

# Evaluation of Development Strategic Investment Options

## 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 invests close to \$1 billion per year in Development Research to fuel the development pipeline with valuable drug opportunities. Appropriate allocation of these funds is critical to sustaining profitability.

Because the business is so highly variable and unpredictable, management is always looking for more accurate ways to evaluate how various investment options affect the ability of Development to maximize throughput of Registrations and New Drug Applications (NDA's).

## Objectives

- Create a methodology to make objective comparisons between alternate investment options, across the Global Development organization.
- Assist with using the above methodology to reduce investment decision risk and increase the ROI of Development investment dollars.
- Aide in identifying ways to increase Development throughput of NDA's.

## Solution

ProModel worked with the Development team to create a simulation based solution to support their objectives.

Some key features of the solution:

- Captures the entire global process from CAN to Registration.
- To help determine the ROI of technology investments and organizational changes.
- Accounts for the high degree of variability and resource constraints inherent to the Development process.
- Capable of evaluating the impact of potential investments on scientific tasks and their departmental inter-relationships
- Able to delineate activities by line and by stage of the pipeline.

Customized Output Reports – Key Performance Indicators (KPIs) of multiple scenarios can be compared simultaneously. The types of KPI reports include:

- Starts/completions per stage or process step.
- Cycle time per stage or process step.
- Survival rates per stage.
- Key resource requirements and utilization.
- NDA and Registrations throughput goals

Task / Resource Bottleneck Report – Used to isolate and rank the tasks/resources that have the greatest impact on the system. Some characteristics of the report are:

- Ranks the process tasks which most effect cycle time.
- Identifies the resource, dependencies or tasks that cause the largest delays.

**Results**

For the first time the client has an accurate representation of the major scientific tasks and inter-relationships that make up their Development process. This gives them the capability to more accurately perform the following:

- Evaluate global or site initiative effects on organizational goals such as NDA throughput.
- Experiment with process and or staff initiatives and predict the impact on Development throughput and cost.
- Integrate high level portfolio analysis using Portfolio Simulator with the detailed Initiatives Analysis Model, to provide more accurate Development projections 2-10 years into the future.
- Evaluate financial ROI by comparing the potential additional revenue generated from increased throughput against the potential cost of the changes required to gain the additional throughput.

