

Stellantis Production Way

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Stellantis North America, formerly known as Fiat Chrysler Automobiles (FCA), is embarking on a directive to create a new manufacturing system named Stellantis Production Way (SPW). SPW was conceived out of the merger of FCA and Peugeot S.A. manufacturing systems (Stellantis N. V., 2022-a). The two companies had created best practices for the new organizational structure, policies, and procedures. The task was to transfer this knowledge to a common way of manufacturing for its employees. Stellantis has a strategic plan in place through 2030 (Stellantis N.V., 2022-b). The information gained in this research study will likely be the first of its kind documenting and comparing the old system of World Class Manufacturing (WCM) to the new SPW system. The study will benefit other manufacturing industries across the globe that want to improve upon WCM. Companies considering implementing a manufacturing system will obtain further knowledge of the risks and advantages of SPW because implementing a well-documented manufacturing system has achieved best-in-class status for their products (Poor et al., 2016).

Purpose of Study

The purpose of this quantitative study was to benefit Stellantis manufacturing in the Indiana region. A comparison of WCM costs versus implementing SPW in the Indiana manufacturing plants was completed. Stellantis' cost and productivity data at the plant level and globally were explored. J.D. Power quality ratings and Stellantis' annual reports were listed with the positive and negative effects of the new manufacturing system.

This study produced the first scholarly publication to review the Stellantis Production Way. An April 18, 2022, search on several databases did not uncover a publication with Stellantis Production Way. Comparing a known system, WCM, to SPW provided the needed context to evaluate positives and negatives and how this may affect the bottom line. The new knowledge confirmed in this study is the structure of the SPW, the key metrics used in the system, and the method of communication to the employees of the company. The findings demonstrate SPW is a viable manufacturing system that will propel the company's vision and goals forward according to its strategic plan (Stellantis N.V., 2022-b).

Methods

Stellantis generates internal data daily and releases public financial statements quarterly. The five plants located in central Indiana were the source of the internal data. This study provided a sound platform upon which to expand research concerning the Stellantis Production Way. Stellantis continues to make minor changes to this newly developed manufacturing system. Additional financial results are available each quarter, and year-over-year data will provide a long-term look at how this system performs over time.

Findings

This project quantifies the SPW transformation value provided to Stellantis U.S., LLC. Financially, the first full year results were exceptional, with €14 billion in net profit (Stellantis N.V., 2022-a). The improved quality of the Stellantis products was validated through third-party evaluation by J.D. Power. Stellantis has received initial quality awards for its vehicles. The initial quality survey listed rankings by brand for 2020–2021 with Jeep decreasing from problems experienced per 100 vehicles during the first 90 days of ownership from 155 to 149, and Ram from 141 to 128 (J.D. Power, n.d.-a, n.d.-b). The reduction in labor is

small but not insignificant as each plant will utilize two fewer employees, and multiplying that by five plants in central Indiana will yield 10 fewer positions needed.

Implementation

The benefits of implementing the SPW change management plan are evaluated using short-term financials as SPW began implementation in 2021 and continues through 2022. The design methodology uses a statistical approach to the data and should add additional years of data to illustrate trends when available. Stellantis global SPW information is challenging to acquire, but with a few years of operation, data may be easier to research. The SPW system will apply to other automotive companies utilizing WCM. SPW has a few unique directives that other companies may want to adopt.

Further Research Recommendations

The recommended solution is to continue the implementation of SPW at Stellantis. Further research should be conducted as Stellantis fully rolls out SPW during 2022. The second year of financial results can corroborate that SPW does not have a financially deleterious effect on the company's benefit (Stellantis N. V., 2022). Statistical analysis methods can be designed with 95% confidence intervals to validate results further.

Future Research

Additional research can review the KPIs Stellantis has chosen to drive improvements related to manufacturing. An important area to review is potential scope creep on the amount of labor SPW requires for implementation. Has the labor increased? What level of staffing is needed to keep SPW managed well? As time progresses, data should be charted and trends evaluated, as this is one area of unanswered questions. Is the maintenance domain improving its metrics? Have the quality metrics in the customer experience domain shown a positive trend? Has the third-party J.D. Power released another positive report in initial quality? Another promising study would trend each KPI year over year as the data becomes available. Also, Stellantis is striving towards a zero net carbon footprint by 2038. This topic for all automotive companies is worth researching. These topics, plus sustainability and diversity and inclusion as improved practices in business, are topics for further study (Stellantis N.V., 2022-b). The information can be disseminated through various academic channels, including the EBSCO information systems. Additional metrics can be researched to add to the body of knowledge of SPW.

Report Limitations

SPW is in its implementation stage in 2022. Stellantis has rolled out training, but not completed it, to North America, South America, Enlarged Europe, Middle East & Africa, China, India & Asia Pacific global regions. Limitations of the project exist because SPW is not fully implemented. Other restrictions involve limited access to specific personnel during the COVID-19 pandemic. Time and distance constraints can limit interactions. Access to Stellantis personnel is mitigated because the author is employed in one of the facilities. Notwithstanding, Stellantis management has agreed to support this project and will help remove roadblocks.

Generalizability of the Study

The information gained in this research will also benefit other manufacturing industries across the globe. Companies considering the implementation of WCM or SPW will obtain additional knowledge of the risks and advantages of this system. With five plants in the central Indiana region, Stellantis needs to realize the return on investment of implementing a WCM system in its automotive operations. Automotive manufacturers do not know the benefits of SPW, and investment could achieve the exact opposite of what the system was designed to accomplish: reduce or eliminate waste. Finally, companies implementing WCM can review how SPW has achieved a best-in-class for its products.

Conclusion

SPW improves the prior manufacturing system at FCA and Peugeot S.A., now Stellantis. There is a reduction of labor to implement and manage the system. The reporting structure is streamlined as layers of management are removed. Quality has been improved as shown by a third-party survey. Net profits were robust for the first year of the company. The key performance indicators will lead each domain to achieve the needed results in quality, delivery, and cost. By communicating information effectively and focusing on critical metrics, the company can meet its electrification goals and net-zero carbon content (Stellantis N.V., 2022-b).

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