

Advanced Industries Practice

How industrial companies can cut their indirect costs—fast

New technologies go beyond what traditional cost optimization can offer.

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Profitability in the automotive and other industrial sectors has been strong in recent years, but global economic growth has fallen from 3.1 percent in 2017 to an estimated 2.6 percent in 2019, and 2020—due to the coronavirus pandemic—will most likely see a global recession. Maintaining profits and growth is going to be very difficult. However, regardless of the larger economic environment, companies can take actions that can help. Specifically, many companies are seeing the share of general and administrative (G&A) costs increase. From 2008 to 2015, G&A expenses grew more slowly than revenues (41.8 percent versus 61 percent). Since then, the trend has reversed, with G&A expenses rising faster—15.4 percent compared with 6.0 percent revenue growth. Traditional cost-optimization approaches are yielding diminishing returns; if revenues begin to fall, then, so will profits.

Drawing on the latest McKinsey research and a series of interviews with experts and industry leaders, we believe there is a way to do better, faster: tech-enabled rapid reduction of indirect costs. By indirect costs, we mean those separate from the direct process of manufacturing goods or offering services. Instead, they are shared across the company and are largely fixed. Examples include finance, procurement, HR, marketing, and IT. Context is important. For a telecommunications company, fuel is allocated as an indirect cost; for an airline, it would be direct.

The tech-enabled cost-reduction approach uses automation, artificial intelligence (AI), and other technologies to find new opportunities in such areas as capacity reallocation, spending effectiveness, and accounts receivable (Exhibit 1). Based on our experiences with 24 industrial companies, we found that it can cut indirect costs by as much as 15 to 20 percent in 12 to 18 months.

The approach is comprehensive, covering everything from spotting opportunities to measuring impact, and it is also integrated into company operations (see sidebar, “How to get started”). In this article, we explain the four stages of a rapid tech-enabled indirect-cost-reduction effort. Then we

present seven cases where these techniques were applied. Finally, we discuss what companies need to do to prepare for such a transformation.

The four stages of the tech-enabled cost-reduction approach

While no two such programs are alike, four stages are common.

Stage 1: Identify areas of improvement.

Far too often, companies lack transparency on their own costs and processes. The first challenge, then, is to ensure that all relevant information is available. Big data, AI, advanced analytics, data visualization, and process-mining tools can help to identify cost-reduction opportunities in finance, procurement, HR, and production management. For example, procurement categories such as temporary labor and business travel typically have large data sets. This allows companies to test a number of options—such as consolidating providers or changing travel policies—and if the results are good, to implement them. The use of analytics can help HR see if a department’s spans of control are too big or if there are salary imbalances among employee groups.

Stage 2: Automate processes.

The automation of production is hardly news; this has been happening for decades. What is surprising is the extent to which industrial companies have not done the same with their administrative processes, where indirect costs cluster. The premise of our approach is that many of these can and should be automated. The immediate focus should be on technologies that can work quickly, such as robotic process automation (RPA), smart workflows, or data-visualization tools.

Stage 3: Work smarter.

The greater computing power of AI, machine learning, and data visualization can be used to (semi-) automate decision making and to analyze data in ways that have not previously been possible. This creates a better fact base and should improve the quality and efficiency of decision making. For instance, AI and machine learning can automate and improve sales forecasting by analyzing historic

Exhibit 1

The use of automation and AI can unlock new functionalities and savings opportunities.

Functionality	Impact	Maturity	Speed	Ease to implement	Mechanism
Robotic process automation <ul style="list-style-type: none"> Automate routine tasks through existing user interfaces Use optical character recognition (OCR) to recognize text 					<ul style="list-style-type: none"> Reduce manual repetitive tasks Automate and improve quality of routine tasks through existing user interfaces, such as data extraction and cleaning
Result: Capacity reallocation					
Smart workflows <ul style="list-style-type: none"> Automate workflows that involve multiple handoffs among people, robots, and other systems 					<ul style="list-style-type: none"> Free up and reallocate capacities by integrating tasks performed by groups of people and machines
Result: Capacity reallocation					
Data visualization <ul style="list-style-type: none"> Use advanced visualization and enable self-service analytics 					<ul style="list-style-type: none"> Reduce manual repetitive tasks Create higher quality just-in-time transparency and analyses Speed up decision making and issue resolution
Result: Capacity reallocation and improved effectiveness					
AI/machine learning <ul style="list-style-type: none"> Invest in technologies that recognize patterns and support making data-driven predictions/decisions 					<ul style="list-style-type: none"> Automate knowledge work across business functions Create transparency on spending to lower risks and improve decision making
Result: Capacity reallocation and spending reduction					

and real-time transaction information. These technologies can systematically consider and correlate external effects and then use them to build a simulation model. They can also take into account a range of data, be it weather, economic projections, CO₂ emissions, or competitor activities.

Stage 4: Capture impact.

Tracking optimization initiatives is not easy, but there are ways to use technology to follow them from conception to completion. For example, impact-management software can track plans and follow up on initiatives; by connecting with company data, it is possible to track if targets are being met. Establishing a “center of competence” inside the

company (more on this later in the article) that has specific responsibility for doing so can help.

The use of use cases

Industrial companies know they need to get a grip on indirect costs. The business area and which of the four stages it is in gives an indication whether to use AI, smart workflows, RPA, data visualization, or something else.

In the seven real-world examples that follow, we explain what was done and how, and estimate the results. Each case addresses an essential business area such as finance, procurement, or production management. Each comes from a

How to get started

Stage 1: Identify areas of improvement

To create momentum, it helps to assess the value at stake early on. Benchmarks can help identify areas of improvement and assess the cost-saving potential quickly. For instance, our experience suggests that in finance, about 75 percent of revenue-management processes are fully automatable; in financial planning and analysis, only 10 percent are. A library of use cases makes it easier to prioritize actions and select appropriate ways to cut costs.

Stage 2: Automate processes

Automating processes to reduce repetitive and manual workload immediately shows results, in both productivity and employee satisfaction. That helps to build acceptance for further rounds of tech-enabled cost reduction. Good pilot programs—for example,

start-to-finish creation of fully functioning robotic process automatization—can be done in four to six weeks. Such pilots demonstrate how development costs are quickly amortized—often in less than a year—and reveal the roadblocks that need to be removed in order to scale up automation.

Stage 3: Work smarter

Most companies struggle to choose from the many tools and technologies available. A full-scale diagnostic and design of a target picture before launching a transformation can help. This review includes quantifying opportunities by business function and cost category, identifying digitization opportunities, creating a transformation road map with milestones, and instituting a pragmatic governance structure that ensures implementation is both speedy and effective.

Stage 4: Capture impact

To successfully implement a full-scale tech-enabled cost-reduction transformation, companies must track the progress of their work. Web-based software solutions can be set up in less than a month to track impact and ensure value delivery.

Often, companies struggle to go from one-day walkthroughs and successful pilots to a full transformation. To bridge the gap, several factors matter: strong senior-executive ownership, a vision that is aligned with the strategy, discipline, and a focus on internal capability building. Most important of all is to see the effort as an integrated business-IT program, not a one-off technology project.

Exhibit

An integrated approach to tech-enabled cost optimization has four stages.

	1 Identify areas of improvement	2 Automate processes	3 Work smarter	4 Capture impact
Description	<ul style="list-style-type: none"> ● Benchmark processes and assess indirect cost-saving potential ● Apply library of use cases 	<ul style="list-style-type: none"> ● Automate repetitive process steps ● Increase productivity and employee satisfaction ● Start with pilots and prove value 	<ul style="list-style-type: none"> ● Perform full-scale diagnostic ● Quantify opportunities by business function and cost category 	<ul style="list-style-type: none"> ● Track progress and optimization initiatives ● Scale up transformation ● Refine road map
End products	<ul style="list-style-type: none"> ● Process benchmarking ● List of prioritized use cases 	<ul style="list-style-type: none"> ● Delivered pilot programs ● Measures to scale up 	<ul style="list-style-type: none"> ● Full diagnostic result ● Target picture and road map for transformation 	<ul style="list-style-type: none"> ● Progress report ● Monitoring of impact in balance sheet

specific industry or application, but the general logic will remain the same.

Example 1: A spending 'X-ray' helps cut indirect spending.

Business area: Procurement

Technology used: Data visualization, AI

Stage 1: Identify areas of improvement

Indirect costs addressed: Third-party spending

Each business unit of a medical-technology company had information on its own expenses,

but the company lacked a comprehensive view of its indirect spending, and could not analyze its expenses by category. In addition, its IT system was fragmented and the supplier data riddled with mistakes.

The company chose to implement an advanced spending intelligence tool. The system used data engineering and machine-learning methods to address the problem of dispersed data in the IT system. These tools extracted data from each business unit's enterprise-resource-planning (ERP)

system and combined it into a single model. With the data harmonized, the company was able to deploy a cloud-based visualization engine to quickly identify areas where there might be savings, down to the line-item level. The use of machine-learning algorithms made it possible to compare prices and specifications and to identify price variances and savings opportunities between interchangeable items and services. As a result, the company was in a better position to negotiate with its vendors, achieving savings of 5 to 10 percent, depending on the category.

Example 2: Process mining reduces overhead in finance and order processing.

Business area: Finance

Technologies used: Process mining, data visualization

Stage 1: Identify areas of improvement

Indirect costs addressed: Corporate overhead; financing costs for working capital; order processing.

An international company wanted to expand into new regions. Unfortunately, slow payments from customers strained cash flows and made it difficult to invest in growth. To locate the problems in the ordering process, it used a process-mining tool to analyze and visualize all orders.

The company found that there were multiple billing models for maintenance and service, and that the average time needed to issue the first invoice was 26 days. On top of that, many orders were cancelled or rejected due to failed credit checks and inventory issues. To solve these problems, the company standardized its billing and implemented automated processing; the average invoicing time fell to ten days. It also updated its ordering and inventory systems, minimizing the cash-flow problems related to out-of-stock orders. Staff time was freed up to deal with more value-adding tasks; cancellation and rejection rates fell.

Example 3: Analytics finds hidden savings.

Business area: Procurement

Technology used: Data analytics

Stage 1: Identify areas of improvement

Indirect costs addressed: Indirect procurement; spending on maintenance, repair, and operations (MRO)

A large energy company that had optimized its direct spending wanted to do the same with its indirect spending, which it believed had been undermanaged. By examining transactions related to raw materials, parts, and MRO services, it identified a number of ways to cut costs significantly.

When analysts loaded the spending data into an analytics solution, they found that in some cases different plants were paying up to 20 percent more for the same parts. Just making sure everyone paid the lowest price scored a quick win. Using a cloud-based platform, the tool also automatically computed the potential effects of different scenarios. This provided insight into price categories that previously had limited transparency. Costs fell by 5 to 15 percent.

Example 4: Reporting processes bring better information at lower cost.

Business area: Production management

Technology used: Data visualization

Stages 2 and 3: Automate processes and work smarter

Indirect costs addressed: Personnel costs associated with technical planning and reporting

Due to multiple, inaccessible, complex, and inconsistent data sources, a major carmaker could not understand why its production-planning and ramp-up costs had increased. Because the organization was also characterized by silos (chassis, powertrain, assembly, paint, and so on), each with their own systems, tailored to specific needs, it also lacked effective ways to analyze and solve problems related to overall project development. To a great extent, it relied on manual, outdated reports.

To address these problems, the company adopted a three-phase approach. First, it developed a “click prototype”—an interactive visualization of future workflow that managers could use to monitor and plan production.

Second, using data visualization, it developed and iterated a minimum viable product (MVP), meaning one that is developed quickly to satisfy the most important needs. In this case, the MVP took the form of a digital control tower that showed managers at every level progress all along the production line. It also automated and digitized reports. The MVP created a single, consistent, and uncontested data pool that everyone could use. Important features included the customized display of relevant key performance indicators (KPIs) and links into other existing IT systems.

Finally, the company compiled user feedback to develop and test additional functionality, such as a risk matrix that assessed supplier risk and managed it by agreeing and tracking countermeasures. Within six months, the use of the most important technologies had become routine. When the system was implemented in full, the company estimated it had cut employee planning and reporting time by 30 percent.

Example 5: Automation through robotics cuts errors.

Business area: Multiple

Technologies used: RPA, smart workflow

Stage 2: Automate processes

Indirect costs addressed: Technical planning

A medium-size specialty steel maker wanted to reduce its general and administrative expenses. Its production management was fragmented and manual and its systems were not integrated. By automating repetitive tasks, such as producing a weekly production report and inputting master data for products into the ERP systems, the company hoped to improve production without increasing staff. But it had no experience with RPA. Working with the relevant business experts, the team selected a third-party RPA software platform and developed a plan for further process automation. It also built capabilities to support future projects, including a project methodology to deliver RPA use cases, and defined the roles of the RPA creator as well as of the IT and business experts.

In the first month, four reporting processes were automated—the shipment overview, the production overview, and the trademark overview, plus its update. The automation of repetitive processes

reduced errors and saved staff and cycle time. In addition, management believed the successful deployment of the RPA infrastructure would prove to be a useful role model for other departments, such as finance and HR, as they, too, considered the possibilities of automation.

Example 6: Fully automated data transfer speeds up forecasting.

Business area: Production planning

Technology used: RPA, machine learning

Stages 2 and 3: Automate processes and work smarter

Indirect costs addressed: Technical planning

While the automation of many processes is feasible and desirable, too often, it simply isn't done. For example, one automotive company found that connecting the department-specific technical-planning tool with the company-wide procurement tool via back-end integration was not feasible due to high costs and scarce resources. The company found that many repetitive manual tasks were not a big deal individually, taking relatively little time; on that basis, automation did not justify big investment. Data therefore had to be manually copied into a planning tool; this hampered reporting and data analysis and caused a bottleneck in the forecasting process. To solve the problem, the company installed rapid automation technology. This could deal with small repetitive tasks at low cost because no new IT infrastructure needed to be built. There were three phases.

Diagnosis: The company prioritized potential automation and AI use cases, estimated their impact and feasibility, and started to implement the one with the highest priority in about three weeks.

Pilot: The company automated data transfer in its prioritized use cases. RPA was used for automation and a simple machine-learning algorithm was installed to map the data fields. The pilot was ready for deployment in six weeks.

Expansion: By improving the pilot, eventually 90 percent of data transfers were automated. In parallel, the company began to implement its other priorities.

The process paid for itself in a year, while increasing the reliability of data transfer.

An impact management and tracking tool can help clarify what to do first, and measure what benefits are captured.

Example 7: Managing accounts-receivable better generates cash.

Business area: Finance

Technology used: Artificial intelligence

Stage 3: Work smarter

Indirect cost addressed: Accounts receivable, cost of collection

A global technology company wanted to lower its accounts-receivable (AR) balance while reducing the cost of collection. After analyzing two years of collection data, it concluded that the solution was to speed up collection and to understand which outstanding receivables were likely to be most problematic. On that basis, it deployed a predictive model that used machine learning and advanced analytics to create a better collections process. In effect, the company shifted from a strategy of collecting by segment and country to a bottom-up invoice-level strategy. Costs fell 15 percent and the AR balance 7 percent, while yields rose.

Building the organizational foundations for tech-enabled cost reductions

To manage change of this magnitude, organizations must change, too. There are four important elements.

Create an agile transformation road map: To reach the full potential of indirect cost optimization while also managing risk, it is helpful to chart a plan that can be adapted as circumstances change. Doing a complete transformation in one fell swoop is just too difficult—it requires too many capabilities and can also provoke resistance. It's better to proceed methodically, starting with select use cases to create momentum and to demonstrate that the process works. Moreover, the savings from the first steps can be used to finance future ones.

While the end-to-end indirect cost optimization of multiple functions and cost categories takes at least six months, not every organization needs to go that far. It is also possible to focus on a set of simple and pragmatic actions.

Use an impact management and tracking tool:

Large-scale transformations can fall short when organizations are not sure what they want to achieve or how they want to go about it. An impact management and tracking tool can help clarify what to do first, and measure what benefits are captured. Any such tool should include the following features.

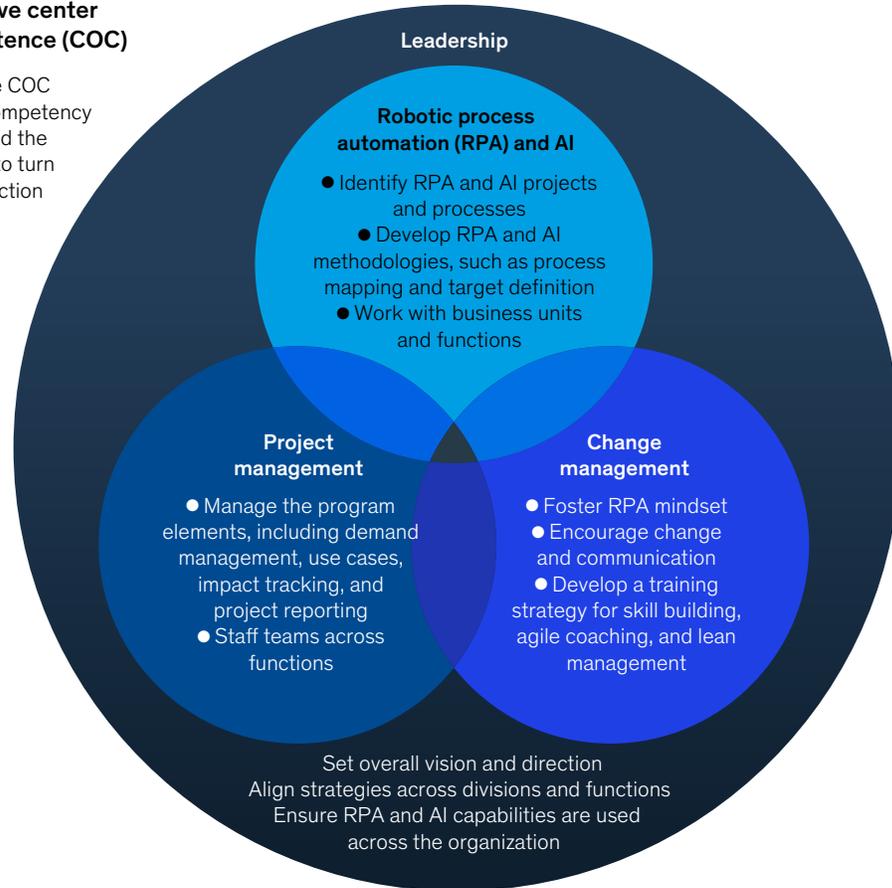
- *Metrics:* Track the performance of initiatives against relevant business goals, budget, and time frames. The tool should be home to all the latest numbers, so there is no arguing over the facts.
- *Automated reporting:* No need to manually aggregate the latest numbers from multiple spreadsheets.
- *Timely decisions and full transparency:* It should be possible to see at a glance all initiatives and whether they require leadership attention.
- *Fast, secure deployment:* Setup and support should be possible in a month.

Build a center of competence (COC): Getting impact management and agile transformation right requires overcoming real and perceived barriers. Bundling all related activities in a COC can help (Exhibit 2). Managed by the transformation leader, and sponsored by the board, a COC should include project managers, as well as technical and change-management experts. Its job is to implement the agile transformation plan. It should also play a leading role in identifying and implementing use cases; coordinate IT activities; and serve as a community-building platform.

By bundling activities in a center of competence, companies can manage change.

An effective center of competence (COC)

An effective COC needs 3 "competency clusters" and the leadership to turn ideas into action



Drive the automation program as an agile transformation: To overcome real and perceived barriers, realize impact, and change the organization sustainably, some companies have led their automation programs according to agile-enterprise principles. To do so, they are forming agile teams that deliver automation and efficiency use cases from their prioritized backlog in a focused and iterative manner. They are also combining subject-matter experts from different areas of the line organization, such as automation and AI consultants, business analysts, and agile coaches. The latter are often organized in chapters, where methodologies, knowledge, and people are developed per expert group. Sponsorship by the

board is a key success factor. Other elements of an agile operating model, such as setting 90- and 14-day priorities and ensuring resources for each team, are important.

Achieving rapid indirect cost optimization has never been more promising, thanks to advancements in such technologies as automation, smart workflows, AI, and data visualization. And perhaps never has it been more urgent. Getting started does not require long preparation or costly investments. All that is needed is imagination and a willingness to change.

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