**Business Intelligence, its history, and the future Wai Ping KWOK**

Business Intelligence, a term that has been used for over 150 years, refers to the use of strategies and technologies to acquire, store, manage and analyse business related data by enterprises to improve and optimise decision and performance. With continuous advancement of technology, the meaning of business intelligence has evolved over time; and is expected to continue to evolve in the future.

**The history**

Traditionally, the goal of business intelligence is to help business executives make better strategic decisions. To start with, the executives state their requirements by asking for what they need. The companies collect and store the answers to the questions in their internal business systems everyday. Data analyst or business analyst works on structured transactional records in relational databases from business systems. The information, mostly from internal and some from external sources, is usually collected, organised, and stored into a data warehouse specialised to quickly respond to some specific and important questions to business decisions over time. The most important output from business intelligence is the analytics and reports for performance management, from which executives obtain actionable insights from their last decisions to make informed decisions. For example, the business executives are expected to receive daily sales performance reports or monthly financials reports to help them plan the business activities for the coming period. To improve the intelligence, data analyst may carry out data modeling, which is a method to help determine the interaction of different datasets to obtain more valuable insights. For easier interpretation to executives, data visualisation and dashboards are common tools in use, which are usually automated to display crucial insights in graphic. In general, business intelligence looks for information from the past to answer questions in the past and present.

**The future**

Instead of asking "What happened?", some people start asking "What will happen if we do this?" Business intelligence has evolved. The future of business intelligence with data science and machine learning shifts to look for information from the past and present to answer questions for the future. Internet flourishes the explosive growth in unstructured data such as text and images, and NoSQL databases are developed to manage this huge and yet less structured data. Big data technology can process and analyse huge sets of data in different formats from various sources in a relatively short period. Therefore, business can now rapidly draw actionable insights derived from more data to make informed decisions. Data Scientist uses scientific method, with a focus on statistical analysis and predictive modeling, to derive insights. One major expansion is machine learning. Machine learning allows computer to learn actively by responding to data inputs after going through algorithms and it is getting increasingly important in business. Machine learning helps streamline operational processes. It enhances customer experience and loyalty in understanding target audience and their needs by analysing personal profile, later boosting sales and profits. Machine learning also identifies risk in working environment safety by predictive analysis to prevent system failures or malfunctions, which saves not only money but also human life. The next eye-catching business process enhancement should be automation of numerous workflows with intelligent IT automation, which is expected to boost productivity enormously.

The evolved business intelligence is no longer only a vision. Incorporating the use of data science and machine learning should be an integral part of business strategy and business executives should bring them into action items. Given that business intelligence is scalable, businesses of all size should put it into the agenda at their next executive meeting if they have not done so.

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