

## DEFECTS PER MILLION (DPM) AND WARRANTY RISK MITIGATION PROGRAM

CGN teamed with our client to develop a database tool that allows for modeling the controls and their potential effects.

### Business Problem

With significant amounts of new content in new product introduction, our client did not have an accurate quantitative method for defining, recording, analyzing and mitigating risk in the design and manufacturing processes located both internally and for parts sourced from suppliers. The penalties for non-conformance included cost penalties for the client, delayed time to market, and jeopardizing the client's quality image. The client needed a sound quantitative risk mitigation strategy that could be extended across the supply chain to create visibility and collaborative control of risk in new product introductions.

### CGN Solution

A database tool based on the Automotive Industry Action Group (AIAG) Failure Modes Effects and Analysis (FMEA) was developed that allows for modeling the controls and their effect on predicted warranty indexes (design) and predicted DPM (process). The tool then creates an implementation plan (Risk Mitigation Plan) based on weighing the benefits and cost of controls. Consequently, enabling the client to better coordinate and communicate the implementation of controls and continual on-going improvement. The team focused on suppliers who were designing and/or manufacturing new content, recently changed processes, or moved to new locations and had historical quality problems. The results enabled the client to prioritize projects to determine short-/long-term benefits and impacts.

### Customer Benefit

Supplier developed Risk Mitigation Plans on DPM predictions enabled them to understand the capability of their processes and have adequate controls in place to protect the client. In 18 months, the supplier DPM predictions had an 87% improvement as a result of the risk mitigation database tool. These same suppliers did not have any spills during the launch phase whereas several issues were reported in the previous launch.

### SCOPE

*Assist high risk suppliers in determining DPM predictions and strategies to mitigate risk for a new model launch*

### BUSINESS DRIVERS

*Warranty and DPM reduction;  
improved product launch;  
supplier partnership;  
APQP/NPI metrics; and  
reduced program costs*



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