THROUGHPUT IMPROVEMENT PROCESS

Overview

To better understand the current trends throughout the automotive field and gain a competitive advantage over the industry leaders. Team of industrial engineers tasked with performing a market analysis of the major OEMs in the world, as well as gathering relevant research on throughput improvement. With both of these, the team will be able to thoroughly analyze the data and provide the sponsor with accurate and modern “best practices and recommendations” regarding TIP.

Objectives

To fully understand the industry’s current trends, an in depth questionnaire focussing on TIP strategies by shop type within the categories of people, process, and technology. The questionnaire was designed specifically to gain an understanding of the industries’ methods, tools, systems, key metrics for overall equipment effectiveness, and process management techniques. Fifteen articles highlighting the industry’s top TIP strategies were gathered and analyzed to form recommendations on the top processes to adopt for optimal efficiency.

Approach

- Gather insight on General Motors and their current TIP system
- Initial research of TIP from external sources (scholarly articles, thesis, consulting firms, etc…)
- Merge information from GM and external sources to create TIP questionnaire
- Tailor research to questions generated from questionnaire
- Analyze results from questionnaire *Note: pivot strategy engaged
- Focus our efforts on research and recommendations for “industry best practices”
- Summarize all results in a detailed, informative manner. Present to professor and sponsor
- Showcase results to Penn State faculty/students/others

Outcomes

- Minimal budget expense
- Best Practices from Operations Research will reduce overall process time
- Throughput Improvement Process Questionnaire to be used by GM internally
- Initial relationship with major OEMs started
- Project determined that external use of questionnaire results in minimal return
- 12-month internal use of questionnaire and its associated analytical tools on the fast-growing website: surveymonkey.com
- Key recommendations of “best practices” in three main segments of the throughput improvement process: People, Process, and Technology