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# Big Data Analytics Implementation Readiness Among Malaysian Facilities Management Companies

**Mohd Hafizal Ishak[1]*, Wan Muhammad Idham Wan Mahdi[1], Pua Wei Lun[1] & Azlina Md Yassin[1]**

[1]Centre of Project, Property & Facilities Management Services (PROFMS), Universiti Tun Hussein Onn Malaysia, 86400 Parit Raja, Batu Pahat, Johor, MALAYSIA

*Corresponding Author

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**Abstract**: Big data analytics (BDA) implementation is under increasing demand in the facilities management (FM) sector. For FM companies, a good grasp of its drivers and difficulties is now necessary due to the increase in its demand. The goal of this study is to pinpoint the factors that influence BDA and implementation readiness among FM companies in Malaysia. This study used quantitative method, where 70 FM companies in Malaysia were polled via questionnaire. Both of the research's goals were met by using descriptive and correlational analysis as techniques. The outcome demonstrates that FM companies confronted a dearth of knowledgeable staff who had hands-on experience with BDA products. Improving indoor air quality and lowering the chance of important assets failing were determined to be drivers and difficulties that have a significant impact on how ready FM companies are, while the challenges include poor data quality and a lack of competent personnel.

**Keywords**: Big data analytics, readiness, BDA integration, facilities management (FM) companies.

## 1. Introduction

The key component of our modern life is data. Nowadays, each individual uses a huge volume of data in their daily habits, particularly in the usage of smartphones for information searching, finding a location through GPS, online shopping, watching videos, etc. These large amounts of data are stored in cloud storage for future use. Big data is used in many sectors and has generated significant financial value to every business sector by providing substantial productivity growth. The usage of big data can increase an organisation's productivity by becoming more effective and efficient in producing better quality products and services (Manyika *et al*., 2011). Due to technological advancements, the

*Corresponding author: mhafizal@uthm.edu.my

conventional management technique in the facilities management (FM) industry is quickly changing. Furthermore, the players are experiencing growing customer demand to manage facility portfolios with strict cost-cutting and environmental impact targets. As a result, the new FM landscape has been influenced by Big Data Analytics (BDA), Internet of Things (IoT), and cloud technology needs; however, only 34% of business executives who use business intelligence (BI) plan to use BDA in the future (Purcell, 2013; Eriksson, et. al, 2018).

The British Institute of Facilities Management (BIFM, 2014) reported that facilities managers are unable to acquire the appropriate degree of data, evaluate it properly, and convey its consequences to the rest of the organization; thus, halting sustainable initiatives throughout the organization. They also have to be up-to-date with the changing technology (Mawed & Al-Hajj, 2017). The challenges occur due to a lack of resources, knowledge, experience, or adaptability to change from traditional data mining to BDA (Mignon, 2016; Granberg & He, 2018).

The purpose of this research is to identify the drivers and challenges of BDA implementation readiness among FM companies. This research will help FM companies identify the drivers that come with the challenges they may face. Besides that, this research will give awareness to FM companies in Malaysia about the potential of BDA. This research will also provide a clear insight into the current performance of FM companies who were or had used BDA in their daily operation. Thus, this research will provide knowledge of how BDA can help as a tool to improve the performance of FM companies. Subsequently, this knowledge will help FM professionals and business managers to understand the importance and benefits of BDA, while offering insight that can develop a better diversification strategy decision with the purpose of improving the performance of companies to provide quality services. Hence, two main objectives were set in this research; first, to identify the drivers and challenges of using BDA among FM companies in Malaysia, and second, to analyse BDA implementation readiness among FM companies in Malaysia.

It is important to identify the drivers and challenges of BDA implementation by assessing the implementation readiness among FM companies. Therefore, the results of this research are hoped to help FM professionals and business managers to increase their overall understanding of BDA and its implementation. Finally, the results from this research can act as a reference to students or researchers in further work related to this topic.

## 2. BDA Integration with FM

Big data is defined as datasets that are beyond the capabilities of standard database management software to capture, store, manage, and analyze (Manyika *et al*., 2011). It is designed to analyze huge, diverse datasets from different resources and drive decision-making (Gandomi & Haider, 2015). An organization needs efficient methods to turn vast amounts of fast-moving and diverse datasets into relevant insights in order to achieve this evidence-based decision-making. The entire process of gaining insight from large data may be broken down into five levels: (1) acquisition and recording, (2) extraction, cleaning, and annotation, (3) integration, aggregation, and representation, (4) modelling and analysis, and (5) interpretation (Labrinidis & Jagadish, 2012).

According to Boyd and Crawford (2012), BDA is an academic, cultural, and technological phenomenon based on the interaction of technology, analysis, and mythology. Big data, it is widely assumed, can provide a greater degree of intellect and knowledge, allowing hitherto inconceivable insight to be generated through beliefs of truth, objectivity, and accuracy. (Ahmed, *et al*, 2017). BDA has been widely used in a variety of fields to find useful patterns, provide insight into new business, and support predictive analysis based on gathered data (Bilal *et al*., 2016). Manyika *et al*. (2011) also stated that data is a critical component of individual business competition and growth, and it will underlie future waves of productivity growth and consumer surplus.

Many industries around the world have been overwhelmed by the potential of big data in solving most of the common problems in the industries and transforming into a smarter way of doing business, including facilities management. The importance of using BDA should not be excluded in the field of facilities management. Undoubtedly, through the useful information generated by BDA, the application of big data has achieved good decision-making abilities and boundless economic benefits (Du, Li, & Zhang, 2014).

Over the last few years, big data has been discussed across various sectors, and it has been considered as a big game-changer in most modern industries. For this reason, many organizations have access to valuable pools of big data generated by their products and services (Manyika *et al*., 2011). Currently, facilities management is heading towards Big Data Analysis (BDA), Internet of Things (IoT), and Artificial Intelligence (AI) technology (Granberg & He, 2018).

From the study of Agrawal *et al*. (2011), BDA offers many opportunities. It can be particularly advantageous when used and applied in FM, from commercial buildings to crucial and energy-intensive structures. Mawed and Al-Hajj (2017) also stated that many academics, writers, and even facility managers have advocated leveraging data from a building information model or FM software to help with building and operations management (Eastman, *et al*, 2011).

When BDA is implemented correctly, it will generate useful value to FM (Mawed & Al-Hajj, 2017). Granberg and He (2018) stated that BDA has operations and strategic advantages. For operations, BDA gives a quick indication of the outcome, while for strategy, BDA helps to focus on utilising the data collected from the facilities as a base for making decisions. Atkin and Bildsten (2017) also said that BDA allows managers to make fast decisions based on the data that is always present, and which only needs to be analyzed and assessed. Most FM organizations have several stages in adopting BDA. Many facilities managers have already gathered a huge amount of data; however, they do not know how to access and analyze it to generate its value (Granberg & He, 2018).

The level of readiness of FM companies for BDA could be analyzed using maturity models for big data (Wong, Chuah & Ong 2015). A maturity model can identify the strong and weak points of a certain domain, and it can assess an organization and delineate its development part (Olszak & Mach-Król, 2018). The typical maturity levels of big data have five levels: initial, managed, defined, quantitatively managed, and optimizing. The description of maturity levels in the process approach is shown in Table 1.

**Table 1: Process Approach of Maturity Levels (Olszak & Mach-Król, 2018a).**

| Level of Readiness | Description |
|---|---|
| 0 | Initial (Atemporal) - able to perform daily reporting from structured data, historical data analysis, and intelligent decision-making to support daily work. |
| 1 | Managed (Pre-temporal) - able to predict possible changes in market environment, identifies potential customers and competitors' behaviour, and make decisions based on the information. |
| 2 | Defined (Partly Temporal) - could use unstructured or semi-structured data on market trends to implement the first elements of temporal reasoning for decision support in order to gain insight into clients' and competitors' changing behaviour. |
| 3 | Quantitative Managed (Predominantly Temporal) - able to analyse customer's behaviour, get personalised recommendations, identify market trends, use predictive strategies' analysis, temporal process queries, and perform temporal reasoning. |
| 4 | Optimizing (Temporal) - fully mature in combining big data in business analytics with social media data and real-time information on customer behaviour, capable of gaining the first-mover advantage through real-time competitive insight, early identification of customers and competitors' behaviour, and temporal reasoning on market evolution. |

### 2.1 The drivers for big data analysis in FM

According to Mignon (2016), drivers are the rationale for adopters choosing the innovation and influence the decision in an early or late adoption (in the content of BDA). Eriksson *et al*. (2018) showed each organization has its drivers to implement BDA in the company. BDA allows FM organizations to simply identify and define their business goals by providing an informed foundation to properly monitor key performance indicators (KPIs) (Eriksson *et al*., 2018). In addition, Eriksson *et al*. (2018) stated that FM companies could provide a sufficient package of services, including efficient water conservation, improving building performance and customer comfort level, and providing and improving quality air level in the building. Besides that, FM companies could emerge with smarter ways to deliver contracts, improve their competitiveness to remain ahead of their competitors, generate new revenue streams, and most importantly, reduce any risks associated with FM contracts.

### 2.2 The challenges of big data analysis in FM

There are many sets of policy issues and procedures involved in BDA, including security, privacy, data ownership, ethical issues, remote access, closed protocol and so on (Eriksson *et al*., 2018; Manyika *et al*., 2011). Manyika *et al*. (2011) stated that privacy is the most important issue to customers, which grows the more apparent the value of big data is. Another concern is data security, which is to protect sensitive or private data. Manyika *et al*. (2011) highlighted that personal information, confidential corporate information, and even national security secrets could be exposed as a result of data leaks. Bilal *et al*. (2016) also stated that private information could be vulnerable to attacks or cyber theft. Therefore, it is essential that addressing data security protects and reduces the problem of serious breaches.

This paper proposes a theoretical framework of drivers and challenges for BDA implementation to analyse FM companies' readiness in adopting BDA initiatives, which is shown in Figure 1. The variables of drivers and challenges were found and used to analyse which drivers and challenges were the most interconnected between themselves. The interconnection between these variables was used to measure the level of readiness of BDA implementation among FM companies in Malaysia. The level of temporal was used as the maturity model to analyse the level of readiness, which was developed by Wong *et al*. (2015). The maturity model can identify strong and weak points of a certain domain, and it can assess an organization and delineate its development (Olszak & Mach-Król, 2018). However, this research used the general typical maturity levels of big data with five levels, as shown in Table 1, to represent the level of readiness of BDA implementation among FM companies. The reason for using the interconnection between the drivers and challenges of BDA implementation was to analyse the most interconnected variables between the drivers and challenges and relate those with the maturity level of BDA implementation readiness. Therefore, it was hypothesized that there is a relationship between the drivers and challenges of BDA implementation. Thus, the interconnection between these variables will represent the level of readiness of BDA implementation among FM companies in Malaysia.

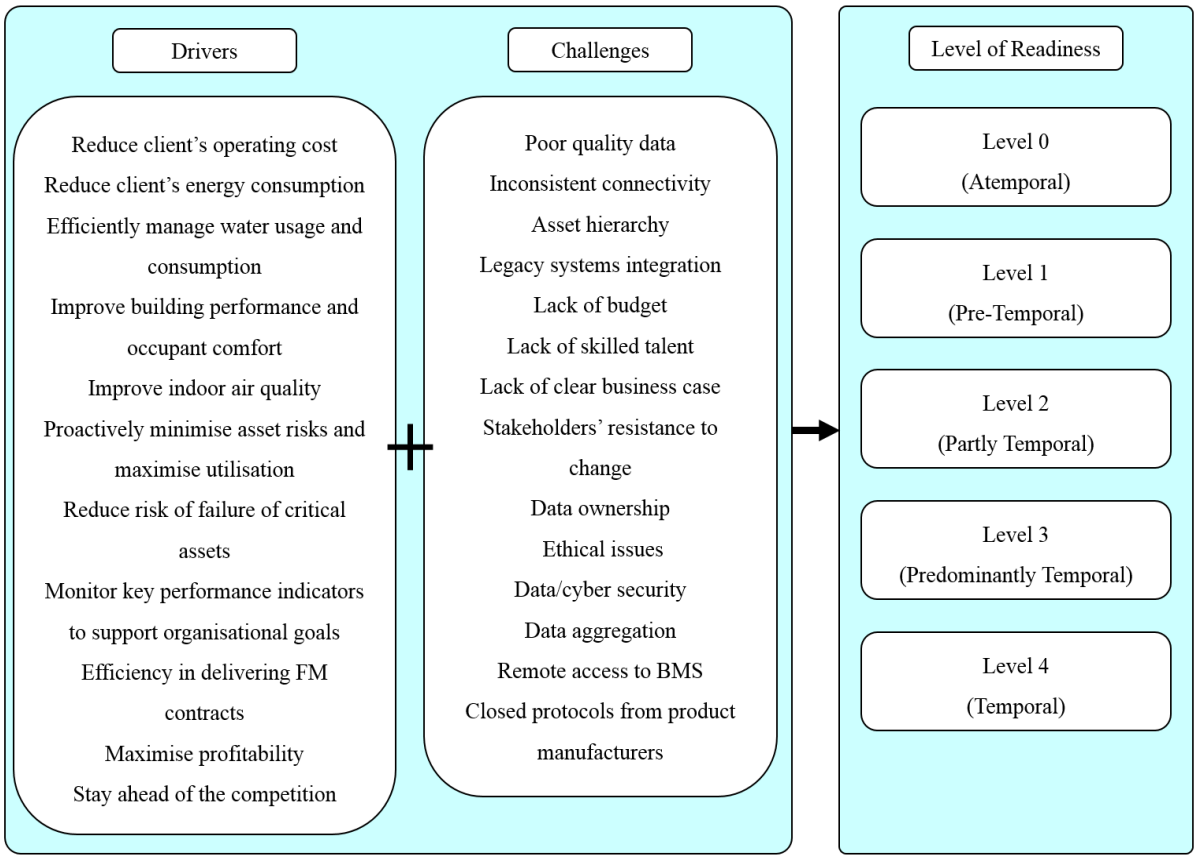


**Figure 1: BDA implementation in FM and the theoretical framework**

## 3. Research Methodology

This research aimed to identify the drivers and challenges of BDA implementation readiness of Malaysian FM companies. The questionnaires developed based on framework that has been highlighted in the literature review. The quantitative approach was selected as a method to achieve the objectives, which used a 5-point Likert scale for the measurement. The evaluation of the instrument is based on the previous research of BDA and validated by local expert panels in BDA and facilities management. Online survey was carried and received responses from 70 of the 253 FM companies registered with the Construction Industry Development Board Malaysia (CIDB).

The methodology was segregated into three stages. Stage one was the background of this study involving the objectives, literature reviews, and theoretical framework development. Stages two and three focused on achieving objectives one and two. Descriptive statistics and correlation analysis were used to analyse the data. The overall methodology flow is shown in Figure 2.

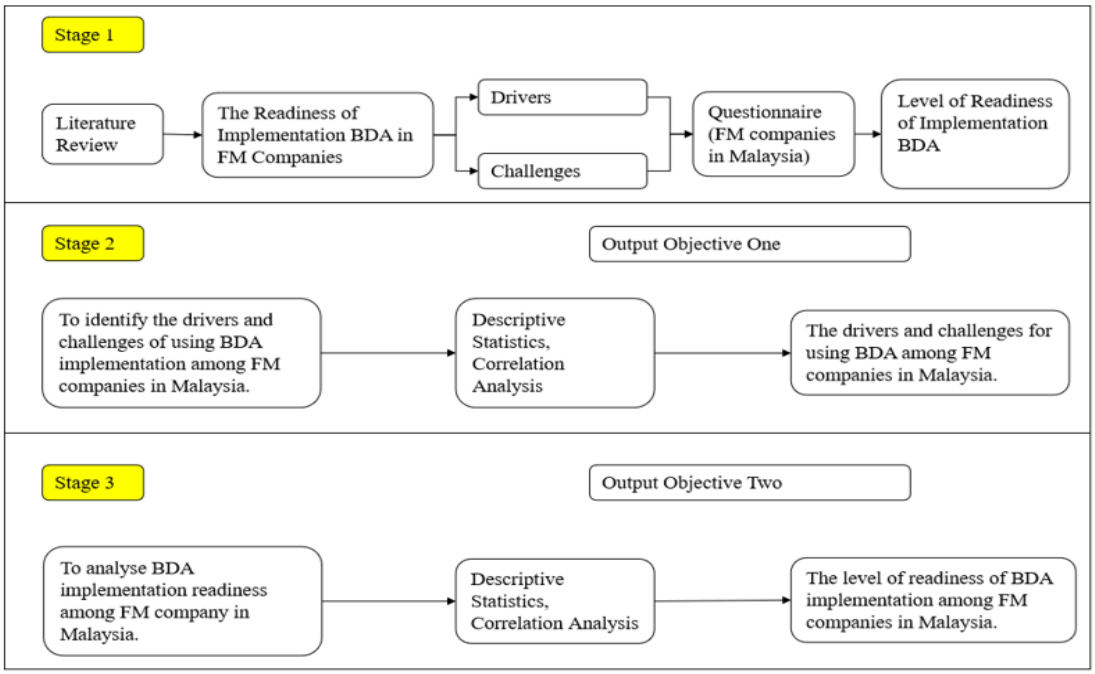


**Figure 2: Research methodology flow**

## 4. Results and Discussion

Table 2 shows the results of the descriptive statistics for each driver of BDA implementation among FM companies in Malaysia. The most influential driver, with a mean value of 4.79, is the driver "Stay ahead of the competition". Surprisingly, the results of this analysis are similar to what has been reported by Eriksson *et al*. (2018), which is also the highest value with a mean of 4.50. According to Eriksson *et al*. (2018), FM businesses are looking into BDA as a way to grow their business and earnings, owing to the increasing levels of risk connected with FM contracts and commercial competitors. However, from Table 2, the driver "Efficiency in delivering RM" has the lowest mean value at only 3.63. This result is very different from the previous literature review research conducted by Eriksson *et al*. (2018), which delivers FM contract as the second-highest in their research. The third-placed driver, "Provide a solid foundation for properly monitoring Key Performance Indicators (KPIs) and achieving company objectives" (4.57), the fourth-placed driver, "increase the efficiency of the building and the comfort of the occupants" (4.18), and the fifth-placed driver, "reduce client's energy consumption" (4.09), show that the participants recognized the business value of maintaining the KPIs by improving building performance while providing occupant comfort and ensuring energy consumption effectiveness.

The sixth-placed driver is "proactively minimize asset risks and maximize utilization" (4.06), the seventh-placed driver is "effectively manage water usage and consumption" (4.03), and the eighth-placed driver is "Improve indoor air quality" (3.96), which indicate that the respondents have the responsibility to deliver the utilization at a maximum level, manage water usage, consumption and indoor air effectively and have quality. Another driver that ranked eighth is "maximize profitability in an increasingly complex market" (3.96), and the ranked ninth is to "decrease the risk of key asset systems failing" (3.82). Lastly, the overall mean was determined by using each mean of the drivers; thus, the overall mean value is 4.156.

**Table 2: Drivers of BDA Implementation among FM companies**

| Items | | Mean |
|---|---|---|
| I. | Stay ahead of the competition | 4.79 |
| II. | Reduce client's operating costs | 4.63 |
| III. | Provide a solid foundation for properly monitoring Key Performance Indicators (KPIs) and achieving company objectives. | 4.57 |
| IV. | Increase the efficiency of the building and the comfort of the occupants | 4.18 |
| V. | Reduce client's energy consumption | 4.09 |
| VI. | Proactively minimize asset risks and maximize utilization | 4.06 |
| VII. | Efficiently manage water usage and consumption | 4.03 |
| VIII. | Improve indoor air quality | 3.96 |
| IX. | Maximize profits in an ever-more-complex market | 3.96 |
| X. | Decrease the risk of key asset systems failing | 3.82 |
| XI. | Efficiency in delivering FM contracts | 3.63 |

Using descriptive statistics, each challenge displayed the mean value for themselves and the overall mean for all challenges for BDA implementation among FM companies. Table 3 shows the mean for each challenge, from highest to lowest, and the overall mean. The challenge which achieved the highest mean value is the scarcity of qualified personnel who understand data analytics and what it means for various FM activities and operations, with a mean value of 4.84. This means that most of the respondents agreed with the challenge as they faced this while implementing BDA in their daily operation. The second highest is poor quality data with a mean value of 4.54. This shows that data is a very important part to successfully implement BDA in the companies. The third highest is the insufficient funds to implement BDA activities on a wide basis, with a mean value of 4.40.

Most of the respondents also agreed with the statement of "issues about the data being transmitted through the network's security" (3.7), "inconsistency in how assets should be organized in a hierarchical system" (3.52), and "inconsistent connectivity to handle bandwidth-intensive real-time applications" (3.52). The legal issues included stakeholders' resistance to change, limited access and management of BMS from afar, lack of a business case for funding, ownership of big data issues, legacy systems integration issues, and ethical issues. These challenges have a mean value of around 3, which means that most of the respondents felt that the challenges will not affect the adoption of BDA in their companies. Lastly, the closed protocols from product manufacture only have a mean value of 3.01, which is the lowest mean value out of the overall challenges of BDA implementation in FM companies.

**Table 3: Challenge of BDA implementation among FM companies**

| Items | | Mean |
|---|---|---|
| I. | Scarcity of the qualified personnel who understand data analytics and what it means for various FM activities and operations. | 4.84 |
| II. | Poor quality data | 4.54 |
| III. | Insufficient funds to implement BDA activities on a wide basis. | 4.40 |
| IV. | Issues about the data being transmitted through the network's security | 3.70 |
| V. | Inconsistency in how assets should be organised in a hierarchical system | 3.52 |
| VI. | Inconsistent connectivity to handle bandwidth-intensive real-time applications | 3.52 |
| VII. | Legal ramifications of combining enormous amounts of data are numerous | 3.45 |
| VIII. | Stakeholders' resistance to change | 3.42 |
| IX. | Limited access and management of Building Management System (BMS) from afar | 3.34 |
| X. | Lack of clear business case for funding | 3.33 |
| XI. | The ambiguity associated with ownership of 'Big Data' | 3.31 |
| XII. | Issues with legacy systems integration | 3.31 |
| XIII. | Ethical issues associated with data storage | 3.30 |
| XIV. | Closed protocols from product manufacture | 3.01 |

### 4.1 Drivers and challenges of BDA among FM companies

Figure 3 shows that 23 pairs of relationships between drivers and challenges are statistically significant, as the p-value is less than 0.05. There are eight pairs that have a weak relationship based on the correlation value. Some of them are positive relationships if the correlation value is positive, while some are negative relationships if the correlation value is negative. Based on Figure 4, the correlation between staying ahead of the competition and closed protocols from product manufacturers is -0.474, the highest correlation value compared to others. Thus, this means that the relationship between these two variables is negative and weak. According to Eriksson *et al*. (2018), FM companies are overwhelmingly driven by competitive pressure. As a result, FM businesses that want to stay ahead of the market must ensure that the BDA deployment is not restricted by systems and technologies that are not built to allow for open data access.

The second-highest correlation is staying ahead of the competition and lack of skilled talent with a good understanding of data analytics, where the correlation value is 0.404. Thus, this means that the relationship between these two variables is positive but weak. The usage of BDA helps FM firms remain ahead of the competition but it also causes a shortage of experienced individuals with a thorough understanding of data analytics. According to Eriksson *et al*. (2018), as data volumes and sources continue to rise, FM organizations suffer a lack of human capacity to support the company's adoption of BDA.

The third-highest correlation is to stay ahead of the competition and lack of a clear business case for funding, where the correlation value is -0.378. Thus, the relationship between these two variables is negative and weak. This means that FM companies must ensure the finances for BDA implementation are secured from the senior leadership, and that there is a clear link between BDA implementation and the attainment of a company's commercial goals in order to stay ahead of the competition (Eriksson *et al*., 2018).

The correlation that ranked fourth is reduced risk of failure of critical assets systems and poor-quality data. The correlation value is -0.367, which means the relationship between these two variables is negative and weak. According to Eriksson *et al*. (2018), data analytics provides a lot more depth and capacity to explain differentiated and unexposed expertise or customer to unquantified risks when it comes to vital assets. As a result, BDA helps to reduce the risk of critical asset systems malfunctioning and improves the quality of data available for analysis.

The correlation that ranked fifth is delivers FM contracts more efficiently and inconsistent connectivity to handle bandwidth-intensive real-time applications. The correlation value is 0.361, which means the relationship between these two variables is positive but weak. According to Eriksson *et al*. (2018), the difficulty to get precise real-time data from many sources exacerbates the BDA aspect. As a result, BDA could help deliver FM contracts more efficiently, but it will also cause inconsistent connectivity to accumulate accurate real-time information.

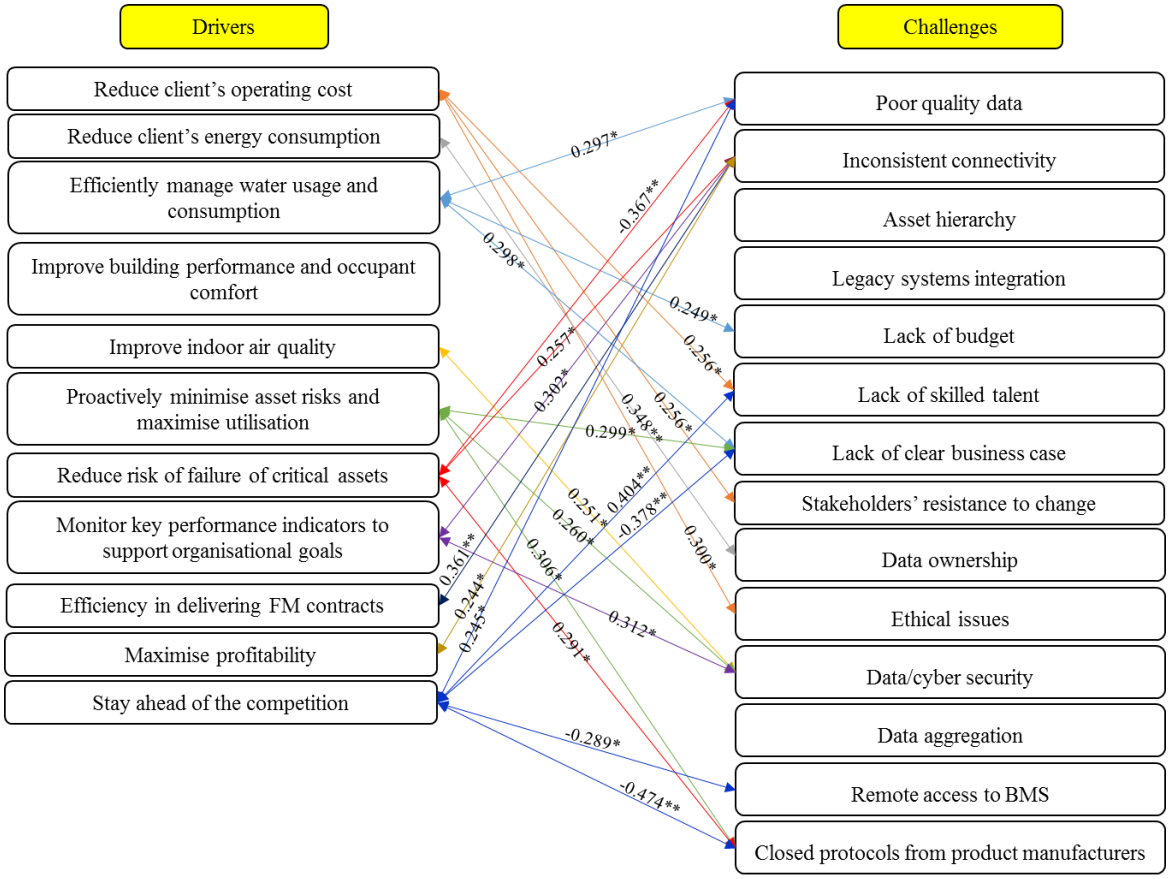


**Figure 3: Correlation between drivers and challenges of BDA implementation among FM companies**

4.2 BDA implementation readiness among FM companies

Table 4 shows the significant correlation value for drivers and challenges with the readiness of BDA implementation, in which the p-value is less than 0.010 and 0.050. There are four variables, which are divided into two each for drivers and challenges, compared with the readiness of BDA implementation. Improving indoor air quality has a positive relationship with the readiness of BDA implementation among FM companies. As the correlation value is 0.292, this shows a very weak relationship between improved indoor air quality and BDA readiness. Most companies have mentioned that BDA could create a better indoor environment, such as air quality. According to Grasberg and He (2018), a better indoor environment will increase the productivity of the staff, since making the building more efficient will have a smaller impact on a company's budget. This means when FM companies are ready to adopt BDA, it will help to improve indoor air quality, even in very weak relationships.

Besides that, reducing the risk of failure of critical assets also has a positive relationship with the readiness of BDA implementation among FM companies. The correlation value is 0.446, which means this is a weak relationship between reduced risk of failure of critical assets and readiness of BDA implementation among FM companies. According to Eriksson *et al*. (2018), the upkeep of important assets and business systems is prioritized by FM companies, and the functioning of these assets and business systems on the "front-line" is critical. As a result, implementing BDA in their businesses will help to lower the danger of key asset systems failing, especially in weak connections.

For correlation between challenges with the readiness of BDA implementation, two variables are statistically significant to the readiness of BDA implementation. These variables are poor data quality and scarcity of the qualified personnel who understand data analytics and what it means for various FM activities and operations. For poor data quality, the correlation value is -0.309 which is a weak and

negative relationship. With a higher readiness of BDA implementation among FM companies, poor data quality could be reduced as the relationship between these variables is negative.

Next, the scarcity of the qualified personnel who understand data analytics and what it means for various FM activities and operations shows a negative relationship with the readiness of BDA implementation among FM companies. The correlation value is -0.425 which is a weak relationship. Facilities management firms that would like to implement BDA, according to Eriksson *et al*. (2018), must invest in human resources, particularly skilled individuals in data administration and analytics. Therefore, the companies that are more ready to implement BDA can invest in hiring professional personnel to manage and analyse data. This shows a negative relationship between these two variables: lack of skilled talent and BDA implementation readiness among FM companies (please refer to Figure 4).

**Table 4: Correlation analysis between drivers and challenges with readiness of BDA implementation among FM companies**

| **Drivers** | | **Pearson Correlation** |
|---|---|---|
| I. | Reduce client's operating costs | -0.194 |
| II. | Reduce client's energy consumption | 0.133 |
| III. | Efficiently manage water usage and consumption | 0.107 |
| IV. | Increase the efficiency of the building and the comfort of the occupants | 0.092 |
| V. | Improve indoor air quality | **.292*** |
| VI. | Proactively minimize asset risks and maximize utilization | 0.233 |
| VII. | Reduce the risk of failure of critical assets systems | **.446**** |
| VIII. | Provide a solid foundation for properly monitoring Key Performance Indicators (KPIs) and achieving company objectives. | 0.029 |
| IX. | Efficiency in delivering FM contracts | 0.219 |
| X. | Maximize profitability in an increasingly complex market | 0.210 |
| XI. | Stay ahead of the competition | -0.187 |
| **Challenges** | | |
| I. | Poor quality data | **-.309*** |
| II. | Issues about the data being transmitted through the network's security | -0.043 |
| III. | Inconsistency in how assets should be organised in a hierarchical systems | -0.019 |
| IV. | Inconsistent connectivity to handle bandwidth-intensive real-time applications | 0.001 |
| V. | Legal ramifications of combining enormous amounts of data are numerous | 0.072 |
| VI. | Ethical issues associated with data storage | -0.175 |
| VII. | The ambiguity associated with ownership of 'Big Data' | -0.027 |
| VIII. | Limited access and management of Building Management System (BMS) from afar | -0.031 |
| IX. | Closed protocols from product manufacture | 0.138 |
| X. | Issues with legacy systems integration | 0.086 |
| XI. | Lack of clear business case for funding | 0.005 |
| XII. | Lack of budget to roll out BDA initiatives on a larger scale | -0.161 |
| XIII. | Scarcity of qualified personnel who understand data analytics and what it means for various FM activities and operations | **-.425**** |
| XIV. | Stakeholders' resistance to change | -0.117 |

Notes : **Significant Factors at 0.01; Significant Factors at 0.05

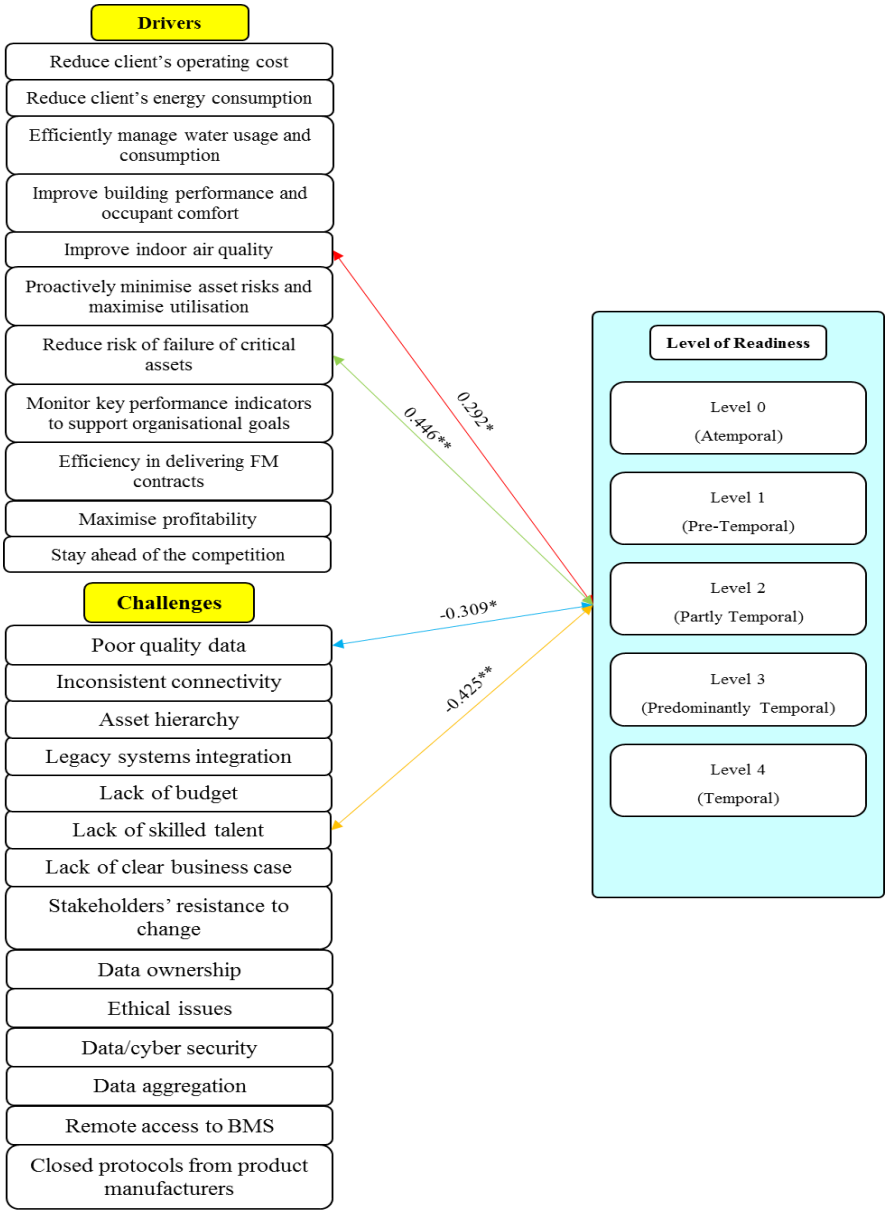


**Figure 4: Correlation between significant drivers and challenges with readiness of BDA implementation among FM companies**

## 5. Conclusion

This research has achieved both objectives: to identify the drivers and challenges of using BDA among FM companies in Malaysia and to analyze BDA implementation readiness among FM companies in Malaysia. The research shows that staying ahead of the competition was the driver for most respondents to adopt BDA initiatives. As they implemented BDA, the challenge for most respondents was having skilled talent with data analytics knowledge. After analyzing the readiness of BDA implementation among FM companies, the result shows that most of the FM companies were primarily at Level 1, which is in the status of Managed (Pre-temporal). Besides that, two drivers, which are improve indoor quality and reduce the risk of failure of critical assets, positively correlated with BDA implementation readiness among FM companies. On the other hand, there were also two challenges: poor quality data and lack of skilled talent, which had a negative relationship with the

readiness of BDA implementation among FM companies. At the end of this research, it is hoped that this research will be useful for future studies with the suggestions provided.

Several recommendations can be made based on the findings of the research. First, as the main issue in adopting and implementing BDA is a shortage of trained labor with a clear understanding of data analytics, hence, organizations should invest in proper training for their employees. This research shows that FM companies have professional and skilled talent in managing and analyzing the functions and operations of facilities management.

Besides that, FM companies must create a proper model to save each data that is collected. As the data comes from diverse sources in various formats, sooner or later, the company will run into the problem of data integration. Data formats will be differing and matching them can be problematic. Thus, companies can compare the data to a single point of truth, match records and merge them if they relate to the same entity. This will help increase the quality of data collected and make it easy to analyze as the data store is at the right place. Next, FM companies can develop a strategic implementation plan. A strategic implementation strategy enables businesses to anticipate their future and prepare accordingly. Companies can predict certain undesirable events and take the required safeguards to avoid them via strategic implementation plans. As a result, companies will be able to keep up with the changing market trends and stay one step ahead of the competition.

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