

DT Operations submission assignment 1

by Daniel Tate

Submission date: 11-Dec-2019 10:48PM (UTC+0000)

Submission ID: 115975974

File name: 3131_Daniel_Tate_DT_Operations_submission_assignment_1_84837_770118295.docx (1.44M)

Word count: 3375

Character count: 18544

Operations Management Fundamentals

Critically assess the development and strategic importance of operations management.

University of Wales Trinity Saint David School of Engineering

Daniel Tate 1701938

Motorsport Management and Logistics Level 6

Operations analysis

M6X01290

Word Count: 3008

The Operational Analysis of Rolls Royce Motor Cars Limited



Figure 0.1- Rolls Royce Ghost production line (BMW Group , N/A)

Table of Contents

1.0 Introduction	4
2.0 Fleet Differentiation	5
3.0 Rolls Royce Marketing Mix	5
1 Price	5
2 Product.....	6
3 Place.....	6
4 Promotion	7
4.0 Rolls Royce Performance Objectives.....	7
Quality.....	7
Speed	7
Dependability	9
Flexibility	9
Cost	10
5.0 How can Rolls Royce Improve its operational activities in the manufacturing stage of production?	11
6.0 Conclusion	12
6.0 Bibliography	13

1.0 Introduction

What is operations management? According to the chartered institute of Logistics and Transport:

"Operations management is an area of management concerned with overseeing, designing, controlling the process of production and redesigning business operations in the production of goods and/or services. It involves the responsibility of ensuring that business operations are efficient in terms of using as few resources as needed, and effective in terms of meeting customer requirements. It is concerned with managing the process that converts inputs (in the form of materials, labour and energy) into outputs (in the form of goods and/or services)." (CILT, 2019)

This report will specifically focus on the operational management of Rolls Royce Motor Cars Limited, paying particular interest in customer expectations and quality. The vehicles that Rolls Royce make are renowned as being the pinacol in luxury road transport, with most of the vehicles being specifically tailored to their intended buyer. According to an article published by Ray Massey, *"Rolls-Royce has glided to record sales of 4,107 super-luxury cars - the highest in the marque's 115-year history – boosted by super-rich customers commissioning bespoke personalised limousines like works of art."* (Massey, 2019) Although many vehicle brands are seeing a decline in both production and sales of vehicles, Rolls Royce are exceeding expectations, especially in today's harsh global market. Although many people are now looking for a cheaper, more efficient alternative when upgrading or changing their vehicle, others are willing to pay above what would be deemed normal for any mode of transport. In addition to exploring how the range of vehicles being produced are tailored to suit the needs of its varied customer base, particular attention will be paid to the five operation performance objectives. These are;

1. The Quality- is the final product to the required or set standard?
2. The Speed- How fast is the product being produced?
3. The Dependability- Is the product which is being ordered dependable? (e.g. will it be delivered on time?)
4. The Flexibility- Can the product be easily changed to suit the requirements of the buyer?
5. Cost- Is the product cost effective? (e.g. is the product worth the money?)

2.0 Fleet Differentiation

One of Rolls Royce's competitive strengths is the variety of vehicles that it is producing at its Goodwood Factory. Rolls Royce currently produces seven models that provide a varied product experience, depending on the drivers or passengers desired outcome. A prime example of this is the clear difference between the Rolls Royce Cullinan (4X4 Capable off-road vehicle) shown in figure 1.2 and the Rolls Royce extended wheel base phantom (Commonly chauffeur driven) shown in figure 1.1 below.



Figure 1.1, 1.2, Images acquired from the online configurator (Rolls Royce Motor Cars, 2019)

Rolls Royce is well known for its attention to minute details, such as the infamous starlight headliner. Each constellation in the headliner is completely unique to its owner, making it a very sought-after and bespoke option.

3.0 Rolls Royce Marketing Mix

To understand the Rolls Royce's brand, the marketing mix can be used. The marketing mix looks at the price, the product, the place and the promotion of the company and its products.

1 Price

Rolls Royce prides itself on its customer base and repeat purchases. Rolls Royce's intended target market consists of wealthy and high-class individuals, which in-turn allows for a premium pricing strategy. Rolls Royce sells vehicles to affluent personnel who pay particular attention to status and brand association. A common informal phrase is "The Rolls Royce of X" showing how niche and defined Rolls Royce is, not only as a car manufacturer but as a brand. However, the average age of ownership has fallen over previous years. According to Forbes's article, the average age of ownership is in the 'mid forties', showing that there is a surge of younger buyers compared to previous years. The director of design, Giles Taylor, commented on this new trend, stating "We've attracted a younger buyer on the back of a complete range of new cars – the Ghost, Wraith and especially Black Badge which has been a phenomenal success. It has also been because of how we tell our brand story. And yes, absolutely. As our demographic around the world becomes younger, as much as they like to

be driven in a Phantom, they also like to drive them.” (Banks, 2018) This article shows that Rolls Royce quickly realised that there was a market available that would be more suited to a younger generation but could still conform to its identity of being a prestigious and opulent brand.

2 Product

Sir Henry Royce once said *“Strive for perfection in everything you do. Take the best that exists and make it better. When it doesn’t exist, design it.”* (BMW Group, 2019) This quote is still relevant to this day. Rolls Royce is the pinacol in refined luxury and bespoke craftsmanship, making their products not only individual works of art, but also very expensive, as previously mentioned. Rolls Royce uses this bespoke craftsmanship to market their vehicles. On the BMW Group Website it states, *“that it takes 60 pairs of hands more than 450 hours to design, construct and craft each Rolls-Royce Motor Car.”* (BMW Group, 2019) Although quality doesn’t have a time scale, Rolls Royce believes that slowing down its operational time and reducing unnecessary work load on its staff members will result in less faults occurring during the production stage.

3 Place

Rolls Royce started the production and operation of its vehicles from its Goodwood headquarters, based in West Sussex, in January 2003. Its logistics and technology centre are based in Bognor Regis and opened its doors in 2015. Rolls Royce is known for being a British brand, but in 1998 Rolls Royce was sold to Volkswagen. However, the BMW Group held the right to name its vehicles and, more importantly, ownership of the pendent that is located on every bonnet of every Rolls Royce, which is named ‘the spirit of ecstasy’. Rolls Royce (BMW) didn’t produce any new vehicles under the Rolls Royce brand until they released the Phantom 7 in 2003.

Rolls Royce stated in a press release in 2017 *“Rolls-Royce Motor Cars has today announced a highly successful 2017, with a total of 3,362 cars commissioned by customers in almost 50 countries around the world. This result was achieved despite the absence of Phantom from the market and unsettled market conditions in the important Middle East market.”* (Rolls Royce- Press release , 2018) This press release shows that Rolls Royce already has a strong global market position and also highlighted a large influx of sales in the Asian market, making this one of the key continents in which they wish to expand into more predominantly.

As of March 2018, Rolls Royce has 138 dealers in more than 50 countries worldwide. (Rolls Royce Motorcars, 2018) These figures show the large market in which Rolls Royce sell its vehicles in.

4 Promotion

Unlike other vehicle manufacturers, Rolls Royce has a select market. Rolls Royce tends to promote its vehicles through direct marketing strategies. This was observed in March of 2013 when the Rolls Royce Wraith was released. According to an article published on campaignlive.co.uk, *"Rolls-Royce launched a campaign for the new Wraith sports car. The activity included a two-minute noir-style film by Partners Andrews Aldridge."* The article goes on to explain that *"The film was shown at exclusive events for Rolls-Royce owners in London, Miami and Los Angeles, and has clocked up 267,000 views on YouTube."* (Ridley, 2013) The previous points made show how Rolls Royce has a special bond with its customers and encourages repeat purchase through its marketing strategies.

4.0 Rolls Royce Performance Objectives

Quality

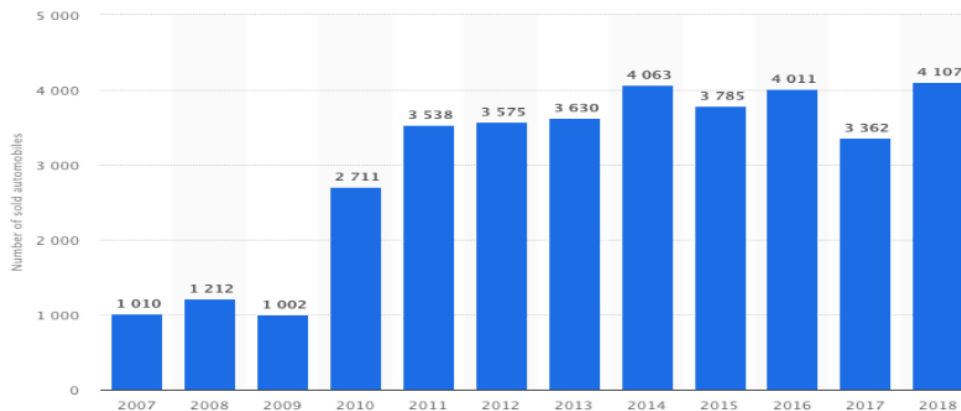
Rolls Royce is renowned for its quality, not only in its craftsmanship, but also in its design and customer care. Rolls Royce prides itself on its attention to detail. This can be seen not only in its vehicles body design and interior, but also in its factory's architecture and highly trained skilled workforce. In terms of performance objectives, Rolls Royce would overwhelmingly choose quality as its main asset. As previously stated, quality is not only shown through the vehicle itself, but through its marketing strategies. Rolls Royce showed a concept of its first ever SUV at the Frankfurt Auto Show in 2015. In May 2018 Rolls Royce launched this first ever luxury SUV, named the Cullinan, ready for market in early 2019. After the release of the Cullinan, Rolls Royce moved a collection of its Cullinan models to Wyoming in the United States. They were sent to take part in the 'luxury event of the year', named 'Rolls Royce's Global Press Drive'. This event saw 200 of the world's leading journalists and influencers critically analyse and inspect the new vehicle. Rolls Royce knows the quality of their products and welcomes criticism by those with a very large consumer reach or fanbase. These influencers/journalists mostly filmed their experience of the event and posted it on social media. This is a good example of how Rolls Royce uses strategic advertisement to reach and engage with a large audience of potential buyers. Social media plays a key role in informing the public of its quality in all aspects of the production of their vehicles and benefits of owning one of their cars.

Speed

Rolls Royce's operational speed is extraneous and is not a key performance objective. In an article by CAR Magazine, published in 2016, it comments that *"...the two assembly lines – one for Phantom, one for Ghost and its Wraith and Dawn derivatives – move incredibly slowly. In a normal car factory, the 'takt time', or the interval between the start of production of each new unit, and thus the time the car spends at each build station, is measured in seconds. On the Ghost line it's an hour, and on Phantom, two. There is an oddly serene atmosphere. The cars are held in rotating cradles, not unlike a normal factory, and are conveyed between the stations on a line. But unlike a normal plant, nobody*

seems to rush, and the lack of machines means you can hold a conversation without raising your voice." (Oliver, 2016) This article goes on to state that all the noisy manufacturing tasks, such as the construction of the engines and body, are imported from a BMW factory based in Germany. This resultantly allows for better working conditions for its skilled workforce.

There is a direct correlation between sales figures and the time it takes to produce each vehicle. Advancements in Rolls Royce's production line ultimately improves the company's total sales. Figure

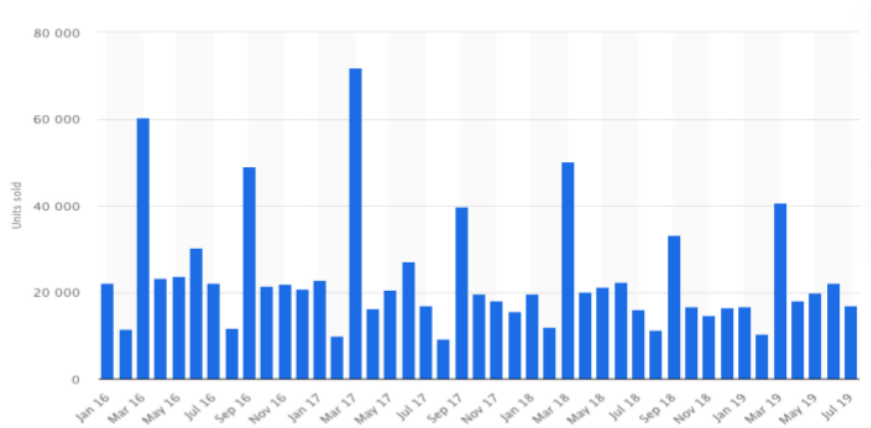


Worldwide sales figures (after registration) for Rolls Royce motor vehicles since 2007.

Figure 2.0- (I. Wagner, 2018)

This chart shows that there is a positive correlation of sales for Rolls Royce over the previous 11 years, with a dip in sales in 2009, 2015 and in 2017. When comparing another prominent car manufacturer, such as Ford UK, whose total sales breakdown are shown in figure 2.1, there is a distinct difference in the amount of sales of vehicles, but the quality and precision of Rolls Royce's products are much more refined and are a premium product resulting in production times being significantly longer due to the intensity of its uniqueness, hence the number of vehicle sales is less but more expensive. The chart below shows the sales figures (after registration) of Fords in the UK. In July 2019, according to this graph, total sales amounted to 17,049 units, which is 4.088 times the number of vehicles Rolls Royce produced in the whole year worldwide in 2018. (There is a distinct spike in the graph during certain periods of the year, this is due to the increase of sales during new registration periods.) Ford, however, manufactures low quality, fast selling vehicles (in comparison to Rolls Royce) at an affordable price for

the general public, so with regards to speed of product output, Rolls Royce is comparably successful in production as it bases its core values on quality rather than quantity.



Figure

2.1- Breakdown of sales figures for Ford UK (Sönnichsen, 2019)

Dependability

In the automotive manufacturing industry, the dependability objective normally has a direct correlation to the order fulfilment time (lead time) and how quickly the customer can receive the product. For example, when a customer buys a new mass-produced Ford model such as the Focus, the buyer would expect to wait around 5-8 weeks, depending on how many options are ticked on the specification list. Rolls Royce, on the other hand, doesn't follow the same fashion, but the customer is aware of Rolls Royce's integrity to the vehicle and often willing to wait longer for a better-quality product.

Flexibility

Flexibility is one of Rolls Royce's key performance objectives. The brand is well known for its customizable features, with the website stating that there are over 44,000 colours available. Rolls Royce goes that one step further. What they offer their clients is the opportunity to create and commission one-off colours, making the car totally unique. Car magazines article summarises Rolls Royce's flexibility in production perfectly. It explains *"If you struggle with the notion of a new car costing that much, you need to come here and witness the skill of the staff who will line your boot with alligator if you wish and execute (almost) any other request you might make with infinite patience, and who won't give you your car unless it is utterly perfect. One custom paint-job took 18 times longer than average."* (Oliver, 2016) Rolls Royce only uses robotics in the raw stages of the production, with its engine and body manufacturing being outsourced to BMW who supply these components. The only time robotic integration is implemented in its Goodwood facility is in the paint stage, where robots apply a base paint colour. It is then passed on to a skilled autobody paint technician who finishes the final paint scheme of the vehicle, which in-turn upholds their social image of producing hand crafted vehicles.

In 2015 Rolls Royce opened the doors of its technology and logistics Centre in the town of Bognor Regis. The centre which located 8 miles from its main Goodwood site, plays a key role in the production of its new vehicles. The centre allows Rolls Royce to take both a lean and agile approach to its production line. Being both lean and agile allows for minimal wastage but at the same time allows for a more flexible approach to meet its strenuous customer demands. The centre was opened to allow for future expansion of operations. The Technology and logistics centre played a key role in the design and prototyping of the 2018 Rolls Royce Cullinan, which is now well known as being one of the most expensive and luxury production sports utility vehicles to ever hit the market.

Cost

The Starting price of a Cullinan according to TopGear Magazine is “£276,000” (Top Gear Magazine, 2019) in comparison to the Bentley Bentayga (its Luxury SUV counterpart) with a starting price of £133,00, the Cullinan is vastly more expensive. Rolls Royce is renowned as being one of the most expensive car manufacturers in the world, this is not only because of the exquisite materials used in the production of the interior, but also its skilled craftsmen and women that play a key role in specific segments of the production line, an example being the painstaking task of painting the coachline or more commonly known as a pinstripe, it stretches up to 6 meters down the side of the vehicles . The coachline which is shown in figure 3.0 below is hand painted by Mark Court, who is the only person responsible for hand painting these vehicles within the company.

The car is nearly all hand crafted (as stated in the product section of the marketing mix), and with this car being hand crafted, it resultantly comes with a large labour cost, which is only one of the reasons for Rolls Royce Products exorbitant price tags.



Figure 3.0 – Mark Court hand painting coach lines on a Rolls Royce vehicle.

5.0 How can Rolls Royce Improve its operational activities in the manufacturing stage of production?

Rolls Royce has always had the same views about its operational management procedures. Rolls Royce has built its brand around using both the best materials and the best skilled workforce available in the automotive industry. The downfall to this however is the slow rate of production, which resultantly means a lower rate of total sales. However, this could be a positive for customers as it increases the cars rarity factor. Another way Rolls Royce can improve its operational activity is implementing more robotic integration and automation onto its production line. On the other-hand Rolls Royce has always stuck to its principles of producing hand crafted products, so therefore implementing more automation into the production line, would stray away from the history of the brand.

6.0 Conclusion

Rolls Royce operates its production and manufacturing stages differently to say a larger scale operation such as its parent company BMW, which take a more automated approach to manufacturing. Although Rolls Royce has developed its brand identity as being one of the leading manufactures in the automotive industry, it has stuck to its historical routes, with nearly every part of the car being handcrafted in its Goodwood facility. This report has focused specifically on Rolls Royce's operational performance paying particular attention to quality, speed, dependability, flexibility and cost. This report has also focused on identifying the marketing mix of Rolls Royce, this is to ensure that the reader has clear overview of how the company operates rather than focusing on just the performance objectives. Rolls Royce pays particular attention to two performance objectives, the first being quality and the other being flexibility. As Rolls Royce is the industry leader in interior and exterior bespoke design, continuity in communication between Rolls Royce and the customer is key, this is to ensure that only the perfect product is released from the factory and conforms exactly to the needs and wants of the customer.

6.0 Bibliography

- Banks, N. (2018, 01 04). *Insight: Rolls-Royce Reveals How To Build A Modern Luxury Car Brand*. Retrieved from Forbes: <https://www.forbes.com/sites/nargessbanks/2018/01/04/rolls-royce-modern-luxury-car-brand/#29fcf22e10cf>
- BMW Group . (N/A). *SOPHISTICATED LUXURY IN PERFECTION*. Retrieved from BMW Group: <https://www.bmwgroup.com/en/brands-and-services/rolls-royce-cars.html>
- BMW Group. (2019). *Rolls Royce MotorCars* . Retrieved from BMW Group: <https://www.bmwgroup.com/en/brands-and-services/rolls-royce-cars.html>
- CILT. (2019, N/A N/A). *What is Operations Management?* Retrieved from The Chartered institute of logistics and transport : <https://ciltuk.org.uk/About-Us/Professional-Sectors-Forums/Sectors/Operations-Management/What-is-IOM>
- I. Wagner. (2018). *Worldwide sales volume of Rolls-Royce automobiles from 2007 to 2018*. Retrieved from Statista: <https://www.statista.com/statistics/267243/worldwide-sales-volume-of-rolls-royce-automobiles/>
- Massey, R. (2019, 01 10). *Rolls-Royce achieves record sales in 2018 and is boosted by super-rich customers commissioning bespoke luxury cars like works of art*. Retrieved from This is Money : <https://www.thisismoney.co.uk/money/cars/article-6574159/Rolls-Royce-achieves-record-sales-2018.html>
- Oliver, B. (2016, 10 12). *Inside Rolls-Royce: 800 hours and the job's a good 'un*. Retrieved from Car Magazine : <https://www.carmagazine.co.uk/features/car-culture/800-hours-and-jobs-a-good-un-inside-rolls-royce-car-april-2016/>
- Ridley, L. (2013, 05 23). *Rolls-Royce kicks off global creative pitch*. Retrieved from Campaign: <https://www.campaignlive.co.uk/article/rolls-royce-kicks-off-global-creative-pitch/1183618>
- Rolls Royce Motor Cars. (2019). *Configurator- Build your rolls royce* . Retrieved from Rolls Royce Motor cars : <https://www.rolls-roycemotorcars.com/en-GB/configure-your-rolls-royce.html>
- Rolls Royce Motorcars. (2018, 03 27). *ROLLS-ROYCE MOTOR CARS ANNOUNCES ANNUAL GLOBAL DEALER AWARD RESULTS*. Retrieved from Rolls Royce PressClub: <https://www.press.rolls-roycemotorcars.com/rolls-royce-motor-cars-pressclub/article/detail/T0279606EN/rolls-royce-motor-cars-announces-annual-global-dealer-award-results?language=en>
- Rolls Royce- Press release . (2018, 01 12). *ROLLS-ROYCE MOTOR CARS DELIVERS OUTSTANDING RESULT IN 2017*. Retrieved from Rolls-Royce Motor Cars PressClub : <https://www.press.rolls-roycemotorcars.com/rolls-royce-motor-cars-pressclub/article/detail/T0277884EN/rolls-royce-motor-cars-delivers-outstanding-result-in-2017?language=en>
- Sönnichsen, N. (2019). *Ford car sales in the United Kingdom (UK) from January 2016 to July 2019*. Retrieved from Statista: <https://www.statista.com/statistics/300381/ford-car-sales-in-the-united-kingdom/>
- Top Gear Magazine. (2019). *The Top Gear car review: Rolls-Royce Cullinan* . Retrieved from Top Gear : <https://www.topgear.com/car-reviews/rolls-royce/cullinan>

