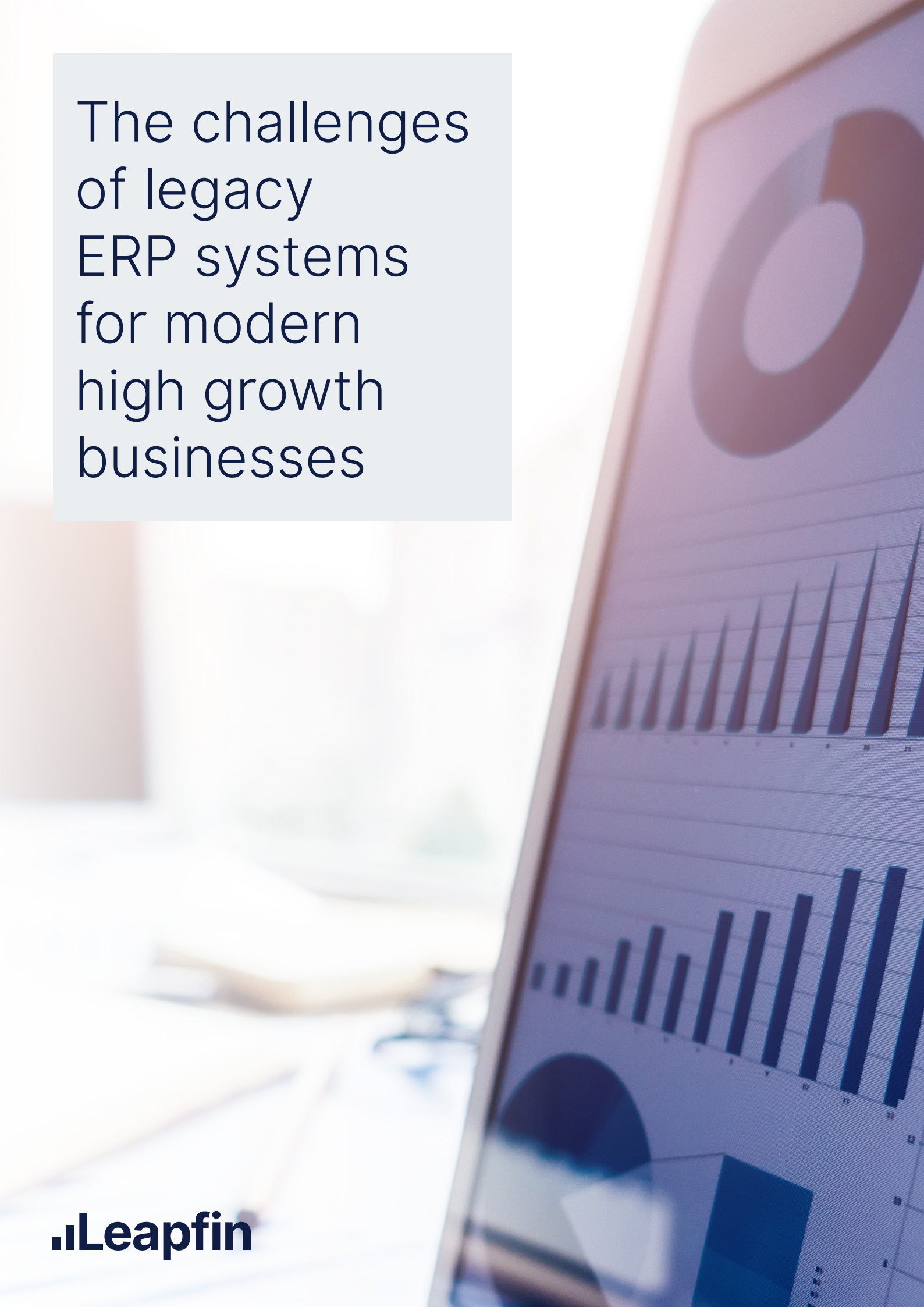
The challenges of legacy ERP systems for modern high growth businesses



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Introduction

A business is rarely monolithic. It is an array of different functions, spanning everything from supplier management and component sourcing through to production planning, assembly, inventory management and shipment. These processes must work together in a carefully choreographed dance that sees departments hand each other the right resources for the job, smoothly and accurately – and after all that is done, every step in the dance must be reconciled and accounted for.

An enterprise resource planning (ERP) system helps a business manage this dance. It's the glue that binds the different participants together, coordinating each step and recording it for operations and reporting purposes. The concept is decades old, but the fundamentals still hold true for modern businesses today, but we are seeing it evolving rapidly. This white paper explores what that change looks like, why it's happening, the challenges that it presents, and how to overcome them.

What ERP looked like 20 years ago – A walled garden

ERP originated from the manufacturing industry. Companies started using software solutions for manufacturing resource and material requirements planning. These systems were then expanded to cover other back-office functions to help with managing inventory and production, such as accounting and finance. These early ERP systems all had one thing in common; they were monolithic products that contained a variety of back-office functions in one system.

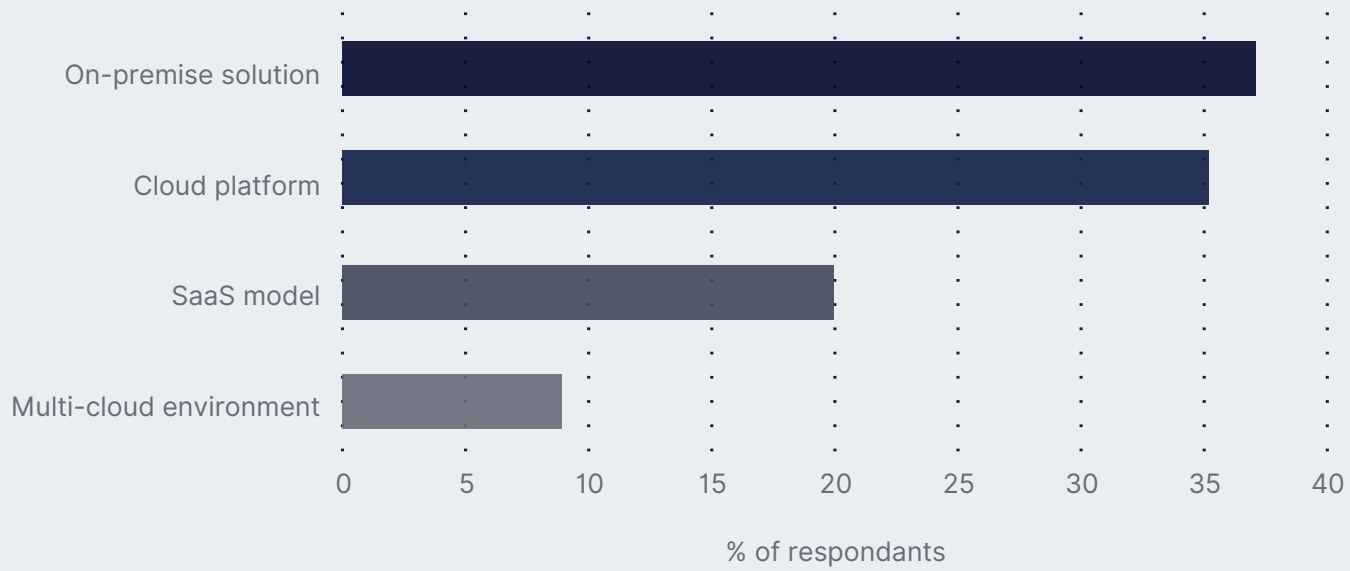
ERP vendors approached things this way for several reasons. First, it enabled them to grab market share by becoming a one-stop shop for all back-end operations. It meant that they could charge more for their software. Second, it made the ERP process easier to integrate. By controlling everything, they could orchestrate workflows and data exchange between the different departmental processes seamlessly. In short, ERP was a walled garden.

What ERP looks like today – Multiple, distributed solutions

Today's ERP industry looks markedly different to the one that developed over two decades ago. It contains a great many solutions from a variety of small start-ups, with cloud-based deployments prominent. In a survey of ERP users,[1] specialist ERP consulting company Panorama found that just 37% of them had deployed the software on their own premises. The majority had opted for alternative models. As shown in Figure 1, a large proportion of these selected a single cloud platform to implement traditional ERP software, while 20% were using software as a service (SaaS)-based tools.

The emergence of Amazon Web Services (AWS) and other cloud providers has given the impetus to this, freed from the need to maintain expensive data centers, companies are making use of the agility offered by cloud services. In addition to this, one of the newest trends (small at the moment, but still significant) is for businesses to switch to multi-cloud deployments, using an array of cloud providers. There are advantages to this approach, as it creates resiliency – a company can still access the service even if one provider becomes unavailable. But it adds a layer of complexity for deploying ERP, an issue that is surely going to become more prominent in the future.

Figure 1: Modern operating models for ERP deployments



Source: Panorama research, total may not be 100% due to rounding

Why did the change happen?

Several things changed to transform the ERP business. In the early 2000s, Gartner introduced the concept of ERP II.[2] This expanded the idea of ERP beyond the back-office functions visible only to a specific part of the company. Other elements also started being introduced into ERP systems: business intelligence (BI), customer relationship management (CRM), and human resource management (HRM) all found their way into the ERP eco-system.

The new paradigm utilized web-based tools to open up ERP access to a wider range of employees, as well as partner companies. This meant that selected vendors could access a company's ERP systems for supply chain collaboration.

The emergence of cloud technology has led to further advances. The market that has been created by the innovation instigated by Amazon, and picked up by Microsoft and Google, has completely shifted the way that many companies operate. The concept has had a transformative effect on the way that hardware is provisioned, how new projects are rolled out and on the way that software is delivered.

Cloud technology has extended ERP far beyond its original manufacturing roots, opening up systems to customers and other parties, creating what Capgemini has called a 'borderless enterprise'.[3] It has also led to the massive growth in software-as-a-service (SaaS) offerings, where an application is hosted in the provider's data center and is accessed through a web browser.

According to the 2019 Software Trends report,[4] the average employee now uses eight SaaS applications. While companies have benefited from having so many new SaaS options in the market, they have also caused an element of fragmentation as there are so many different vendors to support and integrate. When it comes to ERP, having multiple different applications can result in massive issues with data silos and a disjointed operating environment.

Changing business conditions

Alongside these rapid advancements in technology, there have also been changes to how companies operate. The business environment today is very different than it was a quarter-century ago. Markets have become increasingly competitive and fast-moving. Companies frequently need to change aspects of their internal operations to optimize outcomes in areas such as margin management and COGS attribution so that they can stay one step ahead of competitors.

The need to move more quickly made the old, monolithic ERP model less relevant. Those systems were more brittle because changes made to one part of the system affected the operation of others. This complicated change management for companies with large, sprawling sets of operational rules across dozens of modules.

This race to compete has also changed the role of the technology function in modern business. In the early 1990s, IT was still largely a cost center, there to service back-office functions and support business operations. Today, IT is increasingly becoming a profit center and a strategic partner for business functions.

> **55%** of companies that view IT as a critical tool to advance their business strategy have awarded budget increases to the technology department in 2019.[5]

The globalization of distribution

Another major change was market globalization and its effect on ERP technology. When ERP first appeared, the web was barely born. In the last 30 years, this technology has transformed the business landscape by opening new markets for companies and levelling the competitive playing field.

A business that used to source components from a handful of local suppliers can now easily hop between vendors on spot markets around the world, ordering digitally. Similarly, its customer base is no longer limited to a single region; it can use the web to distribute to businesses and consumers around the world. This has resulted in an explosion in the volume and velocity of financial transactions, all of which must be managed and reconciled reliably in software, often in multi-currencies.

A fragmented payments landscape

As companies expand around the world they face the challenge of taking payments in multiple different currencies and via a host of different payment methods. For example, in the European Union (EU), there are 27 different markets, all with different payment methods.

In the UK, card payments dominate, while in Germany open invoicing – where a consumer buys a product and pays for it later – is popular. In Asia, payment systems are often integrated directly into the major e-commerce platforms, like Alibaba or WeChat. Being able to integrate with all of these different payment methods is a major challenge for companies looking to expand abroad.

SaaS ERP

- **Faster deployment**
- **Lower capital costs**
- **Greater flexibility**
- **Can create data silos and integration issues**
- **Greater accessibility**

On-premise ERP

- **Implementation can take 18-24 months**
- **Higher cost for implementation, but lower ongoing operational expenses**
- **Greater control**
- **Applications run in same platform**
- **Less vulnerable to connectivity outages**

The emergence of SaaS models

The arrival of cloud-based ERP means that organizations are faced with the choice between running ERP software on-premise, in the traditional way, or choosing a cloud provider.

There are a number of factors determining that choice: companies have to look at their personnel, financial situation and technical set-up before deciding on the path to follow.

For example, organizations with small IT teams will particularly be attracted to cloud. There will be fewer demands placed on companies going down this route as there's less interaction required. This is not just because of the need to use IT resources more effectively, there's also the provisioning process to consider.

Many SaaS decisions are made by the managers of business departments rather than the IT executives. This 'bottom-up' decision-making means that the software that's chosen tends to be a better fit for business needs, rather than something imposed on a department by IT.

In addition, the use of SaaS means that costs are more controllable, a company can pay for what's needed and since it's an operational expense rather than a capital cost, it will also look good on the balance sheet. There's normally also a much reduced implementation time compared to on-premise ERP, which is software that is notorious for its complexity. Many companies have found integrating ERP with existing departmental software to be a laborious process and cloud could be the answer to this.

But the real advantages of cloud are in the way that it provides a degree of interaction with business stakeholders. These could be departments within the enterprise itself, customers or business partners – we've already seen how the new wave of ERP deployment is aimed at bringing these players into the wider schema, and cloud provides the ideal way for doing this.

It's this flexibility that is the standout reason for the choice of cloud. As has been mentioned, to use cloud to its full potential requires a high degree of cooperation between IT, finance and all other departments. There are still businesses that don't do this, and they're the ones that are failing to reach potential.

How the change impacted companies

These changing conditions have forced companies to think differently about ERP, leading to a move away from the first-generation model. In a business world that demands more justification for its technology spend, IT departments have found it difficult to sell mammoth ERP projects with lots of complex moving parts that are not immediately necessary.

This old approach to ERP hasn't died out, but these developments have created a more fragmented marketplace in which incumbent players no longer rule unchallenged. Some companies are clinging to old-school monolithic systems, while others are deploying cloud variants. Some have atomized their ERP functionality and instead embraced individual products from different vendors. These piecemeal implementations enable them to install bits of ERP functionality as needed. It also lets them seek out 'best-in-breed' point solutions, paying for them as they go, rather than budgeting hundreds of thousands of dollars in consulting fees and complex, sprawling licenses.

The challenge of data silos

While this new approach to ERP has its benefits in terms of flexibility and cost management, it also has its downsides. Implementing a mixture of smaller cloud-based and on-premise solutions piecemeal from multiple vendors can create data silos. Each product has its own way to store and process data. A company may use one vendor for supplier management, one for CRM and another for payment processing. A piece of software may excel at its job while failing to be part of a cohesive whole. These software products and services typically don't make data available to other programs in a standard way. Their data formats and application programming interfaces (APIs) are different, making integration difficult. Companies may have to hack together bespoke middleware solutions to ensure that the modules can talk to each other, creating support and maintenance problems.

If they don't have the internal expertise, they may need to take on a third party consulting company to do it for them.

Many companies who have gone down the ERP route have been encumbered by trying to support a variety of systems. Finance teams have been hamstrung by this set-up, a situation where they frequently have to manually administer these systems and download Excel files, before integrating them into a spreadsheet. Only after having done this, are they able to handle pivot tables, vLookups and all the other more complex Excel operations.

This is hard enough for growth companies but once we start looking at mid-sized enterprises, we're talking of hundreds of thousands of transactions every month. And when one goes further up the ladder, we can see companies that process millions of these transactions every month – at that sort of scale, manual operation becomes highly inefficient, if not downright impossible. It's not unusual for companies to talk about 200MB .CSV files that take 20 minutes to load – multiply that by the number of transactions handled daily and it's easy to see how the system can become overloaded.

Solving the manual integration problem

Companies currently solve this problem by building an internal data warehouse on Amazon Web Services or similar cloud services that aggregates data from multiple sources. Since internal data warehouses should be customized for specific business needs, they will vary significantly from company to company. Internal data science teams write SQL queries to extract financial data from data warehouses. Additionally, companies can utilize business intelligence software for these requirements. However, there are major limitations to these methods because data warehouses are highly technical and require significant IT resource commitment to finance teams.

From automation to intelligent automation

One way that companies are starting to get around the problem of data silos is by leveraging technologies like robotic process automation (RPA), which use software to mimic the actions of human employees. RPA software is able to move data automatically between different spreadsheets, making back-office environments more efficient. But companies are now taking this a step further by adding artificial intelligence into the mix. With intelligent automation, systems can not only move data around but also 'understand' the information and make judgement calls about how best to process it. This makes RPA much more scalable and increases the amount of tasks it can be used for.

Lack of end-to-end visibility

It's not just the time factor that hinders companies. Because files are being drawn from a variety of sources and different systems, managers don't have the end-to-end visibility that they would like. What they want is accurate, up-to-date information on financial performance, but what they're all too frequently getting is a snapshot – a small fraction of all the relevant stats. What this means is that for any given month, they have visibility of just one day's performance. Only at month-end, do executives receive a full set of figures – and even then, they're out of date the next day and have to wait until the end of that month to get all the correct financials.

These integration issues lead to technical challenges. ERP implementation was a difficult technical challenge for 44% of companies[6] in Panorama Consulting's survey, which has the potential to increase development and deployment costs.

The difficulty in integrating cloud-based services from multiple vendors also creates quality issues. Far more companies expect benefits from updating their technology than actually experience them. A reliance on manual integration also makes it difficult to scale the deployment of these loosely coupled solutions. Far too many companies still resort to exporting data manually from one program and formatting it in a spreadsheet so that they can import it into another. It isn't just deployment costs that can spike. Companies can expect an increase in operational costs as well. Poor integration makes it difficult to understand what's happening inside the company. Without a single view of a customer, order, or component, firms cannot track assets through the supply chain from end to end. This also impacts financial reporting, because accounting departments cannot get a holistic, real-time picture of a company's finances.

Conclusion

Companies need a way to enjoy the benefits of a loosely coupled enterprise resource planning system made up of best-in-breed products without losing sight of their business processes and blinding their accounting department.

These problems will continue to get worse over time for several reasons.

Increasing data volume. Applications are generating more data each year as they get access to more detailed information and become more innovative in their processing.

Increasing fragmentation. It is becoming easier to create point solutions handling small parts of the ERP process. There will be more start-ups in the next few years offering best-in-breed software that doesn't talk to other products intuitively. Companies must prepare themselves to cope with the integration challenges.

Increasing business models. Enterprises must adapt to the new ways consumers want to buy. The rise of the sunscription economy, freemium economy, microtransactions and in-app purchases have exponentially increased the complexity faced by finance and accounting organizations.

In order to address the looming data crisis, modern chief financial officers must act now. Executives must obtain the financial visibility to lead their teams and make data-driven decisions on the fly.

Executives must also evaluate the capabilities of legacy financial software and make the upfront investment to modernize their finance technology stack, enabling their teams to successfully cope with the coming data deluge.

Entire organizations must strive to become more data-literate, empowering each employee with access to data. These problems must be resolved now, as the cost of waiting is too high.

Now is the time to begin planning data and technology strategies that will help solve this ERP fragmentation problem. In doing so, you will not only avert disaster, but will give yourself a powerful competitive advantage.

Leapfin

Leapfin is a unified, financial data platform designed for modern businesses. Our technology helps companies to break down silos and centralize financial data. We improve the quality of data by eliminating discrepancies and redundancies, whilst increasing efficiency through automating business processes.

Leapfin seamlessly integrates with billing systems, payment service providers, CRMs, enterprise data warehouses and ERPs, giving companies a 'single source of truth' for their financial information. We also leverage RPA technology to automate complex business logic at massive scale, improving accuracy and reducing the manual workload.

By streamlining and simplifying the data pipeline, Leapfin empowers finance teams. We provide accurate and real-time financial information and reports, so you can make data-driven decisions and push your business forward.

References

1. Panorama Consulting, 2019. '2019 ERP Report'. Available at: *https://www.panorama-consulting.com/resource-center/erp-software-research-and-reports/panorama-consulting-solutions-2019-erp-report/*. Accessed January 2020.
2. Gartner, 2000. 'ERP IS Dead – Long Live ERP II.' Available at: *https://www.slideshare.net/Agcristi/erp-is-dead-long-live-erp-ii*. Accessed January 2020
3. Capgemini, 2015. 'ERP III and the Digital Economy – Building the Borderless Enterprise'. Available at: *https://www.capgemini.com/2015/04/erp-iii-and-the-digital-economy-building-the-borderless-enterprise/*. Accessed January 2020.
4. Blissfully.com. '2019 Annual SaaS Trends Report.' Available at: *https://www.blissfully.com/saas-trends/2019-annual/*. Accessed January 2019.
5. Harvey Nash, KPMG, 2019. '2019 CIO Survey.' *https://www.hnkpmgciosurvey.com/*. Accessed January 2020.
6. Panorama Consulting, 2019. '2019 ERP Report.' Available at: *https://www.panorama-consulting.com/resource-center/erp-software-research-and-reports/panorama-consulting-solutions-2019-erp-report/*. Accessed January 2020.