EXECUTIVE BRIEF

How food producers can stay ahead with data and the cloud

We live in an era of disruption. Fuelled by pervasive digitalisation and hyper connectivity, rapid-fire changes are roiling entire industries, companies, and even countries. Business disruption has become the new normal, and it is arguably intensifying with the splintering of traditional business models on multiple fronts ranging from transportation and travel to office spaces.

This wave of change is also seeping into normally staid industries such as food production. To stay relevant, food producers must re-evaluate shifting market trends and leverage the power of technology and data to place themselves in an advantageous position for the journey ahead.

Finding patterns in data

Data often contain patterns that are not evident at first blush. We have learned to identify some of them in our lives: Skipping classes will probably result in difficulties with passing the exams; employees who meet the expectations of their bosses are more likely to get a hefty year-end bonus. The challenge for food producers lies with scouring their data to uncover hidden patterns that help them cut waste and increase their production rate.

To succeed with data, food producers must move beyond limited, causal factors, and look at larger data sets across multiple data points. For instance, what happens when the local temperature goes above 38 degrees Celsius and the humidity stays consistently above 95% for an entire week? Does quality suffer—likely—or does this result in delays within the supply chain that increase the risks of spoilage and loss of revenue?

Parse through enough data, and the correlation between production delays or quality issues with innocuous hiccups further up or down the supply chain become readily apparent. Unfortunately, the digital pipes to funnel data and the systems to manage and analyse data on-premises just doesn't exist in most organisations.

This means that any attempt to harness the full power of data cannot ignore the cloud and its ability to manipulate vast amounts of structured and unstructured data.

The agility of the cloud offers a seamless way to integrate with disparate data sources, while offering a common platform to share that wealth of information, ensuring that all stakeholders are kept informed to make data-driven decisions.

Going deeper with analytics

The "how" of digitalisation is crucial when it comes to pulling ahead of the competition and is a perennial problem that has contributed to the surging growth of the big data and analytics market that **Frost & Sullivan predicts will reach US$40.6 billion by 2023**. Should food producers turn to third-party data analytics and visualisation products to connect the dots using data?

Identifying the right solutions really boils down to where food producers are on the maturity curve. Many of the standalone tools are certainly capable enough to generate the requisite analytics or populate a corporate dashboard. Of course, figuring out advanced scenarios such as linking sales demand to production data will require more specialised tools.

Such insights can be gleaned from an industry-specific ERP system that is built on relevant domains of expertise and which has access to a centralised data repository. With the ability to dynamically access data sources across the entire supply chain made available with the power of networked analytics, stakeholders can quickly identify redundant processes or wasted efforts.

Finally, machine learning offers the ability to bring things to the next level. While seen as a fad by some, there are practical and highly valuable outcomes that can be gained from the right application of machine learning to improve planning efficiency or reduce waste.

More data using technology

Across Asia, food producers are using technology to increase the data that they can leverage. For instance, at least one livestock producer has started putting activity trackers on cows in a bid to raise healthier cows. Elsewhere, wine producers have started using drones to perform detailed heat mapping of their vineyards to identify hot spots during the day—of relevance even with other types of crops due to health risks associated with certain food additives reaching very high temperatures.

Whether drones or internet of things (IoT) appliances, the rising affordability of technology means that they are being deployed more pervasively than ever. This consumerisation, in turn, is leading to broader deployments, culminating in a plethora of new opportunities and the ability to deliver highly personalised offerings.

Though the above might sound impressive, of even greater appeal would be use cases that are yet to be dreamt up. As new use cases are found, the ability to quickly adapt and implement them can offer savvy food producers a vital advantage to improve their supply chain, identify inefficiencies, and be a forerunner in harnessing new opportunities.

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INF-2285367-en-SG-0420-1