Clinical R&D Resource Requirements Analysis

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Vertical

Manufacturing | **Pharmaceutical** | Healthcare | Portfolio | Logistics | Financial | Government | Business

Genre

Case Study | **Project Review:** | White Paper | Technology Overview

Client

A leading global pharmaceutical firm

Situation

The firm's Clinical R&D department was charged with gaining a better understanding of its resource requirements over the next five years. In the current competitive internal operating climate, the emphasis of this study was placed on helping to better estimate future resource requirements as well as identifying opportunities for immediate resource savings. ProModel was engaged by the Clinical R&D department to help develop a solution.

Objectives

The main objective for this project was the development of a methodology and tool set with which the Clinical R&D department can more accurately predict their future resource requirements versus available capacity.

Solution

To help accomplish the objective, the team developed a modeling solution with ProModel's Portfolio Simulator technology. The primary component of this solution was a customized portfolio simulation application featuring templates for both the Early Development and Full Development stages. These templates included all the processes required to execute a clinical trial. The clinical trial activities modeled were grouped into the following four phases: Planning & Strategy, Study Setup, Study Execution, and Study Summarization.

Some of the custom capabilities and features of the portfolio application included:

- Capability to model departmental resource requirements given multiple possible future clinical trial portfolio demand profiles.
- A model of the current and future state of planned clinical trials.
- Ability to run scenarios reflecting new hypothetical organizational structure options.
- Capability to analyze FTE requirements given an increase or decrease in possible future required clinical trials.
- The methodology required to perform periodic updates and analysis of future changing scenarios.
- Ability to predict the impact on project throughput and time lines due to the combination of resource constraints, survival estimates and cycle time assumptions.
- Scenario generation that shows the results of task consolidation.

Results

This overall solution will allow the Clinical R&D Department to experiment with multiple "What-If" scenarios in order to proactively align the tasks and staff required to ensure optimum departmental performance, in the present and future. Specific results include:

- The solution allowed the team to analyze the resource requirements of a new organizational realignment.
- This portfolio simulator application has proven to be a viable way to perform resource modeling within the Clinical R&D organization.
- The model was validated to be 90% accurate when compared to actual historical cycle times and resource requirements.

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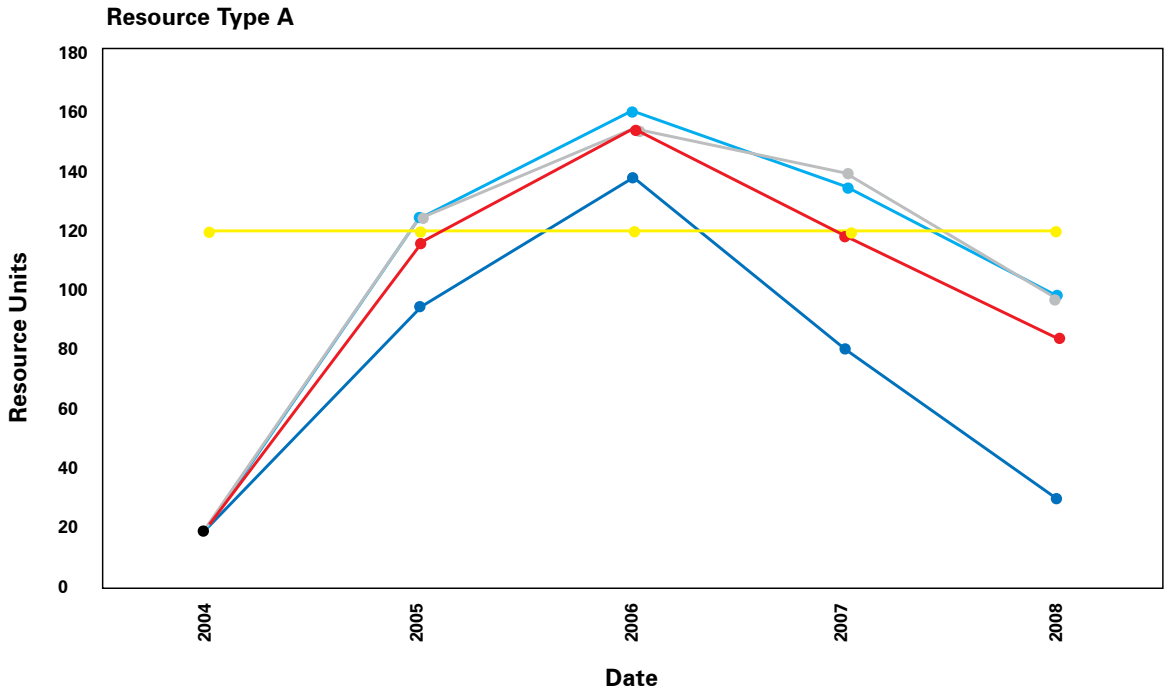
Resources Required vs. Resources Available by Year



An example of the output results from this solution is shown in the chart above. The straight horizontal line shows the number of available resource units. The other lines represent scenarios that were run with different clinical trial parameters for 2004 – 2008.

The graph indicates that under all scenarios, the need for this resource type is going exceed the number of available resources in 2006. Some of the scenarios show resource constraints from 2005-2007, while others do not.