Business at risk: Attacking unhealthy complexity to increase profitability

Strategy and Operations

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Simplicity is the ultimate sophistication

Leonardo Da Vinci
Many companies have found that offering a diverse product portfolio is essential for maintaining a competitive edge. However, companies often launch product variations without fully understanding the extent to which the variants will increase complexity and costs in the supply chain or be considered valuable by customers. As a result, the avalanche of new products has often generated higher costs without a clear payoff.

The diversified industry sector is facing tough challenges from a shifting customer behaviour, jeopardizing traditional business models and eroding margins. The main drivers are intense pressure from customers regarding products being highly customized and being delivered through a global supply chain network at short notice, the distinguished global customer and regulatory requirements, the customer’s expectation to speed up innovation cycles to feed their customer needs and to stay on top of the competition. Given the customers pressure on price and the markets competition, diversified industrial manufacturer tend to fulfill every requirement requested from customers paying less attention to the fairly caused costs alongside the supply chain.

As a consequence, the total amount of items including their variants keeps increasing while producing smaller lot sizes and managing it becomes more and more expensive, finally eating up profits.

For diversified industry manufacturer, it is not enough to simply recognize the challenges – rather, to translate their impacts into changes to business and operating models. This manifests itself in five key complexity challenges.

**The five key complexity challenges explained**

Firstly, production facilities often need to be reequipped each time a variant is processed, which results in downtime that reduces capacity utilization and increases processing costs. Downtime from a single product changeover can exceed ten hours, even if the differences between products (such as size, color, or packaging) are minimal

Secondly, the procurement department needs to purchase a large variety of ingredients and materials and enlist a large number of suppliers, making it hard to leverage scale.

Thirdly, as it is difficult to accurately forecast demand for a large number of products, fill-rate targets are often hard to achieve and the distribution department is burdened with high inventory levels that increase the net working capital. Some manufacturers end up maintaining twice the inventory level that they actually need.

Fourthly, Costs for overhead and administration increase significantly as companies struggle to manage a large product portfolio.

Finally, the overabundance of products and high level of complexity make it hard for sales teams to identify, and focus their efforts on, the most valuable products in the portfolio. And because a diverse product assortment often lacks a clear value proposition, the marketing and promotion budget is not spent effectively. Higher marketing costs and lower sales-force effectiveness result.

**Distinguishing good from bad complexity**

Not all complexity is bad. There is an essential difference between value-creating and value-destroying complexity. Good complexity drives new sales in diverse markets and delivers a healthy profit. New SKUs are able to attract unsatisfied market needs that can grow emerging segments. Bad complexity erodes profits and increases inventory cost, as well as the number of redundant processes. This often includes carrying on legacy SKUs, which cannibalize sales and increase product variants. As a consequence, the organizational structure becomes more complex and suboptimal systems that are often circumvented by manual labour-intensive processes occur.

Complexity reduction helps to reveal these hidden costs, allowing a company to focus on its core business. It also provides clarity regarding which products are making money and which bottlenecks are eroding profits.

**A holistic view to identifying and managing complexity**

To ensure only good complexity exists, and to reduce avoidable complexity to a minimum, an in-depth end-to-end examination of all areas of complexity is crucial. A strategic understanding of market factors is as essential as the operational view if this is to be achieved.
Tackling complexity by focussing only on SKU rationalization, process efficiency or manufacturing optimization will only address parts of the problem. It is not a sustainable solution.

We recommend that companies take an end-to-end view of complexity through the “The 9 Levers of Value” approach (Exhibit 1). This reflects strategic considerations of where to play and the operational challenges of how to win. Where to play considerations are concerned with the company goals, markets and channels, target clients and the competitive landscape. How to win screens core business processes and the technological infrastructure as well as topics such as people and culture.

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<tr>
<th>Where to play</th>
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<tr>
<td>How quickly are new products introduced?</td>
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<td>How customised are SKUs to meet market demands?</td>
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<td>How much has the amount of legacy SKUs increased during the past years?</td>
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<th>How to win</th>
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<td>How many variants and exceptions are existing for standard guidelines and workflows?</td>
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<td>How challenging is it to meet current and future market demand with today’s equipment?</td>
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<td>How often is too little safety stock an issue in the day-to-day business?</td>
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<td>How complex is the plant footprint and the internal distribution network (e.g. material &amp; people flow)</td>
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Identifying the most relevant complexity levers differs for each company. To understand the root causes of complexity we recommend conducting an initial assessment. This consists of a management workshop and resulting questionnaire conducted with subject matter experts (SMEs) to confirm if there is a common view on complexity. Exhibit 1 serves as an example for such a questionnaire, covering the most relevant levers. By asking both management and SMEs, the biggest pain points can be located quickly and divergences can be analyzed to understand perception gaps.

Once the qualitative assessment of complexity is validated, a financial decomposition of the company can be performed. Opportunities can be quantified, benefits validated and a tangible business case created, together with a roadmap to tackle the complexity hotspots identified.

**Complexity reduction in practise**

Let’s consider the case of a global manufacturer company that has seen ever increasing SKUs and associated complexity in its commercial end products. Facing this fact the management team came to the decision to launch an ambitious simplification program. The goal was to define a sustainable position in the competition and lay the groundwork for a future strategic vision.

To comprehensively solve the complexity challenge, the company teamed up with KPMG, using advanced analytics to evaluate its product portfolio, process efficiency, product equipment fit and supply chain segmentation. At the core of the project was an in-depth economic model that took into account the strategic product life cycle as well as market concerns. The company was able to determine the true profitability of each individual SKU, while being able to consider “What-If” scenarios (Exhibit 2). Tax implications also played an important role in deciding which SKUs should be optimized or rationalized to benefit from location advantages.

Furthermore, manufacturing technologies were assessed based on market trends and product/equipment fit. Process complexity was identified by conducting multiple workshops, subject matter experts (SME) interviews and surveys.

Due to the applied agile methodology, the company was able to constantly evaluate how the project was progressing.
Exhibit 2: Portfolio Analysis including Scenario Modelling Options

..."The output gave us the opportunity to optimize our product portfolio by understanding the profitability of individual SKUs, address the product/equipment fit, improve operations and highlight the steps necessary to strengthen our position in a changing market environment. The results of the study were highly appreciated by management and subject matter experts alike."

Project Lead for Simplification and Strategy 2025

Continuous complexity is inevitable and requires active ownership

Our experience shows that complexity cannot be solved by a one-off program. Markets are constantly changing and bring new challenges that raise fresh, unanswered questions. Complexity management should be an integral part of a company's strategy and day-to-day operations.

Every manager has the ability to reduce complexity. But this requires an active approach to embracing the task rather than worrying about the threats complexity poses.
About KPMG Strategy and Operations

KPMG Strategy and Operations works with private, public and not-for-profit organizations to transform businesses and improve performance, helping clients achieve their goals and objectives. Our professionals develop insights, as well as tangible and executable business plans including roadmaps, to help address organizational challenges such as complexity management, growth, operating strategy, cost, integrated business planning and transformation.

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Holistic solutions
Driving innovative changes to business and operating models

Customer first
Putting the customer first in all that we do

Data driven
Leveraging data and analytics to provide leading insights

Value driven
Value-based, metric driven approach

Agile approach
Alternative embedded approach to managing change

Technology enabled
Using technology to drive and enable business value from change
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