



# Profitability at risk: Managing complexity in the changing pharmaceutical industry

Operations Consulting

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*Simplicity  
is the ultimate  
sophistication*

Leonardo Da Vinci

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# Profitability at risk: Managing complexity in the changing pharmaceutical industry

How pharmaceutical companies can reduce business complexity and unlock hidden value by turning information into insights.

The pharmaceutical market is undergoing a fundamental disruption, jeopardizing traditional business models and eroding margins. Governments and insurers are putting pressure on pharmaceutical companies to reduce prices and demonstrate greater value. The disruption is also characterized by increased patient empowerment that is enabled by better access to data. This implies that patients better understand, and get more involved in, managing their conditions.

KPMG's Pharma outlook 2030 study<sup>1</sup> identified parallels with the challenges faced in the past by the automotive industry. Both industries are mature, with significant regulatory pressure and steered by a few, very large players. For pharmaceutical companies, 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 four key complexity challenges.

## Four key complexity challenges

Firstly, in a mature pharmaceutical market, consumers demand tailored personal care concepts to address individual medical conditions as well as their general well-being. We also observe a shift from treatment towards prevention, which requires new forms of therapies, increased access to data, and technological advances, because existing production equipment is often not in line with market requirements and companies need to move away from the traditional one-size-fits-all concept.

Secondly, pharmaceutical companies face downward pressure on pricing as well as increased legal requirements, while demonstrating added value is an additional objective to be overcome. For instance, New York State's Delivery System Reform Incentive Payment aims to move nearly 90 percent of managed care payments to value-based methodologies by 2020.<sup>2</sup> This requires not only full cost transparency across the entire value chain, but also the adaptation of new pricing models that capture fair costs.

Thirdly, new business and operating models including tax and value optimization, necessitate robust, proactive portfolio management to avoid ever increasing stock keeping units (SKUs). Only well managed portfolios can strengthen the bottom line by increasing efficiency and boosting productivity.

Finally, converging technologies that replace manual and labor-intensive work enable solutions such as predictive

analytics. This requires new skill sets and harmonizing the existing IT landscape.

## 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 such as gene editing, 3D printed organs or nanoparticles that can grow emerging segments. Regulatory complexity can be beneficial in the sense of impacting time to market. Substantial market share can be secured as - especially lifesaving - drugs will hardly be changed once used.

Bad complexity erodes profits and increases inventory cost, however, 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 labor-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.

<sup>1</sup> Pharma outlook 2030: From evolution to revolution, KPMG Global Strategy Group, February 2017

<sup>2</sup> A Path toward Value Based Payment: Annual Update, U.S./N.Y. Department of Health, June 2016

## Exhibit 1: Example questions to identify complexity with management and SMEs

Where to play	low		high	
How quickly are new products introduced?				
How customised are SKUs to meet market demands?				
How much has the amount of legacy SKUs increased during the past years?				
<b>How to win</b>				
How many variants and exceptions are existing for standard guidelines and workflows?				
How challenging is it to meet current and future market demand with today's equipment?				
How often is too little safety stock an issue in the day-to-day business?				
How complex is the plant footprint and the internal distribution network (e.g. material & people flow)				

Source: KPMG analysis

 Management Assessment

 SME Assessment

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 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 practice

Let's consider the case of one of the three leading global pharmaceutical companies that has seen ever-increasing SKUs and associated complexity in its commercial end products, APIs and medical devices. 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 corporate supply network and lay the groundwork for a future strategic vision.

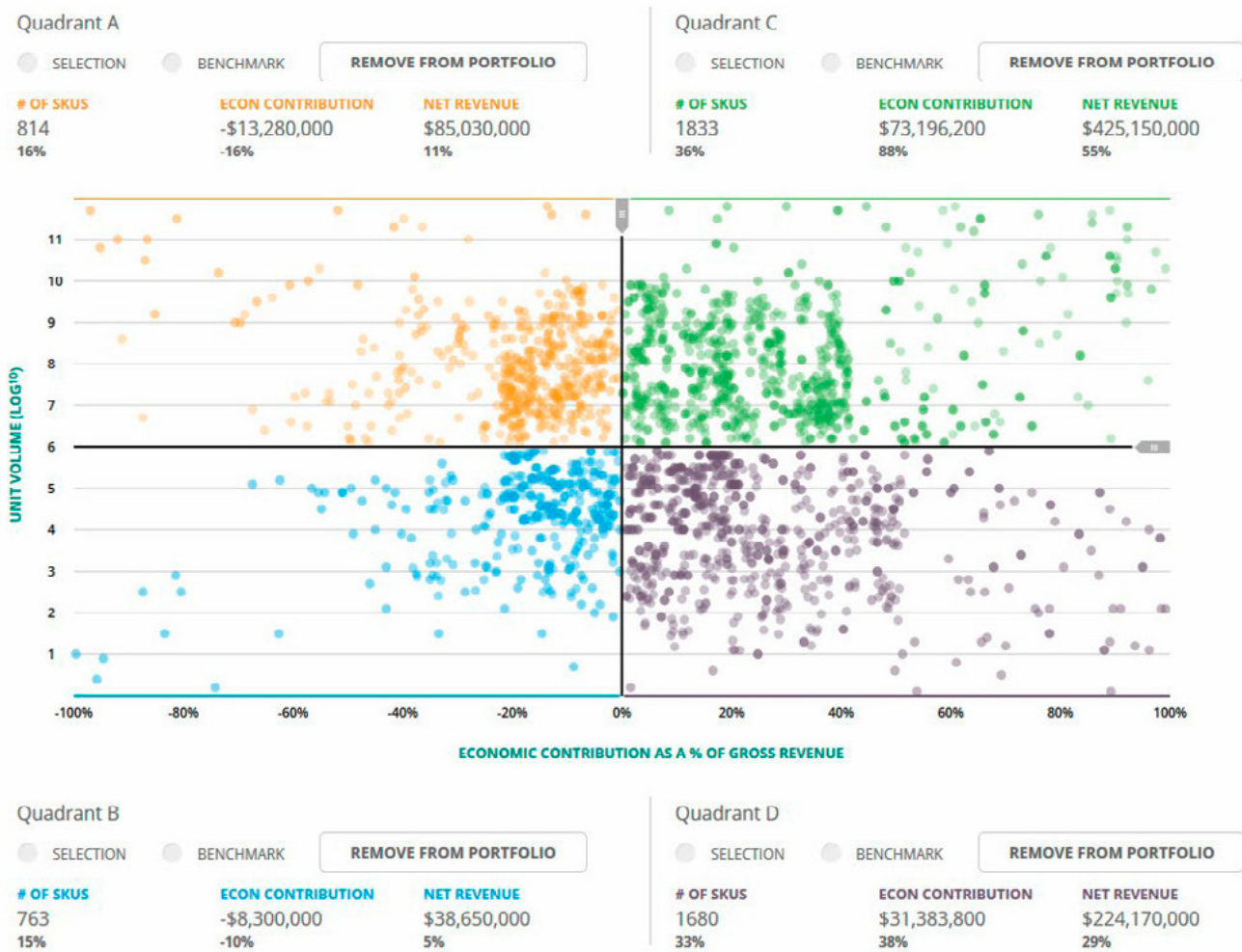
To comprehensively solve the complexity challenge, the company teamed up with KPMG, using advanced analytics to evaluate its product portfolio, process efficiency and product equipment fit. At the core of the project was an in-depth economic model that took into account the strategic product life cycle 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 and was able to bring in new market and business insights. The results of the program: a tangible business case and executable roadmap covering three aspects:

1. Quick-wins and process simplification
  2. Structural and technological improvements
  3. Long-term strategy and portfolio optimizations
- As a result, reduced complexity unlocked hidden value equivalent to 15 percent of the company's net sales.

## 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 Operations Consulting

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.

## Why KPMG?



### **Holistic solutions**

Driving innovative changes to business and operating models



### **Value driven**

Value-based, metric driven approach



### **Customer first**

Putting the customer first in all that we do



### **Agile approach**

Alternative embedded approach to managing change



### **Data driven**

Leveraging data and analytics to provide leading insights



### **Technology enabled**

Using technology to drive and enable business value from change

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