BUSA8000 Techniques in Business Analytics Report

IoT in Manufacturing

Student Number:	46739106
Student Name:	Umut Demirhan
Lecturer's Name:	Dr Lin Han
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Introduction

In this report, Impacts of IoT in Manufacturing is discussed. IoT for manufacturing can use machine and equipment data to transform the systems and processes of the contemporary factory setting.In the last century, technological developments and innovation have gained an incredible momentum. In order to compete in the business world, it is very critical today to follow the current technology. Especially in recent years, many companies have gained an advantage against their competitors by investing IoT implications and reducing their costs and increasing quality.

The document is structured in seven parts which discuss the importance and implementation of IoT in these sub-areas of Manufacturing.

1. Supply Chain Management and Optimization
2. Remote Monitoring
3. KPI Compilation
4. Automation
5. Quality Control
6. Workforce Efficiency
7. Worker Safety

And a conclusion part where some predictions and evaluations are made.

Supply Chain Management and Optimization

Remote Monitoring

KPI Compilation

Automation

Predictive Maintenance

Quality Control

Workforce Efficiency

Worker Safety

Conclusion

1. Introduction

This paper represents how Supermarket retailers gather data and extract insights from them. This paper also includes some managerial decisions taken from those insights with appropriate examples. This paper aims to inform readers about supermarket is disrupting with new technology. And impotence of technology context of getting insights from the market and use those insights to run business smoothly. It also aims to acknowledge how big data is becoming a top player for getting success.

The document is structured in four parts. The first part of this paper presents the importance of IoT and how supermarket retailers use IoT to gather data. In second part introduces some insights which have been extracted from those data collected with technology. The third part includes few examples of the managerial decision made by using those insights. And Efficacy of those decisions is also included in the final part of this report.

2. Data collection for insight

Big Data is becoming a top priority for any business, and it is expanding at a fast pace. Social media,connected devices, sensors, smartphones, and other sources generate a massive amount of data andinformation. Organizations from different sectors are trying to achieve success by crunching these fast-moving, extensive, and complex streams of data (Tyagi,2020)For almost a decade, manufacturing and transportation have reaped the benefits of IoT sensor dataand insights. While sensor data and analytics have enormous potential for retail applications,merchants are just getting started. To play around with the internet of things IoT sensor data is largerthan big data in terms of volume and many players have already benefited from the transformingimpacts of the game. IoT is an acronym for Internet of Things. It's rumored to be a game-changer inretail store management, supply chains, and customer experience ((Vučenović, 2021)Retailers like Tesco and Asda have started implementing big data into their business (Aktas and meng,2017). Tesco is among the retail sector pioneers who began using the internet of things (IoT) forbusiness insights by handling real-time data (Marr, 2016).In the retailer's context, IoT is the primarysource of retail data because IoT is a system that can access all available devices in the store andinterconnect them (Tyagi,2020