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This month begins a three-part series, based on the author's Viewpoint column in the July 2007 issue of Maintenance Technology. In this first installment, Dr. Becker discusses the underlying assumptions of cultures-in-action and how human reasoning impacts performance and reliability.

Part I...

Building Cultures Of Reliability-In-Action

Development of effective decision-making skills and behaviors is the foundation of human reliability. This human element is crucial to your equipment and process reliability.

Dr. Brian Becker
Reliability Management Group (RMG)

Process-oriented organizations drive value by improving their business processes and equipment performance. At the same time, however, a number of applications, including asset management, work process improvement, defect elimination and preventive maintenance, among others, can be powerful but incomplete applications when seeking to sustain a competitive edge.

To implement and sustain high-performing, reliable cultures, managers need to be as rigorous about diagnosing, designing and implementing changes to the human decision-making process as they are with their business and equipment processes. Equipment and process reliability ultimately rest with *human reliability*. Thus, cultural change at its deepest level requires examining human reasoning and its resulting decisions.

To establish a culture-of-reliability requires going beyond the traditional stew of copycat approaches and learning how to: (1) *use actionable tools* to implement and sustain reliability improvements and bottom-line impact by (2) *collecting cultural action data* and (3) *learning how to use* that data to *uncover hidden bottlenecks* to performance.

In the quest for high performance, well-intentioned managers often launch cultural change efforts using what they believe to be applied methods, like

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employee surveys, team building, empowerment, leadership style, systems thinking, formal performance appraisal, 360° feedback, you name it, only to be disillusioned in the end by the fact that more change efforts fail than succeed. Although they may be well-accepted, traditional change methods are not precise enough to create and sustain cultures-of-reliability and typically evolve into the next flavor of the month.

The learning exercise

For the past 16 years I have been conducting a specific learning exercise related to cultural change. The purpose is to help participants understand why implementation is so hard. There are five objectives for the session:

1. To discover root cause of implementation barriers;

2. To illustrate the interdependent relationship between learning and error;

3. To determine how participants personally feel when they make mistakes;

4. Based on their experience of error, to understand how humans design a culture-in-action to avoid errors and mistakes; and

5. To determine the costs of error avoidance to business and human dignity.

To start, participants construct a definition of competitive learning which, at its root, is defined as the detection and correction of mistakes, errors, variance, etc., at ever-increasing rates of speed and precision—*the heart of reliability*. Through poignant illustrations, they learn that their organizations tend to focus on making fast decisions ("time is money"), timelines, milestones etc., but at a cost to precision, the quality of the decision.

Based on that definition, the participants are asked to reflect on a recent performance mistake they have made on the job or in life. The response from hundreds of them—*male and female, Fortune 500 executives, managers, supervisors, engineers, technicians and craftsmen*—are very consistent. When they make an error they feel: shame, anger, frustration, stupid, embarrassed, inadequate with an impulse to hide the error and, at the same time, a desire to fix it. The result is an emotionally charged picture of wanting to fix mistakes coupled with an overwhelming response to hide them for fear of blame.

As the exercise unfolds, participants gain insight into how learning and mistakes, trial and error shape performance and how ineffective learning patterns persist for years. For example, individuals from process industries have revealed they've known that less-than-effective outages and turnarounds have existed for years; that "lessons-learned" sessions don't successfully address operations and maintenance infighting and squabbles over what quality work means and the validity of data; that stalled work management initiatives or reprisals for management decisions are a fact of life; etc. The list goes on and on. Discovering why his division had not been able to penetrate a market for over 20 years, one vice president-level participant summed up the dilemma this way: "The costs [of ineffective learning] are so high, they are un-estimateable."

Through collective reflection in a larger group, participants come to realize that they all experience learning in very similar ways. They also come to learn that their

Managers need to be as rigorous about diagnosing, designing and implementing changes to the human decision-making process as they are with their business and equipment processes.

reasoning is very similar. They typically espouse that continuous learning is important and mistakes are OK, but, in the final analysis, mistakes are categorized as critical incidents on performance appraisals or simply seen as ineffectiveness.

When performance appraisal is tied to pay, rewards and promotion, participants indicate that they would have to be foolish, if they "didn't put the best spin" and save face at any cost. "I have a mortgage to pay" is how many respondents put it. At the same time, they acknowledge learning does occur, but at a rate that leaves much to be desired. "It's not all bad," is how many participants put it. Yet, this is not really a case of being bad. Rather, it is a case of sincere, hard-working people unknowingly designing a culture with a set of unintended outcomes.

At this point, participants begin to gain insight: they say one thing and do another. Moreover, they come to understand that it is easy to see defensive patterns in others, but not so easy to see defensive patterns in themselves. Not surprising, being defensive is espoused as not ok. Hence, good team players should be open to feedback. Not being

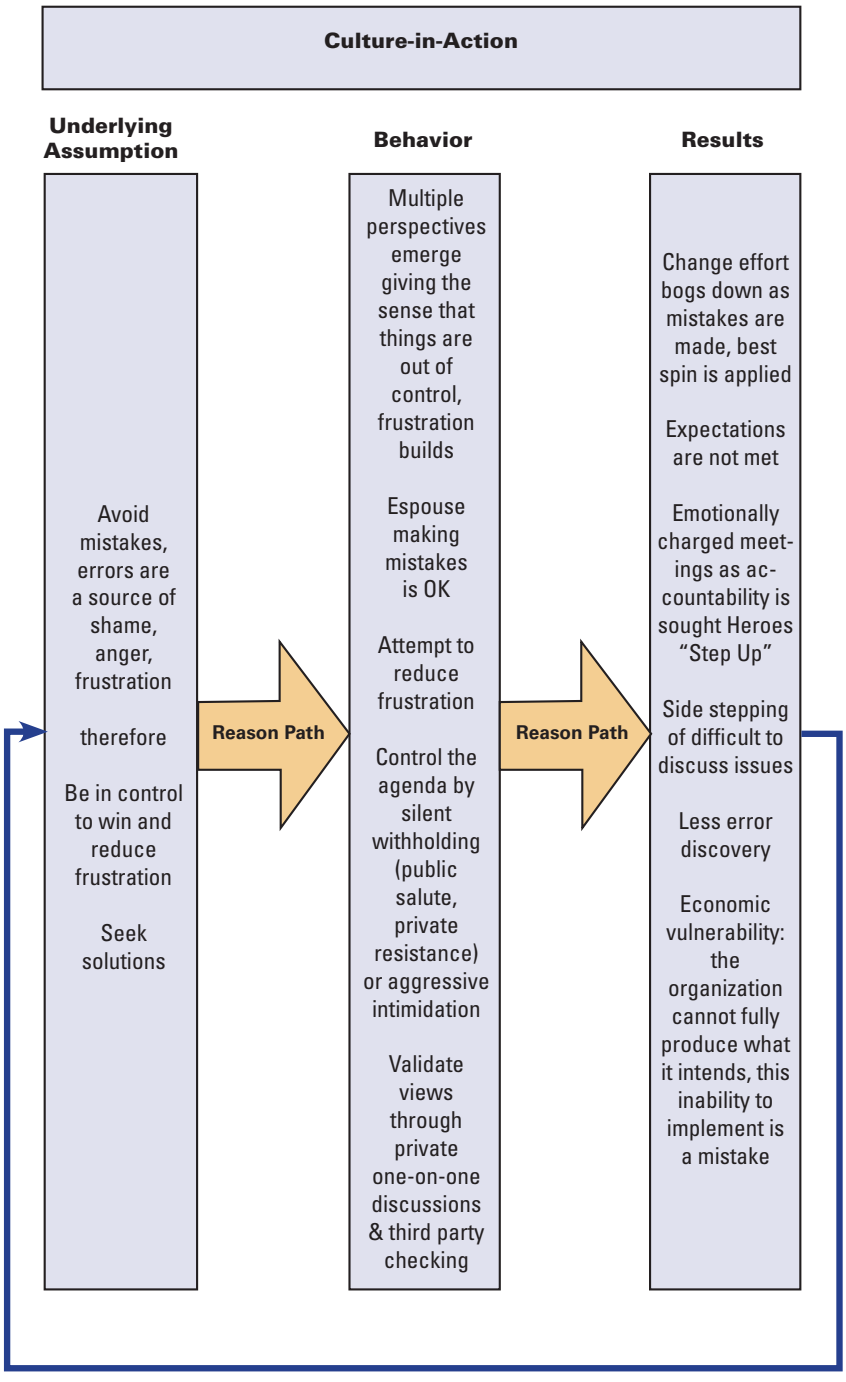

Fig. 1. Typical model based on learning exercise and field data

open would be admitting a mistake, the very essence of pain.

In the final phase of the learning exercise, participants come to recognize that they have a strong desire to learn and they seek noble goals, but that fears of retribution for telling the truth, blame, fear of letting someone down or fear of failure, whether in substance or perception, contribute to a sense of loss of control. Unfortunately, this situation violates the first commandment of management: BE IN CONTROL.

The need for control translates into a hidden performance bottleneck, given the complexity of job interdependencies and systemic error. As one individual noted, "I can't control what I can't control, but I am held accountable. Accountability translates into who to blame." Participants acknowledge that they subtly side-step difficult issues and focus on the more routine, administrative issues, thereby reducing emotional pain and conflict in the short term. They acknowledge that they bypass the potential for higher performance by not reflecting on gaps in decision-making.

Ironically, as these decision bottlenecks limit performance, expectations for better performance increase, often resulting in unrealistic timelines and more stress. Executives complain they just don't get enough change fast enough, and middle managers and individual contributors complain of "micro-management." Sound familiar?

The end result is that sincere attempts to improve the status quo slowly are co-creatively undermined and inadequate budgets and unrealistic timeframes are set. Good soldiers publicly salute the goals, but privately resist because their years of experience have taught them to think in terms of "what's the use of telling the truth as I see it; this, too, will pass." Ultimately, many see the "other guy(s)" or group as the problem and wonder why we can't "get them" in line. This is the heart of an organizational fad—*something that often is labeled as the lack of accountability.*

Culture-in-action

Based on participants' data generated from this learning exercise and action data recorded and collected from the field (see Part III of this series for the data collection method), a culture-in-action model, similar to that shown in Fig. 1, is created and verified with illustrations. Participants consistently agree this type of model is accurate and reflects their own current cultures-in-action.

Underlying assumptions…

The culture-in-action model is rooted in human reasoning. Given the assumptions of avoiding mistakes and being in control to win and look competent in problem resolution, the reasoning path is clear. The behaviors make perfectly good sense.

Behavior…

When seeking solutions, multiple perspectives will proliferate on which solution is best, some with more risk, some with less. Think of it as *inference*

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stacking. A complex web of cause and effect, solutions and reasons why something will or will not work are precariously stacked one upon the other, up to a dizzying height.

Determining whose perspective is right is problematic ("Your guess is as good as mine"). Hence, controlling the agenda to reduce frustration either by withholding information ("Don't even go there") or aggressively manipulating people to submit or comply with someone else's views to get things done is a logical conclusion based on the underlying assumptions.

It is not surprising that executives seek to control their organizations and focus on objectives—*and when they do this that middle managers privately feel out of control because they think they are not trusted to implement initiatives or handle day-to-day routines*. This leads to the following managerial dilemma: If I voice my real issues, I will not be seen as a good team player. If I stay silent, I will have to pretend to live up to unrealistic expectations. Either way is no win (a real double bind).

To overcome this dilemma, people verify and vent their emotions one-on-one, i.e. in hallways, restrooms and offices. This way, they avoid confronting the real issue of how they are impacted by others, which is difficult to discuss in a public forum ("Don't want to make a career-threatening statement"). Instead, they seek third-party validation that their beliefs are the right ones to hold ("Hey, John, can you believe what just happened in that meeting? I don't think that strategy is going to work; didn't we try it 10 years ago?"). Even the best-performing teams demonstrate some of these performance-reducing characteristics. The culture becomes laden with attributions about others' motivation, intent and effectiveness and it is labeled "politics."

Results…

Routine problems often are uncovered, organizations do learn, but the deeper performance bottlenecks, hidden costs, sources of conflict and high-performance opportunities are missed because the focus is on putting the "best spin" on "opportunities for improvement" with a twist of language to avoid the "mistake" word. That's because mistakes are bad and people don't like to discuss them. Interestingly enough, there are even objections to using the word "error" during the process of the exercise. It is not surprising that when trying to learn and continuously improve a turnaround, business process or project, for example, people privately will conclude "Oh, boy, here we go again. Another wasted meeting debating the same old issues." Negative attributions proliferate ("They don't want to learn") and underlying tension grows.

At this stage of the process, the pattern begins to repeat itself. As the project effort falls behind, expectations build. Typically, someone will be expected to "step up" and be the hero. With eyes averted, looking down, uncomfortable silence, someone "steps up" and often gets rewarded. Yet this heroic reward doesn't address root cause (i.e. what accounted for the errors and frustration in the first place). Side-stepping or avoiding the more difficult-to-discuss issues don't help uncover root cause, but, rather, lead to fewer errors being discovered. As a result, the business goal is pushed a little further out and economic vulnerability is increased.

If the market is robust, errors and mistakes may mean little to a business. The demand can be high if you have the right product, at the right time. As competition increases, however, or the market begins to falter, the ability to remain competitive and achieve what the organization has targeted is crucial. Competitive learning is the only weapon an organization has to maintain its edge in the marketplace.

Major culture-in-action features

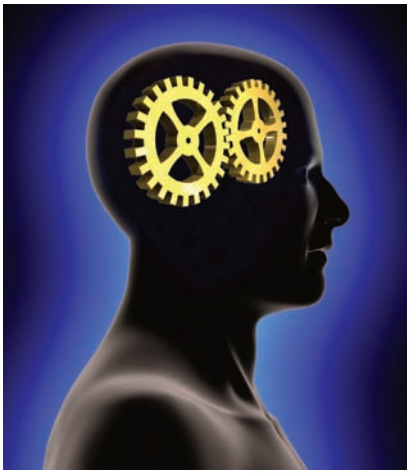
In summary, the major features of a true culture-in-action are:

- Avoidance of mistakes and errors at all cost;
- Little active inquiry to test negative attributions;
- Little personal reflection (i.e. "How am I a part of the problem?");
- Little discussion of personal performance standards by which we judge others; and
- Little agreement on what valid data would look like.

As the exercise winds down, it's not long before someone asks, "So how do you get out of this status quo loop?" When this question comes, because it always does, I turn it back to the group and ask how they would alter this cultural system? The reaction is always the same—*silence and stares*. No wonder. The answer is not intuitively obvious, even to the most seasoned of practitioners and theorists.

The short answer is rather than "get" anyone anywhere, change has to be based on individual reflection and actionable tools driven through collaborative design and invitation. These actionable tools balance the playing field, at all levels, by helping create informed choice through daily decision-making reflection. Traditional intervention methods focus on changing behavior, learning your style or type, building a vision, etc. There are any number of approaches, all very powerful but incomplete without addressing the underlying reasoning (root cause) that is informing the behavior in the first place.❖

In the first installment of this series, the author discussed the underlying assumptions of cultures-in-action and how human reasoning and resulting decisions impact performance and reliability. This month, Dr. Becker discusses how functional Collaborative Design tools contribute to creating a culture-of-reliability.



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Part II. . . Collaborative Design

Building Cultures Of Reliability-In-Action

Practice makes perfect when it comes to harnessing the "tools" that help optimize equipment and human performance.

Dr. Brian Becker
Reliability Management Group (RMG)

Based on the use of a learning exercise over almost two decades, the first article in this series *(MAINTENANCE TECHNOLOGY, December 2007)* described how individuals tend to subtly side-step discussing costly errors and mistakes in their organizations.

Not surprisingly, at first blush, many participants have been uncomfortable with what this learning exercise has revealed. *Everyone likes to believe that they "walk the talk."* Their experiences illustrate that they believe healthy cultures foster alignment among organizational goals, processes and peoples' behavior and personal values; very noble goals. However, the learning exercise asks people to dig below what is discussable and to make a distinction between what is espoused and what is actually produced in action. The level of alignment typically highlights *compliance* to goals rather than *commitment*, and how that compliance impacts decision-making and costs.

When it comes to equipment and business processes, decisions often are supported by rigorous data collection, including leading and lagging key performance indicators (KPIs) like return on investment (ROI) or schedule compli-

The vision of Collaborative Design is to maximize organizational performance while simultaneously enhancing human dignity.

ance. Yet, organizations typically do not apply the same data collection rigor to decision-making-in-action. Instead, as decisions are examined and accountability is invoked, people can fall into subtle defensive patterns in an effort to cope with systemic error and performance interdependencies in hopes of not being seen as incompetent or lacking team skills. The fear of being unfairly judged leads to distrust. These defensive patterns can limit the implementation of changes in equipment and business processes and feed a self-fulfilling fad loop. Based on their own illustrations, participants conclude that the full range of business value is restricted according to the level of discussability and trust.

Collaborative design

Webster's Collegiate Dictionary defines reliability as "suitable or fit to be relied on: trustworthy." For anyone working in a process-oriented industry, reliability is a key word in the Holy Grail of performance. Equipment and human decision-making form a complex performance platform that is essential to producing a competitive product. That's why collaboration is so important.

At the close of the referenced learning exercise, someone (either participant or leader) will ask how to alter the self-fulfilling loop of distrust we have uncovered—*and how to do it without continuing the same old pattern of espousing continuous learning, collaboration, accountability etc.* It's a difficult question to answer; if it weren't, participants would already be implementing the answer in their organizations.

Working over the past 18 years with people's internal dialogues, *(i.e. what they think, but don't necessarily say)*, I have collaboratively field-engineered a compact set of communication-based tools that I have come to call "Collaborative Design." The vision of Collaborative Design is to maximize organizational performance while simultaneously enhancing human dignity. These tools productively expand discussability and measure the business impact of doing so. Their fundamental premise is based on invitation as a way to create psychological safety for discussing issues.

Like any tool, Collaborative Design skill application is learned through practice. Great golfers, musicians, tennis players and executives, for example, understand the importance of repeatable processes for improving one's swing, sound, ground stroke or decision-making process. Collaborative Design is no different, except with one distinction—*the current decision-making culture is unconsciously put in place to prevent the expansion of discussability, which is the very goal of Collaborative Design*.

Collaborative design performance criteria

Collaborative Design is driven by a set of functional tools. Functional tools are any set of actionable tools with these performance criteria:

- **Defineable.** A clear definition and purpose exists and can be verified in action.
- **Measureable.** Any tool or cluster of tools can be assessed for its business impact.
- **Integratable.** Any tool or cluster of tools can be taught and applied in the field and used with other applications.
- **Repeatable.** Any tool or cluster of tools can be applied over and over with the same end result; skill improves.
- **Sustainable.** Any tool or cluster of tools endures over time.
- **Self-correcting.** Any tool or cluster of tools will endure because unintended consequences are uncovered.
- **Ethical**. Given their self-correcting nature, any tool or cluster of tools is non-manipulative, maintaining business value and human dignity.

As noted in Fig. 1, Collaborative Design's basic tool set is composed of the following six functional tools:

1. **Continuous Invitation**—A tool for balancing decision-making control
2. **The Source of Human Action**—A tool that productively accesses what people are thinking but not necessarily saying
3. **Private to Public**—A tool for stating private thoughts, while minimizing negative reactions
4. **Stating a Bind**—A tool for resolving legitimate but competing objectives
5. **Active Inquiry**—A tool for understanding how others characterize a problem
6. **Field Testing**—A quality assurance tool for measuring the business impact of Collaborative Design or any other change tool

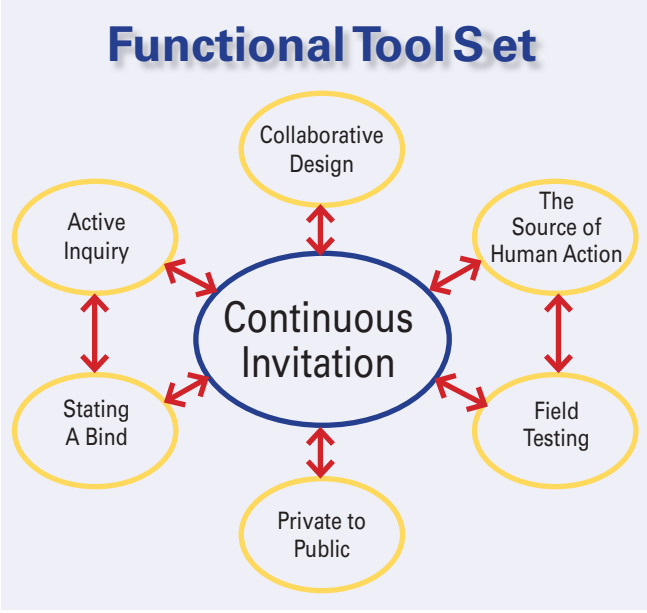


Fig. 1. Collaborative Design functional tool set

These tools productively expand discussability and measure the business impact of doing so.

Five of the six tools are composed of two parts: a conceptual framework and an actionable model. Field Testing is the application that measures the business impact and quality of tool application.

There are three fundamental assumptions of Collaborative Design. Individuals seek to deepen their personal reflection skills by: 1) expanding their acceptance of their own and others' mistakes; 2) committing to practice-in-action; and 3) maximizing performance.

Although it would go beyond the scope of this article to discuss all of the tools, a basic introduction into Invitation will help the reader begin to understand Collaborative Design and the premises upon which it rests.

Continuous invitation

Invitation is the threshold by which all the other tools are accessed. It sets up informed choice, mutual control and trust. The features of Continuous Invitation are as follows:

- Its business impact is felt when the tool is competently applied in daily business.
- It is most powerful when used with the other Collaborative Design tools.
- It productively helps uncover what is difficult to discuss or undiscussable.
- It builds true commitment to business objectives, not compliance.
- Like any tool, competence is built through practice.
- Although counter-intuitive, the right to decline exists. This provides mutual control, hence balancing power

Field testing has consistently revealed that even when invitations were partly created, invitees were more likely to sincerely commit to the decision at hand because they experienced mutual control deep into their bones. When invitation was *practiced*, management found it could make collaborative decisions quickly and build trust rapidly. Furthermore, once trust was established, management found it could make command and control decisions as well, with few unintended consequences. Because discussability was expanded, team members better understood managerial time and performance pressures.

As noted in Table I, invitation is composed of four domains:

Table I. The 4 Domains of Invitation

True invitation matched with true acceptance—this is informed choice for both team members.	**True invitation matched with false acceptance**—this is public acceptance and silent resistance.
False invitation matched with true acceptance—this is a setup and likely to undermine trust. False invitation often is masked with a mixed message. "I trust your work on the income statement, but let me review it before you send it anywhere."	**False invitation and false acceptance**—the struggle for control marked by little trust, public posturing and private deals.

The production script shown in Table II was developed by field testing different configurations in action. Ultimately, the configuration reporting the fewest negative consequences was crafted into an action tool. Like any tool, by using it, practitioners develop their own style through artful application.

Table II. Continuous Invitation Production Script

Continuous Invitation

What To Do:	How To Say It:
1. Statement of what you want.	" I'd like to discuss..."
2. Value statement, why you think it would be important for them to engage.	"I think the value to you would be..."
3. Right to pass (decline).	"You can decline if you want."
4. Trade-offs to the inviter.	"Without the discussion I have to..."
5. Inquire and wait.	"Are you interested?"

Like any tool, Collaborative Design skill application is learned through practice.

Invitation matched with active inquiry doesn't exclude other decision-making models. For example, command and control models are appropriate in times of crisis. However, without inquiry tools for checking decision, command and control can create unintended consequences. For example, in the worst case, one engineer described being ordered to stand by during a startup and before he could explain that the pump had no oil in it, he was ordered to do as he was told. "I was so angry they would not listen," he remembered. "I didn't say a word; the turbine rolled and the pump fried." Cost of the repair? About $250k.

Early users of the tool often confuse invitation with giving up their rights as a manager. "What if they decline my invitation," they ask. If an invitation is declined, it means the tool is working. You know where you stand on an issue. Declining often means that the invitee is not in a position, typically emotionally, to discuss a topic. Invitation provides a platform for exploring options, even when someone declines. The inability to discuss an issue does not prevent the manager from ultimately taking unilateral action. The first explicit effort, however, is to make decisions collaboratively.

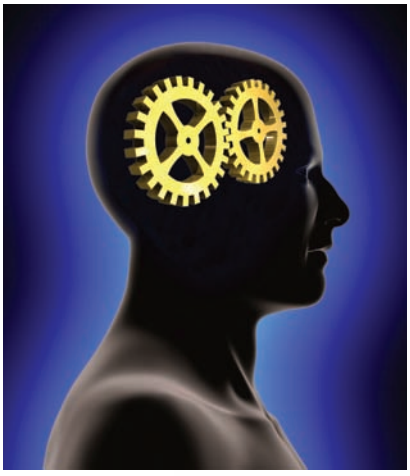
A simple rule (and important rule) is to NOT use invitation if you are NOT extending a true invitation. If acting unilaterally, explain why. In addition, be ready for the unintended consequences of unilateral control—*public acceptance, private resistance and decision-making dependence on the manager; little true accountability.*

Making it work

A culture-of-reliability is defined as the collective ability to detect and correct performance gaps at ever-increasing rates of speed and precision across the organization's industrial and business processes, as well as the human decision-making system in which the industrial and business processes are embedded. If any one of these three interdependent performance systems is diminished, the ability to maintain reliable, sustainable performance is at risk.

It is not uncommon for organizations to focus change efforts on their industrial and business processes, product innovation etc. and overlook the human decision-making process that rests under all of them. Taking a team-building class or understanding your leadership style is not enough. At its deepest level, human reasoning and its resulting decision-making is the root cause of equipment and process reliability. Collaborative Design optimizes equipment and human performance by productively uncovering hidden bottlenecks to performance and building true commitment to increasing the detection and correction of mistakes and errors at ever-increasing rates of speed and precision.❖

In the first article of this series (December 2007), the author covered the underlying assumptions of cultures-in-action and how human reasoning and resulting decisions impact performance and reliability. In the second installment (January 2008), he addressed how functional Collaborative Design tools contribute to creating a culture of reliability. This month, he discusses the implementation process of Collaborative Design and how it sustains a culture of reliability-in-action.



Part III... Collaborative Design Implementation

Building Cultures Of Reliability-In-Action

It's time to talk. Getting where you want to be requires stepping away from traditional methodologies.

Dr. Brian Becker
Reliability Management Group (RMG)

The ability to sustain a culture of reliability-in-action rests in the ability to create informed choice in decision making based on balancing control through expanded discussability. The result is the co-creation of psychological safety for all involved. To surpass current levels of performance requires uncovering hidden performance bottlenecks. Many teams sincerely believe they are open and honest, yet remain blind to the deeper assumptions and issues inhibiting performance.

Work management processes, defect elimination, RCM, improved outage and turnaround efficiencies, better sales calls, enhanced managerial leadership and coaching competence are fertile ground for Collaborative Design.

Collaborative Design is most effective when the stakes, either in substance or perception, are high. Implementation of such a high-performance system calls for going beyond traditional change and training methods. Requirements are:

- Collecting cultural *action data* (not survey data) to document decision-making patterns-in-action. [Ref. 1]
- Using functional tools to *reflect on personal contributions* to effective and ineffective decision making and the resulting *team co-creation*.
- Determining the *business impact* of daily decisions.
- Designing *psychological safety checks and balances* to assure the productive expansion of discussability and the uncovering of hidden assumptions. For example, the underlying fear of letting the vice president down can be as costly as fearing career implications for a failed project.
- Continually monitoring human decision-making patterns by *institutionalizing reflection time*. Examining what is happening in the human decision-making context is as important as examining the equipment and process performance data—*perhaps even more important*.

These criteria reflect the same plan as do the check cycles we have come to know. Where Collaborative Design differs, however, is in using functional tools to validate the productive expansion of discussability, while examining underlying assumptions and their associated costs from the get-go.

Participants learn how to work from their *internal dialogues* (what is thought or felt but not typically verbalized, including tacit knowledge). This approach fosters more accurate hearing of inference, resulting in a shifting of understanding about how decisions-in-action are created. The result is coming to understand the distinction between advocating a strategy (an espoused theory of what needs to done) and what it takes to produce the strategy. This sets the table for profound change and increased performance.

More precise data is available including: untested theories, standards and emotions resting in peoples' heads (about leadership style, personal effectiveness, what is motivating others, etc.). These belief systems are safely revealed and the underlying assumptions informing them are extractable and manageable. Without uncovering the underlying reasoning, it is highly likely that the culture and its fear patterns will define what change is acceptable, rather than root-cause change of the culture.

Instead of learning about performance bottlenecks six months or a year down the implementation path, teams uncover and manage issues early. This is preventive maintenance at its best, but applied to the human decision-making system.

Scary and exciting

The examining of decision-making-in-action is both scary and exciting for those first exposed to Collaborative Design. Many theorists, managers and teams believe they are honest and open—*nothing is undiscussable, they typically relate*. What a humbling experience it is when Collaborative Design reveals that *what they say* and *what they do* are different and that this misalignment impacts performance.

Outage lessons-learned sessions or root-cause analyses *(see "Why Some Root-Cause Investigations Don't Prevent Recurrence," by Randall Noon, Maintenance Technology, December 2007)* for example, often can fall short. That's because many of the most important topics are not discussed in a public forum, but rather in hallways, private offices or parking lots, thus fragmenting concerns and issues and hindering learning. When carefully examining human reasoning and decision making-in-action, users of Collaborative Design quickly come to realize cultures can vary, but underlying human reasoning and assumptions vary little.

Collaborative Design integrates management development and business applications into one compact business system. Team-building, leadership, continuous learning, self-assessment, etc. are not fragmented out into separate subject matter in the hopes that some skills will transfer to the job. Work management processes,

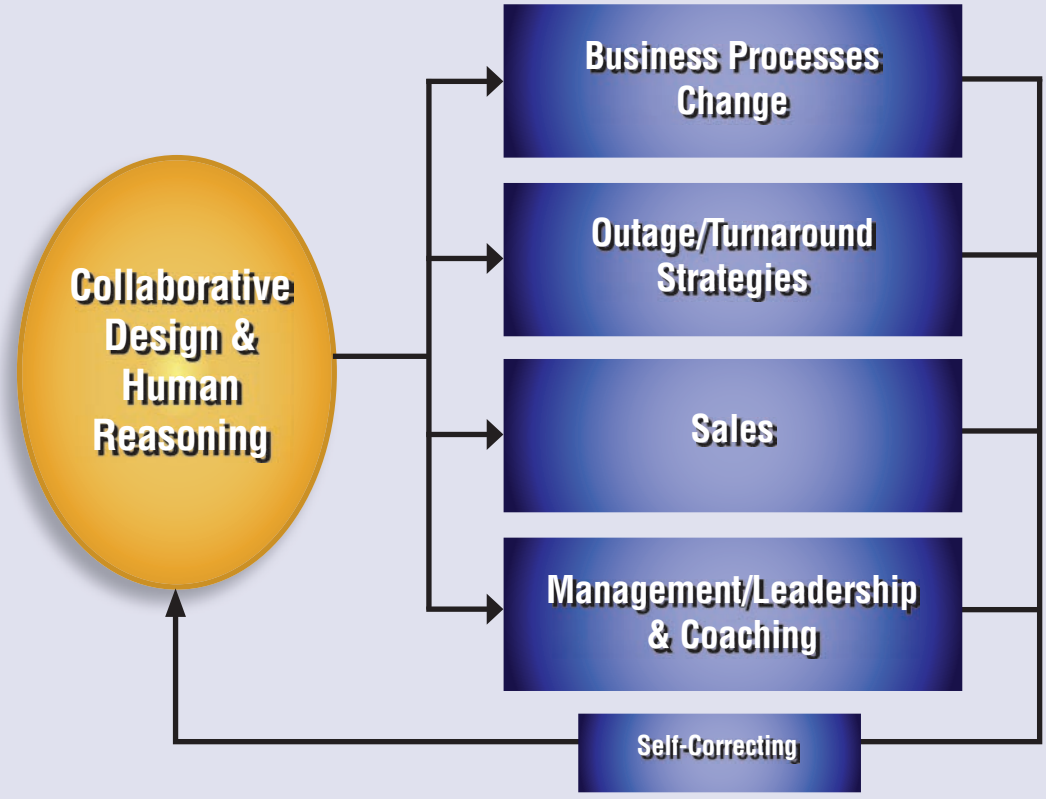


Fig. 1

defect elimination, RCM, improved outage and turnaround efficiencies, better sales calls, enhanced managerial leadership and coaching competence are fertile ground for Collaborative Design because all of these business applications rest on *human reasoning* and the decisions that result from it (Fig. 1).

Perhaps most importantly, Collaborative Design points out that misalignment-in-action is not due to some character flaw or innate human badness. Rather, the power of Collaborative Design rests in its promise to *productively* reveal assumptions that typically aren't questioned.

Implementation

Implementation of the basic Collaborative Design process is as follows. While there are important nuances, not all can be explored within the scope of this month's article.

Role of the Invitationalist…

To start, you can't do it alone. A knowledgeable, external "Invitationalist" *(part teacher, facilitator, consultant and mutual learner)* who can quickly verify his or her competence in functional tool application. Can the teacher ethically walk the talk? The role of the *Invitationalist* is to:

- collectively establish a *common dictionary* of terms.
- collectively establish a definition of valid data.
- support the introduction of *data-collection-in-action*.
- help build action cases revealing *decision-making-in-action*.
- assure a reasonable test of the functional tools and learn while validating skill transfer to a core internal group. This is especially important early on because learning a tool for the first time requires making mistakes and learners can quickly blame the tool, rather than their inability to use it. This is like blaming a tennis racket or golf club for limits in our game.

Without an *Invitationalist modeling tool application*, productively uncovering limiting, underlying assumptions and undiscussabililty is unlikely.

Steps in the process…

Initial introduction of Collaborative Design starts at the executive level. The speed and precision of the installation are directly proportional to the level of executive involvement. No big surprise. The process begins with the steps in "Phase 1: Individual Development" (refer to Fig. 2 on the following page).

1. Introduction
Learning Exercise
Evaluate Business Costs of Decision Making

STEP 1

As a starting point, conducting the Learning Exercise is essential. This unique activity creates an invitation by setting up an *informed choice to learn*. It is a fact finding and definitional process, combined with

Fig. 2

a peek under the blanket, revealing the vision and potential of Collaborative Design and its functional tools. The Exercise uses learner data, introduces the notion of internal dialogue and private reasoning, establishes effective and ineffective decision making patterns, and drives down the anxiety associated with mistakes and costs out the impact of private reasoning and undiscussability.

2. Collaborative Design of Project Plan

STEP 2

Based on the Learning Exercise experience, the Invitationalist and the group begin to practice Collaborative Design from the start by designing the project plan and assuring a reasonable project timeline for learning functional tools. The objective of Phase 1 is to validate tool application in daily business. This application prepares the first contingent of participants *to learn how to learn* from direct experience—*something that is crucial for skill transfer and future sustainability, since functional tool users actually experience the value of application and its dilemmas.*

3. Collect Cultural Action Data

STEP 3

Applying Collaborative Design, participants learn how to use audio taped data to collect cultural decision-making data-in-action. Taped data, when properly introduced and managed will meet confidentiality and legal requirements. Participants audio tape record selected meetings in which they participate; just like monitoring equipment in action.

Action data is important and fosters the quickest learning because it doesn't rely on someone's singular interpretation of a crucial meeting. Instead, it provides a directly observable record that can be publicly examined, leading to more than one interpretation. Participants can determine the root cause of their decision-making and behavioral gaps, and can begin to hear their application of the functional tools as they seek to close gaps and measure the value. This is critical for validation.

4. Using Tools, Build Decision Making in Action Case & Reflect on Patterns

STEP 4

With Collaborative Design Case Analysis Tools, each participant creates a compact action case [Ref. 2] based on a selected decision making point deemed important by the participant. Using the action data, participants meet one-on-one with the Invitationalist and seek to uncover their root-cause assumptions, personal issues, patterns and the business costs of their decision-making-in-action while practicing functional tools. This is the heart of personal reflection.

Each participant designs personal solutions to identified gaps, preparing and practicing before trying to apply. It is here that data drives theory about root cause; is the problem linked to conflict resolution, leadership or a lack of common definitions, etc.? Hence, behavior is changed by altering reasoning patterns based on action data first, rather than, as traditional applications do, by focusing solely on manipulating behavior or forcing patterns into preconceived, theoretical models.

An important role for the Invitationalist during this early phase is pointing out that skill application varies by individual. Some will quickly migrate to use, others more slowly. Skill expansion is directly proportional to the willingness to take risks, make mistakes, build a pool of experience and engage in continuous practice. The Invitationist helps participants stretch their risk-taking and supports when failures occur.

5. Apply Tools in Decision-Making-Action Validate Business Impact

STEP 5

With the agreed upon solution in place, the participant, with the required help of the Invitationalist, applies the solution in action and validates the effectiveness. If needed, the Invitationalist may

Fig. 3

conduct follow-up quality-assurance interviews with staff who were involved in the Collaborative Design application. "Phase 2: Team Co-Creation" (refer to Fig. 3) now can begin.

STEP 6
After working on their personal cases, the executive group reconvenes, shares cases, builds its theory of decision making-in-action, validates costs and the value of investing in change and begins to expand the application by *digging deeper into the executive teams' co-created decision making and its associated costs* ***in the moment***.

With the individual learning under their belts, team members are now ready to expand the application and examine other team co-created decisions. The value is ratcheted up and the functional tools mitigate any risk, so no one is "making a career decision" by pointing out undiscussable or "spin" issues.

STEP 7
The executive team validates its collective ability to produce Collaborative Design and the enhanced business value. For example, a vice president and his team discovered they could do strategy building in three *hours* instead of three *days* because they came to understand how they confused, argued and spun future scenarios that were only empirically testable, but acted as if their definitions and scenarios were accurate and true. The result had been little or no decisions and/or compromise at best.

STEP 8
With gap detected and value confirmed, the executive group identifies and invites the next group of stakeholders to participate in the learning, usually a group or mix of groups that have high potential competitive impact.

Now, it's on to the final step…

STEP 9
The process repeats itself.

Importance of practice

I once observed a seasoned mechanic working on a motor. The first things I noticed were how quickly and assuredly his hands moved; how quickly he used his tools and removed the motor from its mounting brackets; how quickly he broke the bolts, disassembled the motor, diagnosed, found and fixed the problem. He then reassembled the unit just as quickly.

When I marveled at his skill, he looked at me incredulously and remarked, "Good grief, I've been practicing for 30 years. Of course, when I started, I always busted my knuckles just like everyone else."

Learning functional tools is no different, although each individual's rate of skill acquisition can vary. In addition, as mistakes are made and knuckles are busted, issues of error avoidance, mistakes and looking incompetent will raise their heads over and over again. It never goes away—*and there will be substantial pressure to return to the status quo from all quarters*. There are some rather predictable stages of learning through which teams typically pass (see Fig. 4). They are:

- **Awareness:** Through the Learning Exercise, the team comes to understand how private reasoning shapes the culture and impacts performance.
- **Acceptance:** Once identified, the team has to accept the costs to organizational performance and human suffering. Acceptance is an important step in stepping up to a new performance level.
- **Decision:** Once the patterns of private reasoning, sidestepping, spin etc. are identified and accepted, the team must make a decision and commit to change.

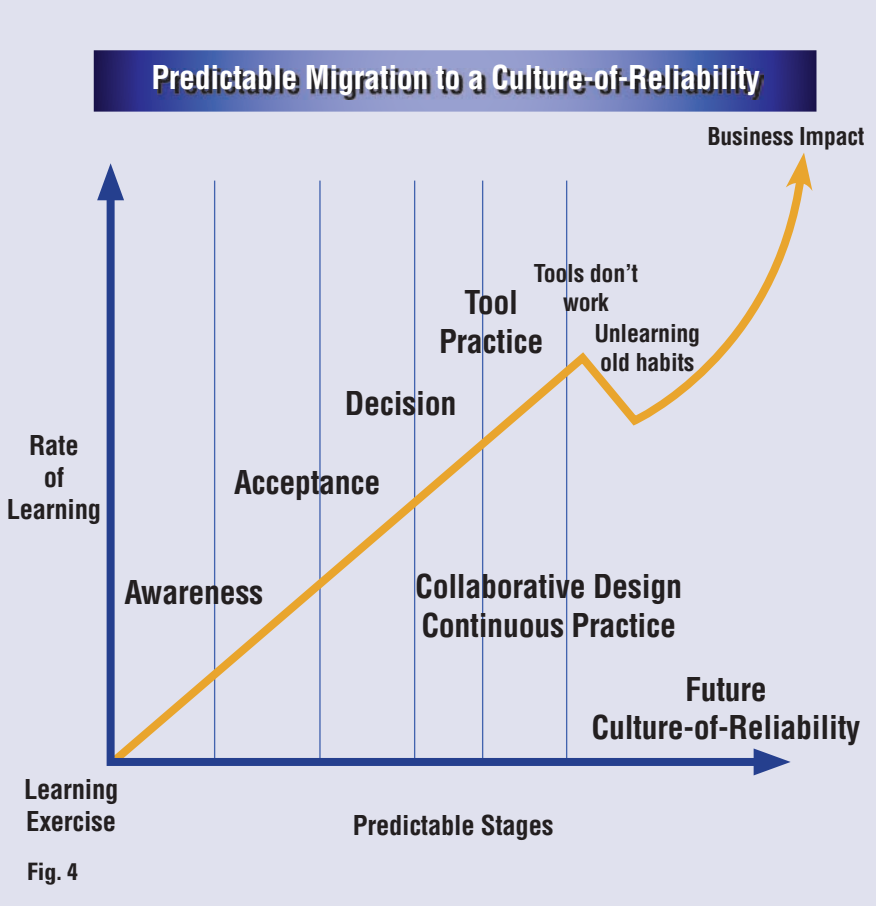


Fig. 4

◆ **Tool Practice:** Measurable change in decision-making is marked by working from internal dialogues and practicing active inquiry through functional tool application. It is not unusual for teams to fail at first; old habits must be let go and replaced by new. This is normal when learning any new skill. The taped data will verify tool application. But, when new skills replace old, the level of performance can increase exponentially.

In summary

Collaborative Design is a new generation of change application. Its vision is to maximize performance while maintaining human dignity. Not surprisingly, there are some predictable stages that learners must go through to achieve a culture-of-reliability and the promise of high performance.

Collaborative Design can be used in any business application, but it is at its best when the stakes are high, either in substance or perception. Like any application built on continuous learning, its results have been encouraging and, as should be, new frontiers are always revealed. Given the fact that it engages human reasoning and the resulting decision-making process, Collaborative Design can be applied in any business setting. ❖

References

1. Survey data is valuable for picking up routine issues, but is unlikely to pick up undiscussable issues because acceptance is tacitly held.
2. There are various ways to create an action case study.

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