Supercharge your enterprise resource planning (ERP) investments

Improve UI and migrate to SAP S/4HANA – with Pega

PEGA®

Build for Change®

Challenges preventing digital transformation

Many enterprise organizations are faced with a massive challenge to their digital transformation. Do they stick with a legacy system in which they've already invested, even if it doesn't meet all their business needs, or do they start over? How can they not only make do with the systems they have in place but improve processes and manage implementations and upgrades more efficiently?

The complications and challenges that arise from changes to legacy systems are all too familiar:

- The need for custom code development including interfaces

- Inconsistent and non-integrated master data

- A conglomeration of best of breed applications

- Inconsistent analysis and reporting applications

One or more of these challenges can result in poor user productivity, slow and high-risk transition project implementation, and complex back office system consolidations that are difficult to gain business adoption and support.

For those who utilize SAP, the impending requirement to move to S/4HANA is a big pill to swallow. From a business standpoint, it is difficult to quantify the benefits that offset a multi-million-dollar expenditure, along with the associated disruption to existing business processes and impacted knowledge workers. But the IT organization has no choice but to move forward with the transition that preserves an acceptable level of support. IT needs to adhere to a technology roadmap that's in line with what is taking place in the industry today.

SAP is a powerful business suite but there are other tools available to make it even better. These tools reduce the pain of making major SAP upgrades or changes to other systems that tie into the SAP infrastructure. But before you can get into tools to improve your SAP implementation, you need to align your key stakeholders around how to tackle the project itself.

The traditional approach: familiar and costly

The traditional solution to this problem is to initiate a multi-year, multi-million-dollar project following a waterfall mentality. It seems straightforward; define a project scope that takes into account the end-to-end desired results with the promise of something better over a multi-year time frame. Unfortunately, many of these efforts are not successful. Across industries and stakeholder groups the most common causes of failure include the lack of:

- Executive buy-in and continued support

- Understanding/estimation of project challenges and complexities

- Detailed business and/or technology roadmaps

- Defined or realistic project scope and associated promises

- Experienced ERP professionals
- Clear process ownership, responsibilities, or accountabilities
- User acceptance (let's face it, people do not like change)

To quantify these common challenges, take a look at some harsh statistics[1]:

- 80% of customers are unhappy with their current ERP
- 60% of ERP projects fail
- 90% of ERP projects fail to deliver any measurable ROI
- 40% of enterprises fail to achieve more than half of the expected benefits

So why do we keep making the same mistakes, spending enormous amounts of money, and expending significant amounts of precious resource time?

An alternative strategy: taking an agile approach

To avoid the common pitfalls associated with traditional forms of system upgrades or improvements, organizations should consider a different strategy to address the shortcomings embedded in their current systems.

This requires an agile approach as opposed to the establishment of a big event (i.e., the traditional waterfall or "big bang" approach). An agile approach takes careful consideration of stakeholders, associated benefits, and what will impact their daily activities. The roadmap is defined by the goals to be achieved and how those relate to the frequency of implementations.

The core of an agile approach is to make project and implementation challenges more manageable by breaking the project down into several discrete pieces. The pieces or "scopes of work" will be directed at specific impacted stakeholder groups in the organization. By focusing on each of these groups, we can consider the problem through their perspective. How will that stakeholder be impacted by any changes made? When we impact a stakeholder group, how do we show a benefit quickly, and then isolate them from other changes that will be taking place as we continue down the path to digital transformation?

A key formula for success is to minimize the impact of change to each stakeholder group through each step of the roadmap. Many projects fail, not because the systems weren't capable of solving the problem but because user acceptance to change became the biggest impediment to the project.

The benefits of agile

Taking an agile approach is not complicated, but it is different. A long-term plan is put in place to focus on using technology and tools that are best designed to accomplish the business outcomes. Any major ERP endeavor is a journey, not a destination. Unfortunately, the waterfall method, by its inherent design, is focused on completing a major project to arrive at a destination. As we have all experienced, the destination changes with time as the business climate changes. Even if the project is delivered on time and on budget, there is still a good chance that it no longer fulfills the new requirements of the business.

Using an agile approach will provide the flexibility necessary to adjust to changing business conditions without producing major rework. It will allow the business to see timely benefits through frequent improvements and stick to a long-term digital strategy. It enables the organization to consistently move through the journey and follow a roadmap to achieve digital transformation. Just as importantly, this focus will produce the ongoing support from all portions of the business required to stick to a long-term strategy and make it a part of the regular conversation.

Wrap and renew vs. rip and replace

Now that your strategy is aligned for an agile approach, it's time to consider how to execute the technical implications of the project. Since the investment into SAP has already been made, it makes more sense to build upon and improve the SAP implementation instead of overhauling it. A wrap and renew approach refers to working within existing technology and systems rather than removing it all and starting from scratch (rip and replace).

The advantage of using SAP is that it is very versatile and can be configured in many different ways to accommodate the various business process requirements that exist today. However, the user interface may be considered inflexible and nonintuitive, consisting of a series of tables and drop-down windows. This type of user interface is difficult to master and can make training tedious. SAP also requires the memorization of codes to understand what function is being performed. SAP has developed some new tools to address these issues, but they are still difficult to maintain. **This is where Pega comes in.**

How to wrap and renew with Pega

Pega can be paired with SAP to build intuitive, flexible interfaces to guide users through getting jobs done. The construction of the interfaces considers the changes and improvements to the underlying business processes and focuses on the user experience.

The intent is to isolate the user from most of the heavy changes that will be taking place on the back-end business processes that source the data and the preparation that takes place for user consumption. Pega can be used as an agility layer on top of SAP and effectively manage the user experience and shield the user as much as possible from future changes to the internal workings of the SAP modules. Essentially it is best to keep hard-to-change applications as close to plain vanilla as possible and wrap with Pega for delivery and change.

Another critical element is to focus on the back-end business processes and reassess how the process should look going forward. Try to minimize the scope but also consider how these processes would fit with the upgrade to S/4HANA. When the changes to the back-end systems and processes are made, impacts to the user will be minimum as Pega will be handling the user interface to the systems through a different software layer; one that is intuitive, flexible, and easy to modify without a great deal of training. The business process owner will benefit as Pega will be removing inefficiencies and making improvements that will dovetail into the S/4HANA upgrade when that step in the technology roadmap is undertaken.

Continue the agile methodology by making incremental improvements to business processes that are a key focus area and high priority. Consider the changes that are necessary to eliminate customization, unnecessary integration, or requirements for avoidable middleware. Position the organization for success and quick wins in the short-term while future-proofing your business at the same time. These new capabilities allow organizations to react more quickly and easily to shifting market demands, growing expectations from clients, suppliers, and partners, and dealing with other unplanned or unanticipated changes.
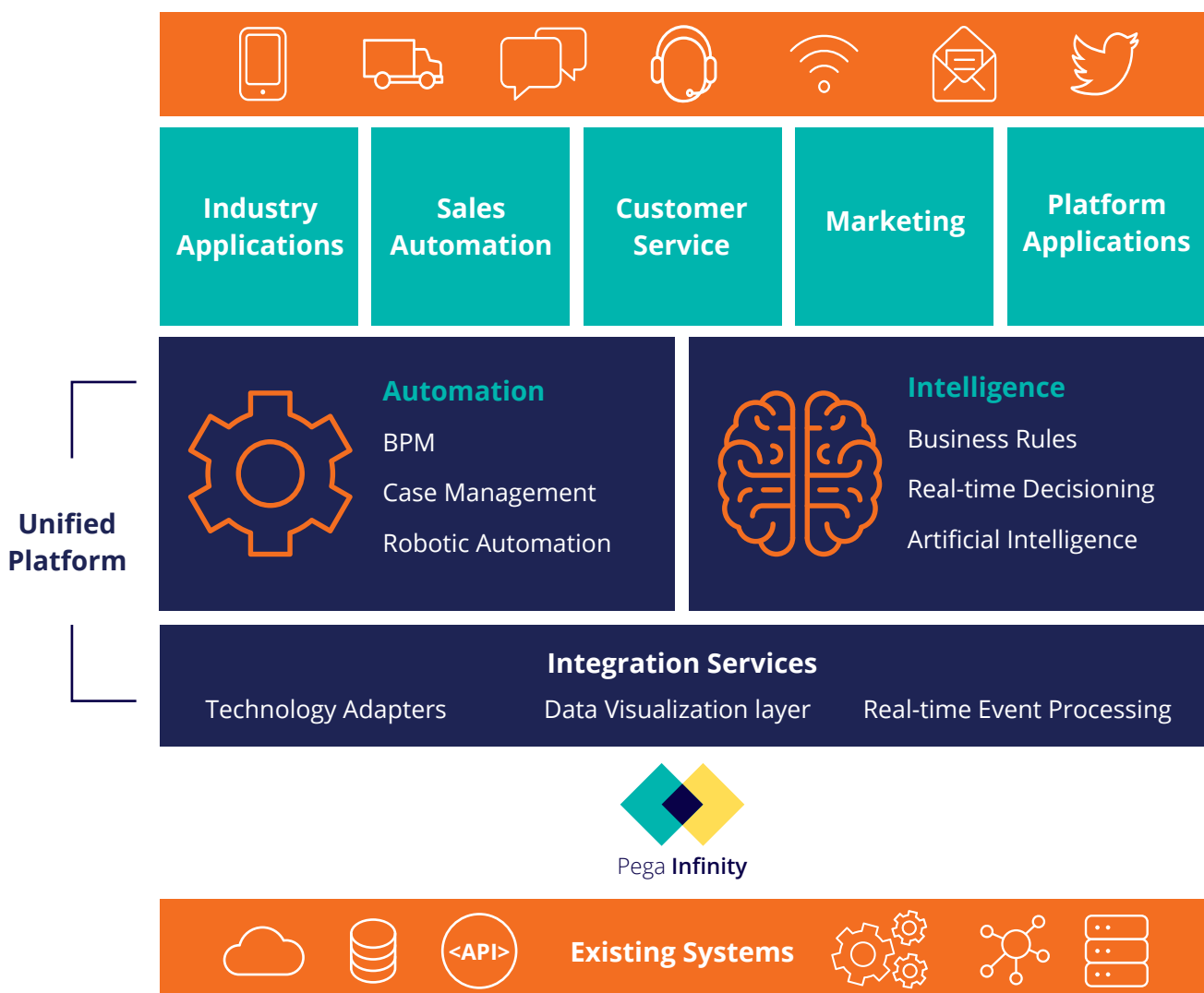
At some point in the roadmap, the major upgrade will take place for the SAP modules, especially when migrating to S/4HANA. By following the new approach, your organization will reap the dual rewards of the implementation of business process improvements and an improved user experience.

This transformative solution also enables organizations to leverage valuable investments in existing SAP and legacy systems instead of continuing to introduce risk by heavily customizing SAP or by adopting costly rip and replace strategies.

Pega Infinity™ - the unified architecture for digital transformation

The Pega Infinity™ platform provides a robust collection of technologies and capabilities for building customer engagement solutions, end-to-end digital process automation, and other business applications. These capabilities are part of Pega's unified architecture, designed to work together from the ground up.

Our strategy to leveraging these capabilities takes a no-code, model-driven approach. Pega uses these models to dynamically generate the underlying code for the application. So, you could say, our software writes your software. Imagine a command and control layer over your systems of record that provides the flexibility and agility for business users to make changes or to add new services or business models in a controlled way. Pega's patented layered architecture and integration capabilities work with SAP or other existing systems to make them better.

Industry Applications	Sales Automation	Customer Service	Marketing	Platform Applications

Automation
BPM
Case Management
Robotic Automation

Intelligence
Business Rules
Real-time Decisioning
Artificial Intelligence

Unified Platform

Integration Services
Technology Adapters   Data Visualization layer   Real-time Event Processing

Pega **Infinity**

Existing Systems

Pega's no-code platform provides the ability to create applications that are built for change and at the same time provide seamless integration to legacy systems and ERPs. The platform provides mashups to extend existing applications, live data to simplify access and management of organizational data, and traditional protocol support. Pega provides out-of-the-box connectors and services for multiple types of systems. Pega's wrap and renew approach and digital transformation capabilities focus on these core pillars:

- Connecting SAP and other applications to external sources using out-of-the-box services and connectors
- Integrating SAP and legacy systems using Pega Live Data and Pega Robotic Process Automation™
- Eliminating process execution gaps in ERP systems
- Extending SAP and other applications with components from Pega Exchange

These capabilities give organizations a unique competitive advantage to be able to transform with agility while freeing up SAP and legacy systems to focus on day-to-day transactions.

From a security perspective, Pega delivers secure connectivity using industry standard security protocols. The application utilizes wizard-based integration to help users define the details of their ERP connectors and services using:

- Robust no-code connectors and services to provide performance and ease-of-use
- SAP-specific connections to make ERP information immediately visible and actionable in Pega solutions
- Direct and NetWeaver brokered connections for enterprise SAP architectures
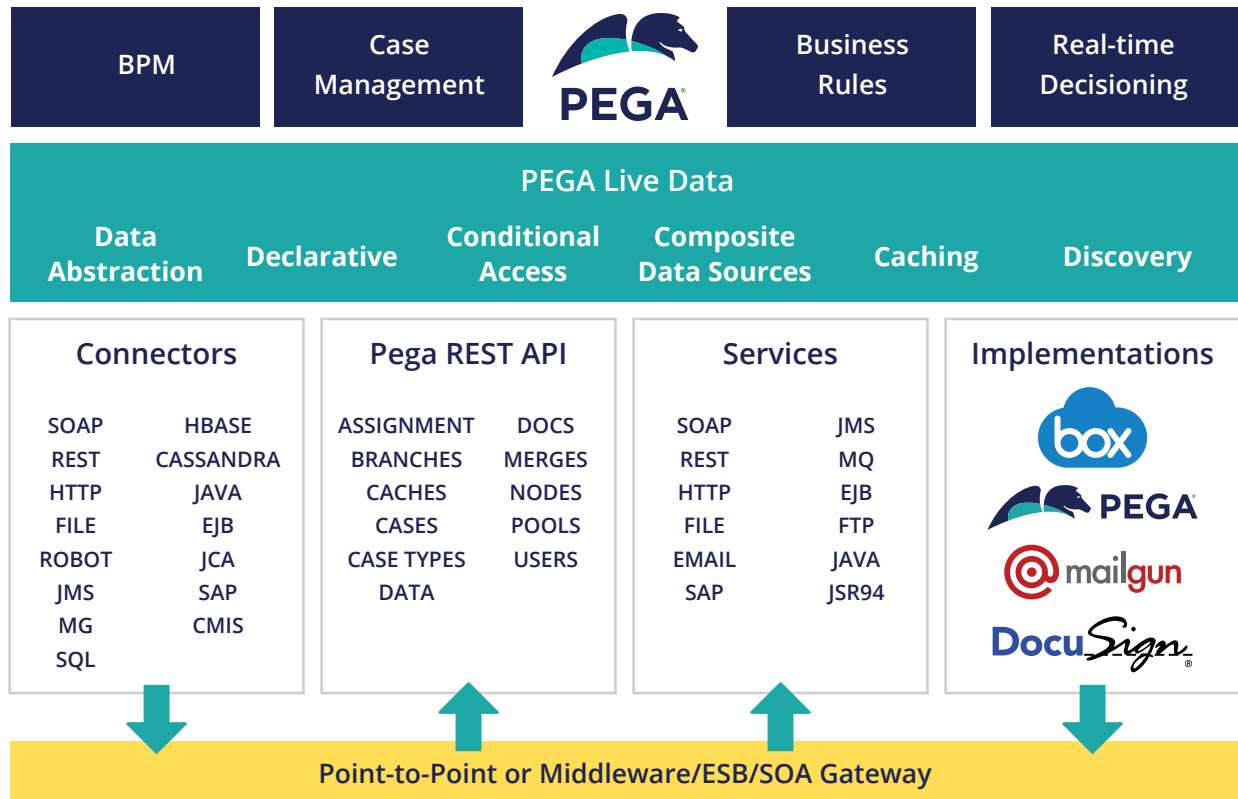
To ensure ease of use, Pega enables users to:

- Invoke SAP BAPI/ABAP user exits, and custom code functions from Pega
- Provide built-in caching features that allow organizations to persist data elements that don't change often, and relieve the transaction burden on back-end systems
- Use connectors/services to communicate with SAP
- Enable Java connector/service support for communication with the SAP Server in both directions: inbound (Java calls ABAP) and outbound (ABAP calls Java)
- Perform data transforms with no-code mapping, calculations, and format changes, so SAP objects can be quickly exchanged with Pega

Organizations can leverage the Pega platform two-way integration capabilities, delivering robust protocol adapters, services and live data to easily connect and augment ERP systems functionality.

Data Integration
ROBUST CONNECTIVITY TO DRIVE AUTOMATION

BPM	Case Management	PEGA	Business Rules	Real-time Decisioning

PEGA Live Data

Data Abstraction	Declarative	Conditional Access	Composite Data Sources	Caching	Discovery

Connectors

SOAP	HBASE
REST	CASSANDRA
HTTP	JAVA
FILE	EJB
ROBOT	JCA
JMS	SAP
MG	CMIS
SQL	

Pega REST API

ASSIGNMENT	DOCS
BRANCHES	MERGES
CACHES	NODES
CASES	POOLS
CASE TYPES	USERS
DATA	

Services

SOAP	JMS
REST	MQ
HTTP	EJB
FILE	FTP
EMAIL	JAVA
SAP	JSR94

Implementations

box
PEGA
mailgun
DocuSign

Point-to-Point or Middleware/ESB/SOA Gateway

Conclusion

ERP systems like SAP are the bedrock of many organizations. Few IT executives would argue that centralizing their enterprise systems meant they sacrificed agility. It's a fact that monolithic systems are difficult to modify and expensive to maintain. No organization can afford to continue to spend over 70% of its technology budget stuck in maintenance and support mode, leaving only the remaining 30% to growth and transformation. The statistics about project failures are staggering, and no organization can afford to take those risks and ignore the new way.

We believe there is a better approach to be successful on your digital transformation journey, including large projects involving the evolution of SAP or other ERP systems. With Pega, you can maximize your existing technology investments, leverage new technology along with your legacy systems to make them more efficient, and keep up with the constant changes in your business and the industry. You can have the best of both worlds – stable transactional systems of record and an agile innovation platform that scales to grow and adapt more quickly to business needs. Let us help you reimagine your digital transformation journey.

1   "Ten ERP failure statistics that highlight the importance of getting it right the first time", ERP Focus, Rick Carlton, August 23, 2017. https://www.erpfocus.com/ten-erp-failure-statistics.html

PEGA

We are Pegasystems, the leader in software for customer engagement and operational excellence. Our adaptive, cloud-architected software – built on the unified Pega Platform™ – empowers people to rapidly deploy and easily change applications to meet strategic business needs. Over our 35-year history, we've delivered award-winning capabilities in CRM and digital process automation (DPA), powered by advanced artificial intelligence and robotic automation, to help the world's leading brands achieve breakthrough business results.

For more information, please visit us at **www.pega.com**