



FREUDENBERG-NOK

Secrets to Eliminating Disparate APQ Systems

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Freudenberg-NOK eliminates redundant systems, gains executive visibility and improves launch performance by integrating APQP program management, and product development.

The requirement for advanced product quality planning (APQP) compliance has resulted in a general structure for reporting on status during product development and launch in the automotive industry. However, the fact that different OEMs demand different variations has complicated the original intent. For suppliers, it is increasingly difficult to satisfy the many OEM requirements while maintaining efficient product development processes and running a profitable business.

Forward-thinking suppliers are tackling these issues with methods that satisfy reporting requirements while improving the product development process and maintaining proprietary competitive practices. For example, by managing programs in a phase-based structure that aligns with the APQP standard and creating templates for different OEM requirements, Freudenberg-NOK has been able to eliminate the numerous systems and spreadsheets used to track APQP status and improve visibility into the product development process for more effective program management. The approach also helped Freudenberg-NOK measure launch performance to improve product quality and customer satisfaction.

Planning for the Future

In previous years, management at Freudenberg-NOK could see the combination of trends that lay ahead, including:

- An increasing number of new product programs
- Shortening development cycles
- Customer-specific quality deliverables and reporting requirements
- Continued pressure on product margins.

These converging circumstances meant that effectively managing product development programs was becoming a competitive necessity while simultaneously getting more difficult.

As a global supplier with a diverse set of customers, Freudenberg-NOK recognized the coming challenges, and senior managers were determined to make APQP program management an organizational competency and a competitive advantage.

Given the strategic importance and cross-functional nature of the program management process, a steering committee and project team were formed with broad representation. Membership included executives and staff from product development, quality, manufacturing management, purchasing and finance. Participants were selected from different product lines and plants to ensure all key considerations would be taken into account.

After conducting several kaizens, the project team's research identified a set of key issues the business faced. For one, new product programs were not being managed in a consistent manner because project managers were using different methods and systems. This resulted in three primary problems:

1. OEM customer quality deliverables were inconsistent and untimely;
2. Launch performance was not measured and unclear; and
3. Executives lacked visibility.

When presented with the team's findings, the steering committee emphasized a customer-focused approach to solving the problems. The committee understood that solving the problems required a single process and that getting the company aligned with one solution would be difficult.

The steering committee also recognized that a combination of organizational change, reengineering and information technology would be required to address the problems and provide the company with a competitive advantage in the years ahead.

The Power of Perspective

Prior to the initiative, some at Freudenberg-NOK considered APQP a process handled by the quality group—a common belief at many companies. Whether unintentional or deliberate, this set a tone in the organization that can lead to a “that's not part of my job” attitude. The project team understood the effect of this and decided early on that achieving project success and customer satisfaction would depend on overcoming the perception.

Both OEM and Tier One customers are adamant about the application of APQP as the basis for the new product process and not just the generation of documents and reports. By using the phases and deliverables from the APQP standard as the foundation for the reengineering efforts, the Freudenberg-NOK project team was able to quickly build a process model that addressed customer requirements yet still had a consistent and efficient design.

While certain program management and product and process development activities are not technically part of the APQP process (e.g., production volume planning and capital acquisition), the majority of value-add tasks critical to new product success were already included or easily added.

Product lines around the company were invited to map existing product development processes and unique methodologies to the APQP process to maintain competitive practices while satisfying the standard approach. Templates were established to address different OEM deliverables and reporting requirements. At the detail level, different products had different tasks and activities; however, each template followed the same phases and must satisfy the same milestones. The secret is in the way deliverables are grouped and relationships are defined.

As the template structure was being fleshed out, the Freudenberg-NOK project team set out to identify and evaluate software that could satisfy the emerging program, project and process requirements and replace the various spreadsheets

and databases that had been put in place over time. The critical characteristics for Freudenberg-NOK's solution included:

- Must support a template structure.
- Have functionality to run the business, not just report.
- Offer simple Internet screens that allow drill down.
- Must be able to implement software quickly.
- Must be flexible enough to adapt easily and expand applications over time.

After an extensive review of systems, Freudenberg-NOK selected Aras as its software supplier. The supplier went live in eight weeks, deploying the system across all Freudenberg-NOK's North American development centers. More than 50 templates have been defined to date, as different spreadsheets and systems have been retired as a result of the rollout. Each of the templates follows a standard APQP program format providing process consistency.

Keeping "APQP" as the process name—even though the activities and deliverables had been expanded—turned out to be an important decision. Today APQP, program management and product development are not only considered a single process, but are practically synonymous at Freudenberg-NOK.

Freudenberg-NOK works diligently to embody the essence of the APQP standard. It has achieved better organizational alignment than anticipated simply because of the way people think about the relationship between APQP, program management and product development.

Making Every Launch Count

OEM customer stipulations and looming warranty considerations are providing even greater incentive for suppliers to focus on product launch.

During the initial analysis of issues, the Freudenberg-NOK project team identified the measurement and consistency of launch performance as one of the primary problems facing the company. For years, managers inherently understood that there was a relationship between the numerous project

management variables that are involved in a new product program, including the number of programs assigned to an individual, the variety of OEM-specific deliverables, and the degree of success at program launch. With many more programs coming in the near future, Freudenberg-NOK wanted to explicitly understand the relationships and interdependencies between program variables.

The flawless launch scorecard was designed with 13 key performance indicators (KPIs), measuring customer satisfaction and plant launch performance across five dimensions: quality, readiness, timeliness, service and profitability. Since going live with the solution, more than 360 flawless launch scorecards have been completed. The intent is to gather data that will be used to target improvement opportunities and provide insight into the interdependencies of program variables to help run the business more effectively and profitably.

The inclusion of the launch coordination metrics as part of the APQP solution rollout has become a driver for acceptance of the single process and system. As more data is located within the system, executives increasingly ask about and emphasize launch metrics in other meetings and reviews. The pressure combined with regular communication and training is helping to convert the remaining laggards.

In summary, Freudenberg-NOK's implementation of a common APQP tool has had considerable impact. Employees can see the current status of projects across the enterprise. Internal and external launch metrics are being captured and used to provide feedback to the development process. The Web-based technology has made it easier to deploy the system to all team members—not just the quality group. The data consolidated within the system is now being used to make the product development system even more effective.

About Aras

Aras® offers the best Product Lifecycle Management (PLM) software for global businesses with complex products and processes. Advanced PLM platform technology makes Aras more scalable, flexible and resilient for the world's largest organizations, and a full set of applications provide complete functionality for companies of all sizes.

By rethinking the way PLM is designed, Aras has taken a fundamentally different approach with a focus on the Business of Engineering. Aras solutions support processes for global product development, systems engineering, multi-site manufacturing, supply chain, quality and more.

Companies running Aras include Airbus, Boeing, Bombardier, GE, Hitachi, Honda, Kawasaki, Magna, Microsoft, Motorola, Nissan, TOSHIBA, Xerox, the US Army and hundreds of others worldwide.



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