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The importance of business strategic alignment with big data analytics in SMEs

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This time we have visiting writer from the University of Oulu. Fan Wang holds a position of a post-doctoral researcher at the Martti Ahtisaari Institute in the Oulu Business School and also works with us as a specialist in our mutual Dataki-project. Next, she shares her thoughts on the strategic alignment of business in SMEs with big data analytics.

The importance of business strategic alignment with big data analytics in SMEs

Nowadays, not only does the multinational data-rich company benefits from big data analysis, but the enabling technology also emerges the opportunities for Small and Medium Sized Companies (SMEs) to generate data from their customers, business, markets, and environments. The value of big data analytics becomes important in response to digital transformation. The big data analytics capability determines how the SMEs configure their resources towards designing and delivering that enables business decision-making and differentiate from their competitors, and to what extent the SMEs exploit the value from data.

According to the interviews conducted in the Dataki-project with companies around the Oulu region, the need for big data analytics varies and depends on industries and the stage of the company. Companies in the ICT industry are all the way more advanced in developing big data analytics capability than those in service industries, e.g, the travel industry. Online merchandises are the ones that can benefit from and foresee the value of big data analysis and its impact on business decision-making. The major problem of utilizing big data analytics from those companies arises from a lack of resources, the capability of data analytics, and an understanding of the value of data.

From the top management level, the decision for any kind of IT investment is challenging due to the limited financial resources and employee capabilities working on the infrastructure invested and uncertainty and unclarity related to value from big data analytics. From the employee's perspective, the new way of working is subject to learning, training, and the

burden of taking responsibility. Moreover, the communication between management and employees is often not transparent concerning what top management expects from data analytics and the data the employees report. Therefore, the decision on data, business strategy, IT infrastructure, and employees should be aligned and coherent to extract the maximum value from big data analytics.

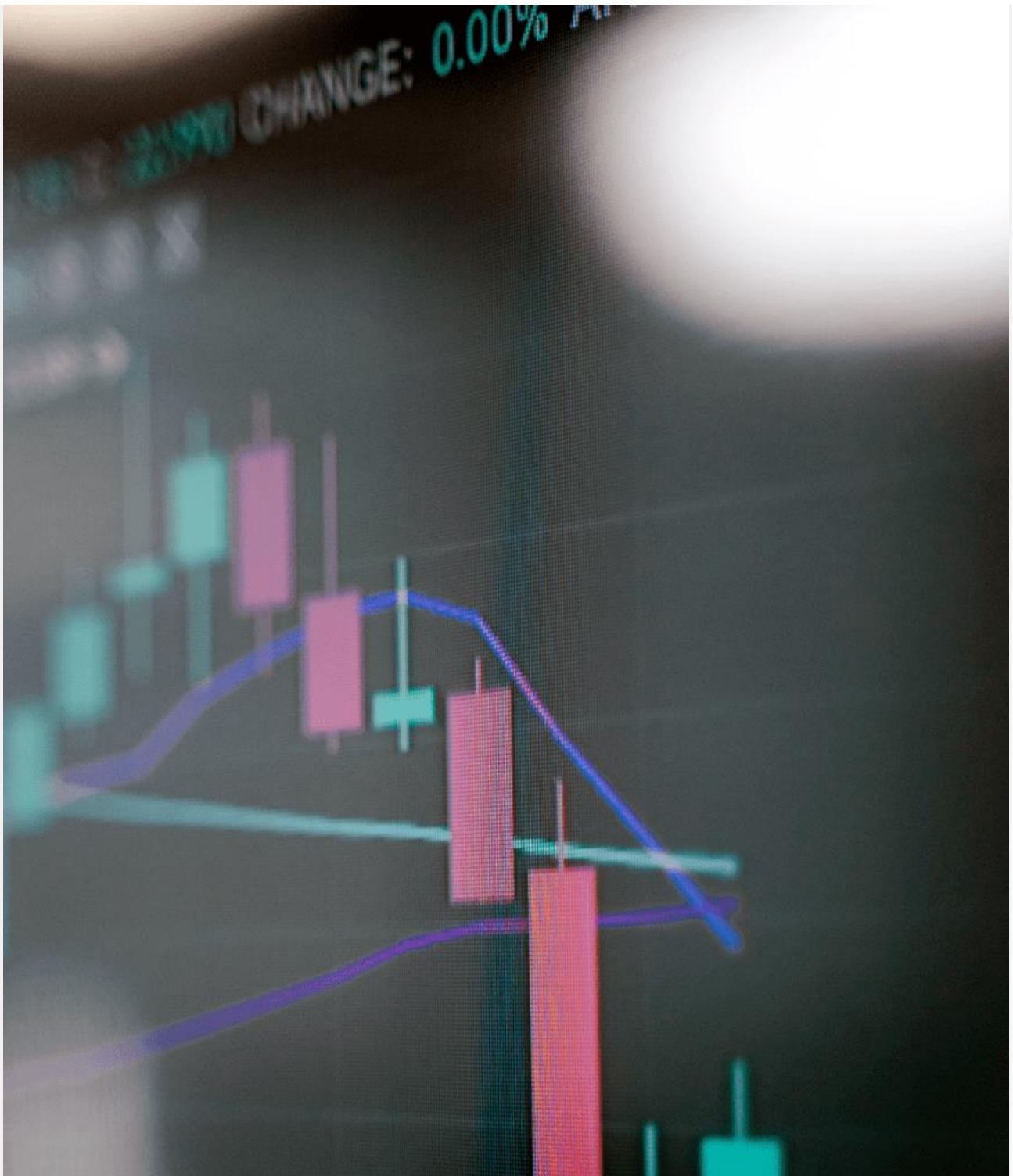
The following steps can ensure the business analytics capability is aligned with the overall business strategies of the SMEs.

1. *Define the business strategy and its metrics:* SMEs should clearly define their business strategy, including their goals, objectives, and key performance indicators (KPIs).
2. *Identify the needed data and ensure its quality:* SMEs should identify the necessary data to measure its implementation and support its alignment once the business strategy is defined. This includes internal and external data sources, such as customer, sales, and market data. Detailed objectives should be set for data collection, sources of data collection, curation, analysis, and application to the practice.
3. *Develop a roadmap for business analytics:* Aligned with business strategy, current resources, and capabilities, the specific initiatives, timelines, and resource requirements should be figured out.
4. *Communicate and alignment:* SMEs should communicate the business analytics roadmap to management, employees, and external partners to ensure that the data analytic strategy is aligned with the overall business strategy and realistic according to SMEs' resource and capability.
5. *Monitor and measure:* Finally, SMEs should monitor and measure the impact of their business analytics capability on their business performance and make possible adjustments along the process.

SMEs usually suffer from resource and capability constraints. SMEs can't utilize all the data available for business decision-making. Rational decision on where to collect, how to collect, for what period, and for what purpose relies on the need and current situation of the firm and the aligned business strategies.

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Understanding the importance of Big Data in the strategic alignment of business is important to SMEs as well as larger enterprises.