Case Studies In Creating Value

Aerospace and Defense

NASA SAVES APOLLO XIII

SCORECARD

- The systematic KT approach enabled teamwork despite a quarter million-mile separation from the deviation
- Engineers determined cause quickly enabling rapid contingency action
- Apollo XIII returned safely to earth
- Engineers found root cause—critical to the safety of future missions

Accelerated Decision Analysis Saves Apollo XIII

Fifty-four hours and fifty-two minutes into the Apollo XIII mission, John L. Swigert, Jr., duty commander at the time, reported: "Houston, we've got a problem here.... We've had a Main Buss B undervolt." What followed was a rapid loss of oxygen and power and then the abbreviated use of Kepner-Tregoe process as engineers in Houston struggled to determine what went wrong and take the rapid actions needed to get Apollo XIII home. NASA engineers, skilled in Kepner-Tregoe Problem Solving and Decision Making processes, began to build a specification of the deviation and started contingency actions. The systematic approach and their in-depth knowledge of Apollo XIII's systems led the engineers to rapidly find the cause and take action, and weeks later, find the root cause.

Discipline becomes essential when a top-speed search for cause is undertaken and there is no possibility of amassing the optimal data. The presence of a systematic approach enabled the NASA team to work as a unit even though separated from the deviation by nearly a quarter of a million miles. (Excerpted from *The New Rational Manager*, by Charles H. Kepner and Benjamin B. Tregoe, Princeton Research Press)

CLIENT: DRS OPTRONICS, INC.

SCORECARD

- Prevented shutdown of a product line worth $25M/year
- Avoided retrofit costs estimated to be $2.2M year one and double year two
- Gained invaluable goodwill and credibility with the customer

A Systematic Approach to Complex Problem Solving

DRS Optronics, Inc. (DRSO) is a worldwide engineering and manufacturing organization for advanced electro-optical systems and components used in infrared imaging, targeting, and night vision systems for military and commercial applications.

DRSO uses the systematic Kepner-Tregoe approach to resolve the complex issues of cutting-edge technology. For example, during a product upgrade, receivers in an infrared night vision component had lower than anticipated transmission. After years in development, this lingering problem threatened the start of production. By using the rapid, cost-effective KT processes, the issue was resolved and delays were avoided, saving a $25 million product line.

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CLIENT: LOCKHEED MARTIN SEAT

SCORECARD

- Increased award and incentive fees and received zero non-conformances in an ISO 9000 audit
- Reduced personnel attrition rates by over 90% and increased flexibility with consistent project management making it easier to move people into new areas
- Increased safety including a 40% drop in lost workday/mishap rates
- Improved cost management from an average $120,000 overrun to a $90,000 under-run

Project Management Yields Mission Success

Lockheed Martin SEAT provides services to NASA at the Johnson Space Center in Houston. When NASA changed its contracting approach, Lockheed Martin SEAT was given new responsibility for managing over 100 NASA projects. Through a massive training and integration effort in Kepner-Tregoe Project Management, Lockheed Martin SEAT successfully transformed the way it does business. Lockheed Martin SEAT used KT process to successfully introduce and implement a new way of doing business that resulted in measurable improvements in cost savings, attrition, safety, incentive fees, ISO ratings, and more.

Kepner-Tregoe, Inc. collaborates with organizations worldwide to meet complex business challenges and achieve rapid, measurable results.
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