Bridgestone Analytics-Driven Innovation

Didem Bulut Aykurt
06/11/2023
MIS542-Business Analytics

Dr. Emmanuel Tsukerman

Bridgestone: Technology and Product Innovation for Maximizing the Tire Life

- Bridgestone is a global kingpin in tires, rubber, chemical products, sporting goods, and renewable for use in various products.
- The inflation force to minimize resource of fuel what is more inflation pressure labor-intensive process too complex or expensive to another piece of equipment by operators.
- Serious tire problems arise, so the company created applications to maximize the tire's lifecycle and found a solution to any issues on time with the latest IoT and Cloud Technologies.

Bridgestone Produce Analytics to Support Businesses

Bridgestone is a full-service tire manufacturing and maintenance company that creates an online platform to solve their challenge problem. They put the data and digital solution with:

- tire pressure and temperature with a level of accuracy
- Each step of the retreading process
- Tire inspection, usage, and tire selection and maintenance

Bridgestone’s Innovation Business

- Tirematics uses sensors to measure the temperature of tires and air pressure for solutions for yard management.
- The system automatically alerts the service manager and drivers via email or SMS when unusual tire air pressure or temperature is disclosed.
- BASys is a company of digital applications that collects data for customers to make valid and knowledgeable decisions.
- Toolbox is a digital platform to accumulate data for tire commercial fleet operators.

Tirematics

- They used the sensor to monitor tire pressure and temperature by the actual time with IoT and Cloud technology to alert customers and collect data to improve productivity.
- The solution of Tirematics elucidates tire information remotely that helps to check tire pressures more systematically, so tires can be used for a long time with the best performance.
- All the data driving reduces the number of tires replacement and decreases operating costs such as fuel and tire expenses for fleet customers.

Toolbox

The Toolbox manages customer information such as equipped tires and customers' bus and truck tiers during tire inspection results, and the accumulated data help optimize overall;

- ✓tire usage condition,
- ✓tire selection,
- ✓maintenance practices,
- ✓improve tire development cycle and field productivity.

Bridgestone Business Models

- All of Bridgestone's technology systems help collect data to bring customers' needs and market products. The company created a model to improve its potential. Some of the models are outlined below.

1) Situation Analysis identifying order to forecasting, including past, present, and future aspects.
2) SWOT Analysis is Strengths and Weaknesses, Opportunities and Threats helps to understand the current state has the reach and focus move forward the future.

Predictive Maintenance Analytics

- Predictive analytics provide significant productivity and efficiency for customers.
- Bridgestone builds value customers, essentially global fleet and OEM customers, by merging tire analytics to better understand tire wear and casing health to maximize tire retreading and notify when a tire needs maintenance.
- Online platform and analyze tire data in real-time as part of a fully desegregated vehicle ecosystem.

Bridgestone called “Digital Solution Center”

- Analytics and tire data management improve planning, ordering, maintaining, tracing, and decreasing downtime, automatic notifications, and remainders for inspection duties.
- They manage and analyze customer information and numerous tire information like inspection results and usage data process of a product digital tools to help improve customer productivity.
- Collecting real-time air pressure and temperature of tire data to know the right time to eliminate any serious problems arise.
- Aim to step up to global growth and formation of digital solutions the digital assets.
- Also, the company provides manufacturers with a wide range of products in over 150 nations and localities worldwide.

References

- Degraeve, Z.& Schrage, L.,(1997). A Tire Production Scheduling System for Bridgestone/Firestone Off-The-Road. https://pubsonline.informs.org/doi/abs/10.1287/opre.45.6.789
- Taoprayoon, S.,(2004). Marketing Strategies for Bridgestone's Tire Operation. https://repository.au.edu/server/api/core/bitstreams/591760c9-e523-45a2-8f1b-c40c1c950e55/content
- Bridgestone,(2017). Bridgestone introduces "Toolbox," a digital platform for mobile field service. https://www.bridgestone.com/corporate/news/2017112801.html
- Automativeworld,(2016). Bridgestone demonstrates the benefits of Tirematics at IAA. https://www.automotiveworld.com/news-releases/bridgestone-demonstrates-benefits-tirematics-iaa/
- S. Ransbotham,& D. Kiron, "Analytics as a Source of Business Innovation," MIT Sloan Management Review. http://sloanreview.mit.edu/analytics2017
- NCS, (2019). Boosting daily operations with Bridgestone's digital initiatives. https://www.ncs.co/en-sg/knowledge-centre/boosting-daily-operations-with-bridgestones-digital-initiatives/
- Tenn, N.,(2022). Bridgestone Collaborates with Microsoft to Accelerate Advanced Tire Analytics Integration Across Global Portfolio of Connected Tires and Mobility Solutions. https://www.bridgestoneamericas.com/en/newsroom/press-releases/2022/bridgestone-announces-partnership-with-microsoft