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Advanced Electronics Practice

A new approach to Accelerated Performance Transformation

New technologies are transforming industrial, technology, and consumer companies. How can they improve their margins and growth while funding innovation?

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The term “disruption” constantly comes up when discussing technological advances over the past two decades. The explosion of social media and the internet, combined with the growth of the sharing economy, has transformed how we live and work. Now disruption is making headlines again. But this time, the term applies to new technologies that could have even greater impact. The list of innovations is long, but those routinely found at the top include artificial intelligence (AI), machine learning (ML), autonomous cars, advanced robotics, and the industrial Internet of Things (IoT). Call it Disruption 2.0. While earlier waves of disruption focused on “doing things differently,” Disruption 2.0 involves “doing different things.”

How will industrial, technology, and consumer companies navigate these changes? This question is urgent and could soon become more pressing. Although the current period of economic expansion is one of the longest in US history, a downturn is always a possibility. The unemployment rate is also extremely low—a situation that has often preceded an economic slowdown. Further, a recent McKinsey survey revealed that 59 percent of top executives believe that economic conditions are worse than they were six months ago.[1] If revenues decline as economic growth slows, companies may have difficulty funding the new innovations that define Disruption 2.0. The recent rise of tariffs and economic protectionism could also add complications.

To prepare for potential challenges, industrial, technology, and consumer companies have several options. One route involves undertaking an Accelerated Performance Transformation (APT) to drive EBITDA[2] expansion within 18 to 24 months. Such transformations are common across industries, but the coming technological advances and likelihood of slowing growth suggest that companies might receive optimal benefits from an innovative three-step approach that focuses on determining their full potential, measuring absolute change in financial performance, and driving a coordinated path to execution. Initial results at companies that have used that approach suggest that APT could improve EBITDA by more than 500 basis points in the first year alone.

Driving transformative change: Lessons from top performers

The three-step APT process is based on an analysis of more than 650 industrial, technology, and consumer companies over the past two decades. We examined their performance by focusing on one metric: economic profit[3] divided by revenue.

Quality of revenue

Quality of revenue (QOR) is the measure of the strength of a company’s operations, product offerings, and business model. It is calculated by examining five parameters:

- the markets in which a company operates
- the types of customers served (a metric that considers a customer’s size and market share, among other factors)
- a company’s position within its customer base (for instance, being the favored supplier)
- the uniqueness of a company’s proprietary offerings
- the preferred monetization model (such as whether a company relies on subscription revenue or licensing revenue)

[1] “Economic Conditions Snapshot, June 2019: McKinsey Global Survey results,” June 2019, McKinsey.com.
[2] Earnings before interest, taxes, depreciation, and amortization.
[3] Economic profit is the amount that remains after subtracting the cost of capital from net operating profit.

Our goal was to determine how the top companies maintained or improved their margins during periods of revenue growth and decline.

Our analysis revealed that company characteristics, such as size, capital expenditures, and R&D spending had a limited impact on performance, but management choices and operational excellence made a big difference. For instance, the size and number of a company's M&A deals strongly correlated with EBITDA, as did R&D productivity, employee productivity, and the quality of revenue (QOR) (see sidebar, "Quality of revenue"). But one operational strategy had a greater impact than any other: aggressive cost management during both good and bad economic times. These findings became the backbone of our three-step APT approach.

Careful cost management during strong economic periods

The top performers were highly cost conscious, even when revenues were soaring. Although costs did rise during these strong economic periods, the increase was approximately equal to revenue growth (Exhibit 1). Despite the influx of cash, the top performers treated variable costs as fixed expenses rather than pushing for more spending. At the bottom performers, by contrast, costs increased much faster than revenues did. These divergent patterns had striking consequences for EBITDA, with the top performers showing a gain of 390 basis points and the bottom performers a decrease of 230 basis points.

Even stronger cost management during weak economic periods

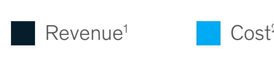
The contrast was even greater when we compared how the top and bottom performers behaved when their revenues declined. During these tough periods, the top performers accelerated their cost-reduction efforts. Although their revenues dropped by only 14.6 percent, they cut costs by 20.5 percent (Exhibit 2). Notably, they treated fixed costs like variable costs and made reductions when possible. By contrast, the bottom performers reduced costs by 14.1 percent—a decrease similar to their

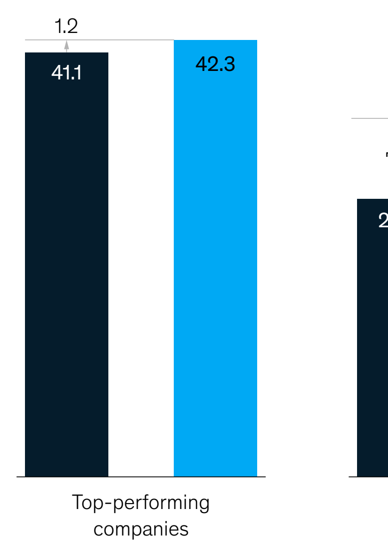
Exhibit 1

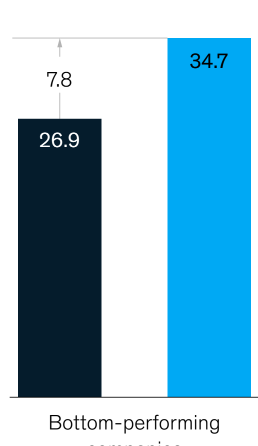
Even when top companies report revenue growth, they aggressively control costs.

Companies with positive revenue growth

Increase in revenue and cost between 2008–12 period and 2013–17 period, %







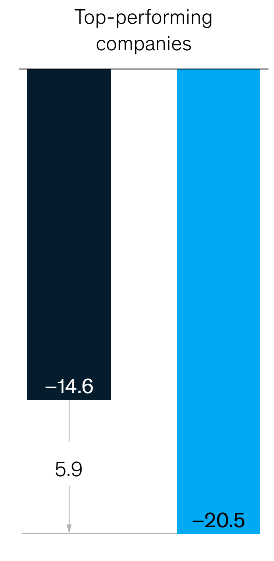
[1] Increase in revenue between one period (2008–12) and a second (2013–17); analysis restricted to companies with positive revenue growth.
[2] Increase in cost between one period (2008–12) and a second (2013–17); analysis restricted to companies with positive revenue growth.

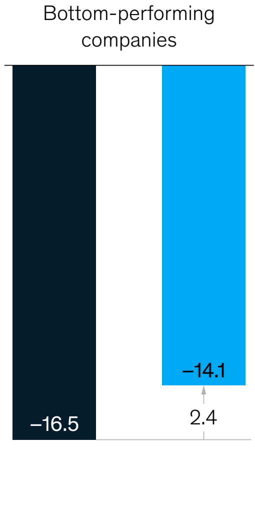
Exhibit 2

When revenues are declining, top performers become even more aggressive about cost reduction.

Companies with negative revenue growth

Decrease in revenue and cost between 2008–12 period and 2013–17 period, %





[1] Decrease in revenue between one period (2008–12) and a second (2013–17); analysis restricted to companies with negative revenue growth.
[2] Decrease in cost between one period (2008–12) and a second (2013–17); analysis restricted to companies with negative revenue growth.

16.5 percent revenue decline—and their fixed costs remained unchanged. The different strategies translated into an EBITDA increase of 680 basis points for the top performers and a decline of 370 basis points for the bottom performers—a gap of 1,050 basis points.

Impact of margin performance on total returns to shareholders

The share price of top performers reflected their cost-management efforts. Their total returns to shareholders (TRS) were consistently higher than those of bottom performers from 2001 through 2015—a period that saw rapid growth, a major recession, and then a recovery. In 2009, the year after the downturn began, TRS for the top performers was 47.5 percent higher than TRS for the S&P 500, while the bottom performers lagged behind this index (Exhibit 3). In 2014, when economic growth was moderate but steady, the results were even more dramatic. TRS for the top performers was 140.1 percent higher than TRS for the S&P 500, and the bottom performers lost even more ground.

Preparing for the future

All companies want to see EBITDA improvement, and the emergence of Disruption 2.0 adds urgency to the need to manage costs. If businesses integrate new technologies into their operations, they will see huge productivity gains as they automate knowledge work, digitize their supply chains, use the industrial IoT to improve predictive maintenance, and make other process improvements. Companies that use AI and ML to process big data will also gain new insights that lead to better customer segmentation, improved operations, and other advantages.[4] The challenge, however, will be in investing in innovation while maintaining margins.

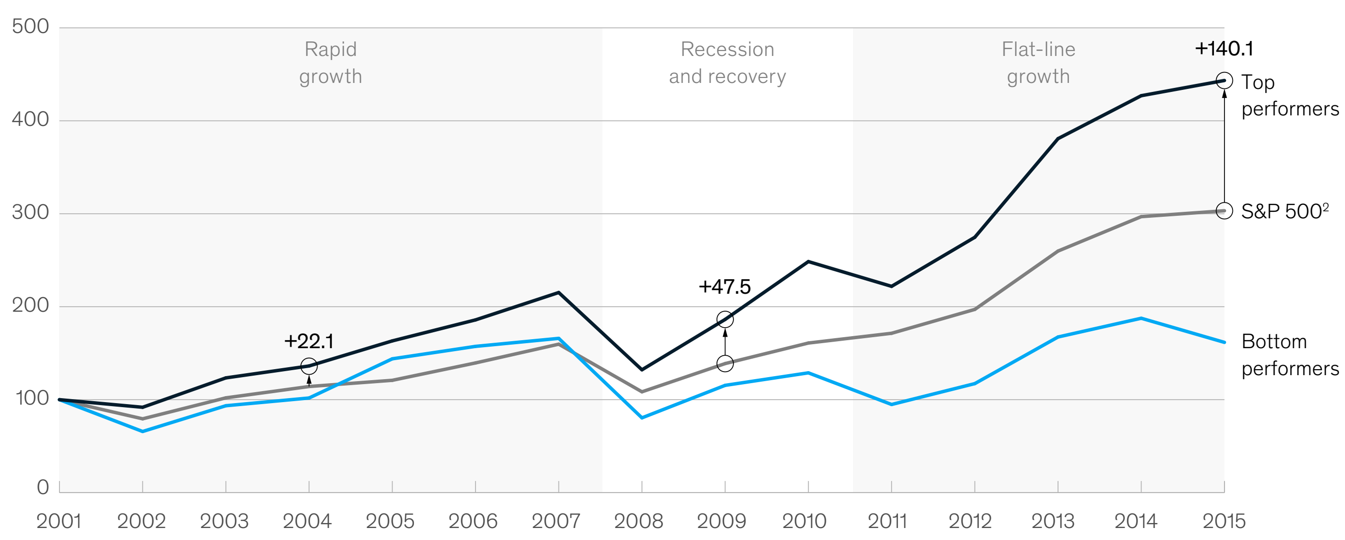
With this funding imperative, and with economic slowdown always a possibility, all industrial, technology, and consumer companies must learn to emulate the top performers quickly. An APT that includes the following steps may be their best option for a rapid transformation (Exhibit 4):

[4] For more information, see “Notes from the AI frontier: Modeling the impact of AI on the world economy,” McKinsey Global Institute, September 2018, McKinsey.com.

Exhibit 3

Top performers beat the S&P 500.

Cumulative total returns to shareholders, %[1]



[1] Weighted by market capitalization at beginning of fiscal year, indexed to 100% in 2001.
[2] Excluding financial companies.

— determining a company's full potential

— measuring progress toward absolute financial goals rather than the money nominally saved by implementing cost-reduction initiatives

— driving a coordinated path to execution

Companies that have embarked on a transformation using the three-step APT approach have achieved 70 to 80 percent of the intended impact in less than two years.

Determine full potential

Before companies move ahead, they have to understand their baseline performance. This goal sounds simple, but it is difficult to achieve. While many companies do look at specific operational and financial metrics in isolation, few consider the whole picture. Further, many companies rely on forecasts or planned estimates rather than actual numbers when trying to establish baselines and determine their full improvement potential.

During APT, managers must collect hard, factual data from the groups or individuals that have responsibility for tracking different metrics. Overall, the focus should be on five pillars that are often at the root of performance issues (Exhibit 5).

— **Head count.** After mapping head count by function and site, companies should conduct various analyses to determine whether any adjustments are necessary. For instance, a spans-and-layers analysis can identify cross-company overlaps and consolidation opportunities.

— **Operating expenses.** Leaders must break down spending by cost center and type. In addition to looking for potential areas of waste, companies may also need to institute more policies to keep expenses in check, such as new travel guidelines. To gauge whether their current operating expenses are excessive, they may want to build zero-based budgets. Frontline employees can often provide insights about potential waste in software, facilities, licensing, and other areas.

Exhibit 4

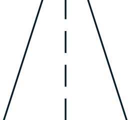
Companies should take an accelerated approach to improving core performance.

Determining full potential

- Getting detailed insight into baseline performance
- Conducting analyses of head count, operational expenditure, cost of goods sold, cash flow, and revenue
- Creating a list of initial improvement actions

Measuring absolute change in EBITDA,[1] not deltas in cost

- Ensuring tight integration between improvement actions and profit-and-loss outcomes
- Creating an early-warning system
- Monitoring all changes that could affect EBITDA, including unexpected headwinds



Driving a coordinated path

- Establishing individual accountability
- Eliminating conflict among business units, functions, and sites
- Getting input from frontline workers

[1] Earnings before interest, taxes, depreciation, and amortization.

— **Cost of goods sold (COGS).** To optimize spending related to the production of goods and services, companies must look at materials, manufacturing, and services. Leaders will find multiple opportunities to reduce COGS, including those related to improvement in labor productivity, material procurement, material consumption, and supply-chain operations.

— **Cash management.** Leaders must know baseline cash metrics, including accounts payable and accounts receivable, by business unit, region, and site. It often helps to conduct weekly reviews of planned outflows and expected inflows, since this detailed information can help companies create cash-flow targets and projections. As with other areas, leaders may sometimes need to create new policies to improve cash management, including those designed to prevent early payments.

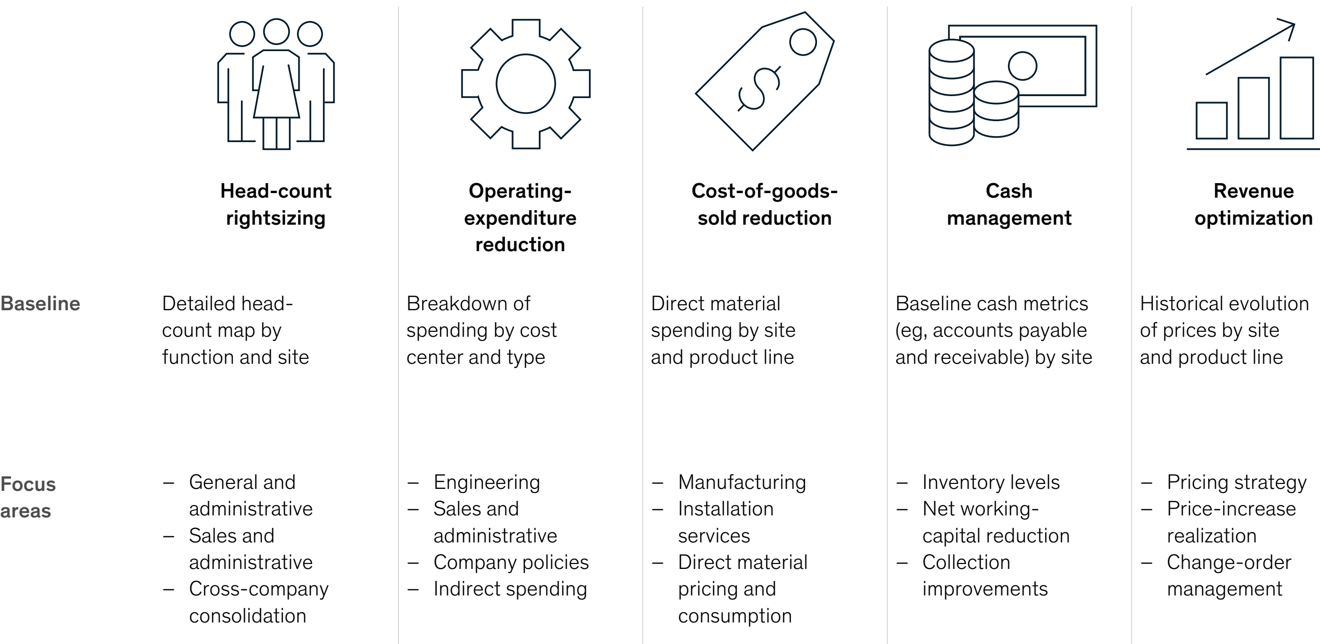
— **Revenue optimization.** For revenues, it is important to understand the historical evolution of prices by site and product line. Leaders can then make adjustments as needed—for instance, by customizing pricing based on the specific product configuration a customer selects or by conducting analyses that indicate the best times for price increases. They should also ensure that discounts offered to customers are appropriate, to avoid price erosion.

Once leaders are ready to move ahead, they should create a list of priority improvement initiatives that focus on identifying and resolving the root cause of any problem. For each one, they should specify what will need to happen, when it will occur, and who will have responsibility.

Many companies that have applied the three-step APT approach have found multiple cost-reduction opportunities across the five pillars. One power-electronics company in a highly competitive market was close to bankruptcy, and its stock price was at a record low. After looking at the five pillars, managers analyzed their entire spend base in detail and identified more than 100 improvement initiatives. The transformation reduced COGS by about 30 percent and operating expenses by about $40 million. The company also eliminated about $20 million in product discounts without affecting volume. Together, these improvements delivered about $110 million in operating-income improvement and increased cash on hand by more

Exhibit 5

Companies must develop baseline-performance metrics for five pillars of the business.



	Head-count rightsizing	Operating-expenditure reduction	Cost-of-goods-sold reduction	Cash management	Revenue optimization
Baseline	Detailed head-count map by function and site	Breakdown of spending by cost center and type	Direct material spending by site and product line	Baseline cash metrics (eg, accounts payable and receivable) by site	Historical evolution of prices by site and product line
Focus areas	– General and administrative – Sales and administrative – Cross-company consolidation	– Engineering – Sales and administrative – Company policies – Indirect spending	– Manufacturing – Installation services – Direct material pricing and consumption	– Inventory levels – Net working-capital reduction – Collection improvements	– Pricing strategy – Price-increase realization – Change-order management

[1] Based on defined-benefit pension funds with funds under management >$1 billion with allocation to private equity.

Source: McKinsey analysis

than 500 percent, all within the first 18 months of the transformation. Gross margin increased by about 2,000 basis points and operating margin by about 3,300 basis points over the same period. In addition to avoiding bankruptcy over the short term, the company saw its stock price rise by more than 20-fold after undertaking the transformation.

Measure progress toward absolute financial performance

When companies are evaluating the impact of a performance transformation, they traditionally focus on measuring the impact of their improvement initiatives, such as how much they save by reducing COGS. But it is more important to focus on the target EBITDA that they hope to achieve. For instance, companies may encounter unexpected headwinds, including higher-than-expected inflation, during their improvement initiatives. They could also fall short of their top-line growth plans or make changes in product volume and mix that decrease sales. Such changes could erode many benefits of their cost-reduction programs. If such problems occur, companies should adjust their improvement initiatives for the five pillars and strive for a greater delta (change from baseline). This strategy will help ensure that their transformation programs deliver real impact and meet the expectations for EBITDA that were set up front (Exhibit 6).

As leaders create or revise their cost-reduction initiatives, they must specify what actions will occur by what time and who will be responsible for completing them. They must also create, at the outset, a plan that describes the reinvestment of any savings.

In all cases, improvement steps should be tied to profit-and-loss statements. Since financials may be compiled only once a month, leaders must establish early-warning systems—those that provide either daily or weekly alerts—to ensure that they are on track to meet their targets. There should be a single source of truth for all metrics (such as a central database that all teams can access) rather than spreadsheets owned by different groups.

A semiconductor company that had trailed its peers in revenue for the prior five years attempted to improve its performance by launching a three-step APT. After examining all direct and indirect costs, the company identified more than 200 improvement initiatives that could reduce spending by about 15 percent. For each initiative, it created key performance indicators directly linked to profit-and-loss metrics, such as those related to sales-force efficiency. It measured progress weekly and made adjustments if any initiatives appeared to be going off course. This close monitoring helped the company increase gross margin by 400 basis points and operating margin by 570 basis points. The company also exceeded its initial targets for absolute EBITDA improvement.

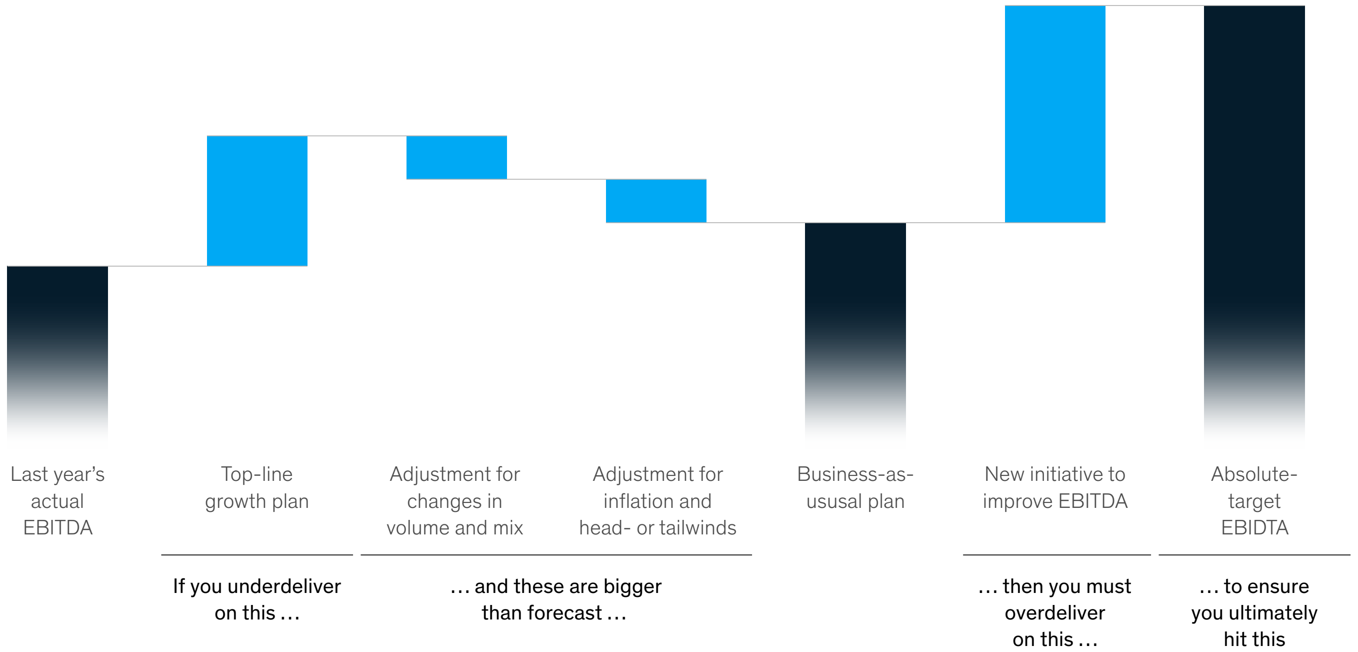
Drive a coordinated path to execution

Many performance transformations falter because no one has accountability for critical tasks or because groups fail to coordinate their activities. Leaders can avoid these problems during APT by coming up with a target for EBITDA, and then clearly stating why hitting this target will help the

Exhibit 6

Companies must focus on absolute financial performance, not simply improvements from cost-reduction initiatives.

EBITDA,[1] $, illustrative



[1] Earnings before interest, taxes, depreciation, and amortization.

organization, to get teams aligned and energized. In particular, they should emphasize how new initiatives will make certain tasks easier. Without this information, employees may fail to see that the benefits of APT extend beyond cost reduction. Leaders must also create a communications-and-engagement plan that describes accountability for critical tasks.

Another important step involves energizing the organization by putting the right talent and resources in place. If necessary, leaders should appoint change agents, create incentives, and launch capability-building programs to motivate frontline staff. To serve as role models, top leaders should demonstrate by their own words and actions that they support the transformation.

Then it is time to carry out the transformation. Leaders must be realistic and create a manageable portfolio of initiatives that does not overburden staff, as well as a road map that helps them integrate their new tasks into daily work. When necessary, leaders should create initiatives to change the mind-sets or behaviors of any employees having a hard time with the transformation. They can also create incentives for workers to exceed targets. Forums in which frontline employees can contribute ideas for improving the APT process may be particularly helpful. For instance, companies could create a platform through which representatives from different sites and functions can agree on company goals.

The focus on communication and alignment is particularly critical within large and complex organizations. In one case, a global industrial company had grown through acquisitions and lacked an integrated go-to-market model and channel-management approach. There were multiple brands in each division, and the company did not have a central pricing infrastructure, tools, or processes. Because of these inadequacies, it was only able to raise prices by about 0 to 2 percent annually across the board. As part of a three-step APT, the company redefined its pricing architecture for each brand based on factors such as end-market dynamics and value to customers. It also developed new sales incentives to stimulate growth and built internal capabilities. Rather than simply adding on a percentage to base costs, the company encouraged its employees to think about value when setting prices. Through these coordinated efforts, the company discovered that it could increase its prices by 8 percent without affecting customer churn.

In another case, a global semiconductor company was experiencing a 20 percent annual decline in its average sales price while costs decreased only 10 percent. The company's reliance on external suppliers for some important product components was also beginning to lower margins within its portfolio. To counter these issues, the company launched more than 100 coordinated initiatives for reducing costs. Senior leaders were careful to serve as role models and suggest new ideas for improving EBITDA. Overall, the company improved its gross margins by 1,200 basis points and its share price by almost 90 percent.

Industrial, technology, and consumer companies should be excited about Disruption 2.0, but they cannot forget the importance of cost management in their pursuit of AI, ML, and other new technologies. These innovations require substantial investment, and companies may not be able to afford them unless they keep expenses in check across the organization. By undertaking a three-step APT now, companies will gain an early advantage that prepares them for the challenges ahead.

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