session.

On another project, I facilitated a four-day workshop for a cross-functional business team. Its task was to deliver a strategy and high-level implementation plan to migrate the company's purchasing, manufacturing, and inventory applications to a standardized product and material information system. The task was to decide what migration strategy to adopt. Before the workshop, five options had been documented. The group's decision would be reviewed and ratified by an executive steering committee. The stakes were high: 140 systems, 30 sites and thousands of businesspeople were affected.

The steering committee chose Consensus as the decision rule. The participants, carefully chosen and ratified by the executive sponsor, represented all the stakeholder groups. No single person understood all the risks, benefits, and impacts of the task, but together they had the wisdom to determine the best possible strategy. In the end, they combined features of three of the options, arriving at a sixth, better migration strategy.

Here's another example. Ken, an IT project manager, asked me to facilitate a workshop for determining a release strategy for a new underwriting application. The software could be implemented by region, by product, by state or any combination. When I asked Ken about the decision rule, it became evident there was no "person in charge." A series of reorganizations and leadership changes had resulted in the project having no business sponsor. Therefore, there was no one to carry out the first step: selecting the decision rule.

Why is sponsorship so important? Asking people to participate in a decision is powerful, but it's discouraging if the decision isn't sponsored. A decision without sponsorship will fail. Sponsors ensure that the decision is supported logistically, financially and politically.

Rather than make an unsponsored decision, I suggested that Ken and his team decide who its sponsor should be and then solicit that person to act in that role. Ken and his team agreed. Rather than a two-day release strategy workshop, I facilitated a half-day sponsorship workshop. Because there was no decision leader and we needed a decision rule, I proposed that they use Consensus. I then led them through a process to decide on their decision rule, using Consensus as the default decision rule. Everyone was a one on the agreement scale.

Next, I led a brief discussion on the meaning of sponsorship and the impact of not having a sponsor. I then asked the participants to generate and analyze the sponsorship possibilities.

In less than two hours, the group converged on a recommendation for a sponsor and a supporting sponsorship organization. The session ended with the recommended sponsor, who was part of the session, stepping up to the plate in that new role. The project got back on track and was soon able to move forward with a decision on its software release strategy.

A Sense of Balance
If you make important decisions in a non-collaborative manner, you risk making poor decisions that are difficult to sustain. And without a decision rule, people are vague about when, and even whether, a decision has been made. They delay taking action, resulting in the waste of valuable time and money.

Effective collaborative teams, on the other hand, tend to make timely, high-quality decisions and successfully follow up on them. They learn from divergent perspectives, listen to each other's interests, make reasonable choices and come to closure. Good decision-making groups seek inclusive decisions that merge the best of all the options.

Perhaps just as important, if the decision turns out not to be the best one, these teams have the ability to recognize it and recover. They have learned how to balance the content of the decision with the process of arriving at it.

Collaboration Patterns
How you make a decision can be more crucial than the decision itself.

A pattern is a description of a known solution to a specific type of problem. It documents a core insight or instructive information, so people can solve problems quickly and effectively. The software community uses patterns largely to solve problems related to software architecture and design, and, more recently, to design software development processes and organizations.

Various types of patterns are applied to software development (see hillside.net/patterns/patterns.html).

Design patterns address the structure and behavior of software infrastructure, or the solution domain. Analysis patterns address the structure and behavior of the business, or the problem domain. Cognitive patterns describe the thinking and reasoning processes of experts. Process patterns describe techniques, actions, and tasks for developing software.

Organizational patterns describe the structure and practices of human organizations.

Collaboration patterns, the focus of this article, are techniques, behaviors, and activities for people who share a common goal of working together in a group. Collaboration patterns are useful for software projects because they exploit the synergy and productivity of IT teams, customers and users acting in tandem. They exploit diverse points of view, help build and maintain group norms, foster trust, and help teams deliver quality products. Some uses include the following.

- Eliciting and validating requirements
- Verifying work products
- Solving problems
- Making decisions
- Building teams
- Analyzing models
- Selecting technologies
- Creating work plans
- Prioritizing requirements
- Generating ideas
- Designing an organization

Other collaboration patterns I use include the Sieve; Expand then Contract; Wall of Wonder; Multi-Model; Iterate the Multi-Model; Divide, Conquer, Correct, Collect; and Self-Reflect. Look for future *Software Development* articles discussing these patterns.

— Ellen Gottesdiener

Table 1. Collaboration Pattern: "Decide How to Decide"

Name	Decide How to Decide
Context	A group needs closure on a specific issue, and must know when and whether a decision is made.
Problem	Often, the "rule" for how a group will reach decisions is not explicit. Topics are discussed without a specific process for reaching closure, leaving individuals uncertain as to whether a decision was reached. How do you

		know something is "decided" or "finished" if the rule for knowing that something is closed is not made explicit?
	Solution	Establish a decision rule: Decide how to decide. • Use an explicit process to handle decision-making. • Educate the decision leader (person in charge) about decision rules and guide her to choose one. • Review the pros and cons of various decision rules. • Employ various decision rules for various decisions.
	Consequences	Closure on decisions; if a participatory decision rule is used, more integrative data on the decision topic is generated, and people have greater commitment to making the decision stick.
	Entry Criteria	• Need for a decision that has nontrivial stakes for the people affected by the decision. • Identified decision leader. • Explanation of decision rule choices. • Explanation of the decision rule process.
	Exit Criteria	Decision on the item or issue needing closure.
	Uses	Decide on the project's scope, decide whether or not to accept user requirements, decide on the priority of user requirements, select a software package, design an organizational structure, choose technologies, make strategic business decisions.

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Table 2. An Analysis of Eight Common Decision Rules

Decision Rule	Description	Pros	Cons	When to Use

Majority Vote	Decision is made by counting the number of votes made for two or more options. The option that has the highest number "wins".	• Fast • Efficient for very large groups	• Win-Lose; some people will always lose, which creates an adversarial atmosphere. • Choice may not be based on valid information. • Quality of the decisions is often not high	The decision is trivial, the stakes are low, the options are clear, or the division in the group is acceptable to all stakeholders.
Delegation	One person is appointed to make the decision.	• Fast • Accountability is clear	• Delegate appointed may not have expertise in the decision topic • Insufficient buy-in and commitment by those affected by the decision • Decision is degraded if people affected by the decision aren't consulted • Can undermine the authority of the person in charge	Decision must be made quickly, the delegate has authority for the results of the decision, the delegate has or can obtain expertise on the decision topic, or the decision has little importance.
Negotiation	Compromise to a middle position incorporating the most important positions of the sides. All sides	• Requires a lot of discussion • Each party gets	• Lose-lose: everyone loses something • Can increase the	The group is so polarized that no other alternative is possible.

	must retract some of their desired choices.	something	adversarial nature of an already polarized group • Quality of the decisions is often not high	
Spontaneous Agreement	Participants quickly and extemporaneously arrive at a decision without considering the decision factors.	• Fast • Easy	• No discussion of conse-quences or impact. Risk of groupthink when a group agrees be-cause they believe agreement is moreimpor-tant than coming to the right decision (See Irving Janis's *Groupthink: Psychological Studies of PolicyDeci-sions and Fiascoes*, Houghton Mifflin College, 1982).	The decision has minimal consequences and needs to be made quickly. Discussion and sharing of preferences aren't important to the quality of the decision.
Arbitrary	Decision is made by some arbitrary means (such as flipping a coin).	• Fast • Efficient for low-stakes decisions	• Devalues the importance of the decision.	The decision is unimportant, has no long-term consequences to the participants and must be made quickly.

Decision Leader Decides Without Discussion	The leader makes a decision without consulting any other stakeholders.	• Clarifies who is in charge • Fast	• Quality of decision compromised if person in charge isn't knowledge-able about the consequences of the decision. • Person in charge misses the opportunity to learn about the issues surrounding the decision. • Insufficient buy-in and commitment by those affected by the decision.	The decision must be made in a crisis, or the decision isn't a high-stakes one, and it's made by a competent, knowledgeable leader is trusted by the people who are affected by the decision.
Decision Leader Decides After Discussion	The leader makes a decision after consulting with stakeholders in the decision.	• Clarifies who is in charge • Enables stakeholder to provide input • Promotes commitment on the part of stakeholders	• Responsibility for the decision isn't shared by all the stakeholders.	The decision leader has the knowledge and expertise about the decision topic, wants to make the decision collaboratively and needs to balance quality with speed.
Consensus	"A state of mutual agreement among members of a group where all legitimate concerns of individuals have	• Builds trust. • Creates a high level of support and commit-	• Takes longer • Requires participants who are stakeholders and who have expertise and	The decision is important and requires the commitment of all the stakeholders.

been addressed to the satisfaction of the group" (see Steven Saint and James R. Lawson's *Rules for Reaching Consensus: A Modern Approach to Decision Making,* Jossey-Bass Pfeiffer, 1994).	ment for the decision • Considers the impact of the decision • Decisions are more sustainable • Promotes learning because it requires deep listening and inquiry	knowledge in the decision topic • Quality of the decision can be low if participants don't have all the relevant information.	

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