



Leveraging Big Data for Better Insights

Audit / Tax / Advisory

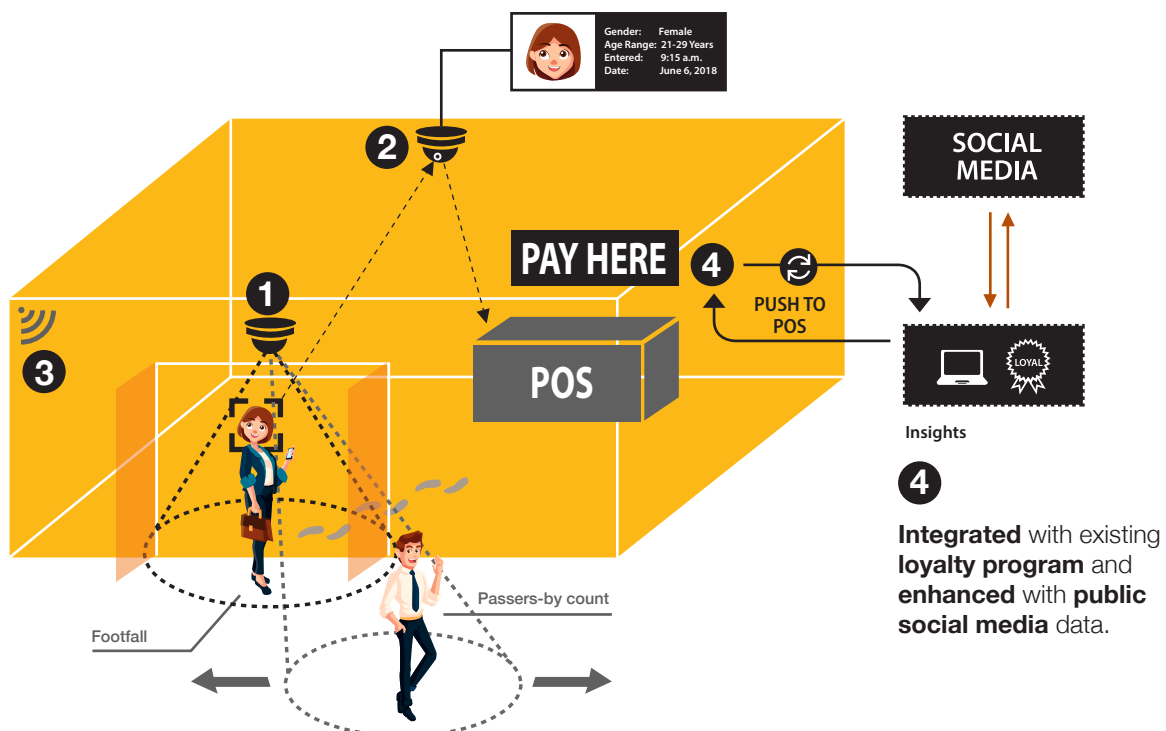
Smart decisions. Lasting value.

Hisham goes to his favourite gadget store to buy a smartphone. The cashier rings up his purchase and keys in Hisham's loyalty card. The data from the purchase, the phone model, Hisham's name, gender and race, are all captured into the store's system.

Across the city at an automobile workshop, Frank keys in his parts order from a supplier. The supplier's system captures the order and tags it as a frequently repeated order, and this data is sent to the parts manufacturer.

With the rise of modern data systems, everything we do on a daily basis, from buying a newspaper at the local 7-Eleven to browsing the latest music release on iTunes or the number of times we call our IT department at work can be captured and stored in a database somewhere.

- 1 Visitor Counting Sensor
- 2 Demographic Sensor
- 3 Wireless (Beacon, Bluetooth, Wi-Fi)



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Welcome to the world of Big Data Analytics (BDA).

Big Data is an evolving term that describes any voluminous amount of structured, semi-structured and unstructured data that has the potential to be mined for information.

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Back in 2006, Clive Humby, UK Mathematician and architect of Tesco's Clubcard, said: "Data is the new oil. It's valuable, but if unrefined it cannot really be used"¹.

If the data obtained is not broken down and analysed with the proper tools, it has no value. This is like unrefined crude oil versus refined products like jet fuel or bitumen used to pave roads.

This is where BDA comes in, the process of examining large data sets to uncover hidden patterns, unknown correlations, market trends, and customer preferences.

Alibaba, Facebook, Amazon, Google, Microsoft, General Motors, Nestle and Unilever make use of BDA to drive their businesses, grow revenue, cut costs, promote efficiency and much more.

Within companies, BDA is a tool that can help employees work more efficiently. Google, one of the world's best employers, uses data collected from employee surveys, work habits and behaviour to retain talent and improve the workplace environment.

As such, BDA is definitely applicable for SMEs and will help businesses stay relevant in today's increasingly digitalised markets.

In 2015, Frost & Sullivan found that the retail sector is a leading BDA adopter, using big data to make better business decisions and run operations more efficiently using data from Point-Of-Sales (POS) and inventory operations.²

Large retailers such as 7-11 use BDA to process data to better understand customers, reduce inventory costs, prevent stock-outs and enhance supply chains.

Customer patterns can be tracked for specific stores during peak periods, and stock can be ordered in advance from the main warehouse in anticipation of these periods.

A store close to universities may see an upsurge of purchases during the exam period when students are cramming, and orders can be put in automatically once stock drops below a certain level.

Big data can analyse not just the POS data, but also publicly available data to predict demand spikes or dips in the demand of specific products or brands.

More complex BDA solutions merge data from different sources, including a brand's social media activity and a store's CCTV footage to glean more in-depth customer demographics and footfall numbers.

The importance of BDA for Malaysian SMEs can be seen in the efforts played by Malaysian Digital Economy Corporation (MDEC) and its BDA initiative, ASEAN Digital Exchange (ADAX) to promote BDA adoption in local businesses.

SMEs can also benefit from BDA although there are the challenges of adequate IT infrastructure, skills and the availability of BDA tools.

However, BDA providers such as Fusionex International and local player DataMicron are working with MDEC to fill the big data gap faced by SMEs. Products such as Fusionex's SME FORYOU and DataMicron's Insta BI offer cost-effective and scalable data solutions that are tailored to the needs of SMEs.

1. Humby, C. (2006). ANA Senior Marketers' Summit.

2. Frost & Sullivan. (n.d.). National Big Data Analysis Initiative: Assessing the Opportunity & Impact of Big Data Analytics in Malaysia.

MDEC and ADAX are also working with industry players to fast-track the development of data professionals through a unique Public-Private Partnership initiative called Data Star programme. The aim is to develop 20,000 data professionals to meet industry needs by 2020.³

Moving forward, BDA can also be used to enhance the quality of audits. With the proper tools, audits will no longer rely on sample-based testing.

New developments in data extraction and BDA will enable auditors to analyse all audit-related data resulting in higher audit evidence quality and better business insights.

Auditors will also be able to use BDA to better identify data anomalies, business risks and improve fraud detection, in turn giving audit clients better business insight to shore up finances.⁴

For instance, BDA analyses the connection between financial and non-financial information such as a logistics company's maintenance costs incurred versus the number of shipments transported, providing both businesses and auditors a more comprehensive view of potential risks.

Big data can be intimidating to SMEs and many feel that they do not have the resources, skills and tools to make use of it. However, there are cost-effective tools in the market tailored just for SMEs.

Big data can help businesses increase sales, improve productivity and efficiency, and better meet customer needs. SMEs should not be left behind and allow their rivals to gain a competitive advantage with BDA.

Big data is part of the exponentially growing importance of digitalisation and technology on businesses. This is relevant to all areas of the modern economy, ranging from manufacturing to services to media.

Businesses which cannot adapt to the modern age of digitalisation will be left adrift, unable to compete with its technologically-savvy peers.

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³ MDEC. (2017).

Retrieved from MDEC web site: <https://www.mdec.my/news/malaysia-to-accelerate-growth-of-data-professionals>

⁴ Jiali (Jenna) Tang and Khondkar E. Karim, D. C. (2017). CPA Journal.

Retrieved from <https://www.cpajournal.com/2017/06/26/big-data-business-analytics-implications-audit-profession/>



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