ERP: Once Upon a Time

According to Wikipedia's neatly packaged blurb, Enterprise Resource Planning (ERP) is “a category of business management software, typically a suite of integrated applications, that an organization can use to collect, store, manage and interpret data from many business activities.” Simply put, ERP is a big umbrella for what companies and organizations use to manage their business and automate their back office and customer-centric functions related to technology, services and human resources.

ERP evolved in the 90’s, stemming from the combination of two diverse domains, MRP (e.g. inventory control) and various early-stage business accounting systems. It enabled organizations to synchronize their processes and gain a holistic view of their business, leading to improved efficiency thanks to better resource planning and control of expenses. However, even in those early ERP days, IT’s main objective was to enhance efficiency and support internal processes.

IT has since endured an overwhelming, mammoth-sized revolution. The IT manager has been promoted to the executive CIO role and is now responsible for business outcomes no less than any other member of management. Today’s IT department rightly sees itself as an enabler for the rest of the business. Without technology, virtually all companies would cease to function.

Leading a business is no longer about focusing on operational systems, it’s about analyzing and identifying market trends, generating knowledge and insights, forecasting causes and effects of business activities and finding and implementing systems that will proactively advance the company.

So... what happened to the traditional IT system? And what happened to the ERP? Is either one still needed? At all?
The Evolution: Keeping ERP Current

One would expect that today, ERP would be considered somewhat of a non-issue, a commodity. But witnessing the uproar in the enterprise software world due to SaaS, the cloud and an endless variety of niche business apps, we ask: Is ERP still relevant?

The short answer is YES. A brief look at leading market analyst reports shows that enterprise software spends reached a staggering $620 billion in 2015 and increased an average of 25% over the last five years (2012-2016).¹

A deeper look into reality, however, leads us to the longer, more succinct answer: ERP is still relevant but it is not the same ERP as we once knew it. In actual fact, the solution evolved so incredibly much that modern ERP is no longer a set of applications, but rather a fully-fledged platform.

According to Rob Bamforth, Principal Analyst, Business Communications at Quocirca, a leading UK-based IT research and analysis company:

“ERP is not a new concept, but mobile and cloud computing have radically changed the way ERP needs to be used. The challenge is keeping ERP simple, consistent and interactive as business processes and teams become more distributed. This has driven the need for open solutions that can scale to meet organizations’ productivity demands, while delivering a simple, flexible and efficient user experience.”

Clearly, ERP didn’t just sit around and wait for a cue. It is shifting a company’s entire operations by leveraging information to create a unified and flexible data repository – shared data and a smart layer of business management tools for all needs and applications.

¹ Forrester Research Inc., SaaS Software Subscription by Category, 2012-2016; Annual Industry Outlook, Tech Market Forecast for 2015
The Quest for Modern ERP

In this document we will explore the elements of modern ERP – elements that transform the platform into an important infrastructure to serve the organization not only today, but well into the future.

Modern ERP consists of:

- Platform Flexibility
- User Experience
- Mobile
- Openness
- Cloud
- View 360°

Up until a few years ago, if you wanted to make a change in a work process, you’d need to hire an expert, write a spec, get it approved, request an implementation price quote, draft a project plan and hope for the best. But try this today and your product will no longer be relevant and your customer – long gone.

This means that companies can no longer allow complex processes. They must be able to change their workflows, business processes or rules, efficiently and independently. Time-to-market must be shorter even though the ecosystem is more complex. The time it takes from planning a product to delivering it to a customer must be reduced, costs and resources too.

Many companies are already upgrading to modern ERP but many will not. Today’s ERP gets its oxygen from enhanced system openness – interoperability and flexibility that optimizes business performance. This is how we keep ERP warm.

*Then we turn up the heat.*
Platform **Flexibility**

Flexibility is important to support business agility. Platform flexibility affects initial implementation as well as changes further down the line. Companies once easily defined exactly what their ERP system would do in the coming 6-7 years, and some even foresee a decade in advance.

The business environment is dynamic and today, most of us can’t even predict a company’s needs 1-2 years down the road. We’re far too concerned with “Will we have new product lines? Will there be new competitors? Which technologies will we use? Will the business model change? Will we still be employed?”

**Flexibility during initial implementation:** This was once a long and difficult journey with frightfully high budgets, where over 60% of projects exceeded their projected timeframe and budgets. If the ERP system was designed at the get-go in a modern, flexible manner, this would not have happened. The system can be equipped with best practices but, it should never force the customer to adjust internal processes just to be able to use the system.

As companies evolve, opening new facilities, adding partners, merging operations, outsourcing functions, centralizing the back office, or conducting any other activity that involves change, businesses are in constant flux. As business processes and components evolve, the ERP system managing them needs to evolve with them. **This requires flexibility.**

**Flexibility is an issue of software design and a modern ERP should provide flexibility in various ways:**

- **Business Process Management (BPM) tools** to define/change business layer and workflow
- **Business Rules generator**, including ability for non-developers to easily define rules, alerts and push notifications
- **Modular** – ability to add/remove components
- **Personalized** – ability to personalize user interface/design
- **SDK** – enable developers to enhance/change system modules
Every employee is a consumer and each one wants a fun, enjoyable and positive user experience (UX). The purpose of the UX platform is to make it easier for employees to do their work. For ERP to keep up, it too, has had to pay the utmost attention to system usability. The true UX harbors on increasing the value users get from ERP systems, along with employee productivity, by deploying a UX platform that makes ERP more intuitive.

Even when complex systems such as ERP are involved, the goal should always be that of making the user interface (UI) so simple that employees can do their jobs without training. Making the UI more intuitive, with an attractive, easy-to-use dashboard and tailoring it for specific roles, goes a long way towards promoting adoption inside the organization.

The more advanced ERP systems have built-in user-learning algorithms so that they learn the usage habits of each individual user and make changes accordingly. Part of the UX secret is to have very rich functionality, yet keep the UI simple, showing only relevant options to each user at every stage in the work process and in accordance with its specific context.

In Priority, for example, once users enter the system’s homepage, they can see exactly how many tasks or items await them, how many processes they need to approve, etc.
Ready? Set? Go! Mobile ERP

You cannot talk about user experience without talking about mobile. ERP was originally designed for desktops, but modern ERP was designed for laptops, smartphones and tablets. And that means ERP anywhere, any time – true ubiquitous productivity and access to data. What’s more, modern ERP is pretty social too, offering Human Resources (HR) tools setup, such as social networking sites, enabling colleagues/coworkers to share/comment on posts within their organization.

Mobile ERP enables employees to work from anywhere, at any time, via the speed and convenience of the Internet, leveraging the many mobile capabilities. Mobile ERP frees the organization from any limitation, while mobile devices, laptops, PDAs and tablets make it possible to carry out any task... on-the-go.

But what is mobile ERP? The very basic level of mobility is to enable employees to view information and perform their jobs when they are not at their desktop. This is typically done via a web application with a responsive UI that can be accessed from smartphones and tablets.
Is it enough? No it is not. For starters, mobile is not a small desktop. Often, the tasks, state of mind and individual user needs vary greatly for employees when they’re on the road or at home and not in the office. Mobile ERP is therefore not a single capability or application. It’s a suite of solutions that a company can use to ensure full synchronization and productivity... everywhere.

Mobile ERP apps should be tailored to specific needs and should also leverage a device’s unique capabilities (e.g. camera, GPS, barcode scanning). Sales people will have direct access to a customer, product catalog or inventory and they’ll be able to open a purchase order with just a few simple clicks. In sequence, their manager, on the other hand, may receive a push notification for an urgent discount approval. On-site technicians will use another app, enabling them, for example, to search for unaccounted stock from the warehouse or a problematic PoS at a retail outlet.

The highest level of mobile support in ERP systems is available in the form of an application generator for mobile applications. It’s an innovative tool that enables individual organizations or developers to design and develop their own mini-workflows.
Open Sesame: ERP System Openness

Today, there's an app for everything. Pre-heat your home? An app. Order sushi? Another app. Read your kids a bedtime story? There's an app for that too. New enterprise applications roll off the assembly line every second, generating scores of startup companies who design and build these apps and churn them out. Then there's limitless niche applications and their easy accessibility to virtually every employee in your organization. And many of these apps are free.

The ‘stale’ and outdated approach that only a single solution, be it brimming with functionality, will suffice for all of an organization's needs, is simply unrealistic. But in its past lives, ERP was designed to support any and all of a companies' IT needs, was it not? This is precisely where the platform approach comes into play. And the key to being and maintaining a strong, viable platform is OPENNESS.

Modern ERP systems are built to support system openness, a new level of interoperability and flexibility to optimize business performance. It must include standard APIs as well as dedicated Software Development Kits (SDKs/devkit). Conveniently, the API layer enables developers to integrate the ERP on both the database and application level with any 3rd party or self-developed app.

Say, for example, that your organization decided to implement an ERP system, but it’s lacking some basic functionality. Maybe you want to connect to an HR shift management app in the Customer Service Center, to your company’s social networks, to an external CRM (Customer Relationship Management) system, or to a MES (Manufacturing Execution System) on the production floor.
As easy as riding a bicycle (or so they say), you’ll want to connect to these and other apps and you’ll want your shiny new ERP system to be equipped with APIs to boost interface functionality. You’ll want data export support tools, (e.g. Google Docs, Office 365) to transfer and share files and you may even want to ‘seal the deal’ with BPM tools to automate, measure and optimize your business processes. But you can’t move a millimeter without a flexible and open ERP system.

System openness will also let you leverage the ever-popular IoT (Internet of Things) technology. It’s a fundamentally cool network of physical objects, devices, vehicles, buildings and other items embedded with electronics, software, sensors and network connectivity that enables these objects to collect and exchange data. It’s a brave new world (even if we can’t grasp it all at once).

No matter what industry you’re in or where you are in the proverbial food chain, it is, without fail, system openness and standard APIs that will allow objects to be sensed and controlled remotely across existing network infrastructure.

This is best illustrated in the system’s Order Management module, for example, that fills product orders at the lowest possible cost. These modules are equipped to handle functions such as automated order entry, viewing and tracking and order status. For example, a service call is virtually ‘sensed’ and controlled, automatically opened by the system to alert on missing or insufficient inventory/parts, or generate a system alert when an item’s shelf life is about to reach its expiry date (e.g. drugs and other perishables).

Ultimately, this will create opportunities for more direct integration of the physical world into computer-based systems, resulting in improved efficiency, accuracy and revenues. After all, isn’t that what we’re all striving for?
The One with the Silver Lining: **Cloud ERP**

To cloud or not to cloud? If you’re new to ERP and still don’t have your infrastructure in place; if you’re short on resources and want to focus on bringing innovation to your core business; if you’re not sure about how your business needs will develop in the coming years, then you’re an ideal candidate for Cloud ERP – ERP as a Service.

**ERP as a Service has 3 main characteristics:**

- Hosted and managed by the vendor on a public cloud
- Delivered in a one-to-many model - vendor maintains many customers on the same server/same database
- Consumed in a monthly subscription model with the option to scale-up/scale-down at any time

Cloud-based ERP is also ideal for growing organizations, with highly flexible and scalable solutions enabling gradual, steady growth, to serve from a few to several thousand users. A secure, risk-free environment where sensitive business data is fully protected, cloud ERP means big benefits for the organization — increased performance, lower operating costs, enhanced access to information and increased security, to name a few.

*The even bigger plus?* This means that time and money are not spent on the company’s IT team managing hardware, software and upgrades, all of which have a detrimental effect on system uptime.

Bear in mind that cloud ERP is not necessarily the right solution for all organizations in every situation. We are, however, seeing a steady increase on a global scale. The take-up is particularly high in industries such as digital media, professional services and business services. One thing we do know, cloud ERP is here to stay.
The Perfect Panorama: View 360°

What about that 360° view of your organization, not to mention those ERP tools that show trends, provide analytics, deliver valuable insights and offer forecasting visualization tools? A modern ERP is not complete without some pretty big time, big Business Intelligence (BI) tools and executive dashboards that definitely do the trick.

Developing viable BI tools was a natural progression in ERP system design. This included the ability to assess performance management and help organizations to predict the future, not only look at past performance. To further a 360° view of the customer, a modern ERP also offers a unified front-office CRM with data analytics solutions to access a wealth of actionable data.

With the rapid, oftentimes overwhelming increase in data (lakes, ponds and pools alike), organizations needed newer, faster ways to drive insights and actions and easier ways to support the decision-making process and align strategies and goals.

Simply put, an all-encompassing 360° organizational view changed the way performance was monitored and understood. As BI tools continue to gain popularity and purpose, ERP systems have established sustainable performance standards, gained valuable insights and provided cross-metrics correlations, ultimately increasing productivity and ROI.
There are a range of ERP vendors, from giant publicly-traded, to friendly niche market suppliers who willingly sell their wares to a handful of customers in various vertical markets. A surplus of players is great for customers, while every vendor has their own unique advantages and target industries. Whatever your needs and budget, there is an ERP vendor out there that will fit the bill.

Here’s what you need to know prior to purchasing an ERP system for your organization:

- **Flexibility Powers Functionality** — Your ERP solution needs to be flexible, modular and open; a comprehensive solution that delivers not only productivity, but also scalability, for your business operations.

- **Do Robust Research** — Research the business architecture of your ERP selection and look for strong planning, forecasting, data warehousing, contact management, marketing management, mobile business intelligence, security management and risk management attributes.

- **Seek Professionalism** — Your ERP implementation provider will be your ERP partner. Give attention to researching the best ERP implementation sources available to you.

- **Scrutinize Business Intelligence** — Powerful business intelligence drives the best ERP solutions on the market today. Not all ERP solutions share the same intelligence; scrutinize the brain power of your ERP selections and target the academic achievers.

- **Imagine Rapid Adoption** — The ERP solution you choose should be designed for easy end-user adoption. Your employees must become familiar and comfortable with working in your new ERP system and fully utilizing its functionality.
Masters of Mobile and Modern UI — The very basic level of mobility is to enable employees to view information and perform their jobs when they are not at their desktop. Strongly consider an ERP solution that offers mobile options that can be accessed from smartphones/tablets with a responsive, intuitive user interface.

Consider Cloud ERP — Don’t make an automatic assumption that you must invest in a cloud ERP solution. The author of this white paper happens to think that if you’ve forged ahead and favor the cloud, then you should view the cloud as more than just a means of cost reduction. Cloud ERP can make your organization more agile and more effective. And that’s something to think about.

We’ve come to respect ERP. We sing its praises and we promote its good name. We’ve been doing it since the 90’s and so far, so good.

*We see no reason to stop now.*
About Priority Software

Priority Software are pioneers in the global ERP solutions market, empowering companies and organizations of all sizes, by providing the most comprehensive, flexible, and affordable ERP solutions on the market today to increase profitability and efficiency. Founded in 1986, with the mission of making ERP easier and offering a more accessible alternative to complex and costly solutions, Priority boasts over 7,500 companies across a wide range of industries in 40 countries who have come to rely on Priority to manage and grow their business. Backed by cutting-edge technologies and a skilled and talented team of professionals, Priority is supported by a network of trusted business partners around the globe.

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