How Digital Technology Supercharges Zero-Based Redesign

Automation and decision-making technologies are evolving rapidly, expanding the potential of a clean-slate approach to cost reduction.

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Zero-based budgeting is back, and interest has never been higher. Companies that take this radical approach to budgeting can reawaken their ownership mindset and align resource allocations closer to strategic goals. Some go further, undertaking what we call zero-based redesign (ZBR), a blank-sheet approach that realigns the operating model, reengineers processes and workflows, and unlocks the potential of digital productivity.

But not everyone is satisfied with the results. Less than half of all large companies (with sales greater than $2 billion) report success from their efforts. However, the numbers get more interesting when you look at what led to positive outcomes. Companies that used zero-based budgeting as part of a comprehensive effort were nearly twice as likely to say they were satisfied or very satisfied with the results as their counterparts who pursued limited initiatives. The most successful outcomes use zero-based budgeting in concert with zero-based redesign. Successful programs typically reduce costs by at least 25% for the targeted functions and processes. In contrast, companies that deploy zero-based budgeting solely for the lure of cost cutting run a double risk: They can cut into growth muscle and hurt the customer experience. (For more on zero-based budgeting, see the Bain Brief "Betting on Zero-Based Budgeting's Trifecta.")

Even among companies that take a broader approach to zero-based redesign, few tap the full potential of the technologies that are increasingly available and affordable to help companies automate tasks, manage processes and help make decisions. These technologies are evolving rapidly, and solutions that may have been unavailable or elusively expensive just a few years ago may be more feasible today. The range of opportunities is advancing quickly, but few companies evaluate the range of possibilities during ZBR planning.

We expect more executives to take advantage of this potential as the benefits from these technologies become clearer, and as the cost to implement them continues to drop. Digital technologies improve the results of a zero-based redesign in three important ways.

- **Cost and efficiency.** Automating tasks and processes end-to-end through software reduces costs significantly, typically by 25%–50%, but sometimes as much as 65%. It can also improve efficiency by allowing these activities to run around the clock. Productivity rises and the need for training declines. For example, a Japanese insurer implemented an artificial intelligence system based on IBM's Watson Explorer technology, which processes information on hospital stays and surgical procedures to calculate payouts. The scalable system will be able to efficiently execute many more payouts than the employee staff that previously handled the process, with the potential to spend much less.

- **Effectiveness.** Process automation makes it easier to reduce errors and speed up response time for customers. It also enables data to be quickly gathered and organized, allowing companies to optimize their processes, make better predictions and meet compliance requirements more effectively. JPMorgan Chase & Co. was able to improve its process for interpreting commercial loan agreements with a machine learning program that generates fewer errors than the lawyers and loan officers who previously spent hundreds of thousands of hours annually reviewing the agreements.

- **Insights.** Because digital technologies allow companies to manage data more effectively, they help deliver insights that lead to new products and services and improvements in existing ones. Quicken Loans saw the opportunity to reinvent the mortgage-application process by drawing data from external sources in real time as customers complete their applications online. Quicken's Rocket Mortgage service can import property data, credit ratings and information on checking and savings accounts from 95% of US financial institutions, which often enables the service to deliver an offer as soon as the application is complete.

Most executives are keenly aware that digital technologies, properly implemented, have the potential to accom-

plish these goals and deliver powerful performance improvements while increasing the likelihood of a successful redesign. Indeed, the business press is replete with shining examples. However, these same executives are often overwhelmed at the prospect of determining which technologies they should prioritize based on their ability to move the needle in their organizations. Put differently, where should they strike first?

Identify the tools

To get a better understanding of the opportunities, Bain researched the performance of a wide range of digital technologies as implemented in large and medium-sized businesses around the globe to assess their potential to improve broad ZBR efforts. Our research identified four technologies that demonstrate outsized potential to remove costs, improve efficiency, raise productivity and otherwise redefine tasks and processes:

- **Virtual business-process assistants (VBPA)** or **robotic-process automation (RPA)** can manipulate data, trigger responses, communicate with other systems, and perform an expanding range of activities that replicate clerical actions performed by staff.

- **Business-process management systems** manage end-to-end processes and can encourage steady improvement over time.

- **Cognitive systems** perform increasingly complex tasks that in some cases require a degree of artificial intelligence—such as using a natural-language interface to respond to a range of customer service requests.

- **Decision management technologies** can make structured decisions based on inputs from various sources, rules and parameters.

Although any one of these technologies applied to a specific solution can reduce costs or improve effectiveness, a larger prize awaits companies that take a holistic approach, considering the full range of possibilities. Taken as a whole, these technologies comprise a powerful collection of tools that, once understood and applied, enable executives to derive greater benefits from ZBR.

Determine the scope

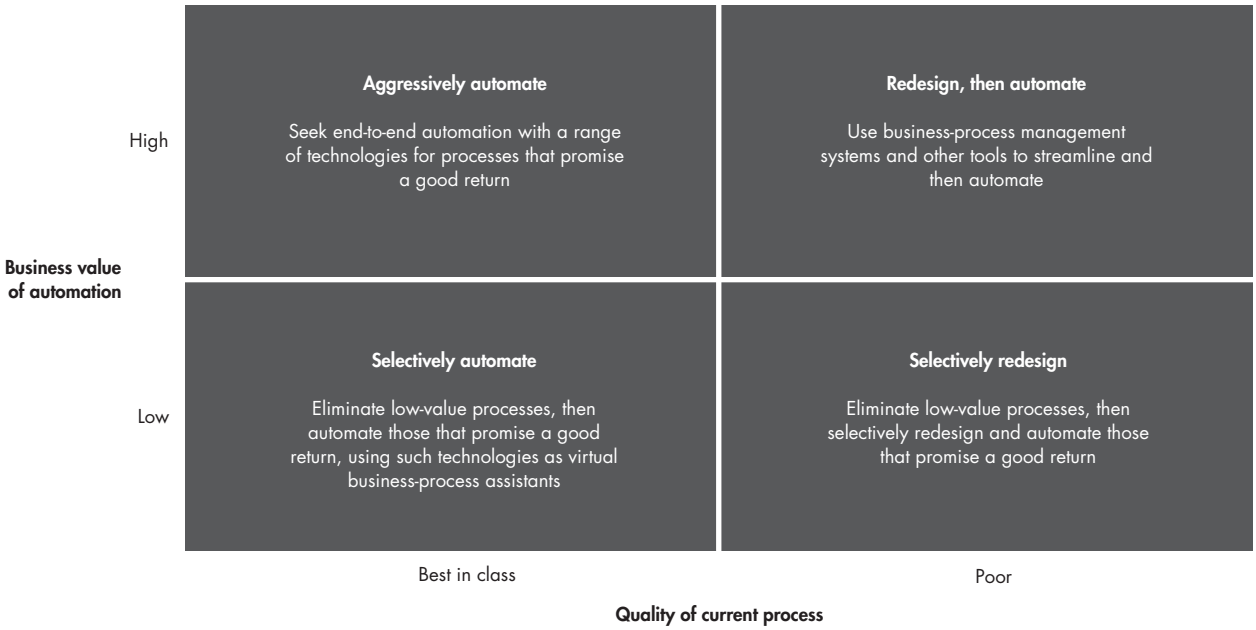
Of course, it would be a mistake to automate every task and process simply because the technologies are available. Instead, executives need to weigh the value of automating a business process against the quality of the current process—specifically, whether it is a poor process that may have been cobbled together, or whether it is a best-in-class process that represents a streamlined and efficient approach *(see Figure 1)*. For each process, executives will have to decide whether the tools are available to automate and whether the process and operating model require some redesign before applying automation tools.

Some of these technologies aim to improve productivity and reduce costs by automating tasks and processes without significantly altering the process under transformation. Companies automating processes with VBPA or RPA technologies are generally not rethinking entire operating models, but rather adjusting their components. Think of it as an evolutionary rather than revolutionary approach, which may be the right path when it isn't practical to reengineer a legacy business process.

A German financial services company realized significant gains through automation, reducing costs by 25%–30% in focused areas. As the company transitioned to a digital model for lending and leasing activities, executives took advantage of redesign efforts to target high-potential areas for automation. In addition to automation tools, they employed advanced technologies such as natural-language processing, machine learning and expert systems. The changes improved straight-through processing and customers' abilities to serve themselves, and also delivered some top-line growth based on a streamlined product offering.

Other companies take advantage of the automation process to rethink parts of the operating model, relying on a combination of process and task automation, along

Figure 1: The scope of automation depends on the company's ambitions for the redesign, as well as the current state and potential return of processes



Source: Bain & Company

with some decision-making and cognitive systems. The introduction in recent years of electronic applications in the life insurance industry offers a good example of how process redesign moves along this spectrum. Initial efforts focused on end-to-end business-process automation, but over time they are evolving to incorporate underwriting decision tools that use advanced analytical techniques and machine learning that taps the insights of generations of actuarial data.

Within the life insurance industry, the improvements made possible by e-applications are revolutionary. The manual process to collect and process an applicant's data, make decisions about policy options and issue policies could take 40 days or more. The lengthy and complicated application forms had very high error rates, often up to 75% marred by omissions and errors. By switching to an end-to-end electronic process, underwriters cut processing costs by 50% or more and sped up the process significantly, improving take-up rates (reducing the number of applicants abandoning the process, often because it took too long) and in some cases issuing policies immediately through the application. The industry has shifted quickly to an electronic model, and greater changes are likely to come over the next few years as their capabilities for analytics, decision making and cognitive functioning improve.

Incorporate technology in the redesign

Taking a zero-based approach strengthens capabilities that provide competitive advantages, while scaling back noncritical functions. A comprehensive redesign looks at every area of spending through the lens of strategic ambitions, allowing executives to make clear-eyed decisions about which activities should be performed, at what levels and frequency, and how they could be performed better. Understanding the potential of digital technologies is an essential aspect of these analyses, for only by considering how they can help deliver the desired impacts can executive teams allocate resources where they will deliver the greatest value.

Embarking on a broad zero-based budgeting transformation requires a shift in thinking about the ways a company pursues its strategic goals, with a renewed emphasis on building up the assets and capabilities that can deliver success. As executives consider the role of technology in such a transformation, they can think of a three-stage process.

- **Set redesign targets and cost goals.** During the early stages of ZBR, leaders perform a holistic review to identify key opportunities. They scan their functions and processes to determine where costs and pain points should be removed. With a comprehensive view in hand, they can target the greatest opportunities first and move swiftly to capture quick wins.

- **Evaluate technologies and prioritize deployment.** During the first phases of a transformation, teams should look for opportunities where technology offers the best tools for automating and improving processes (for example, cycle time and error-rate reduction). They can then evaluate the maturity and fit of relevant technologies to see which are most promising. This assessment includes weighing the costs and productivity benefits, evaluating execution risks (valuing relevant real-world success examples over vendor product claims), and estimating payback time for investment. With the results of that analysis, they can begin to prioritize which technologies to implement.

- **Build prototypes and launch pilots.** With many newer technologies still developing, it is critical to use pilots to conduct "test-and-learn" experiments and determine how a particular solution fits the organization. Agile teams made up of functional and technology experts can develop solution designs along with plans for delivery and pilot programs. These teams can measure the results of their pilots against the broader goals and use the information to refine their ambitions and approach. These pilot results can help refine the execution plans that underpin the broader deployment, and the agile teams stay in place to drive deployment across the larger organization, ensuring that progress stays on track.

We don't yet know the limits of automation, but we do see it expanding dramatically from one quarter to the next. Yet we also see a disconnect between these advances and the habits of executives who, all too often, fail to consider these new capabilities as they rethink their business operations. Now is the time to think expansively, to discover what a risk-managed test-and-learn approach can achieve, and to put plans in motion to transform business operations. When applied in the early stages of a zero-based redesign, these technologies can deliver tremendous change by reducing costs, improving efficiency and raising productivity.

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