by Geng Xuesong, Andrew Chin, and Thomas Lim

Catching the DIGITAL WAVE

JUMBO Group shows how digital transformation and its seafood business can go together.

Singapore-based JUMBO Seafood restaurant was founded in 1987 by Ang Hon Nam and his nine friends, who shared "a passion for eating and seafood". Since joining the business in 1993, his son and current CEO Ang Kiam Meng has not only expanded JUMBO to span 46 outlets across 14 Asian cities but has also made it one of the city-state's leading multi-dining concept food and beverage (F&B) establishments.

EARLY MOVES TO DIGITALISE OPERATIONS

Restaurants are typically labour-intensive businesses that traditionally rely heavily on paper-based operations. For example, to fulfil an order for even a glass of water requires considerable paper coordination across different units in a restaurant. The order taker will pass the order to the kitchen manager, who appoints a staff to check the inventory for a glass and prepare the water. Subsequently, a waiter would take the glass of water from the kitchen and serve it to the guest. The order fulfilment information would then be recorded by the order taker, who would inform the cashier so that the payment could be received.

Order takers thus had to move around several units to register the order. Multiple data entries were also necessary (such as on the guest order and payment system), all of which were done manually. This made the process error-prone. For example, the order taker might submit the order slip to the cashier but forget to pass it to the kitchen, making the guests wait a long time for their food. Substantial effort was hence wasted in correcting these unproductive mistakes. One way to manage this issue was to make the process paperless, enabling seamless information flow across units.

It was with this objective in mind that Ang's project to use PDAs (personal digital assistants[1]) in the 1990s for order-taking was initiated. In fact, JUMBO was one of the first Chinese restaurants in Singapore to use PDAs to manage food orders and launch an online customer loyalty programme.[2] Ang also automated the restaurant's payroll function, and JUMBO became the first F&B business in Singapore to implement a fully integrated point of sale (POS) system.

Besides order-taking, monitoring and controlling backend operations (e.g., kitchen and procurement) were also difficult with the traditional paper-based approach. For a seafood restaurant chain like JUMBO, fresh seafood could account for about half the cost of operations. Yet it was almost impossible to calculate the average price of some of these stock-keeping units (SKUs), as there were multiple suppliers every day, with most simply handing over a list of items printed on a sheet of paper. If too much

seafood was ordered, the excess stock would have to be discarded. This made inventory management particularly challenging. Managers could only spot the problems, such as raw material price increases or too much seafood being discarded, in the consolidated report many days after the actual transactions. This meant that attempts at cost control were based on outdated information.

According to Ang, an ideal digital system would address these challenges. It would help to capture information accurately in real time so that managers could monitor what was happening and consequently impose tighter control over the cost of goods and sources of revenue. With every food or material item captured in the system, it would be easy to extract the relevant information and generate business intelligence. For example, examining the daily change in the average price of raw meat or the average size of live crabs would enable immediate recognition of any abnormality, alerting and enabling the managers to make necessary adjustments.

THE SECOND TIME IS THE CHARM

Buoyed by his initial successful implementation of PDAs and the POS system, the CEO, who was nicknamed "System Ang" by his staff on account of the systematic approach he adopted to run JUMBO, went on to implement an Enterprise Resource Planning (ERP) project for the company to further increase operational efficiency and productivity. Ang also obtained financial and advisory support from Enterprise Singapore, a government agency dedicated to assisting traditional businesses leverage digital technologies for operational enhancements.

At that time, big data analytics and ERP systems were not yet commonplace.[3] As JUMBO had been quoted astronomical sums for implementing a customised ERP system, the Group decided to select a vendor who quoted a more reasonable figure. Unfortunately, that did not work out, and for several years, JUMBO struggled with the implementation of its first ERP system. It had to modify its system flow and set-up considerably to cater to the ERP system, thus affecting other business processes.[4] Besides, the methodology used then was focused on solving problems in parts. For example, procurement data only needed to show *x* number of cartons had been purchased, but in another part of the system, the data was more detailed, and the staff had to key in the exact amount of ingredients used in grammes and kilogrammes. As a result, different parts of the system yielded varying data, which resulted in data inconsistencies and a need to verify which set of data was accurate. Such problems cropped up repeatedly because the system was not sufficiently integrative.

Things eventually came to a head when Ang found that despite the best efforts of his team, the ERP system was a lemon through and through. Ang commented, "The more we tried to fix it, the more errors we introduced. The data was inconsistent, so it was impossible to generate any useful business intelligence. It was so tiring that in the end we decided to abandon it."

He then decided to start all over again. This time round, he and his team would have to be even more cautious and rigorous when selecting a new vendor. The optimal choice would be a system that had a solid track record. This would not be cheap, but it was a must for systematic transformation. In 2021, the Group appointed German multinational software company SAP SE to help it implement the second iteration of its ERP system. This time, Ang also paid attention to building a strong in-house team to work with the vendor and prepare for the implementation.

The project took less than nine months to complete, and the early results after implementation were encouraging. For instance, the finance department, one of the first beneficiaries of the second ERP implementation, used to struggle with completing month-end closing financial reports on time but now found that the process was much smoother. In addition, the duration for processes like stock-taking and inventory reconciliation had not only shortened significantly from one week to just a day, but important information such as inventory balance and the expiry date of stocks could also now be retrieved directly from the system.[5] According to SAP Singapore Managing Director Eileen Chua, other benefits that had materialised included the ability to track procurement journeys and intervene ad hoc when necessary,

the cutting of revenue losses because of seasonal goods arriving late, and improved inventory accuracy due to a unified, single journal for stock information.[6]

Ang added, "The use of SAP also cleared blind spots that were present when we were still using paper. Previously, staff could sometimes end up ordering materials beyond their authority level. Then when the goods arrived, we would start asking each other who ordered it and who authorised the order. But with this new system, we can instruct the suppliers that unless they receive an official purchase order, they need not act on the order. This way, we have better checks and balances."

LESSONS GLEANED FROM THE IMPLEMENTATION

Reflecting on the outcomes of its two digitalisation initiatives, Ang believed that the methodology of the project management made the difference. Like software development, digitalisation projects should follow a four-step process model of analysis, planning, design, and implementation.

Based on his experience, Ang realised that companies had to know the tasks they needed to complete, the software that was required to conduct those tasks, and then demonstrate commitment to finishing these tasks.

First, all digital transformation had to begin with a good analysis of the 'jobs to be done'. Any digital transformation should result in better service quality for customers. "We were lagging behind our goals of driving customer satisfaction

and delighting our customers," said Ang.[7] The transformation therefore had to be consumer-centric, as well as alleviate the pain points for customers, and raise customer satisfaction. This meant that the project team had to spend sufficient time upfront analysing the pain points and customer needs before moving to the next stage of system design. According to Ang, such diagnosis should take up at least one third of the total project time. In his experience, the most challenging part was when the project team exited, and the implementation stage started. If the project team had not done its analysis and design well, the debugging and troubleshooting process at the point of implementation could be very painful, like what JUMBO had experienced during its first project.

Second, the software needed to meet the company's business needs. In its first digitalisation experiment, while a proprietary app had been developed to meet JUMBO's unique needs, the restaurant staff found that it took too much time and resources to maintain and use the software. Quipped Ang, "I define efficiency by the number of clicks needed. If you have to click 10 times to complete a job, it's inefficient, and that was exactly what my staff had to do when they used the app. It's not user-friendly at all. How can my staff be productive like that?" Moreover, in Singapore, many elderly restaurant staff were, in general, not tech-savvy and afraid of new technology. Hence, for successful digitalisation to take place, the systems implemented had to be easy for the staff to use. Otherwise, they would lack the commitment to try and use them.

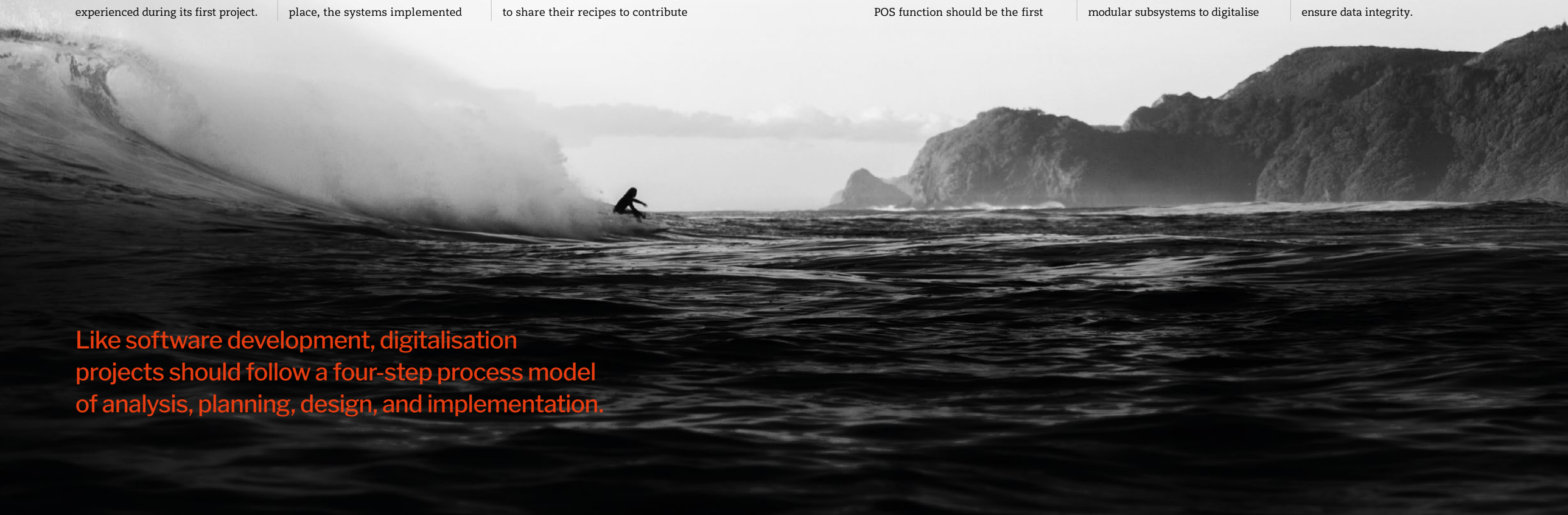
Third, the entire organisation, especially top management, needed to be strongly committed to the project. Digital transformation involved a transformation of mindsets and the acceptance of different ways of doing things, which meant that many people had to get out of their comfort zone. The family-like culture in JUMBO and Ang's lead-by-example leadership style had built a solid foundation for this. Chefs usually do not wish to share their recipes with restaurant owners as the recipes are considered their unique competencies. However, JUMBO chefs trusted the management to the extent that they were willing to share their recipes to contribute to the restaurant's digitalisation journey. As recipes revealed the wide range of types and amounts of fresh ingredients needed for different dishes, JUMBO could input this data into the ERP system to monitor usage and variance, preventing stockout situations and waste. This data-driven approach enabled JUMBO to better control its business costs and improve its operational excellence.

Modular yet integrated system

By 2022, JUMBO was a digitalisation leader in the Singapore F&B industry. It had digitalised its front-office operations, including reservation, meal order, table service, customer payment, and feedback collection. Ang believed that digitalising the POS function should be the first step of digital transformation in a customer-facing business, as it stood at the intersection of other key functions and departments. JUMBO had also digitalised much of its back-office operations, including human resources (HR), accounting, and finance. The new system enabled the company to work out the bottom line far more accurately and easily as it captured the procurement, labour, and marketing costs, along with the revenues.

However, to generate useful business intelligence for management's decision-making, these modules needed to be better integrated. Ang expected this to happen over another two to three years. The plan was to create heterogenous, best-in-class modular subsystems to digitalise various aspects of its operational needs (POS, Customer Relationship Management, HR, procurement, finance, etc.) and deploy customised connecting software such as APIs (Application Programming Interfaces) to integrate all such modular subsystems.

Another key element in the digital system was building a data warehouse with data integrity. Accurate data, especially valuable ones like sales figures and procurement costs, would be key for decision-making. But building a data warehouse could be challenging and time-consuming as it was essentially a manual process in which employees needed to take care and commit to inputting data correctly. Besides, the system needed to have checkpoints to ensure data integrity.



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The ideal digital system would be an integrated system in which all modules were connected to the data warehouse. All stakeholders–including managers and employees–would have access to the data warehouse for different pieces of information depending on their authority and actual needs. Multiple entries of data would be eliminated and any change in data would be reflected across the entire system in real time. As a case in point, in the past, if guests were to change their order, the order taker needed to tell the chef and then update the cashier to revise the bill. In the ideal scenario, the order taker could simply change the order on a mobile app, and the chef, kitchen manager, and cashiers would be immediately informed of the update. Therefore, the information would become transparent, and transactions would become traceable.

Returns on investment for digital transformation

Ang observed that organisations hesitated to initiate digital transformation because it was capital-intensive, and the outcome could be hard to quantify. The benefit of digitalisation, he believed, was that it could enable a better understanding of customer needs, better business intelligence concerning cost control, and therefore better decision-making. As such, it was more of an investment in the company's capability for the future. For example, the system was able to inform the management how effective their online promotion (i.e., click-through rate) was and whether they should continue. It could also streamline the company's operations by predicting consumer demand accurately, enabling minimal wastage of resources while also capturing business opportunities. The HR function could enable the company to plan for the optimal number of part-time employees to supplement the workforce, which was important as there was typically a shortage of service staff in Singapore. The system also allowed relevant employees to access critical information through their mobile phones anywhere, anytime, and make decisions without delay.

Nevertheless, businesses needed to be pragmatic about digital transformation and stop at the point when diminishing returns occur. As Ang explained, if it became increasingly difficult and costly to improve another one percent in productivity or reduce another percentage point in outcome variance, it might be time to stop.

Initially, Ang hoped to implement a system that could do everything, but he came to realise that some subsystems were not as mature or cost-effective as others. In addition, forcing everyone to get onto the system was difficult. Therefore, he turned his attention to designing the system to be modular and open-ended, so that later subsystems could be integrated via APIs.

MAKING JUMBO EVEN SMARTER

JUMBO had already adopted several strategies to work its way around many of the pressing issues that plagued its business. A prominent one was its choice to use data collected through the new ERP system in a more intelligent way, giving it a stronger footing to devise how it could run its business more optimally. Ang believed that it would still take several years for the ERP system to fully yield its long-term benefits. Could the Group truly leverage the system to create data-driven operations and scale its business even further? Ultimately, he believed, JUMBO would become a smart business.

Could it eventually deploy new digital technologies like blockchains to improve efficiency at its outlets and central kitchen operations, which would be smart enough to adjust according to different scenarios? Could it perhaps leverage AI to help create more personalised JUMBO customer experiences? For example, could the system identify customers when they entered the restaurant using facial recognition technology and then prepare their preferred drinks even before they placed their order? In addition, how could digital assets and skills enable JUMBO to expand internationally? Might it even be able to monetise its investment in the system and create spin-offs, perhaps in a tech-related field? The possibilities seemed endless. AMI

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For a list of endnotes to this article, please visit https://tinyurl.com/38pufn2v or scan the QR code below.