

# Advanced Product Quality Planning (APQP) solutions for Automotive supply chain

## Overview

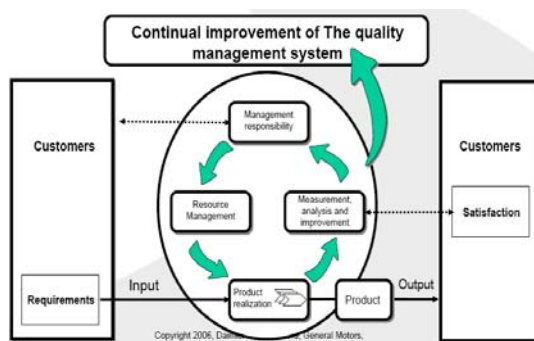
The APQP Solution provides an efficient way to maintain compliance to standards by managing a company's Advanced Product Quality Planning process and documents. It enables a company to leverage the APQP Process to drive quality improvements into product design and manufacturing. It Improve Process Efficiency and Tracking and Reduces Administrative Burden required to comply with the APQP Process

## Automotive Industry Challenges

The current downturn has put down more challenges to Automotive Industry like reduction in the Purchase of Material Costs, Development Costs while consistently improving the quality. Lower headcount and Outsourcing of Design and Manufacturing Activities. Need to collaborate between project design teams – reuse lessons learned and innovate continuously to Improve Content to Keep advanced Product Portfolio.

## Quality Management Challenges

APQP serves as a guide in the development process and also a standard way to share results between suppliers and automotive companies. We have a greater challenge in adhering to the standards and complete the process.



ISO 9001:2000 Model of a Process-Based Quality Management System

## APQP Solution Process & Pains

Manual and administratively cumbersome management of APQP process and documents to maintain compliance to AIAG & OEM standards

- Administrative burden on each program is large, driving up program costs

- Cannot track, reuse, or leverage data from one program to the next neither cannot easily share data across geographies
- Difficult to monitor and control the process and nearly impossible to identify & resolve bottlenecks
- DFMEA and PFMEA are challenging and timely to complete, often resulting in product and process changes during costly periods of development (i.e., during prototype or after)
- Documentation is often completed "after-the-fact", reducing or eliminating the intended benefit of APQP
- PPAP submissions are often much later than the completion of PPAP, thus delaying the timing of tooling payments and affecting cash flow

## Conclusion

The APQP solutions track, re-use and leverage existing data by providing increased visibility, and thus collaboration, made available through the central management dashboard. Benefits include:

- On-time and on-budget introduction of new vehicle programs
- Improved communication with cross-functional teams including suppliers
- Improved decision making to work-in-progress tasks and related items such as parts across projects
- Enhanced product quality and customer satisfaction by leveraging the power of APQP as it was intended
- Increased knowledge re-use through reviews of previously completed deliverables such as Failure Modes and Effects Analyses (FMEA), DVP & Rs and Control Plans; and
- Lower design change costs as FMEAs can be completed faster and earlier in the development process, when changes cost less.

Additionally, the ENOVIA solutions can manage related processes, such as PPAP (Production Part Approval Process), as well as providing a vehicle for collaboratively working with suppliers to effectively execute components of APQP/PPAP.

## Benefit Highlights

- DFMEA and PFMEA can be completed more quickly enabling them to be used to positively affect change early when changes cost less.
- No more after-the-fact creation of documentation
- Track, reuse, and leverage data from one program to the next program.
- Streamline Processes and Make Routing Decisions
- Identify & resolve bottlenecks
- Monitor & Control the Quality Process
- Improve Cash Flow by enabling PPAP to be completed sooner, thus improving the timing of tooling payments
- Fewer personnel required to create and maintain the paperwork freeing up resources to focus on value-added activities
- Faster updates and communication of changes while reducing the effort required
- Access common information from anywhere in the world