



# Pall's Implementation of Accolade<sup>®</sup> and Stage-Gate<sup>®</sup> Generates \$26 Million in Value

## Company Overview

Pall is a \$1.8 billion global supplier of sophisticated filtration, separations, and purification technologies. It serves customers in biotechnology, pharmaceutical, transfusion medicine, semiconductor, water purification, aerospace and broad industrial markets. The company's broad global reach, market focus, and technical expertise are unmatched in the industry.

## The Business Challenge

Pall's strategic goals include a substantial increase in new product revenues through better management of its developmental pipeline. With technology centers located throughout the world, Pall was challenged to ensure that its research and development (R&D) efforts were focused on the right markets, geographies, and product opportunities. The company needed a more structured means of guiding project meetings, making key decisions early in the product-development process, and holding team members accountable for deliverables.

Despite its strong, team-based culture, Pall's complex organizational structure, the large number of projects in its portfolio, and the absence of process tools made it challenging to encourage implementation discipline. Additionally, the existing process lacked an easy way for executives to review and assess projects. Pall also wanted portfolio metrics and reporting capabilities that would help ensure a better return on its R&D investments.

## The Solution

Pall decided to implement Stage-Gate<sup>®</sup>, the widely used product development methodology, in all of its divisions. The deployment encompassed approximately 750 users. To help ensure adherence to the new process, Pall sought a turnkey solution that could automate Stage-Gate, make it easy to use, and provide executives with essential views of the entire product portfolio. The solution also had to facilitate compliance with certain federal regulations, such as FDA 21 CFR Part 11 and FDA 21CFR 820.

Charged with the implementation initiative, John Miller, Pall's chief technology officer, selected the Sopheon Accolade<sup>®</sup> product portfolio and process management system. Reasons for Miller's choice included Accolade's easy-to-use project reporting and charting functionality, embedded best practice content, and direct support of Stage-Gate.

Miller and his team determined that the initiative was most likely to succeed if Stage-Gate and Accolade were introduced in tandem. Process adherence was a top priority. Buy-in from R&D executives and manufacturing was also crucial, so a senior R&D executive was assigned to act as portfolio manager and Stage-Gate "sponsor" throughout the implementation process. Front-line project managers were held accountable for seeing that their functional teams received the proper training on both the new process and software tools.

## The Results

The benefit Pall has received in the two years since its implementation of Accolade and Stage-Gate has taken many forms. For example, team collaboration and communication are much improved. Team members now submit detailed data for monthly gate and portfolio reviews through Accolade. As a result, the average time required to make go/kill decisions at gate meetings has been reduced to approximately 15 minutes per project. In addition, business-line product and marketing teams use the system to share ideas and review the status of assigned tasks online, ensuring that their projects stay on track.

***“Because Accolade<sup>®</sup> and Stage-Gate<sup>®</sup> emphasize doing projects that are core to our business strategy, we are more disciplined about analyzing a project's value.”***

***– John Miller  
Chief Technology Officer,  
Pall Corporation***

The efficiencies gained through this process have translated into a 10 percent time savings per week per team member.

Portfolio management has been made easier, too. Using built-in metrics for project evaluation, new projects are assessed early-on for their revenue-generating potential. Accolade's detailed project summary charts and reports give senior executives the data needed for objective decision-making about resource allocations and at-risk projects so that appropriate course corrections can be made. The company's product development pipeline now consists of higher value projects that are truly innovative. Miller confirms this. "Because Accolade and Stage-Gate emphasize doing projects that are core to our business strategy," he said, "we are more disciplined about analyzing a project's value when approving and prioritizing projects."

Regarding the company's requirement that the solution it deployed be able to support federal regulatory compliance, Accolade again hit the mark. As a part of the implementation of Accolade, Pall's Regulatory Affairs unit conducted an extensive "black box" audit, testing the software to ensure that it complied with the FDA's strict 21 CFR Part 11 guidelines. This was followed by a separate "black box" audit, as well as a "white box" audit of the software's development methodology, both of which were requirements of FDA 21 CFR 820 regulations regarding quality controls. In both instances, Accolade passed the stringent testing without qualification.

Finally, in order to take a metrics-based look at the benefit Pall has received from its implementation of Stage-Gate and Accolade, Miller and his team completed a payback analysis of productivity gains, using a model Pall applies to all its major investments. The model assumed a fixed R&D investment over seven years, starting from the implementation of Accolade and Stage-Gate in 2003, then projected the increased profits that would result from having greater project throughput without increasing the number of resources allocated. Revenue and profit projections were based on short-term observed productivity improvements; historical new product lifecycle revenues per year; and a projected leveling of future productivity gains after the third year, post-launch of Stage-Gate and Accolade.

Even a conservative view of the impact Accolade and Stage-Gate will have on Pall's new product revenues is very encouraging. The model yielded the following results:

- Net Present Value\* = \$26,122,000.00
- Investment Payback\*\* = 1.2 years

**Summary of 7 Year Analysis, Incremental Model at final revenue assumptions:**

<b>Total Cashflow</b>	<b>\$56,397</b>	<b>Internal Rate of Return</b>	<b>62%</b>
<b>NPV@0.15 discount rate</b>	<b>\$26,122</b>	<b>Payback in years</b>	<b>1.2</b>

"We are obviously very pleased with the value provided by our investments in Stage-Gate and Accolade," said Miller. "It would have been very difficult for us to try to implement Stage-Gate without the automation provided by Accolade. You don't want to do one without the other. Most importantly, as a result of this implementation, Pall now has an easy means to select and execute on initiatives that are key to our future success."

**Accolade Adds Value with Integration to Other Applications**

*Accolade's open Application Programming Interface (API) has allowed Pall to integrate the Sopheon system with other key applications, such as Microsoft Project, Lotus Notes, and SAP's ERP application. This integration has increased the company's return on its investment in Accolade. For example, Pall collects up-to-date sales data from its SAP tools and billable time from Lotus Notes, then rolls that information up into Accolade. Forecasted revenues and costs can then be compared to project actuals as a part of ongoing portfolio analysis, enabling the company to evaluate the overall value of its new product development activities.*

In summary, Accolade is helping Pall:

- Retain and share critical project information and documentation globally;
- Provide process transparency for improved portfolio management; and
- Ensure process adherence.

"Today, Accolade provides visibility for all relevant parties into project timelines, risk assessments, project status, and resource allocations," Miller concluded.

\* Net Present Value (NPV) is the net value (using a 15% discount rate) of seven years of future cash flows from incremental sales driven by the implementation of Accolade and associated process improvements. These costs were netted against the cost to purchase, implement, and maintain the software. NPV is used in prioritizing investments.

\*\* Investment Payback is how quickly the costs of implementing Accolade and Stage-Gate are offset by the undiscounted new revenue cash flows. Payback helps to characterize the investment risk relative to future returns.



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