

In This Issue



In his article on a technique devised to help pilots and others deal with emergencies (“Crew Resource Management Improves Decision Making”), Jerry Mulenburg sums up the core actions of crew resource management as “see it, say it, fix it.” That’s a good way for the members of any project team to approach problems. Identifying problems (through testing or merely keeping your eyes and your mind open), communicating them to other team members so your collective knowledge can be applied to solving them, and acting on that knowledge pretty much describes how teams should operate.

So it’s not surprising that Scott Cameron’s “Managing in an Unsettled Environment” makes roughly those same points. He recommends working to understand the changes on the horizon clearly and thoroughly, communicating their implications, and taking action to ensure that you have the capabilities needed to work successfully in a new environment.

Both Mulenburg and Cameron emphasize respect in communication and joint action. It’s obvious why. Good communication is impossible without respect (for others’ expertise and good will). And, in organizations like NASA, where people in effect volunteer their best efforts to projects (see Keith Woodman’s “Volunteers Wanted”), respect is essential to commitment and good teamwork. In the interview, Rüdiger Süß describes learning how to win the cooperation of others at the German Aerospace Center by respecting their needs and fears. Respect also underlies the kind of shared meaning-making Laurence Prusak describes in the “Knowledge Notebook.”

Erik Nilsen and Trisha Jansma’s “Galileo’s Rocky Road to Jupiter” is a vivid study of “see it, say it, fix it” and mutual respect in action. Galileo’s recovery from a series of setbacks, including a potentially mission-ending problem, is a tribute to teamwork, ingenuity, and determination. Also interesting is the fact that the four-year journey to Jupiter

gave the Galileo team the time they needed to respond to the challenges.

There are, of course, various ways to “see”—that is, to understand problems and situations clearly. “Solar Dynamics Observatory Lessons Affirmed” and “Mars Science Lab: The Challenge of Complexity” both insist on the need for rigorous testing to “see” potential problems in spacecraft under development. And field testing prototypes of new technologies (“Rapid Prototyping and Analog Testing for Human Space Exploration”) lets engineers quickly see whether a proposed approach is likely to work. That is a form of seeing by doing, which is very much the subject of Don Heyer’s “Reflecting on HOPE.” Heyer was project manager of a project designed to give NASA early-career hires the hands-on experience of taking a mission from concept to completion, an experience that taught them things they could not have learned in other ways.

Configuration management, skillfully carried out, gives current and future project teams a way to see a project through documents that accurately chart its course. (See Debbie Dusterwald’s “Configuration Management: A Record and a Resource.”) The NASA EDGE vodcast team helps us see NASA work by asking the right questions. Finally, we can literally see the history of the space program by looking at the outstanding photographs of talented and thoughtful NASA photographers (“Permission to Stare”).

Don Cohen
Managing Editor