

# Strategic Assessment of the Demand Planning & S&OP Gap in Malaysian SMEs: A Focus on the F&B Market Opportunity

## I. Executive Summary and Strategic Findings

This report delivers a deep research assessment of operational planning deficits among Small and Medium Enterprises (SMEs) in Malaysia, specifically validating a pervasive maturity gap in Demand Planning (DP) and Sales & Operations Planning (S&OP). The analysis focuses on the Food & Beverage (F&B) sector, identifying it as a critical target market where poor planning leads to financially damaging consequences, thereby establishing a significant market opportunity for specialized digital solutions.

The Malaysian SME sector is fundamental to the nation's economy, yet it is characterized by high operational fragility and low digital technology adoption. The financial impact of this planning gap is not marginal efficiency loss but systemic operational distress. This assessment concludes that the barriers to adoption—primarily cost and complexity—are effectively neutralized by the Malaysian government's suite of digitalization incentives, transforming the market environment into one that strongly favors subsidized, modular technology intervention.

### Key Findings: Quantification of the Operational and Financial Deficit

The investigation confirms a critical, financially destabilizing gap in planning maturity among Malaysian SMEs.

1. **The Operational Gap is Severe and Quantifiable:** The deficit in planning sophistication translates directly into systemic inventory mismanagement, manifesting as both chronic overstocking and debilitating stockouts.<sup>1</sup> These issues contribute directly to the widespread cash flow distress experienced by 70% of SMEs operating in the country.<sup>3</sup>

The planning failure is a material threat to the continuity and solvency of these businesses, as demonstrated by the closure of over 176,000 SMEs during the COVID-19 pandemic, largely due to an inability to manage finances and remain solvent during uncertainty.<sup>4</sup>

2. **The Root Cause is Resource and Skill Deficit:** The fundamental failure to perform effective S&OP stems from a severe lack of managerial resources and technical skill. A large proportion of organizations, approximately 70%, rely heavily on rudimentary tools such as Excel spreadsheets for S&OP and Integrated Business Planning (IBP).<sup>5</sup> Furthermore, the lack of resources and skill to analyze sales data effectively contributes to poor inventory and production decisions.<sup>3</sup> This operational environment is compounded by a low foundational technology adoption rate, with Cloud Enterprise Resource Planning (ERP) penetration cited at only 10.5% among SMEs.<sup>6</sup>
3. **F&B Sector Magnifies the Problem:** The characteristics of the F&B industry—namely, product perishability, short shelf-life, and high demand seasonality—compound the negative financial outcomes of poor planning.<sup>7</sup> Incorrect forecasts in this sector rapidly convert invested capital into unsalvageable waste (spoilage), elevating the priority and urgency for real-time inventory and highly accurate short-term demand forecasting compared to other manufacturing or service sectors.
4. **Government Grants are the Catalyst:** The primary barriers to technology adoption—cost and implementation complexity—are substantially mitigated by aggressive government incentives. Financial support mechanisms, such as the SME Digitalisation Grant (offering up to RM5,000 in matching funds)<sup>9</sup> and the Industry4WRD Intervention Fund (up to RM500,000 for manufacturers)<sup>11</sup>, transform the market dynamics. This creates an environment where market entry requires prioritizing regulatory compliance and certified vendor status over traditional, high-cost sales and marketing efforts.

## The Investment Thesis: Subsidized Digitalization of Planning

The findings validate an optimal environment for investment in specialized, affordable Demand Planning and Inventory Management solutions tailored for the Malaysian SME market. The confluence of a financially crippling, pervasive operational planning gap (high cash flow crisis), a high-growth, defined target sector (F&B), and robust government financial support provides the necessary conditions for rapid market penetration and high return on investment. The successful strategy must focus on delivering automated S&OP outcomes embedded in low-cost software, effectively functioning as a 'virtual consultant' to overcome the SME's internal knowledge and skill deficit.

## II. The Malaysian SME Context and F&B Sector Deep Dive

### 2.1. Macroeconomic Importance and Structural Composition of Malaysian SMEs

SMEs are the undisputed foundation of the Malaysian economy, representing 99.2% of all business establishments in the country.<sup>12</sup> This overwhelming dominance confirms that the operational efficiency and resilience of this sector are directly linked to national economic stability and growth targets.

In terms of economic contribution, SMEs account for 38.3% of the nation's Gross Domestic Product (GDP).<sup>13</sup> They are also the major employer, providing 66.2% of national employment.<sup>13</sup> Given this substantial role, the Malaysian government has prioritized the advancement of this segment, outlining aspirations in the 13th Malaysia Plan to elevate the SME contribution to half of the national GDP by 2030.<sup>14</sup> This strategic national focus establishes the SME sector as a high-priority target for modernization initiatives.

The structural composition of the SME market dictates the required nature of any technological solution. The market is highly fragmented and heavily skewed toward smaller firms.<sup>15</sup> Current statistics show that 70.1% of MSMEs (761,897 firms) are classified as microenterprises. Small-sized firms account for 28.2% (306,764 firms), while medium-sized firms constitute only 1.6% (17,725 firms).<sup>15</sup>

This high fragmentation, where micro- and small-sized firms account for 98.3% of the total market, carries profound implications for solution design. These companies possess extremely limited capital, minimal internal IT infrastructure, and restricted managerial expertise.<sup>3</sup> Consequently, complex, monolithic, and high-cost traditional ERP or S&OP systems typically designed for Multinational Companies (MNCs) are structurally and financially unsuitable for the overwhelming majority of the target market.<sup>16</sup> To effectively address this market, the technology solution must be lightweight, modular, cloud-based, and offered through a subscription model, specifically targeting singular, high-pain operational functions like inventory planning, rather than demanding full enterprise transformation.

Table 1: Malaysian SME Landscape and F&B Sector Contribution

Category	Total Firms (2025 Est.)	% of Total MSMEs	Economic Contribution Context	F&B Sector Scale
Microenterpris es	761,897 <sup>15</sup>	70.1% <sup>15</sup>	Total SME GDP is 38.3% of national GDP <sup>13</sup>	F&B is the 3rd most important sector for GDP and employment <sup>18</sup>
Small Firms	306,764 <sup>15</sup>	28.2% <sup>15</sup>	SMEs provide 66.2% of national employment <sup>13</sup>	F&B Manufacturing is 15.0% of all Manufacturing SMEs (2005 data) <sup>12</sup>
Medium Firms	17,725 <sup>15</sup>	1.6% <sup>15</sup>	National goal: SMEs contribute 50% of GDP by 2030 <sup>14</sup>	F&B Foodservice Market CAGR: 13.27% (2025-2030) <sup>19</sup>
Total MSMEs	~1,086,386	99.9%	N/A	Independent F&B operators hold 74.11% market share (2024) <sup>19</sup>

2.2. Profile and Growth Trajectory of the F&B Sector

The Food and Beverage (F&B) sector is strategically vital to the Malaysian economy and represents a high-growth vertical. According to the SME Corporation, F&B SMEs are the third most important sector contributing to the nation’s GDP and generating employment.<sup>18</sup> The industry is characterized by fast growth, with estimated revenues reaching US\$34 million in

2018 and maintaining an annual growth rate of 7.6%.<sup>20</sup>

More recently, the Malaysian foodservice market, a key component of F&B, was valued at USD 14.75 billion in 2025 and is projected to expand significantly to USD 27.50 billion by 2030, reflecting a robust Compound Annual Growth Rate (CAGR) of 13.27%.<sup>19</sup> This expansion is driven by strong underlying macro factors, including rising purchasing power among Malaysian consumers, consistent GDP performance, and the population's increasing adoption of digital technologies.<sup>19</sup>

The structural composition of the F&B market reinforces the need for low-complexity solutions. Within the manufacturing sector, food and beverages represented 15.0% of all manufacturing SMEs in a previous census.<sup>12</sup> Crucially, the foodservice sector is dominated by independent operators, who held 74.11% of the market share in 2024.<sup>19</sup> This high proportion of independent, small-scale operators reiterates that the typical user is likely an owner-operated business with minimal dedicated back-office support.

The target user is generally receptive to digitalization, evidenced by the accelerating growth of the foodservice industry supported by the widespread integration of mobile ordering applications and delivery-optimized business models.<sup>19</sup> However, this openness to digital engagement must be met with solutions that are integrated, extremely simple to operate, and commercially viable for small establishments that cannot afford a dedicated supply chain staff. The market requires technology that simplifies and automates complexity, rather than requiring additional layers of specialized human capital.

### **2.3. Operational Specificity of F&B Supply Chains**

F&B supply chains present unique challenges that intensify the consequences of poor Demand Planning and S&OP. These systems are inherently differentiated from other industrial supply chains due to highly specific risk factors, including product perishability, seasonality in production, and stringent requirements for transportation and storage conditions.<sup>8</sup>

The high volatility necessitates sophisticated forecasting capabilities. Academic analysis of food retailers confirms a significant influence of seasonality on Stock Keeping Unit (SKU) demand forecasting accuracy.<sup>7</sup> Models that explicitly incorporate seasonal components, such as SARIMA (Seasonal Autoregressive Integrated Moving Average), demonstrably outperform traditional techniques like Moving Average or basic ARIMA for capturing seasonal demand patterns.<sup>7</sup> The ability to accurately predict peaks and troughs is essential for mitigating risks associated with fresh ingredients or seasonal consumer trends.

For restaurant operations, poor inventory management is often linked to fundamental issues

such as over-estimating needs, failing to establish proper management routines in the initial stages of growth, and endemic errors stemming from manual processes.<sup>21</sup> The operational objective is always to strike a delicate balance: maintaining sufficient stock to avoid lost sales<sup>2</sup> while avoiding overstocking, which ties up crucial working capital.<sup>1</sup>

This inherent volatility in the F&B sector acts as a multiplier on the consequences of poor planning. Unlike manufactured goods with long shelf lives, where excess inventory merely incurs storage and carrying costs, an incorrect forecast in F&B rapidly converts capital into unsalvageable waste due to spoilage.<sup>1</sup> This rapid loss cycle elevates the F&B sector to a position of maximum urgency for intervention. Solutions introduced here must therefore incorporate sophisticated, automated perishability management tools (such as FIFO alerts and waste tracking) alongside accurate short-term demand forecasting algorithms to prevent immediate and material financial deterioration.

### **III. Validating and Quantifying the SME Planning Gap**

The pervasive lack of formalized Demand Planning and S&OP processes among Malaysian SMEs is not merely an issue of suboptimal efficiency; it is the direct cause of widespread financial fragility, a phenomenon that can be quantified through high rates of cash flow distress and systemic inventory failures.

#### **3.1. The Financial Manifestation: High Cash Flow and Operational Distress**

The most compelling metric validating the need for improved planning is the high rate of financial instability across the SME sector. A reported 70% of the over one million SMEs currently operating in Malaysia struggle severely with cash flow issues.<sup>3</sup> This level of systemic distress indicates an underlying operational breakdown in managing working capital and predicting financial needs.

The financial fragility is further confirmed by surveys indicating that as recently as 2023, nearly a third of local SMEs possessed less than two months' worth of cash reserves.<sup>4</sup> This precarious financial position renders these businesses highly susceptible to macroeconomic fluctuations or supply chain shocks. The historical consequence of this fragility was dramatically demonstrated during the COVID-19 pandemic, where poor financial and supply

chain management contributed to the closure of over 176,000 small businesses.<sup>4</sup>

The causality linking planning failure to financial distress is explicit: the businesses struggle because they lack the resources and skill to analyze sales data effectively, resulting in poor inventory and production decisions that negatively impact cash flow.<sup>3</sup> The management of finances, the ability to pay bills, and the maintenance of solvency are severely hindered by this planning deficit.<sup>4</sup>

### **3.2. Quantification of Inventory Mismanagement (The Symptom)**

The inadequacy of current planning methods manifests directly in the physical domain as poor inventory management, characterized by two equally damaging extremes: overstocking and understocking.

#### **The Cost of Overstocking**

The allure of bulk purchasing frequently leads SMEs to invest heavily in excess inventory, which carries severe financial penalties.<sup>1</sup> Crucial working capital is restricted by being tied up in surplus stock, severely limiting a firm's liquidity.<sup>1</sup> Furthermore, the need for increased storage space leads to unnecessary storage costs, which directly erode profit margins.<sup>1</sup> For F&B SMEs, this problem is compounded by the high risk of obsolescence or spoilage, adding an extra layer of financial strain and impacting the overall stability of the business.<sup>1</sup>

#### **The Cost of Understocking**

Conversely, understocking results in a direct inability to fulfill customer demand, immediately causing a loss of sales.<sup>2</sup> Persistent failure to meet customer needs due to stockouts inevitably leads to the long-term loss of customers and market share.<sup>2</sup> This dual problem of excess and deficit inventory is a classic symptom of poor Demand Planning maturity. Malaysian SMEs specifically struggle with "irregular inventory" and "inaccurate estimates," which are core indicators of ineffective inventory management solutions and planning processes.<sup>22</sup>

The operational landscape is trapped in a damaging feedback loop. Low technical or

managerial skill results in inadequate data analysis, which generates highly inaccurate operational forecasts. These inaccurate forecasts then translate into inventory volatility (alternating between stockouts and overstocking), leading to capital being tied up or sales being lost, which, in turn, exacerbates the systemic cash flow crisis that 70% of firms face.<sup>3</sup> This financial precarity prevents the firm from accumulating sufficient capital to invest in the very systems and expertise needed to improve its planning capabilities. Breaking this vicious cycle requires an external intervention—specifically, the introduction of automated, low-cost Demand Planning software that can function effectively without requiring high managerial skill input.

Table 2: Operational Gap Validation and Financial Consequence Summary

<b>SME Planning Issue</b>	<b>Symptom/Metric Impacted</b>	<b>Financial Consequence</b>	<b>Supporting Data/Context</b>
Lack of Integrated Planning	Cash Flow Distress	70% of SMEs struggle with cash flow. <sup>3</sup> Low cash reserves. <sup>4</sup>	Poor inventory/production decisions negatively impact cash flow. <sup>3</sup>
Poor Forecasting Accuracy	Inventory Irregularity, Obsolescence	Tied-up Capital, Storage Costs, Waste, Lost Sales	Overstocking restricts liquidity. <sup>1</sup> For F&B, spoilage risk is paramount. <sup>8</sup>
Process Immaturity	Tool Reliance and Inconsistency	Operational Inefficiency, Decision Lag, Misalignment	70% rely on Excel for S&OP. <sup>5</sup> SMEs struggle with irregular inventory. <sup>22</sup>
F&B Specific Risks	Spoilage, Waste	High material write-offs, Increased Cost of Goods Sold (COGS)	Challenges confirmed due to inherent perishability and seasonality. <sup>7</sup>

### 3.3. The S&OP and Demand Planning Maturity Deficit (The Root Cause)

At the core of the financial and inventory distress lies a profound immaturity in formal planning processes. Sales and Operations Planning (S&OP) is a critical framework for aligning supply with demand to ensure the right products are delivered at the right time and cost.<sup>23</sup> Most Malaysian SMEs operate far below the optimal S&OP maturity levels.

## **Reliance on Suboptimal Tools**

A critical indicator of low S&OP maturity is the reliance on manual, non-integrated tools. A significant majority of organizations, 70%, continue to use Excel spreadsheets as their primary mechanism for data analysis supporting S&OP/IBP.<sup>5</sup> While ubiquitous, reliance on spreadsheets prevents the cross-functional collaboration and data transparency essential for successful S&OP. S&OP requires coordination from various departments, including sales, operations, finance, and the supply chain.<sup>5</sup> When planning is conducted in departmental spreadsheets, these departments operate in silos, leading to systemic misalignment and suboptimal resource allocation decisions.<sup>24</sup>

This widespread manual approach places the majority of Malaysian F&B SMEs at the lower end of the Supply Chain Maturity Model, likely Level 1 (focusing only on execution and reaction) or Level 2 (using basic forecasts and aggregated spreadsheets).<sup>23</sup> Achieving the necessary alignment and integration (Level 4/5 maturity) requires dedicated technology solutions that automate aggregation and provide a unified view of the business.<sup>24</sup>

## **Internal Knowledge and Data Gaps**

The managerial knowledge gap further entrenches the immaturity. Effective S&OP implementation is frequently challenged by a lack of education and understanding among employees at various levels regarding S&OP principles, benefits, and best practices.<sup>24</sup> This knowledge deficit leads to inconsistent execution and misaligned goals across the organization.<sup>24</sup> Coupled with this, SMEs often lack the resources and skill to effectively analyze their historical sales data, which fundamentally undermines the ability to make accurate inventory and production decisions.<sup>3</sup>

Furthermore, before any advanced forecasting or planning can be successful, the issue of data quality must be resolved. Companies frequently face challenges integrating data from disparate sources, often struggling with inconsistent data quality and a lack of

standardization.<sup>24</sup> This lack of data veracity, identified as a critical dimension of Big Data issues, renders mined data potentially useless.<sup>25</sup> For any technology solution to succeed, particularly in F&B where decisions are time-sensitive, it must prioritize simple data collection standardization, potentially through integration with existing Point-of-Sale (POS) systems or accounting software. Building a reliable data foundation must precede the deployment of complex forecasting algorithms, ensuring that the advanced intelligence being applied (e.g., SARIMA models for seasonality<sup>7</sup>) is operating on trustworthy inputs.

## **IV. Barriers to Adoption and Technology Landscape**

Despite the critical operational necessity for improved Demand Planning, Malaysian SMEs face significant internal, technical, and financial barriers that have historically prevented the widespread adoption of formalized planning systems.

### **4.1. Internal and Managerial Barriers**

A persistent impediment to digitalization is the knowledge and confidence gap among SME owners and managers. While many Malaysian MSMEs are optimistic about an AI-powered future and recognize its potential for increased efficiency (63%) and cost savings (52%)<sup>14</sup>, this high adoption rate often conceals a critical lack of strategic understanding. Over eight in ten MSMEs (82%) report that they require more education to confidently and effectively deploy technology.<sup>14</sup> This indicates that even when they purchase software, they may not utilize its strategic planning capabilities fully, treating advanced systems merely as glorified record-keeping tools.

The necessity of adopting cloud-based systems was acutely exposed during the recent economic crisis. The pandemic highlighted critical weaknesses when employees were forced to work from home (WFH), losing accessibility to centralized business systems necessary to operate and connect with customers and suppliers.<sup>6</sup> This vulnerability underscores the need for robust, cloud-based ERP or SCM systems to ensure business continuity.<sup>6</sup>

Finally, the lack of cross-functional collaboration remains a major cultural obstacle. S&OP processes are inherently cross-functional, demanding coordination from departments that often operate in silos.<sup>5</sup> The misalignment of departmental goals—for example, sales prioritizing high revenue growth versus operations prioritizing cost reduction—can lead to conflict and suboptimal planning decisions.<sup>24</sup> Encouraging a culture of collaboration is

foundational to S&OP success, something that is difficult to enforce without integrated technology solutions that provide a single, unified data view across the enterprise.<sup>5</sup>

## **4.2. Low Digitalization Adoption Rates vs. MNCs**

A vast disparity exists between the technological maturity of Malaysian SMEs and that of their larger counterparts. Traditional manufacturing SMEs, for instance, display significantly lower levels of technology adoption compared to Multinational Enterprises (MNEs) and Multinational Companies (MNCs).<sup>17</sup> While large firms have successfully integrated digital platforms to facilitate complex supply chain management and production functions, smaller firms have lagged behind.<sup>16</sup>

The low penetration of foundational planning technologies is alarming, with the Cloud ERP adoption rate cited at a mere 10.5% among SMEs.<sup>6</sup> This low figure suggests that the SME market historically views foundational digital transformation as prohibitively costly, overly complex, or unnecessary.

For the few SMEs that do engage in technological adoption, the motivation is often tactical rather than strategic. The main drivers for adopting Industry 4.0 technology include immediate cost reduction, improving time-to-market, or compensating for a lack of qualified labor.<sup>17</sup> This preference for short-term tactical gains over strategic, integrated planning reinforces the need for solutions that offer immediate, visible return on investment (ROI), such as measurable reductions in inventory costs or waste.

This observation validates a strategy of focusing the solution on modular SCM tools, specifically Demand Planning and Inventory Management, that can immediately yield cost reduction benefits (e.g., reduction in storage costs and spoilage).<sup>26</sup> Selling the solution based on visible cost recovery is more effective than attempting to push a comprehensive, expensive ERP implementation that requires a high degree of organizational readiness and strategic commitment.

## **4.3. The Inaccessibility of External Expertise (The Cost Barrier)**

A critical external barrier for SMEs is the prohibitive cost of acquiring the specialized human capital necessary to implement and manage sophisticated supply chain and planning processes.

Specialized supply chain consulting services, often provided by global or regional functional specialists like Logistics Bureau<sup>27</sup> or major firms such as Deloitte, PwC, EY, and KPMG<sup>28</sup>, are priced for enterprise clients. Medium-sized businesses may face rates of RM300–RM600 per hour, while senior specialists and large corporate engagements start at RM700+ per hour.<sup>29</sup> Furthermore, acquiring the necessary training for internal staff is also costly, with short-term professional courses in supply chain management costing between RM2,890 and RM3,500 per person for a few days of instruction.<sup>30</sup>

When measured against the severe cash flow issues faced by 70% of SMEs<sup>3</sup>, these rates render professional strategic planning support fundamentally inaccessible to the majority of the market. This high cost of external human expertise relative to the SME's financial fragility confirms a deep market necessity for technology-as-a-substitute.

The strategic conclusion is that the market opportunity is not to sell S&OP processes (which require expensive consultants and training), but to sell automated S&OP *outcomes* embedded within affordable software. By automating complex functions like optimal reorder point analysis and seasonal forecasting, the technology effectively democratizes specialized supply chain knowledge, replacing the need for high-cost consulting or highly trained internal staff. Simple inventory systems, for example, can start as low as RM200 per month<sup>32</sup>, making technology a viable and necessary substitute for expensive human resources.

## **V. Market Opportunity Sizing and Go-to-Market Strategy**

The analysis confirms a substantial, quantifiable market opportunity driven by acute operational pain and supported by governmental financial intervention.

### **5.1. Opportunity Quantification: Sizing the DP/S&OP Serviceable Market**

The F&B sector provides a high-value, identifiable segment for initial market targeting due to the magnified consequence of planning failure (spoilage and waste).

The overall F&B sector encompasses both manufacturing and services. In the manufacturing sector, F&B comprised 15.0% of all manufacturing SMEs<sup>12</sup>, which themselves numbered

37,866 in one estimate.<sup>33</sup> In the services sector, restaurants alone accounted for 14.2% of the majority of services SMEs.<sup>12</sup> Given the rapid expansion of the foodservice market, projected to reach USD 27.50 billion by 2030<sup>19</sup>, the target population of F&B-focused SMEs is demonstrably in the tens of thousands of firms.

The untapped nature of this market is evidenced by the low maturity metrics. Given the 70% of SMEs struggling with cash flow<sup>3</sup>, the 70% reliance on rudimentary tools like Excel for planning<sup>5</sup>, and the low 10.5% adoption rate for foundational Cloud ERP systems<sup>6</sup>, the penetration rate for integrated, specialized Demand Planning and S&OP systems remains significantly below 30%. This validates a massive, underserved segment struggling with the foundational mechanics of inventory and demand management.

The strategic focus should be directed at the vast majority—the Micro and Small enterprises—that dominate the market structure and face the most acute financial distress. Providing accessible S&OP tools to this segment represents the largest volume opportunity.

## **5.2. Competitive Landscape Analysis and Positioning**

The competitive environment for supply chain solutions can be segmented by the maturity and cost profile of the client.

### **The Consulting Layer (High-End)**

Firms such as Logistics Bureau and ABeam Consulting operate at the strategic, high-end of the market. Logistics Bureau assists senior business leaders with improving logistics and supply chain management, often focusing on high-level challenges such as improving demand forecasting accuracy and resolving general inventory management issues across multiple commercial sectors in Malaysia.<sup>27</sup> ABeam Consulting, with a large pool of SAP consultants, focuses on comprehensive transformations for clients across various industry sectors, including global rollouts.<sup>34</sup> Their services are priced for mid-to-large enterprises.<sup>28</sup>

The specialized S&OP solution should position itself not as a competitor to these high-end consultants, but as the mandatory, operational foundation. The technology provides the systems and clean data necessary for small firms to eventually scale and engage such strategic partners, focusing on implementation of affordable, tangible *systems* rather than just *strategy* or high-cost advisory services.

## **The Software Layer (Entry-Level)**

The existing entry-level software market provides basic inventory and accounting functionality. Solutions like Focus and Precoro offer basic supply chain modules starting from RM500 to RM800 per month, often incorporating features like demand forecasting, inventory management, and procurement management.<sup>35</sup> Even simpler, high-volume solutions like ECOUNT offer inventory systems starting at only RM200 per month.<sup>32</sup>

To successfully penetrate this layer, the proposed solution must differentiate itself by going beyond generic inventory tracking. Differentiation must be achieved through embedded, F&B-specific Demand Planning intelligence—specifically integrating logic for seasonal fluctuations and perishability management that is superior to standard spreadsheet-based or basic ERP-integrated forecasting. This specialized capability justifies the marginal cost increase over basic accounting inventory software.

## **5.3. Leveraging Government Digitalization Initiatives (The Commercial Engine)**

The most potent factor influencing market penetration and sales strategy is the structure of Malaysian government grants designed to accelerate technology adoption. These incentives directly counteract the SME's primary barriers of cost and complexity.

### **The SME Digitalisation Grant**

This government-backed initiative encourages small businesses to adopt essential digital tools. The grant typically covers up to 50% of eligible costs, capped at a specific maximum amount, such as RM5,000.<sup>9</sup> Eligible solutions explicitly include Enterprise Resource Planning (ERP) systems<sup>9</sup>, which typically house Demand Planning and inventory modules. This grant dramatically lowers the capital outlay required for Micro and Small F&B businesses to acquire basic operational planning software. For instance, a RM5,000 solution becomes accessible with only RM2,500 in out-of-pocket costs, making the adoption decision significantly less risky and accelerating the conversion cycle.<sup>9</sup>

## The Industry4WRD Intervention Fund

For medium-sized F&B manufacturers—which, by definition, generate turnovers between RM 15 million and RM 50 million <sup>18</sup>—the Industry4WRD Intervention Fund offers substantial capital support. This fund provides a matching grant (70:30 ratio) up to a maximum of RM500,000 for companies that have completed the government-funded Industry4WRD Readiness Assessment (RA).<sup>11</sup> This incentive directly targets the adoption of technology for process improvement and is the primary driver for selling comprehensive SCM and DP solutions to the higher Average Revenue Per User (ARPU) F&B manufacturing segment.

## The Crucial Role of Approved Vendors

Accessing this subsidized demand is conditional upon regulatory compliance. To utilize the SME Digitalisation Grant, businesses are mandated to select an approved vendor, known as a Digitalisation Partner (DP), from an official list.<sup>10</sup> The grant administration involves agencies such as Bank Simpanan Nasional (BSN), SME Bank, and the Malaysia Digital Economy Corporation (MDEC).<sup>9</sup>

Therefore, market success is heavily contingent upon achieving Digitalisation Partner status or securing strategic alliances with established DPs, MDEC-status companies <sup>39</sup>, or the appointed financial institutions. The grant system is not just an incentive; it is the single most effective distribution channel in the Malaysian SME market, mandating a strategy focused on regulatory compliance and partnership building rather than traditional direct sales competition.

Table 3: Cost and Subsidy Analysis for Market Entry

Solution Type	Estimated SME Cost (MYR)	Government Subsidy Potential	Strategic Implication
Basic Inventory/DP Software (Per Month)	RM 200 – RM 800 <sup>32</sup>	SME Digitalisation Grant (up to 50% matching, max RM5,000) <sup>9</sup>	Enables low-risk, subsidized adoption for Micro/Small firms; high-volume sales

			channel.
Advanced Supply Chain Training (Per Pax)	RM 2,890 – RM 3,500 <sup>30</sup>	Variable/None directly for S&OP	Confirms cost barrier for human expertise; validates technology substitution strategy.
Specialized Consulting (Per Hour)	RM 300 – RM 700+ <sup>29</sup>	None directly applicable	Confirms cost barrier; justifies the high value of embedded SCM software intelligence.
Integrated SCM/ERP System (F&B Manufacturer)	High, Custom (>RM100k)	Industry4WRD Intervention Fund (up to RM500,000, 70:30 matching) <sup>11</sup>	Key driver for Medium-sized manufacturing F&B firms, enabling high-value contracts.

## VI. Strategic Recommendations and Conclusion

The deep research confirms that the operational gaps in Demand Planning and S&OP among Malaysian SMEs are not theoretical but represent acute, financially destabilizing deficiencies within a critical economic segment. The F&B sector, with its high growth rate and compounding risks related to perishability, stands out as the most compelling point of entry for targeted digital solutions.

### Strategic Recommendations

Based on the validation of the SME gap, the F&B sector's complexity, and the structure of

government incentives, a multi-tiered strategic approach is required for market success:

## 1. F&B Specialization and Product Design

The solution must be designed specifically to address the F&B sector's unique pain points. The software should integrate automated, high-precision Demand Planning intelligence, such as SARIMA-based models, to accurately predict seasonal fluctuations in consumer demand for both perishable and non-perishable goods.<sup>7</sup> This must be coupled with specialized inventory management features like automated FIFO alerts, real-time waste tracking, and shelf-life monitoring to mitigate the substantial financial risk associated with spoilage.<sup>1</sup>

## 2. Tiered Pricing Strategy Aligned with Grants

To maximize market capture across the structurally fragmented SME landscape, a tiered strategy is mandatory:

- **Micro/Small Segment Focus (Volume Strategy):** Target the majority of the market (98.3% of firms<sup>15</sup>) with a foundational DP/Inventory solution priced for high volume (e.g., RM200–RM500 per month). The initial implementation cost must be structured to fit within the maximum subsidy limits of the SME Digitalisation Grant (RM5,000).<sup>9</sup> This ensures the cost barrier is minimized.
- **Medium Segment Focus (Value Strategy):** Target the manufacturing F&B firms (defined by turnover between RM 15M and RM 50M<sup>18</sup>) with a full S&OP module implementation delivered on a custom, project-based model. This structure is designed to leverage the substantial funding available through the Industry4WRD Intervention Fund (up to RM500,000)<sup>11</sup>, accessing the higher-value consulting and implementation revenue streams.

## 3. Distribution Strategy: Compliance and Partnership First

Given the dependency on government subsidies, the market entry strategy must prioritize achieving regulatory status. Immediate investment is necessary to secure Digitalisation Partner (DP) status with the relevant agencies (MDEC, BSN, SME Bank).<sup>9</sup> This compliance is not optional; it is the mechanism by which subsidized demand is unlocked, providing

unparalleled access to the target SME population.

#### **4. Product Philosophy: Embedded Expertise**

The technological solution must function as a full substitute for expensive managerial expertise.<sup>29</sup> The software must overcome the internal knowledge and skill gap (where 82% of MSMEs need more education<sup>14</sup>) by being highly prescriptive. Instead of requiring advanced data analysis skills, the system must provide clear, actionable output, such as prescriptive optimal reorder points, automatic adjustments based on forecast accuracy, and clear projections of cash flow impact resulting from planning decisions. The goal is to simplify the complex S&OP process into automated, low-touch workflows.

#### **Future Trajectory**

The market is rapidly evolving towards greater technological sophistication. While the Cloud ERP adoption rate remains low<sup>6</sup>, the high adoption rates and optimism regarding Artificial Intelligence (AI) and Big Data Analytics (BDA) suggest future openness to integrated planning tools.<sup>14</sup> However, this adoption must address the foundational barrier of data veracity.<sup>25</sup> Early market entrants who successfully establish reliable data foundations within Micro and Small F&B firms, by standardizing data collection and cleansing through simple SCM tools, will be optimally positioned to offer advanced BDA and AI-driven forecasting services as the SME segment matures toward a high-income, digitally-driven economy, as outlined in the nation's strategic vision.<sup>16</sup>

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