Actify Delivers Automotive Program Management

CIMdata Commentary

Key takeaways:

- *Actify's Automotive Program Management (APM) suite offers top-tier automotive suppliers a strategic advantage in their pre- and post-RFQ award program operations.*
- *APM delivers a secure, end-to-end suite of applications that manages the entire OEM program lifecycle for suppliers, and consolidates processes and information buried in different enterprise silos into a single version of truth.*
- *APM maintains a repository of past program operations allowing comparisons using multiple parameters to find similar past bids and programs together with their outcomes.*

The automotive sector is the world's largest manufacturing industry and is profoundly different from other manufacturing endeavors. Cars and light trucks are incredibly complicated product assemblies (20,000+ parts) which are produced at a massive scale (nearly 100 million vehicles per year). They come with all the variability that is inherent in any consumer product (colors, features, options, and "fashion trends"). To support this level of production the industry has evolved into a pyramid-shaped supply chain with the OEMs focused on marketing, design, and final assembly supported by thousands of suppliers spread across 60 countries and 5 continents. The most critical layer in the supply chain is the Tier-1 suppliers who directly feed the final assembly plants with parts and major assemblies configured and sequenced to match the vehicle production schedule. These parts must mate perfectly. The holes must line up exactly and the painted surfaces must match even though they may be produced by dozens of different companies thousands of miles apart.[1]

The Tier-1 suppliers have long-term, symbiotic relationships with the auto OEMs and are often engaged in design and prototype activities for product programs years before a new model reaches the market. Once a vehicle design is approved hundreds of Requests for Quotation (RFQs) go out to the Tier-1 suppliers for products such as drive trains, body panels, dashboards, and seat assemblies. The suppliers have only weeks to examine the drawings, read the specifications, and compile a comprehensive bid package that includes piece part prices, tooling and fixture costs, material costs, and capital expenses. Very often they must commit to a price to supply hundreds of thousands or even millions of parts where any overlooked requirement or faulty estimate could have crippling financial implications.

As soon as the supplier is notified that they have been awarded the business it becomes the responsibility of the suppliers' Program Management Team. This team is a group of highly experienced engineers who are typically organized by specific OEM customer. They own this piece of business or program from the day of the award through at least the start of production—often a period of 6 to 9 months. The Program Manager (PM) will be the principal liaison with the customer while also directing a virtual team of dozens of people in design and manufacturing engineering, tooling, quality, procurement, and production. During this period, the supplier must design production processes, develop and test tools and fixtures, create work instructions and test specifications. They must comply with all the OEM's mandated Advanced Product Quality Planning (APQP) and Production Part Approval Process (PPAP) requirements.

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[1] Research for this commentary was partially supported by Actify.

The PM is expected to keep the customer satisfied, monitor costs and budgeted capital, while ensuring that the Tier-1 hits the start of production date and makes the expected profit.

Automotive Tier-1 suppliers acknowledge how critical Program Management is to their success. As evidence, senior management often holds weekly meetings to review program status. Despite its critical nature, and the fact that individual PMs may be running 5 to 15 different programs simultaneously, suppliers have invested little in IT support for Program Management. Most suppliers use home-grown spreadsheets and file management systems, project management software, or in some cases their enterprise PLM system, to try to keep track of all the tasks and massive amount of data associated with programs. The PM's use email and messaging apps to try to coordinate all the people and departments, and nearly all struggle with document version control in an effort to ensure that the design models and drawings that departments are using reflect the most current revision.

Program Management teams have evolved their processes over many years to plug the gaps in their program-based manufacturing workflow. These gaps arise because program-based manufacturers, including automotive suppliers, commit to their customers before they have undertaken the product design and production planning processes that precede manufacture and shipment. During this critical launch and development period, ERP systems generally offer little or no operational support, leaving suppliers without their primary option for operational planning and control.
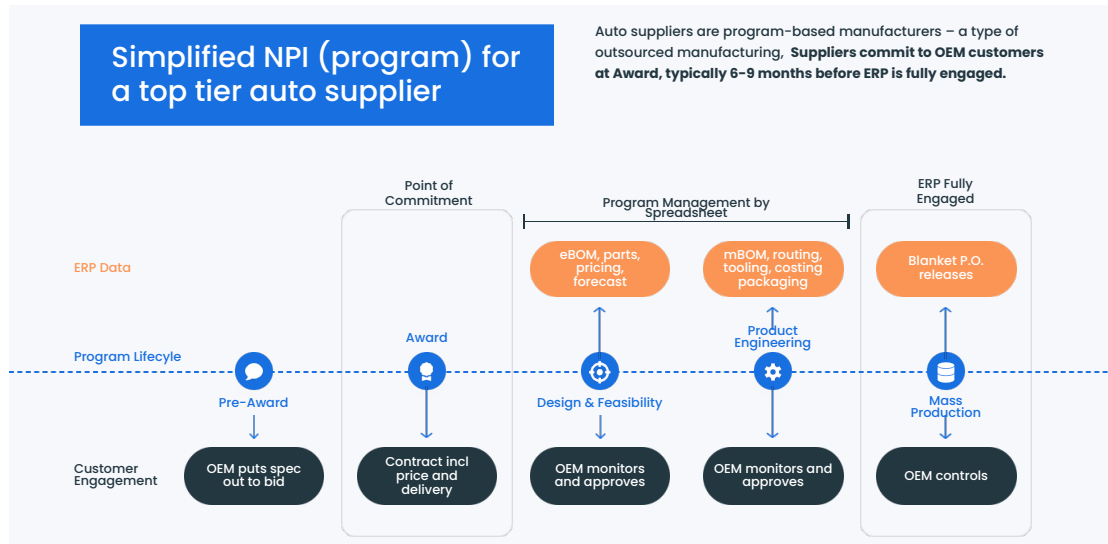

Figure 1—Simplified New Product Introduction Workflow
(Courtesy of Actify)

Automotive suppliers out of necessity have put in place a workflow to address these challenges, yet it demands considerable resources to update and manage. The manual effort required makes them inherently vulnerable to human error. The level of risk is compounded by suppliers' dependence on the few staff members who have the familiarity and understanding of the complex spreadsheets that comprise their systems.

CIMdata believes that replacing current implementations with something like Actify's APM suite presents a compelling opportunity. Adopting an enterprise-class software solution that is purpose-built for program management can unlock improved productivity, reduced risk, and drive performance gains including better win rates, improved customer satisfaction, and higher program profitability.

Actify has been developing custom program management solutions for several years and is using the experience gained to launch its new, packaged APM Suite. The Actify APM suite enables suppliers to retain their proprietary business development and program management phase-gate processes, as well as maintaining the familiar folder structures they use to manage customer and program files and data. Enterprise-class technology and purpose-built design bring a new level of team coordination and work automation that crosses departments and information silos.

During pre-award stages, suppliers can save time with easy access to prior bid history to support additional diligence and customer engagement. Following award, the productivity gained by the PM team enables the supplier to absorb increasing program volume with existing resources, and the advanced capability of APM raises performance across the enterprise, leading to better outcomes.

Underpinning the Actify APM Suite is the Actify Centro platform, which utilizes graph database technology to gather any type of customer and program information and maintain the relationships between them. Centro manages and automates the transfer of files and data between APM and the supplier's CAD, ERP, PLM, and other systems so that it can serve as a repository and single source of truth for the cross-enterprise program management team.

In addition to pre- and post-award functional modules, the Actify APM Suite provides program analysis that uncovers performance insights and captures institutional program knowledge that is then passed to successor teams separated by time or location. In this way, Actify APM can help suppliers apply lessons learned and capture expertise, and importantly, draw on history when applicable to avoid mistakes and reinforce best practices.

Program managers are among the most critical and skilled resources in the automotive supply industry. They are increasingly overtaxed and from an enterprise software perspective, largely overlooked. CIMdata believes that Actify can greatly benefit Automotive Tier-1 suppliers in their business efforts.

About CIMdata

CIMdata, an independent worldwide firm, provides strategic management consulting to maximize an enterprise's ability to design and deliver innovative products and services through the application of Product Lifecycle Management (PLM). CIMdata provides world-class knowledge, expertise, and best-practice methods on PLM. CIMdata also offers research, subscription services, publications, and education through international conferences. To learn more about CIMdata's services, visit our website at http://www.CIMdata.com or contact CIMdata at: 3909 Research Park Drive, Ann Arbor, MI 48108, USA. Tel: +1 734.668.9922. Fax: +1 734.668.1957; or at Oogststraat 20, 6004 CV Weert, The Netherlands. Tel: +31 (0) 495.533.666.