

Airbus Defence and Space

PARTNERING WITH PRICE® TO USE THE INNOVATIONS OF TRUEPLANNING® FOR MORE COMPETITIVE BIDDING ON ADVANCED TECHNOLOGY PROJECTS

Challenge: Verify cost estimates to ensure bids are priced to win but are accurate and profitable for each stakeholder in a project's supply chain.

Solution: Create a Cost Estimation Framework (CEF) that uses TruePlanning® top-down, parametric estimating to set cost targets with TrueMapper® feature to cross-check estimators' bottom-up estimates in Excel based on Work Breakdown Structure (WBS). Improve knowledge capture by creating an historical data repository of cost models to source information for future projects.

Results: A Cost Estimation Framework providing the tools and methods to enhance and integrate bid processes across estimating teams spread throughout the organization, improving the accuracy and credibility of estimates, data sharing, collaboration, and competitive yet profitable bid pricing for advanced projects. Bid managers gain better insights to evaluate risks, react to issues, and make better business decisions. Work Package Delivery managers operate with more confidence in estimated budget, scheduling and their ability to meet target completion dates. Reliable and robust bids can be priced to win and profitably delivered with stronger project control from beginning to end.

One Company's Approach to Winning Business Profitably

Before the formation of Airbus Defence and Space, the head of its cost engineering team, Manuel Massini, was already working with PRICE® Systems International on improving proposal bid and bid validation processes for space hardware and services provider Astrium. A long-time PRICE user, Manuel was leading the development of an integrated Cost Estimation Framework (CEF) that would use top-down, product-based, parametric estimating with PRICE® TruePlanning® to set cost targets for estimation teams and verify their bottom-up estimates based on Work Breakdown Structure (WBS).

The enhancements to estimating methodology are designed to improve the bid process without significantly impacting how expert proposal teams already work. The ultimate goal is a better job of pricing projects to win business while ensuring estimates are credible and profitable for each stakeholder in a project's supply chain.

Key Issues with Bottom-Up Estimates Across Bid Processes

In companies such as Airbus Defence and Space, bid processes rely on expert skill sets scattered in different parts of the organization. The tool of choice for cost estimates from beginning to end is typically Excel or Excel-based. Each component of the WBS is estimated separately and then results combined for an estimate of the entire project.

Consequently, it is difficult to accurately define cost targets upfront to ensure that project bids will be attractive to the customer yet affordable for each stakeholder in supply chains. Estimators working within a WBS-only environment generally have no requirements for cost-target compliancy, data versioning or data archiving. There is no good method to cross-check results or take full advantage of experiences from past projects. Risks of calculation errors, underestimating and overestimating are high. Budget-conscious customers are unlikely to consider project bids that are too expensive, while every company

CASE STUDY

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*Manuel Massini
Head of Cost Engineering
Airbus Defence and Space*

in a supply chain with a stake in the project wants their end of the business to be profitable.

Vision of TruePlanning®-Based Cost Estimation Framework for Bid Validation

Manuel, with support from top management, wanted a way to validate estimates so that bids proposed to a customer would be more accurate, credible and verifiable. As a long-time user of PRICE for estimates of hardware components - just part of entire system bids - it was easy to discuss his broader vision with PRICE® Systems International. "PRICE provides us with more than your typical vendor/customer relationship; we work closely together in a real partnership," says Manuel. "When we wanted to verify cost estimates for all bid processes that go into proposals, they listened, understood and collaborated with us on precisely what we wanted to achieve with an integrated Cost Estimation Framework."

Manuel's vision for the CEF was to not disrupt bid processes that were already familiar and comfortable to estimation teams, but rather to add better direction at the early stages of a project, improve data sharing, and verify bottom-up estimates against pre-defined top-down cost targets. The CEF introduces tools and methods for Airbus' existing estimation specialists without changing their processes.

Integrating Parametric and Bottom-Up Estimating Tools

Across a project's life cycle, the CEF in effect synthesizes three costing methods: analytic, similarity and parametric. Key tools include ProMo+ from IAES Company for database management; QDV from Quotalys Ltd for managing analytical estimates and versioning; and TruePlanning® from PRICE® Systems to set cost targets, map top-

down parametric estimates of Cost Element Structure to bottom-up WBS estimates in Excel, and share information contained in TruePlanning® without having to have the application on every estimator's desktop.

Estimators follow their normal WBS-oriented bid processes using TruePlanning's Rough Order of Magnitude (ROM) estimates as a guide and for comparison at the start of their nominal consolidation process of bottom-up estimating. This type of crosschecking at the project and work package levels exposes any gaps in estimates that may exist, so they can be investigated and corrected long before a formal bid (or bid/no-bid decision).

TrueMapper® Provides Ability to Crosscheck and Increase Confidence in Estimates

Through its TrueMapper® feature, TruePlanning® enables estimators to map the Cost Element Structure for cost targets to their detailed WBS-based analysis in Excel. In addition to crosschecking results, estimators in different areas of the bid process can see and collaborate on any gaps that need to be corrected or tradeoffs that need to be made.

"TrueMapper and the TruePlanning Viewer give us the tools to increase our visibility into cost estimating relationships, share information and work more productively as a team," says Manuel. "Most important, we increase the accuracy and confidence levels of estimates."

The mapping can be generic for a portfolio of projects or customized for each individual project. Improved knowledge capture from each project feeds a repository of historical data that can source inputs to TruePlanning® for setting cost targets of new projects and assembling an initial WBS for estimators.

About Airbus Defence and Space

Airbus Defence and Space is a division of Airbus Group formed by combining the business activities of Cassidian, Astrium and Airbus Military. The new division is Europe's number one defence and space enterprise, the second largest space business worldwide and among the top ten global defence enterprises. It employs some 40,000 employees generating revenues of approximately €14 billion per year.

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