

How Much Does Complexity Really Cost?

EBIT reserves of more than €30 billion are just waiting to be tapped

Uncontrolled complexity is choking profits at too many companies. Because its effects are siloed in separate departments, management often fails to see the relationship between complexity and costs across the value chain. Yet a recent A.T. Kearney analysis finds that companies can increase their EBIT by 3 to 5 percentage points on average—if they make systematic, cross-functional improvements based on transparent complexity costs.

Top managers have focused on complexity management issues for years now. But despite launching various projects and following the latest guidelines, they have had only moderate success. Like a ticking clock that won't stop, complexity is still on the rise, especially in the context of market consolidation and globalization. Ever more complex structures are beset by an increasing number of complexity fields, tied down by non-transparent product portfolios, and hampered by sub-optimal processes. At the same time, companies are squeezed on costs while struggling to meet shareholders' profit targets. By now, all the low hanging fruit has been picked and it is necessary to find newer, more intelligent methods for reducing complexity.

Reducing complexity can have a significant impact on profits. A recent A.T. Kearney analysis estimates that, on average, systematic complexity management can lead to an upturn

in EBIT of 3 to 5 percentage points. A.T. Kearney estimates the additional EBIT potential for DAX companies alone to be worth more than €30 billion overall.¹ In order to reach this level companies must make complexity costs transparent across the entire value chain.

But first, it's important to realize that not all complexity is bad. There is a crucial difference between value-creating and value-destroying complexity, which can be ascertained by answering the following questions: Are customer requirements fully understood? Have they been translated into a product worth more to customers than the complexity it induces? Quite often, value-adding complexity is a real competitive advantage and should be actively and efficiently controlled. Value-destroying complexity pushes the customer away and sends the company into chaos and confusion. This kind of complexity must be reduced to a bare minimum.



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¹DAX is Deutscher Aktien Index (German stock index).

The following guidelines show how companies can reduce unnecessary complexity and increase their EBIT.

Recognize the Relationship between Complexity and Costs

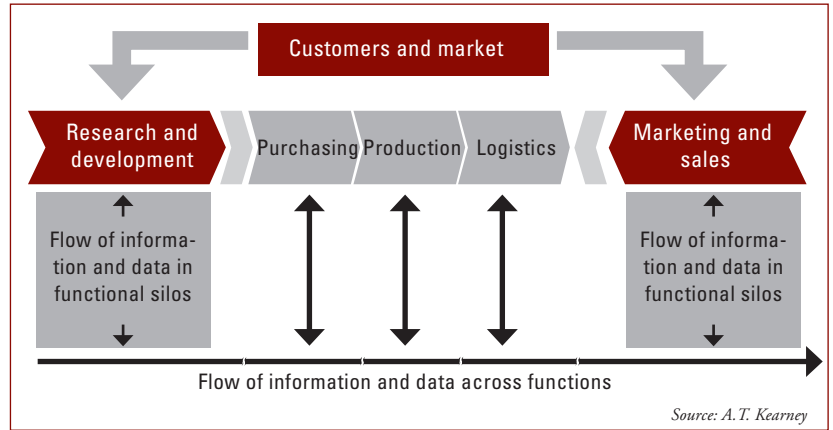
An A.T. Kearney analysis reveals that many companies fail to understand the relationship between complexity and costs. The reason is that these connections often get lost in isolated, silo-like departments and IT structures. It becomes nearly impossible to analyze the information flowing across a company's value chain.

The key to overcoming this misperception is to take a broader organizational view. Looking at a company from this angle, we see that complexity generally arises at the beginning and the end of the value chain—that is, in research and development (R&D) and marketing and sales. Pressures building up in these departments are then passed on to the other stages of the chain—in purchasing, production and logistics (see figure 1). These pressures act to reduce economies of scale and buyer power, and to increase costs for production and logistics.

Understand Real Profitability and Strategic Value

The real cost of complexity can be construed through a pragmatic, activity-based cost calculation. Typically, this requires formulating a contribution margin statement for each product and using it as a control variable. This can be a difficult process, as com-

Figure 1: Information flows across the value chain



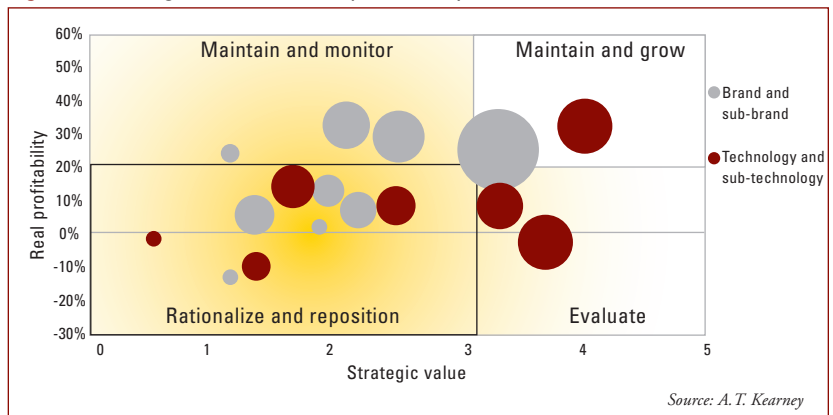
panies often incorrectly assess their products' profitability margins—for example when key costs (in sales and R&D) are not available for a product or product cluster, or when these are allocated incorrectly due to an inappropriate cost key.

Keep in mind that a product's contribution margin isn't defined in terms of profitability alone. It is just as important to consider the strategic causes that sometimes justify complexity. These include new products that haven't yet delivered the necessary contribution margin, the targeted

increase of a company's market share through aggressive pricing, and specific innovative offers leveraged primarily for strategic positioning. In addition, the strategic value of products should also be taken into account. Here, numerous key factors need to be considered, such as technology substitution options, customer loyalty, market size, share and growth.

Once a company has assigned values to its products' contribution margins, it can use a strategic value and real profitability matrix to analyze the importance of all its portfolio compo-

Figure 2: Strategic value and real profitability matrix



nents—such as product groups, technologies and brands (see figure 2). The matrix pinpoints where in a company’s portfolio it should reduce its complexity and where this could even be expanded.

Identify Problem Areas with a Complexity Fingerprint

Real profitability can also be discovered through a company’s “complexity fingerprint.” This fingerprint is created by identifying the specific complexity drivers of a company—such as existing technologies, brands, products and customers—and comparing this total number against the segment producing 80 percent of total EBIT. Figure 3 shows the difference between the two numbers shaded in yellow.

Through this fingerprint, it becomes much easier to determine business-specific problem areas: the larger the space shaded in yellow, the greater the need for complexity-minimizing measures. The goal is then to shrink the number of complexity drivers acting as a drag on EBIT. In our experi-

ence, the complexity fingerprint is a useful tool because it enables transparency, catches management’s attention, and leads to focusing and prioritizing problematic areas. Additionally, it is part of a company’s “complexity score-card” and is a critical controlling tool in implementing complexity reduction initiatives.

Simplify and Maximize Value with a Radical Reduction Approach

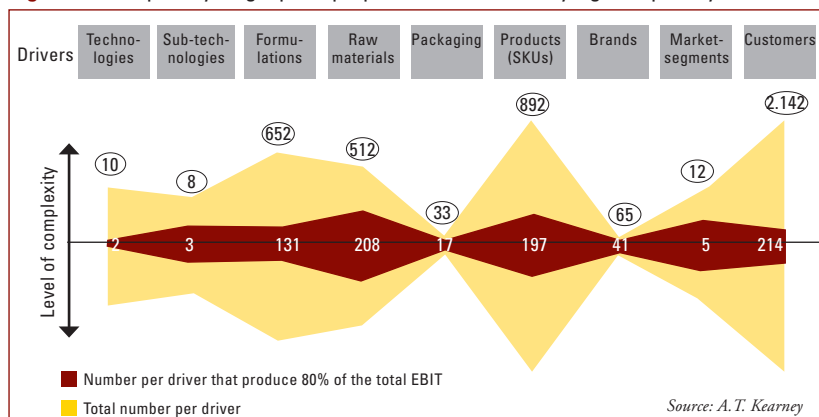
In the process of identifying complexity drivers, a company will need to come up with shared definitions of the business. Experts from across the value chain should be brought together to develop these definitions according to a basic motto: “simplify for value.” Joining together supply chain, production, and purchasing on the one hand, and research and development, marketing, and sales on the other, is not a conflict-free process. Balancing various points of view and personal interests here poses a challenge to nearly all companies. However, the important thing is

Not all complexity is bad. Value-adding complexity offers firms a way of meeting customer demands and is a real competitive advantage.

for experts to consider openly and creatively how to achieve the best mix between complexity and profitability.

All elements of the company should be questioned systematically and critically based on figures, data and facts in down-to-the-bone workshops. After completing these top-down steps, all products and stock-keeping units (SKUs) will be analyzed from the bottom up—right on down to the key raw materials, including their specifications from the respective bills of material. This analysis will show whether or not a product is worth keeping in the portfolio—once again by using the strategic value and real profitability matrix illustrated in figure 2. If both values are too low, the company eliminates the product and (hopefully) converts its customers to purchase other, more lucrative ones. If, however, high strategic value is combined with an overly low real profitability, the com-

Figure 3: Complexity fingerprint pinpoints value-destroying complexity



pany can increase its prices and still induce customers to pay for the ensuing complexity.

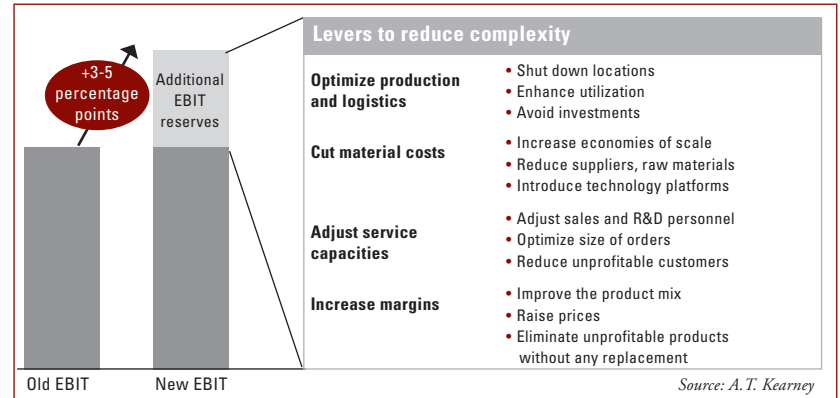
The end result of this combined top-down and bottom-up approach is generally to reduce the product/SKU portfolio by 20 to 40 percent; shrink materials, raw materials and suppliers by 20 to 30 percent; and eliminate sub-technologies and sub-brands. Not infrequently, certain production sites will also close down.

Sustain your EBIT Potential Across the Value Chain

By “simplifying for value,” a company will dramatically change the characteristics of its complexity drivers. But how can your company sustain these results across the value chain? The key is to identify the domino effect: Do cost savings affect only the single value chain stage? Or do they trigger positive or negative reactions across and beyond the whole chain?

An innovative multicube data model can help to understand the domino effect. The model analyzes detailed information from the respective modules of the current enterprise resource planning (ERP) system. It allows companies to distinguish between marginal and incremental cost reductions and identify and quan-

Figure 4: A multicube data model identifies strategies for reducing complexity



tify the remaining fixed costs. Next to data analyses, strategic direction-setting is extremely important for complexity management. From our analysis, we’ve identified four levers that can help organizations trim their complexity costs (see figure 4):

- Optimize production and logistics
- Cut material costs
- Adjust service capacities
- Increase margins

Unlock Performance Reserves by Reducing Complexity

Complexity management calls for hard work, considerable patience and continuous attention of top management. In particular, you must ensure that individual departments are not working against the collective interests of

the firm as a whole. To do this, we often recommend establishing the position of “complexity manager” and assigning someone with extensive qualifications and far-reaching competencies. We also suggest adjusting core processes that are likely to produce complexity, such as product portfolio management, the innovation and production development process, and the lifecycle management process. And during the implementation phase, it is always wise to adjust managers’ target systems, otherwise you risk achieving short-term “flash-in-the-pan” results and employees will subsequently fall back into their regular routines. Consistent and holistic complexity management is one of the few remaining methodologies that enables companies to boost their long-term profitability.

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