

Project Management for Malaysian Automotive Small-Medium Enterprise (SME)

Muhammad Zaidi bin Mohtar and Norli binti Umar

Techno Brozek Enterprise, Melaka, Malaysia

E-mail: technobrozek@gmail.com

Created on: 23-January-2020

Abstract. Project Management is managing a group of people called as project team which assigned to complete project milestones according to project timeline. In this article, the authors make a summary how Malaysian automotive SMEs manage their project in comparison to Multinational Companies (MNC).

Keywords: Project Management, Project Team, Project Timeline, Business Operating System

1. Project Team

The indicators of success for a project in automotive industry when project team can manufacture their product with zero product safety issues, zero customer rejection, meet 100% delivery time and meet 100% target Return of Sales (ROS). These indicators called as Launch Performance Metrics as inside Table 1 where performance measures from Start of Production (SOP) date until 90 days. A project launch flawless when meeting these target indicators. To meet these indicators, need a project manager or program manager to monitor all milestones target must complete on-time with desired quality. A project team lead by program manager consist 5-10 peoples basically come from several departments; purchasing, engineering, manufacturing, finance, material, quality and launch. Their project tasks begin from Request for Quotation (RFQ) stage until after 90 days of SOP. After that, project will hand over to production team to continuous mass production until End of Phase (EOP). For SMEs, project team concept is same with Multi-National Companies (MNC) but smaller project team members and sometimes head of department also be as a project team. Normally, Managing Director (MD) acting as program manager for a project. This will continuous until an SME gain more projects and start hire more peoples.

Table 1 Launch Performance Metrics

Indicators	Results
Safety	0 accident
Rejection	0 RPPM
Delivery	100% on-time
Financial	100% ROS

All indicators above must be measured 90 days start from customer SOP

2. Project Timeline

Program manager will start prepare a project timeline during RFQ stage and continuous update until SOP. In project timeline divided into 2 portions; customer events and internal events. The internals events are based on customer events requirements and deadlines. This information must provide by customer during RFQ stage. Program manager needs to conduct RFQ Kick-Off meeting to explain

with project team and get inputs from them how to achieve target cost and deadlines. Next, project team members will do feasibility studies and give feedback to program manager during follow up meeting. Based on feasibility study report, program manager will draft a project timeline and check either start on-time or not based on customer SOP using reverse time method. If current RFQ given date is start on time, need to propose when target Letter of Award (LOA) date must receive from customer. If not start on time, program manager needs to discuss with project team how to minimize internal event lead times. It's crucial to create a deliverable timeline during RFQ stage.

MS Project is a common software used by program manager to draw a project timeline but costly to purchase and update license annually. Thus, SMEs normally using MS Excel or open-source software like Project Libre. MS Excel still widely used by Malaysian automotive companies since the software already build-in for any device using MS Window as operating system.

Basically, customer events are starts from RFQ, LOA receive, project kick-off, development phase, prototype phase, series of production trial, pre-production and SOP. Prototype will be built offline after development phase completed. It's also supported by numerical simulation validation to predict actual performance. Then, do actual validation process such as performance \ endurance testing and appearance check to confirm actual prototype performance. If the prototype meets the design intern, then can start series of production trial which objective to stable new production assembly process. For pre-production, product quality is SOP level but quantity produce are small. SOP production rate must achieve RFQ target production rate in Jobs Per Hour (JPH) . Before start mass production, all Advance Product Quality Planning (APQP) documents must submit and Production Part Approval Process (PPAP) must approve by customer [1][2]. Figure 1 shown example Project Timeline drawn using MS Excell.

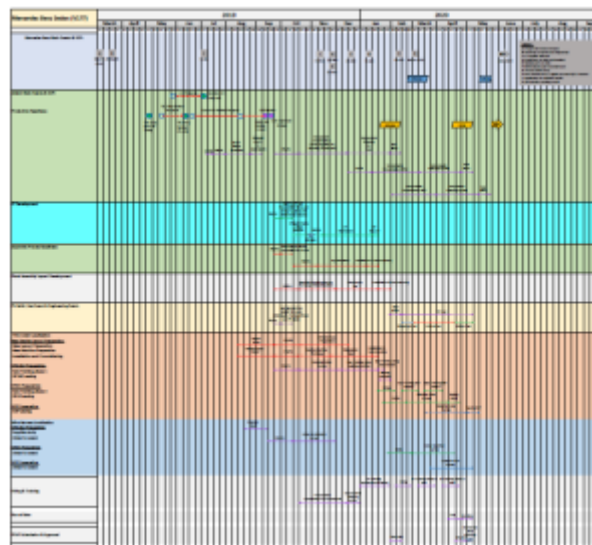


Figure 1 Project Timeline

3. Business Operating System

All automotive car maker and Tier 1 suppliers must obtain IATF 16949-Automotive Quality Management Systems certification from International Automotive Task Force. Meanwhile, minimum requirement for Tier2 suppliers must certified by ISO 9001-Quality Management Systems-Requirements. Thus, those certifications compulsory to obtain as a prove company has standard procedures that full fill the requirements needed in IATF 16949 and ISO 9001 [3][4]. Generally, MNC have established their own business operating system (BOS). It's easier for them to control and update their procedures according to their working environment and business nature. BOS as guideline for all staff to work follow standard procedure. For example, PROTON has PROTON Production System (PPS) [5] and Fiat Chrysler Automobiles has World Class Manufacturing (WCM). Meanwhile, SMEs not have sophisticated BOS like MNC. They develop their own procedures continuously according to customer audit requirements and based on their staff experience working at many automotive companies. Figure 2 shown WCM [6].

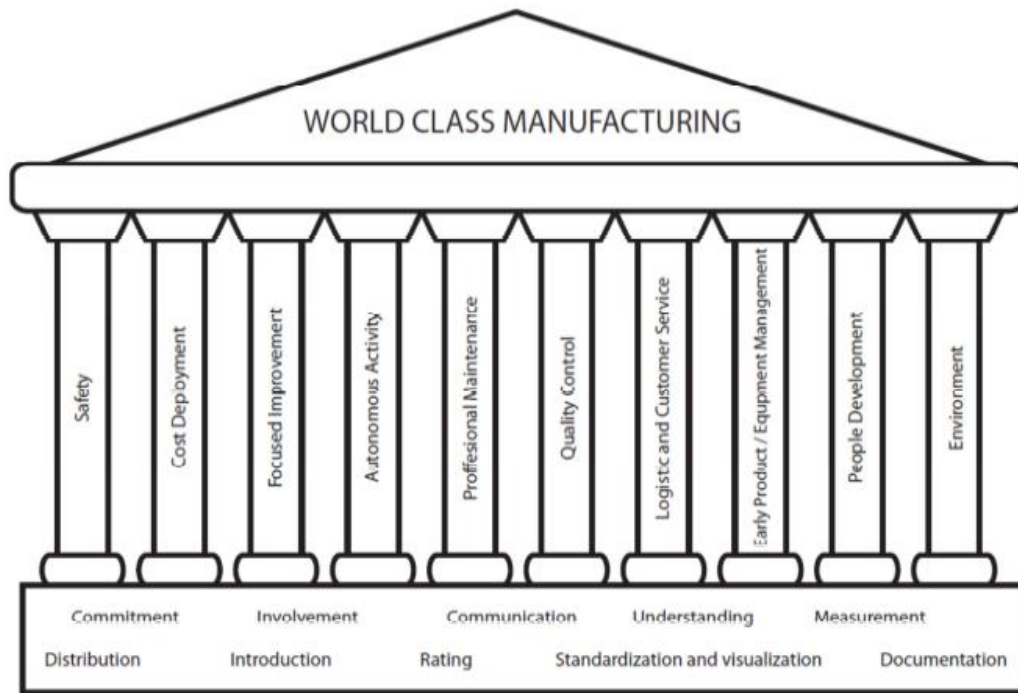


Figure 2 WCM

4. Conclusion

As summary, project management for Malaysian automotive SMEs are cost effective oriented.

Acknowledgments

The present work was fully funded by Techno Brozek Enterprise to support Malaysian automotive SMEs. Any further inquires, can contact at technobrozek@gmail.com.

References

- [1] Wikipedia, 2019. *Advanced product quality planning*. [Online]. Available at: https://en.wikipedia.org/wiki/Advanced_product_quality_planning [Accessed 26 January 2020].
- [2] Wikipedia, 2019. *Production part approval process*. [Online]. Available at: https://en.wikipedia.org/wiki/Production_part_approval_process [Accessed 26 01 2020].
- [3] Wikipedia, 2020. *ISO/TS_16949*. [Online]. Available at: https://en.wikipedia.org/wiki/ISO/TS_16949 [Accessed 26 January 2020].
- [4] Wikipedia, 2020. *ISO 9000*. [Online]. Available at: https://en.wikipedia.org/wiki/ISO_9000. [Accessed 26 January 2020].
- [5] Berhad, P. H. & Berhad, P. H., 2009. *PROTON ANNUAL REPORT 2009*, Shah Alam: PROTON.
- [6] Katarzyna, Ł.-W., 2016. World Class Manufacturing Methodology as an Example of Problems Solution in Quality Management System. *Key Engineering Materials*, 682(February), pp. 342-349.