



## An integrated DFSS strategy and Crystal Ball dramatically decrease Time to Market (TTM) for a complex assembly, from 48 to 12 man-months

### At-a-glance...

Leading disk drive manufacturer develops an integrated strategy leading to significant TTM advantages

Incorporates performance and reliability models with accurate part and process capabilities

Combines best practices, statistical tools, Crystal Ball simulation and the right infrastructure

Develops significant competitive advantages in improved TTM

This leading disk drive manufacturer has developed an integrated model strategy within its DFSS process that combines best practices, statistical tools, Crystal Ball simulation and the right infrastructure to produce significant advantages in time- and resources-to-market and reliability.

### THE SITUATION

This manufacturer faces a competitive situation where being the first to market with a new product gives a significant competitive advantage. The objective is to decrease time to market (TTM) for new products to obtain this competitive advantage, while ensuring reliability is high.

### THE SOLUTION

The manufacturer has integrated DFSS into the advanced technology process. Key to its success is the integrated model strategy. Data from different process are inputs to the models. Monte Carlo simulation and optimization with Crystal Ball is then used produce accurate output, a sort of virtual prototyping. A solid infrastructure ensures data accuracy from start to finish and scorecards are used throughout the development process

### THE RESULTS

Virtual prototyping with Crystal Ball means potential problems with reliability or design, which could cause delays and additional costs, are identified before projects are transferred to the product stage, leading to better reliability. Virtual prototyping also requires less time and resources than real or pilot prototype production. Physical prototypes are still constructed, but virtual prototyping dramatically decreases the number of prototypes needed.

This integrated model strategy, combining best practices, statistical tools, Crystal Ball simulation and the right infrastructure within the DFSS process, has dramatically decreased Time to Market (TTM) for a complex assembly, from 48 to 12 man-months.

The combination of physical and statistical modeling has led to improvements in both reliability and time to market.

### ABOUT DECISIONEERING, INC. AND CRYSTAL BALL SOFTWARE

Decisioneering understands that in any project, risk analysis tools such as simulation, real options analysis or optimization, are used when they help achieve a goal: decreased costs, faster time to market, improved efficiency or increased revenue.

Decisioneering helps organizations meet these goals with Crystal Ball software. Crystal Ball is a suite of Microsoft® Excel-based applications that harnesses and extends the analytical power of spreadsheets. With a full set of risk analysis software, training and consulting, Crystal Ball users improve the quality of their critical business decisions.

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Decisioneering case studies describe actual customer use of Crystal Ball software. We respect our customers' confidentiality and do not reveal their identity.