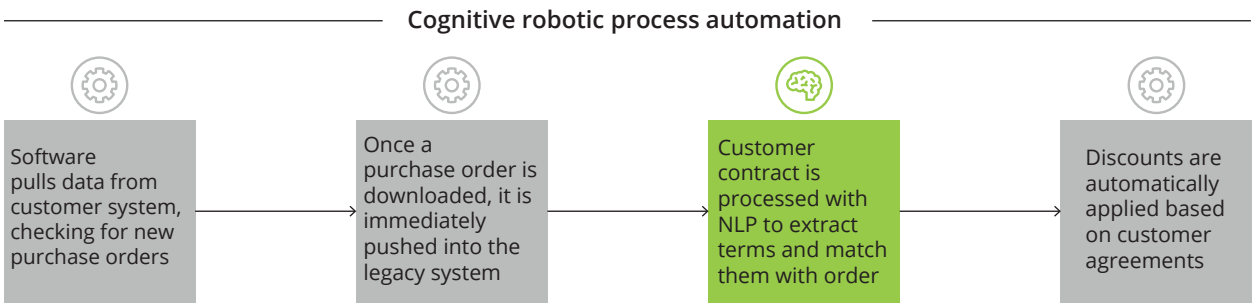
Figure 2. RPA with cognitive technology



Source: Deloitte analysis.

Graphic: Deloitte University Press | DUPress.com

A proof-of-concept RPA project may take as little as two weeks; a pilot could be up and running within four to eight weeks, depending on scope and complexity.[9] But the real effort of installing and integrating bots varies according to a company's specific circumstances. Where little data is available in digital form, or where processes are dominated by special cases and exceptions, the effort could be greater. Some RPA efforts quickly lead to the realization that automating existing processes is undesirable and that designing better processes is warranted before automating those processes.

It is worth noting that RPA's ability to wring substantial process improvements from legacy systems, often at relatively low cost, can undermine the business case for large-scale replacement of systems or enterprise application integration initiatives.

While the RPA market today is still small, the technology is gaining traction as a cost-effective alternative to traditional systems integration and is projected to become a $5 billion market globally by 2020, with a CAGR of over 60 percent.[10] According to one analysis, as many as a third of global enterprises are actively using bots within their IT and finance and accounting processes, with about a quarter adopting RPA within procurement and HR processes.[11] Some enterprises are deploying this software at scale, automating dozens of processes with hundreds of bots, setting up robotic centers of excellence, and appointing a senior executive as "head of robotic automation."

Cognitive technologies extending RPA's reach

Bots can perform only tasks with clear-cut rules. This means that processes that require human judgment within complex scenarios—for example, complex claims processing—cannot be automated through RPA alone. One RPA vendor reports that even its most mature clients automate at most 50 percent of back-office processes, and the majority of clients automate far fewer.[12] This is why some enterprises consider RPA to be part of an "integrated workforce" in which bots work alongside people, taking on relatively simple activities so that people can focus on those complex exceptions. But the line between what humans and computers can do is shifting.

The integration of cognitive technologies with RPA makes it possible to extend automation to processes that require perception or judgment. With the addition of natural language processing, chat-bot technology, speech recognition, and computer vision technology, for instance, bots can extract and structure information from speech audio, text, or images and pass that structured information to the next step of the process. Another example: Machine learning can identify patterns and make predictions about process outcomes, helping RPA prioritize actions.

Cognitive RPA has the potential to go beyond basic automation to deliver business outcomes such as greater customer satisfaction, lower churn, and increased revenues.