Process Automation and the Rebirth of Reengineering

By Thomas H. Davenport

If you are of a certain age you may remember the idea of "business process reengineering," a concept that rose and fell quickly in the 1990s. The idea was that information technology could power order-of-magnitude performance gains in broad, sweeping business processes like order management or new product development. I wrote the first article and book on this topic, but not the most popular ones. The late Michael Hammer and Jim Champy promised more radical change than I thought was possible, and managers liked the optimism. My version of this concept was both more detailed and more conservative, but neither of these attributes led to more book sales.

Reengineering largely disappeared for a couple of reasons. ERP systems from vendors like SAP SE and Oracle Corp. became the primary process-oriented technology. Instead of redesigning processes from scratch, many companies just used the process designs that those big systems presumed. Some reengineering projects foundered on the rocks of organizational and behavior change. The most cynical organizations used reengineering as a label for massive headcount reductions involving relatively little process change. Overall, reengineering was a high risk, high reward activity. Process improvement approaches like Six Sigma and Lean, which didn't rely much on new technology and involved less radical change, were more likely to be successful.

Now, however, there's a good chance we could see the rebirth of reengineering based on a single new technology: process automation (sometimes called "robotic process automation," a term which seems to me both inaccurate—since it doesn't involve robots—and redundant). My Babson colleague Bala Iyer and I wrote a column about this technology last week as a possible driver of process repatriation—bringing offshore outsourced processes back home. It could also foster a new round of reengineering.

Do organizations still need to improve their processes? Of course they do. Every aspect of work needs occasional examination and can be improved. Six Sigma and Lean have flagged a bit in many organizations. And those concepts never included any approaches to redesigning work with the aid of technology.

ERP is still around in most large organizations and it still supports broad processes, but it left untouched many areas of business. And it assumed that people did the data entry and responded to system outputs. Process automation technologies don't replace those systems, but interact with them at the presentation layer—just as if a human were at the keyboard.

What should be different in this round of reengineering? Well, I risk echoing my conservative approach to the topic in the 1990s, but it should be somewhat less ambitious. Very few organizations ever achieved the "10X" improvements promised in the past for reengineering, and they found it just as difficult to redesign a broad process from end to end. Those types of radical improvements are just too difficult for most companies to pull off, and they gave reengineering a bad name.

Most of the process automation projects thus far have been much more pragmatic. They involve relatively modest-size processes, most of which are back office activities. If you're using process automation simply to support the process of replacing a customer's lost ATM card, for example, you're much more likely to succeed than if you're taking on the order-to-cash process. The performance gains aren't tenfold, though they often yield 30 or 40 percent improvements in the cost and time to perform a process. A set of case studies [compiled by process automation vendor Automation Anywhere](#) suggests that this level of improvement is typical.

Even with this more modest approach, the benefits of a broad approach to process automation can add up quickly. A London School of Economics case study ([download with registration here](#)) found that as of April of this year, the company had automated over 160 process areas involving between 400,000 and 500,000 transactions. The overall ROI of this technology was between 650 and 800 percent. That's a better payoff than most companies achieved from either reengineering or Six Sigma.

There is certainly organizational change involved with this form of reengineering too, and it may eventually lead to layoffs. But most of the companies I've observed have redeployed workers to other roles. Human employees' initial mistrust of automation tools gives way to relief that boring work is being done by a machine. At Xchanging, a process outsourcing company in the UK, the "robots" were given cute names like Poppy (after the poppies people wear in that country on Remembrance Day, when the machine went live) and Henry. The anthropomorphizing of these smart machines suggests that workers don't seem to find this form of automation particularly threatening.

The need for IT-enabled process change never goes away, but for some reason it ebbs and flows over time. The advent of process automation technology may well drive another era of flow. The flow of actual process improvements will probably last longer this time if vendors, consultants, and management authors exercise some restraint in their expectations and comments about this new version of reengineering.

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