



## IDC TECHNOLOGY SPOTLIGHT

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### **Business Automation in Complex SAP Environments**

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by Mary Johnston Turner, IDC #258997

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*Many large enterprises have invested heavily in automating their business processes in complex IT environments revolving around an SAP ERP system. However, as they transform their businesses into digital enterprises, these organizations often find themselves unable to achieve end-to-end process automation despite extensive SAP investments. The reason is that most business processes involve multiple systems. To solve this problem, some organizations have turned to a common automation framework capable of spanning completely different systems. This IDC Technology Spotlight examines cases of heterogeneous SAP system environments and how organizations have used automation technology vendor Automic to automate business processes and reap cost savings.*

#### **Introduction: SAP and Process Automation**

##### ***SAP Is Undergoing a Transformation***

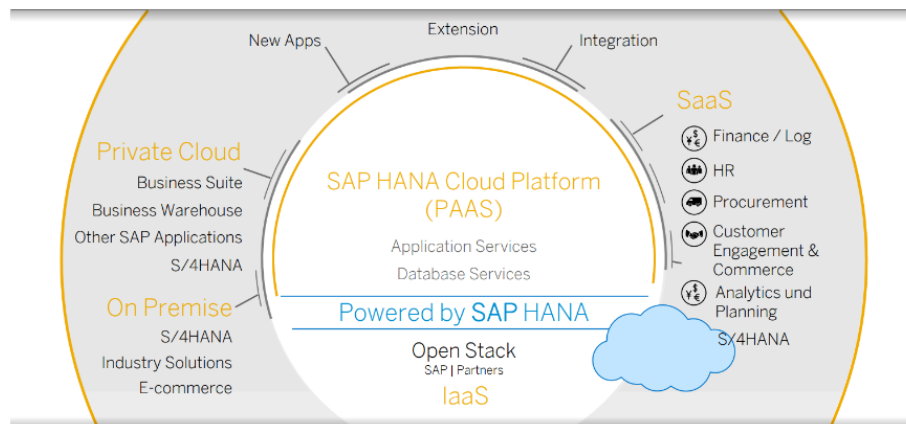
SAP is the business application leader worldwide with a 14% market share in 2014. The company is best known for its ERP solution, SAP ERP; it also sells other business solutions such as supply chain management and CRM software, as well as industry-specific applications.

In the wake of the consumer technology revolution led by Google, Facebook, and Apple, business users increasingly expect solutions that are cloud based, support online social collaboration, are accessible from any smart mobile device, and have actionable analytics embedded inside. In response, SAP is transforming its business. It has acquired a number of companies with cloud-based, social, mobile, or analytical technologies. It has also directed research and development efforts toward new solutions to capture the growing opportunity beyond transactional business applications. Further, the company is migrating all business workloads into SAP HANA, its own in-memory database platform.

During the next three years, IDC expects SAP to pursue cloud-based line-of-business applications; solutions for intercompany collaboration in business networks; platforms for information management, mobile computing, analytics, and application development; and applications to interact directly with the consumer. The company's offerings are shown in Figure 1.

**FIGURE 1**

## SAP's Solutions Today



Source: SAP, 2015

### ***Large SAP Customers Faced with an "Automation Gap"***

Large organizations are faced with what can be termed an "automation gap." On the one hand, they are transforming their businesses to become digital enterprises. Most organizations must present self-service options for customers via Web or mobile devices. Furthermore, many are increasingly required to open up business processes to other organizations and/or external devices via APIs and other means. These changes related to digital transformation require near instant execution of key business processes as opposed to periodic batch runs.

On the other hand, the same organizations often find themselves unable to achieve full process automation. Despite millions of dollars invested in SAP systems running millions of transactions, they cannot automate end to end. A key reason is that most end-to-end processes in large organizations involve SAP and non-SAP applications. Also, extra complexity is introduced when process flows span multiple SAP instances. Hence, what is missing is a common automation framework spanning completely different systems. The workloads most in need of automation are business-critical, time-critical, and high-volume transactions such as:

- Replenishment in retail
- Period close in accounting
- Customer invoicing
- Payroll processing
- Incoming order management

## Benefits from End-to-End Automation

End-to-end automation is increasingly table stakes in the new digital economy. Customer self-service applications and business networks typically require responses in seconds as opposed to daily batch runs during previous times of mail-based interaction. Therefore, investments in end-to-end automation are often driven by new business initiatives as opposed to specific return-on-investment-based business cases.

The typical business benefits from process automation are better business visibility and significant reductions in process cycle times. Shorter cycle times mean businesses are able to collect money faster, avoid out-of-stock or overstock situations, improve customer experience, and so forth. Reduced need for working capital or reduced costs related to failures are key drivers of financial benefits. For example:

- A global consumer goods company had an issue with retail replenishment. Out-of-stock situations were a major concern for this high-profile consumer brand. The process, which involved complex integration between internal SAP systems and external non-SAP warehouse management and logistics systems, had many potential breakage points and required manual supervision. Automating the entire replenishment process led to a 90% reduction in integration failure rates.
- A large utility company based in Asia found that its buildout of SAP applications led to higher complexity of nightly batch processing. The IT workload was more difficult to control, and failures impacted customer experience during customer service hours. An automation project accelerated batch processing and reduced failure rates significantly, improving the ensuing customer experience.
- A large European process manufacturer faced serious issues with its billing process. Sending out between 100,000 and 150,000 invoices monthly involved SAP processes across multiple SAP instances as well as route planning and other operational systems. Once the manufacturer managed to automate the entire invoicing process, the company was able to reduce days sales outstanding by one day.

Automation also implies a reduction of administrative work on the tasks that are automated. These hours can be used on more strategic work. However, this benefit is harder to measure financially as administrative personnel often remain on the payroll but are reassigned to perform different tasks of higher value.

## Digital Transformation Is an SAP Automation Game Changer

A core tenet of digital transformation is the extension of enterprise systems to the end customer via new digital, self-service applications. Another typical aspect of digital transformation is the enrichment of enterprise solutions with external sensor data (the Internet of Things [IoT]), geographical information systems, unified communications systems, and large volumes of external, unstructured data (typically referred to as Big Data).

In most digital transformation cases, the existing business applications are key components of the new digital solutions. These business applications typically support automation within the individual instances of SAP or other business applications. However, in the context of digital transformation, such a level of automation is insufficient in most cases. Self-service applications trigger workflows, which can involve multiple SAP instances or combinations of SAP and non-SAP applications.

IDC expects digital transformation to impact and transform five fundamental aspects of business operations: leadership, operational models, customer relationships, data analytics, and workforce practices and composition.

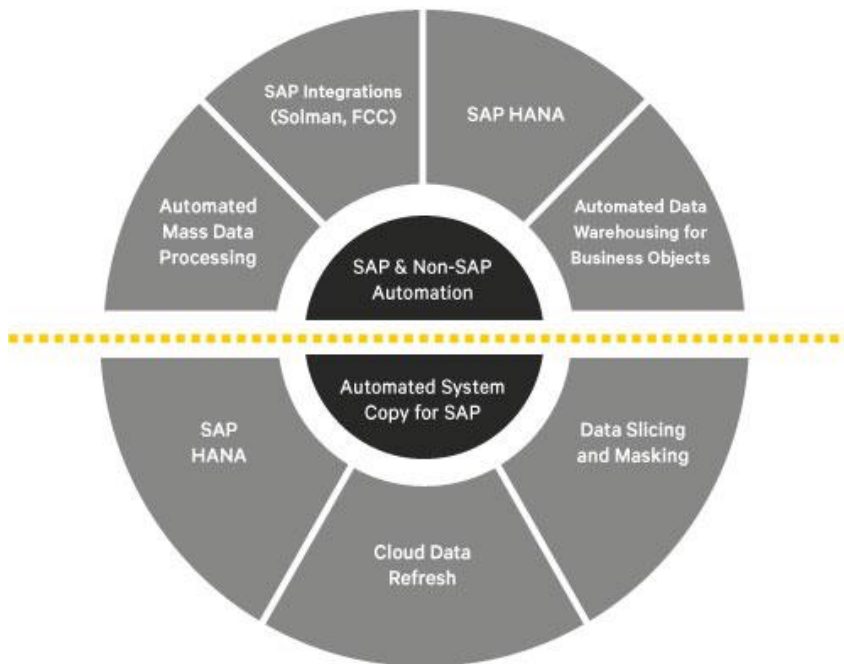
## Considering Automic and SAP Automation Solutions

Automic develops and sells software to help organizations across the world automate their IT and business systems. The company has over 2,600 customers. Of those customers, over 600 use SAP-specific solutions from Automic, including Air Products, ExxonMobil, Fender, Fossil, Goodyear, Heineken, John Deere, Mattel, Pacific Gas & Electric, PepsiCo, Postbank, Robert Bosch, Saint-Gobain, Swisscom IT, and Warner Bros. Automic, formerly known as UC4, is privately held by EQT. The company's Automic Workload Automation product relies on a common object-oriented automation engine, a complex event processing platform, and a user reporting and control interface to define and manage end-to-end automation. It has a high number of prepackaged adapters for SAP and many other enterprise application solutions, IT service management solutions, middleware and database products, and cloud computing platforms. Key solution capabilities include workload automation and job scheduling, IT process automation and orchestration, and managed file transfer automation.

Automic offers a number of SAP-specific solutions, including products to manage SAP process automation such as mass data processing, SAP adapters, SAP HANA integration, and a processing solution for data warehousing with SAP BusinessObjects. Another solution group is related to performing SAP system copies and includes SAP HANA system operations, cloud data integration, and a data transformation solution. Figure 2 displays Automic's SAP portfolio.

**FIGURE 2**

### Automic Offerings for SAP Automation



Source: Automic, 2015

## Challenges

Automic often competes with SAP's own automation technologies. Even though these technologies might not yield the same level of prepackaged automation functionality as Automic's, many customers prefer to experiment with SAP's own technologies, which are already paid for, before investing in a third-party automation solution, which will extend automation to managing non-SAP systems.

To help its customers fully capture the benefits of prebuilt SAP automation tools, Automic needs to continue to educate and provide prospects with easy "on-ramps" for SAP automation solutions. Furthermore, Automic needs to proactively provide prospects with SAP automation solutions that anticipate digital transformation, where innovation is focused on integrating Big Data, mobility, social technologies, and the Internet of Things with SAP's traditional business solutions.

## A Glimpse into a Future of SAP Automation

IDC believes that a number of future SAP scenarios will require automation in SAP environments:

- **Automation between core, on-premise SAP and non-SAP applications, with new, cloud-based line of business SAP applications.** On-premise SAP applications include ERP, CRM, core HR and payroll, and SCM, while other applications might include PeopleSoft, Siebel, Primavera, Cognos, and QlikView. Cloud-based applications include S/4HANA, SuccessFactors, Concur, Ariba, Business ByDesign, and SAP Cloud for Sales. IDC foresees plenty of interapplication workflows (e.g., from expenses to accounting, from sales to order management, from sales to production planning, and from compensation to payroll).
- **Automation between on-premise assets and SAP applications deployed on infrastructure-as-a-service (IaaS) platforms.** Increasingly, SAP customers are using IaaS platforms (such as SAP Enterprise Cloud, Amazon AWS, Microsoft Azure, and IBM SoftLayer) to handle peak demands for compute or storage or as permanent hosts for SAP applications. Such use of external IT resources for SAP-related workloads likely warrants the use of SAP automation technologies.
- **Automation related to SAP HANA data management.** SAP is increasingly taking the data-crushing capacity of SAP HANA outside online transactional data. New data sources include point-of-sale data, social network data, historical data in an SAP Business Warehouse, or unstructured data under other analytical platforms, such as Hadoop and Spark. Automation will be key to reducing the manual efforts related to these data integration tasks.
- **Automation related to SAP projects involving the IoT.** SAP customers are already initiating IoT projects related to manufacturing (shop floor machine sensor information), utilities (equipment sensor information for preventive maintenance and smart metering), transportation (RFID tags, geolocation information, and transportation equipment sensor data), and many other examples across most industries. IoT typically requires workflows in near real time, which in turn requires automation technologies.
- **Automation related to higher pace of SAP upgrades and modifications.** The existing SAP on-premise application will be subject to more frequent modifications in the future due to shorter upgrade cycles, modifications related to self-service and mobile applications, and so forth. Automation technologies, such as Automic's automated system copy, are important to SAP users needing to shorten test and development cycles and enable efficient testing processes.

## Conclusion

Most large SAP customers are undergoing a digital transformation, and many are forced to transform models as traditional business practices face pressure from new digital disruptors. This in turn requires a higher level of process automation than before and more processing in near real time. However, automation is more difficult than it used to be because new cloud applications, external data sources, and third-party infrastructure platforms are involved. IDC sees multiple future scenarios where automation technologies will be needed to connect and orchestrate processes spanning on-premise SAP and other enterprise applications, cloud applications from SAP and others, new database platforms such as SAP HANA, and so forth. Despite the challenges involved in competing with large, global vendors, Automic has a significant market opportunity in helping large and medium-sized SAP customers reach their digital transformation goals.

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Global Headquarters: 5 Speen Street Framingham, MA 01701 USA P.508.872.8200 F.508.935.4015 [www.idc.com](http://www.idc.com)