

OFFERING OVERVIEW

Unit4 Pushes ERP Platform to the Next Level

**Moving ERP Platforms to the Public Cloud Enables a Better
People Experience**



Holger Mueller
Vice President and Principal Analyst

Copy Editor: Jim Donahue

Layout Editor: Aubrey Coggins

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EXECUTIVE SUMMARY

This Offering Overview describes how Unit4 has moved its platform to the public cloud and how that move has enabled next-generation platform capabilities that power a next-level people experience with enterprise resource planning (ERP) software. Specifically, we look at the move to the public cloud, the entrance to conversational user experiences with the Unit4 assistant Wanda, the ability to enable machine learning to power Smart Automation Services and the integration capabilities of the Extension Kit.

This report is part of the Market Overview on SaaS vendor PaaS (to be published by Constellation later in 2019) and concludes with a discussion of strengths and weaknesses of the described capabilities and a list of recommendations for CxOs who are looking for help in the ERP selection process.

Business Themes

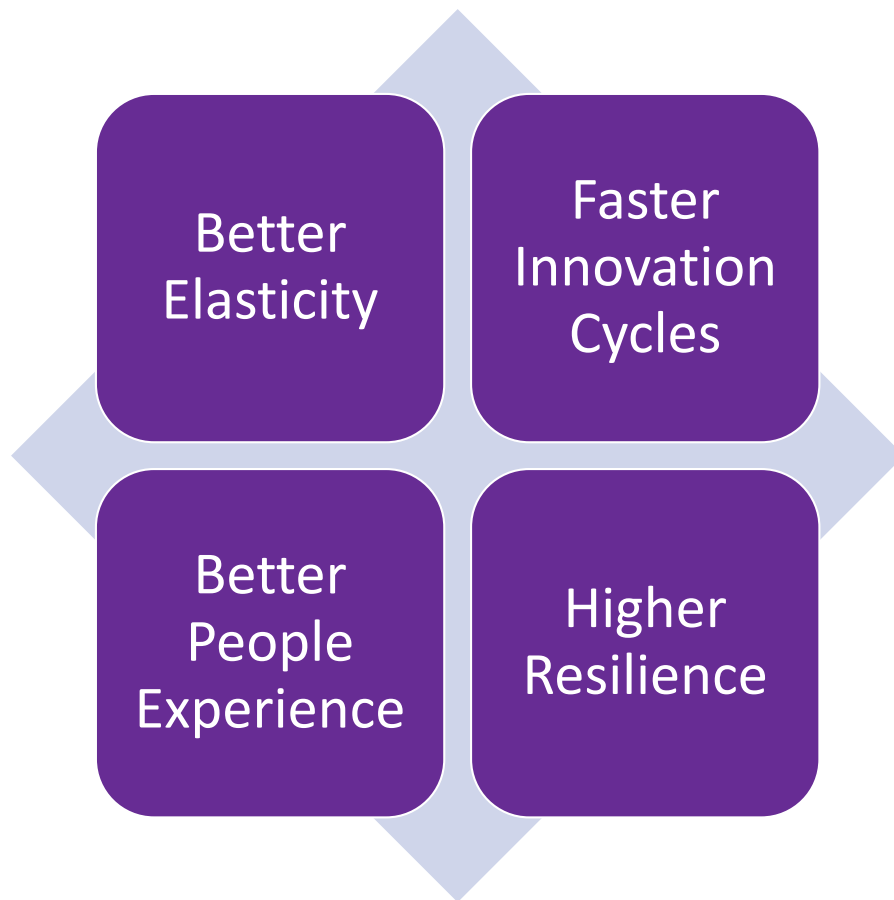
-  Future of Work
-  Technology Optimization
-  New C-Suite

ABOUT UNIT4'S NEXT-GEN PLATFORM CAPABILITIES

Enterprise resource planning (ERP) has been powering enterprises for more than five decades. During this time, the underlying computing architecture on which ERP applications operate has dramatically changed. Each leap forward in computing architectures has enabled new generations and capabilities of ERP functionality—expanding functions and, more importantly, the “people experience” of those using ERP software.

Today, in the era of infinite computing,¹ the new platform for ERP is the public cloud. There are many benefits of a public cloud platform underlying an ERP application; here are the most prominent ones (see Figure 1):

Figure 1. The Four Most Prominent Drivers for an ERP Platform Being Cloud-Based

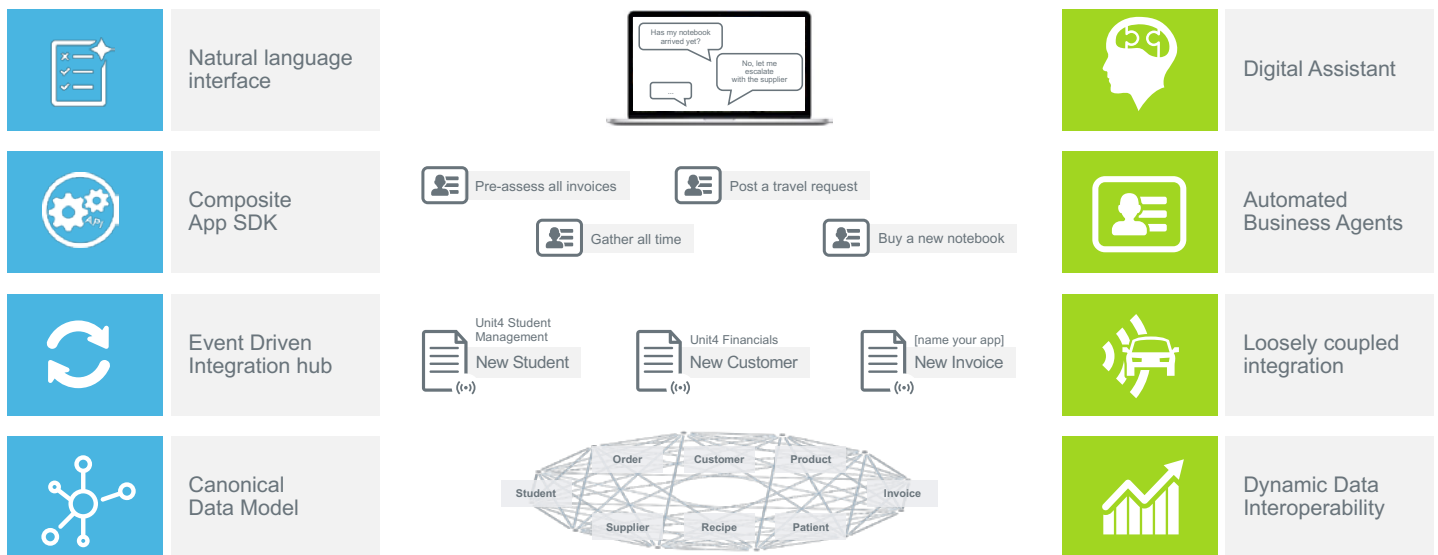


Source: Constellation Research

- **Better elasticity of compute resources.** Having to pay only for what is being consumed is a key feature of the public cloud. With uncertain computing demands from artificial intelligence (AI) and machine learning (ML) as well as integration and smart capabilities, the only effective way to operate a modern ERP system is in the public cloud.
- **Faster innovation cycles.** As sizing on-premises hardware is no longer part of the total cost of ownership (TCO) when running in the public cloud, innovation cycles accelerate. Because vendors are updating releases directly, on-premises resource and skill considerations that kept enterprises on older ERP versions are best practices of the past.
- **Better people experience.** People have a better user experience (UX) as consumers than as employees, and that difference is leading to an engagement gap between work and private life UX. Enterprises need to enable better people experiences by adopting the same platform that powers the consumer experience—and that’s the public cloud.
- **Higher resilience.** Enterprises need to operate 24x7 in today’s economy, and that means they need to adopt “always on, never down” architectures that provide resiliency to their operations through high-availability capabilities. The public cloud provides exactly that, and at a lower cost than on-premises capabilities.

Unit4 moved its platform to Microsoft Azure in 2016, allowing the vendor to offer new capabilities that enable a better people experience (see Figure 2). Specifically, these are the Unit4 Extension Kit, its conversational interface powered by the Unit4 assistant, Wanda; Unit4’s Smart Automation Services; and the implementation of the Azure Service Fabric Mesh, all coupled with an exclusive look at service industries.

Figure 2. The Unit4 People Platform



Source: Unit4

Market Trends

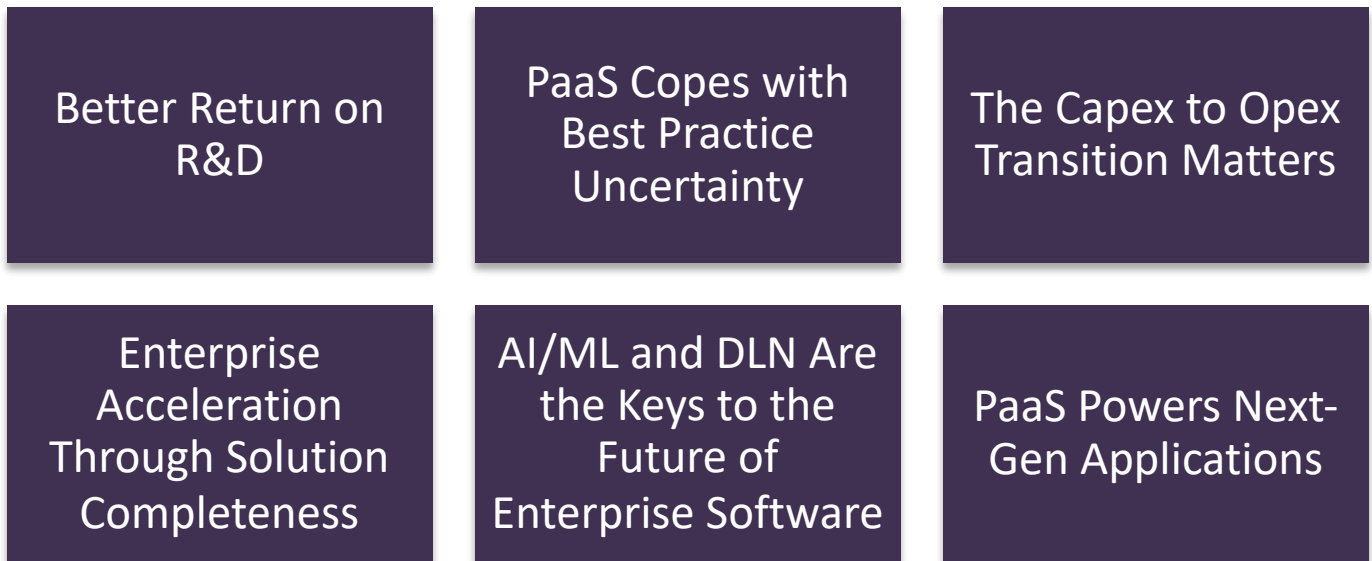
Six prominent market trends are driving enterprise software/software-as-a-service (SaaS) vendors to offer a platform-as-a-service (PaaS) option (see Figure 3):

Better Returns on R&D

ERP vendors, like all software and SaaS vendors, are under pressure to increase the returns of their R&D efforts. Individual developer productivity has already been maximized, and near- and offshore options largely have been fully exploited—so efforts are focused on increasing productivity both in-house and for customers.

PaaS platforms are the right strategy to boost overall developer productivity. Because SaaS vendors are able to create PaaS solutions that fit their domain space, they know their inherent application architecture and can increase their in-house developer productivity. When offered as products, the same PaaS platforms can help customers and partners to complete and complement existing SaaS

Figure 3. Six Market Trends Define the Need for a SaaS Vendor's PaaS



Source: Constellation Research

offerings. This proves very valuable when SaaS vendors are not able to offer complete wall-to-wall solutions but need partners and customers to fill in some functional gaps. Nonetheless, the SaaS vendor will be able to sell its SaaS products, receiving more revenue for the same R&D.

CxOs know that the enterprise software vendor with the better return on R&D will be the winner in their market and therefore the right partner for their enterprise. Availability and maturity of a PaaS offering is a leading indicator of how well a vendor is positioned for the return on their R&D.

PaaS Copes with Best Practice Uncertainty

For the first time in enterprise software history, technology enables new processes and best practices, exceeding their computational requirements. This creates a best practice void, which means enterprises don't know what the real best practices are. Enterprises need to experiment and try new best practices; effectively, this is a repeat of the mainframe era of the 1950s—the hardware was there, but the software had to be written. Enterprises that want to be disruptors and winners in digital transformation must be able to build software for experimental and disruptive purposes.

Naturally, an enterprise does not want to share its business best practice innovations that have market-disruption potential with any of their suppliers, particularly their enterprise software supplier—especially because the business model of software vendors is to build software once and then sell it to as many enterprises as possible. On the other side, enterprise software vendors cannot build for every experiment that one of their customers sees.

The solution to that dilemma is PaaS, as it allows enterprises to build additional capabilities they deem are important for their success (and they cannot get or do not want to get from their enterprise software supplier), and it allows software vendors to provide a platform for experimentation and creation of custom business processes.

The Capex and Opex Transition Matters

Software development is capital intensive and requires capital expenditure (capex) investment by vendors. The same is true for buying hardware and operating data centers. Because reliable public cloud computing infrastructure has been available the last few years, enterprise software vendors don't get a good return on their capital by running their own data centers. As Infor CEO Charles Phillips put it in 2014, "Friends don't let friends build data centers."²

On top of the pure capex, running and operating data centers is also a talent cost and personnel cost for enterprise software vendors. Talent and budget that could be allocated to software and product development is instead monitoring and upgrading servers. Similar to how enterprises would run their own power plants about 100 years ago and then gradually moved to public utilities, they will move to public cloud vendors for their computing needs. And enterprise software vendors will anticipate that trend by closing their data centers and moving to public cloud infrastructures.

Constellation estimates that an enterprise software vendor that moves to a public cloud-based opex model can invest between 15% and 20% more into their product. If compounded over a few years, this can result in a functional leadership by a public cloud-based vendor by 50% to 60% over a vendor that still operates its own data center(s).

This trend makes public cloud support a key factor for CxOs when selecting the right enterprise software products.

Enterprise Acceleration Through Solution Completeness

For way too long, enterprises have operated with incomplete and fragmented enterprise software. Workarounds, often manually operated, are still common in enterprises. In an era where labor costs are quickly rising and talent is getting more and more limited, the automation completeness of a solution, ideally spanning the whole enterprise, is crucial for success.

Experienced CxOs know that they cannot expect solution completeness from their enterprise software vendor(s). There is no guarantee this will change in a few quarters, with road maps not aligning with enterprises' automation needs and the current state of business best practice innovation and competition.

The solution to this challenge is a PaaS platform provided by the enterprise software vendor that gives enterprises the strategic option to strive for solution completeness, even if their enterprise software vendor does not provide it.

AI, ML and Deep Learning Networks Are Key to the Future of Enterprise Software

The future of enterprise automation is in ... automation. AI and ML give enterprises a new option to automate tasks with software.

The first area of innovation involves humanizing the interaction with enterprise software: Instead of typing on a QWERTY keyboard and using a mouse, users can use natural speech and touch to interact with software. This is a much more human-suited way to interact with software than the compromised input tools of the past. With humans effectively being autonomous 3D processors, the next revolution will involve understanding data in a 3D way, using augmented, mixed, and digital reality.

The even bigger impact is happening on the automation side. For the first time, the digital trail (and digital exhaust) of an enterprise can be used to automate processes—even without humans being

involved in the process. And these processes can continuously adopt, morph and reinvent themselves. The capability comes from deep learning networks (DLNs) that continuously look at the digital trail and automate processes autonomously when there's enough confidence that this is how they should be automated.

Both major trends—the humanization of software interaction and the rise of DLN—are powered by the public cloud. Vendors adapting to public cloud infrastructure and opting to automate these processes in an enterprise-friendly way in a PaaS platform will be the winners as enterprises and vendors transition to the public cloud.

PaaS Powers Next-Gen Applications

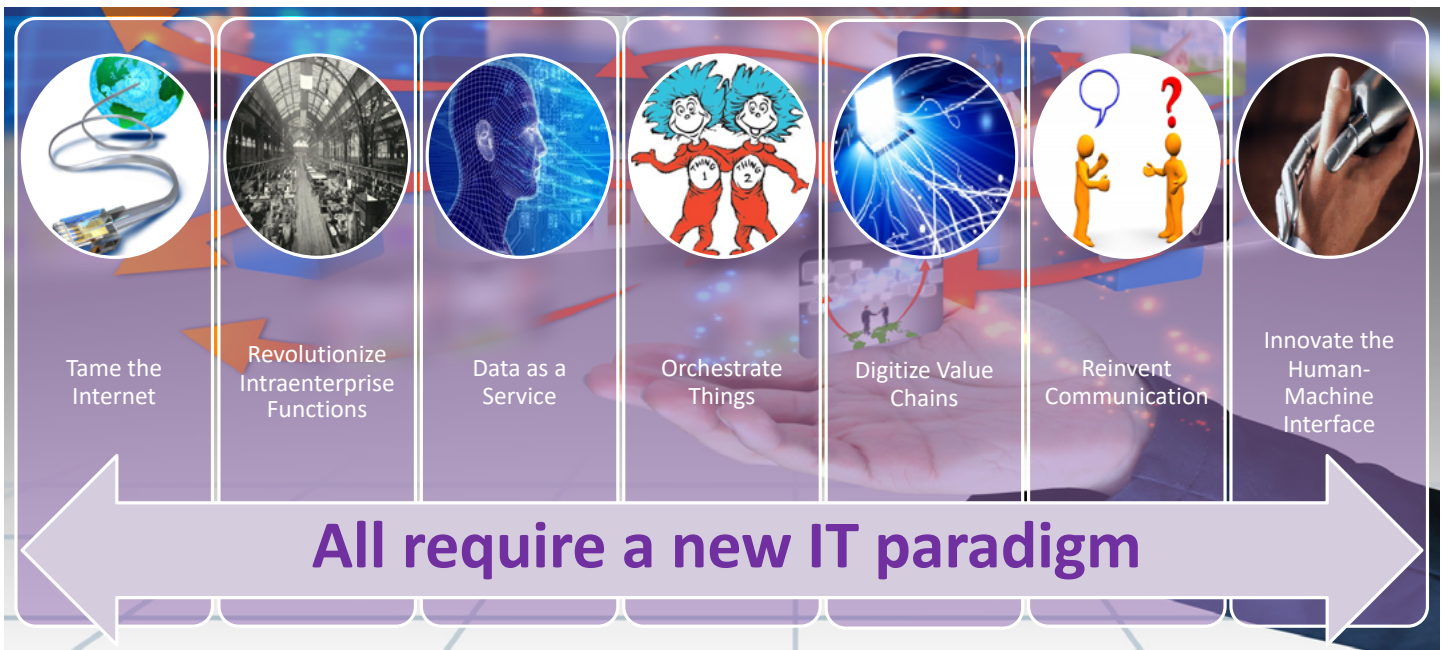
New technology capabilities create new automation needs and opportunities, and enterprises must leverage them in order to win markets or at least remain relevant. They cannot wait for enterprise software vendors to build these, due to the uncertainty over business best practices.

At the same time, it is clear that these next-generation applications (see Figure 4) have to be operated in connection and cooperation with traditional enterprise software applications—the systems of record. Therefore, it is crucial that enterprise software vendors offer their customers the opportunity to build these next-generation applications in combination with their existing needs, further fostering the need for a PaaS platform.

Market Segment

Unit4 operates in the ERP market, with a focus on services industries. ERP platforms are to somewhat extent generic—but from a certain point onward, they are specific to the nature of the ERP applications they operate. The stronger people focus of service industries compared with other industries leads to higher requirements for usability and integration needs.

Figure 4. The Seven Universal Next-Gen Apps Use Cases



Source: Constellation Research

ERP platforms have evolved over time from on-premises to the “cloud for people” phase (see Figure 5).

- **On-premises phase.** This phase is characterized by traditional on-premises computing: Compute is limited to the sizing done at the acquisition of hardware; IT is the driver and efficiency coupled with cost and control are the key drivers characterizing this phase. ERP is operated by IT or users that must go through substantial training.
- **Cloud for business phase.** This phase is characterized by lines of business breaking away from the IT-controlled, usually on-premises ERP solution. Usually lines of business make decisions of deployments for their respective function, creating functional silos. The main driver is the freedom from central IT that the cloud operation by the vendor offers. This gives lines of business more flexibility and freedom but often jeopardizes the holistic view of the enterprise. Training needs are substantially reduced in this phase, and the applications are usually business grade.

Figure 5. The Evolution of ERP Platforms



Constituent	IT	Line of Business	People
Leitmotif	Efficiency	Freedom	Engagement
Focus	Fit to Size	Fit to Budget	Fit to People
Key Drivers	Cost & Control	Flexibility & Freedom	Productivity & Experience
Technology	IT Grade/Training Needed	Business Grade/Some Training	Consumer Grade

Source: Constellation Research

- **Cloud for people phase.** This phase is characterized by a focus on people productivity, with the goal of fitting ERP to their automation needs and the ultimate goal of increasing the engagement of people. To match the consumer experience, ERP, in this phase, runs on the same public clouds and the same tooling as consumer applications.

Unit4 has steadily advanced its platform toward the “cloud for people” phase, starting with moving the platform to Microsoft Azure, the same platform used by Microsoft and numerous consumer- and gaming-focused software vendors. With the adoption of a microservices architecture, Unit4 is gaining critical capabilities that are needed to give service enterprises the required flexibility to create the solutions for their automation needs as well as the integration demands that they face. The move to microservices also enables a more modern way to extend and integrate business software with the Unit4 ERP application via the Unit4 Extension Kit. Moreover, microservices power the ability to build Smart Application Services, a key strategy to make ERP software more people friendly. Lastly, both Azure capabilities and the service mesh capabilities that power the Unit4 conversational UX assistant,

Wanda, a key enabler of a more people-friendly and intuitive way to operate an ERP application as well as a key enabler for a better people experience at work.

Target Markets

Unit4 is an ERP vendor that targets service industries, most prominently those in the professional services industry, the public sector, higher education and not-for-profit organizations. Unit4 has more than 3,000 customers, with most of them located and/or headquartered in Europe. Unit4 has extended its portfolio with the recent acquisitions of financial performance management vendor Prevero³ and, most recently, with the acquisition of talent management vendor Intuo. With more than 3,000 employees worldwide, Unit4 looks for customers across the globe but recently has focused on growth in the U.S. and Germany.

Unit4's focus on service industries sets the vendor apart from traditional manufacturing-centered ERP vendors. Because it was founded and has its headquarters in the Netherlands, the vendor has above-average organizational DNA when it comes to working internationally, making Unit4 uniquely suited for global services companies.

Recently, Unit4 has named people experience as an additional differentiator going forward. While usability has always been key for the success of ERP vendors, a dedicated and focused effort on the people experience side that not only focuses on usability but the complete work footprint of people in an ERP application is a compelling and differentiating strategy for Unit4. Given the more volatile nature of newer generations in the workforce, a shortage of skilled labor and the increasing demand for a purpose-driven culture, this is expected to be a winning strategy for Unit4.

Functional Capabilities

Smart Automation Services

At the core of the Unit4 vision of a more people-friendly ERP system is the creation of Smart Automation Services. Powered by the Unit4 People Platform, these Smart Automation Services tackle routine, repetitive and low-value work and automate them to improve the people experience.

The benefits of Smart Automation Services are tangible, specifically:

- **Higher consistency.** With the delegation of routine tasks from humans to software, enterprises can achieve a higher level of consistency for these tasks. Software does not make mistakes, does not get tired and does not take a vacation. Moreover, personal tendencies of humans are eliminated with consistent algorithms, ensuring routine tasks are handled the same way whenever they are requested.
- **More time for high-quality work.** By using smart services, people will be able to free up time that was dedicated to routine and tedious tasks. The freed-up time can be used for more diverse and higher qualitative work, resulting in higher workplace satisfaction and reduced people frustration (even burnout) from repetitive work.
- **Easier compliance.** Humans are individuals, and thus work differently. But individuality can be a problem for enterprise processes that require the same treatment of identical business situations. When legal frameworks regulate enterprise activity, the compliance achieved by services completed by software is even more important.
- **Better people experience.** When you take away routine, boring and tedious tasks, people in the workforce almost never complain. On the contrary, freed-up time can be used for more enriching, motivating and challenging work processes that help qualify people further, motivate them and thus generally lead to a higher level of engagement and job satisfaction.

Unit4 enables Smart Automation Services by tackling routine tasks or high-volume tasks in the ERP system. These are either not manageable by people due to volume and/or complexity or are regarded as too repetitive and monotonous. Two good examples are the following two Smart Automation Services.

- 1. Smart Resource Planning.** This new capability is for organizations with a high to very high volume of service orders. Scheduling these is time intensive and complex, as service-level agreements need to be met and incoming service requests need to be constantly reprioritized. Moreover, there is a margin consideration in service request scheduling that determines the alignment of the right services with the right customers. The benefits of Smart Resource Planning are that requests for services can be optimally handled, especially for volumes of service requests that are very high, and people involved in the scheduling process can free up their time for more qualitative, less transactional activities. The results are better business, higher customer satisfaction and a better people experience.
- 2. Smart Invoice Processing.** Processing invoices is another laborious and tedious task for enterprises. Customer and supplier numbers must be found, contracts must be checked, cost centers allocated, discounts validated, etc. Smart Invoice Processing not only automates these tasks in software but also distributes the invoices or payment approval across the organization. As a result, people involved in invoice processing can now focus on complex and exception cases as well as on tackling more complex tasks such as spending analysis and supplier relationship management. A better people experience is a positive by-product of using Smart Invoice Processing.

Finally, Smart Automation Services fundamentally change the way ERP is consumed in enterprises. People no longer have to log in to certain screens of an ERP application to get their work done; instead, but smart services handle these tasks automatically. The Smart Automation Services take care of the work and will notify people as needed, in case there are irregularities or exceptions. The result is a completely different user experience with ERP, one that morphs from the always user-driven software to an automation tool that automatically works, effectively fulfilling the long-term Unit4 vision of self-driving ERP.

The Unit4 Extension Kit

Unit4 released its Extension Kit in spring 2018,⁴ with the integration and extension needs of service-centric enterprises in mind. As of spring 2019, several Extension Kit capabilities have been shipped.

Specifically, these are:

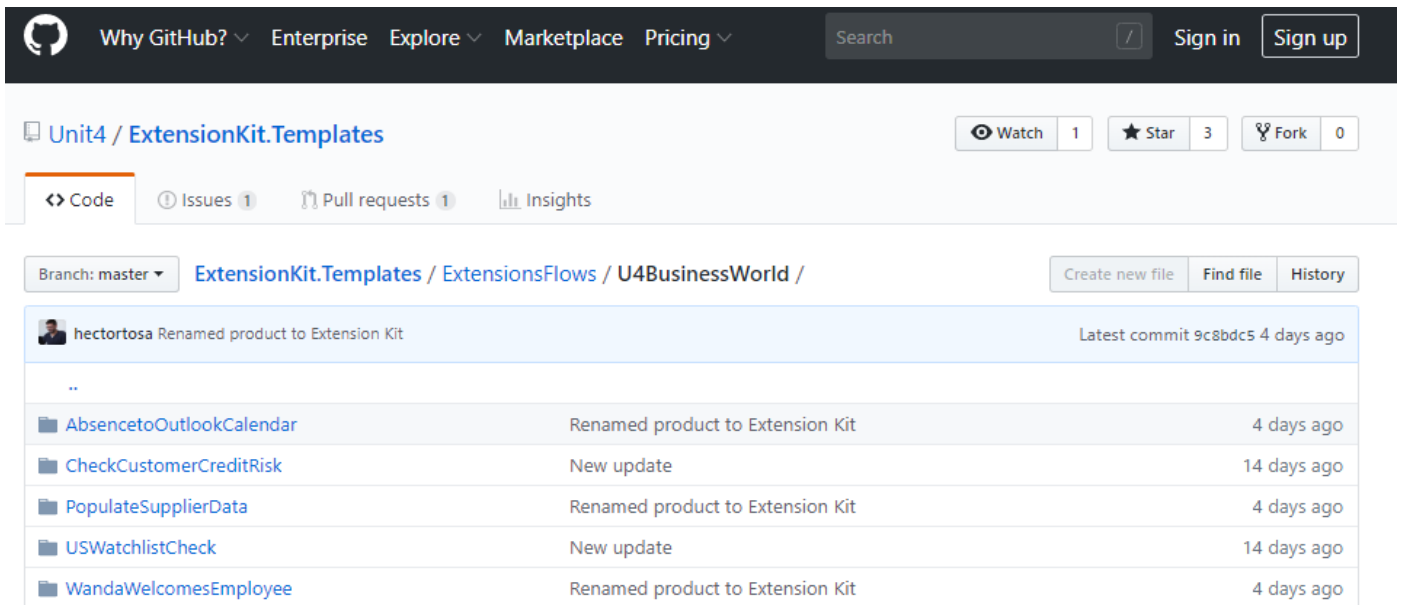
- Calendar event posting in Outlook when an absence is created in Unit4 Business World
- Automated reporting if a customer/donor registered in Business World is on the U.S. government's watchlist
- Reporting of customers' credit risk evaluation via Dun & Bradstreet
- Creating a service request in Business World using Google Forms
- Welcoming new employees using Unit4's Digital Assistant
- Populating information on suppliers in Business World using data from the Dutch Chamber of Commerce

With this set of services in the Unit4 Extension Kit, enterprises can integrate Business World easily with key information sources—for example, the U.S. government watchlist, the Dutch Chamber of Commerce Data or Dun & Bradstreet but also export information (e.g., posting calendar events to Microsoft Outlook) or import information (e.g., creating a service request from a Google Form inside of Business World).

As enterprises require more flexible ways of working, the Unit4 Extension Kit plays a key role in enabling the experimentation, evolution and execution of new best practices. The low-code nature of the Extension Kit services implementation makes it easier for Unit4 customers to quickly implement them. And the underlying microservices-based architecture of the Unit4 People Platform makes it easy to provide and support these integration services.

Another key benefit is the integration with third-party data providers. Traditionally, a one-interface-and-one-customer-at-a-time effort, the Extension Kit has changed the process into a reusable service that can be implemented from GitHub (see Figure 6 on page 17). Instead of the interfaces breaking for each customer, triggering troubleshooting, code changes and quality assurance efforts, Unit4 customers can now be alerted about a new version of the Unit4 Extension Kit Service and upgrade the code proactively and a single time. That is how integration challenges today should be managed (see Figure 7 on page 18).

Figure 6. Examples of Unit4 Extension Kit Services Templates



Source: GitHub

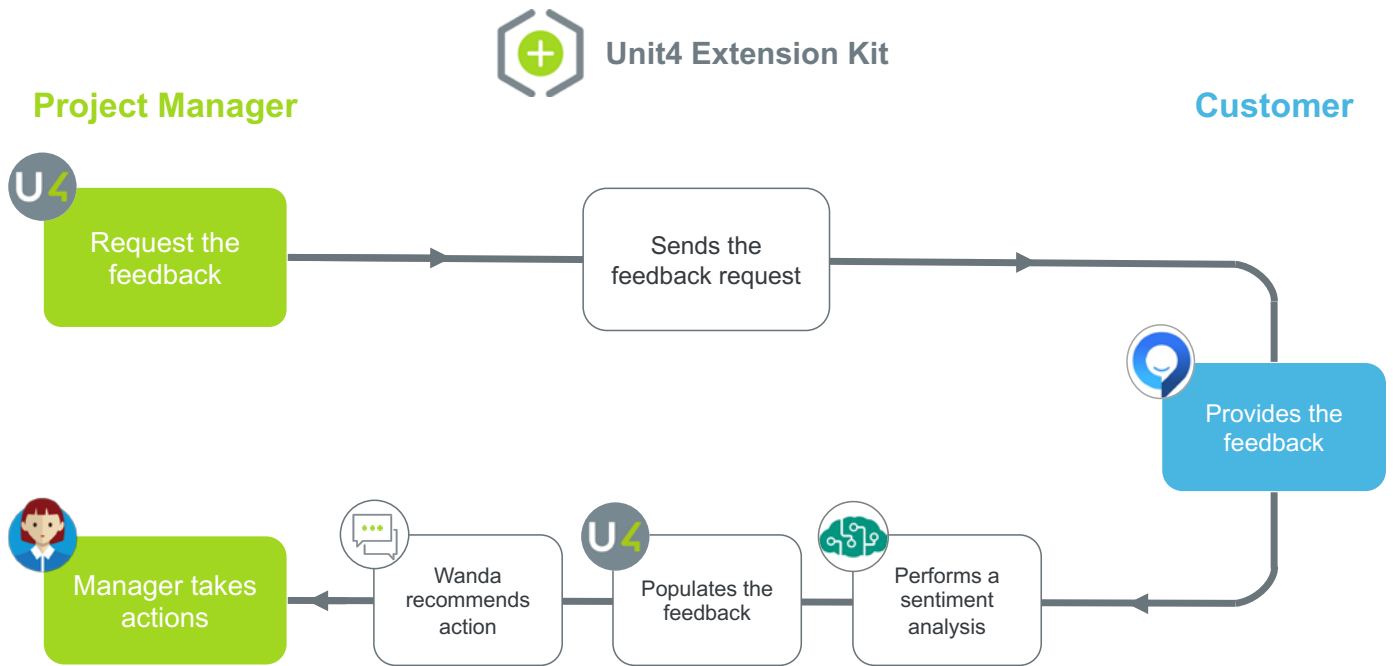
Conversational UX with Wanda

Wanda, originally announced in spring 2017,⁵ is Unit4's digital assistant. Unit4 has been the first ERP vendor of scale naming a digital assistant and shipping working conversational code in its ERP system.⁶ Since then, Unit4 has extended Wanda's capabilities, and the list of messaging clients from which Wanda can be communicated has grown (see Figure 7). As of May 2019, Wanda⁷ can operate in the following messaging clients/channels and offers conversational experiences for the following areas:

- **Messaging clients/channels (in alphabetical order):** Facebook Messenger, Microsoft Skype, Microsoft Teams and Slack.
- **Conversational experiences for (in alphabetical order):** Company policy, employment (HR), purchasing, time recording, travel and expenses and workflow approvals.

Wanda also has expanded its language support from English-only to also understanding Swedish, French, German, Norwegian and Spanish.

Figure 7. How the Unit4 Extension Kit Augments Unit4's Wanda

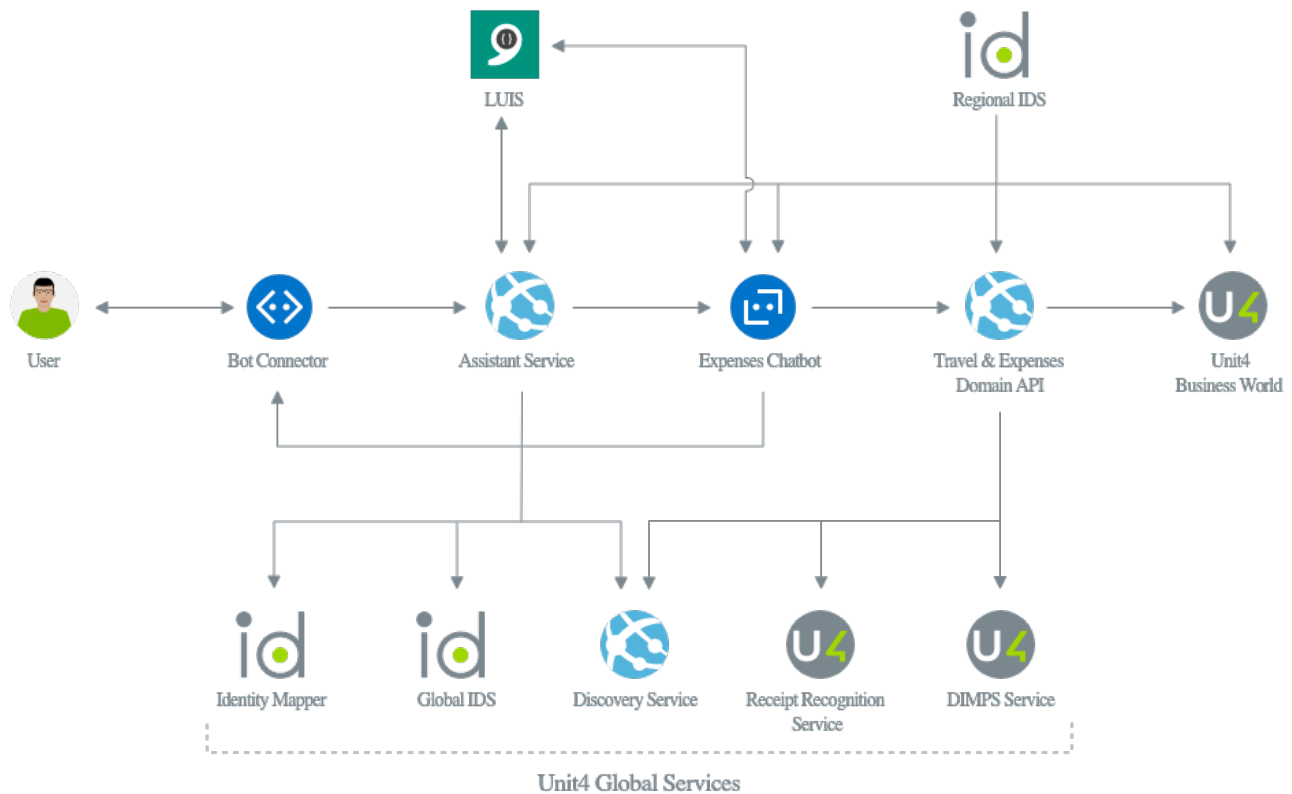


Source: Unit4

Conversational user experience is a key component of a modern ERP solution. People are used to operating their consumer applications with the help of voice and experiencing tremendous efficiency gains. Apart from being able to operate conversational experiences hands-free, a common scenario, people can speak faster than they can type on QWERTY keyboards. This makes information input faster and also more natural, as speech is the most human form of communication, practiced since the beginning of civilization.

The other key benefit of its digital assistants is on usability as conversations fundamentally (see Figure 8) change the usage of an ERP applications. Instead of logging in, navigating complex menus, understanding the interaction mechanism, finding information and then mastering the needed transactional capabilities, people can just speak.

Figure 8. The Unit4 Wanda Architecture



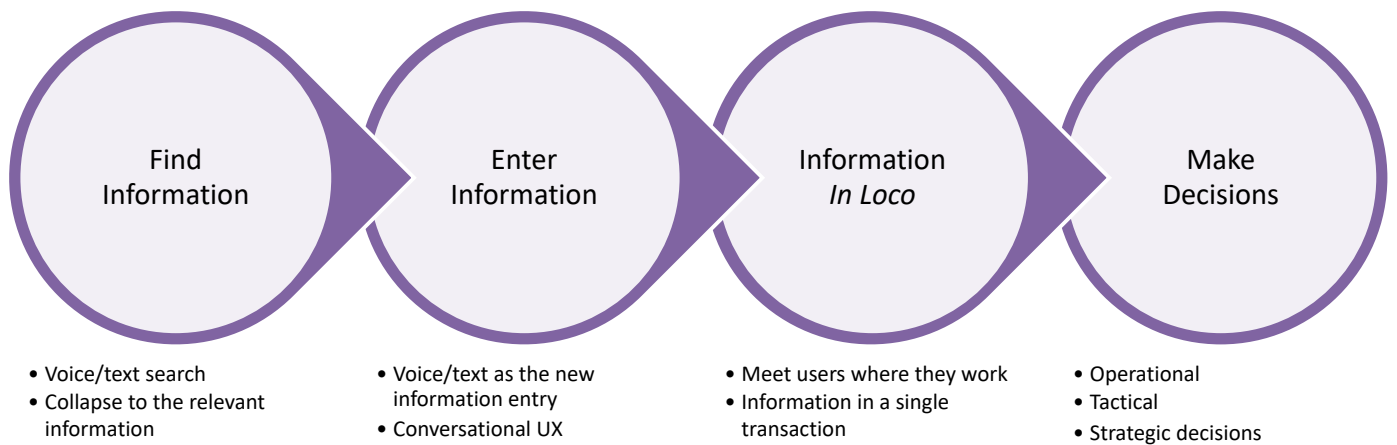
Source: Unit4

As a result, people have a better, more productive way to communicate with their ERP application (Figure 9)—in this case, via Unit 4’s Wanda. This leads to a better people experience for Unit4 users.

Microservices Architecture, Soon on Azure Service Fabric Mesh

Service industries face intensive competitive pressure, and to react efficiently, they require nimble, lightweight enterprise processes. Enterprises in service industries must be able to react faster with service offerings than are product industries because the speed of offering innovation is substantially faster. In service industries, the R&D process for a new service offering boils down to talent availability and potentially needed training before the service can be monetized. Contrast that with product industries, where a true R&D effort needs to be undertaken, testing and often approvals are required, suppliers must be located and negotiated with, manufacturing locations picked, logistics lines established, plants built—until an enterprise in a product industry hits the talent and training issues for

Figure 9. How Assistants Revolutionize Enterprise Software



Source: Constellation Research

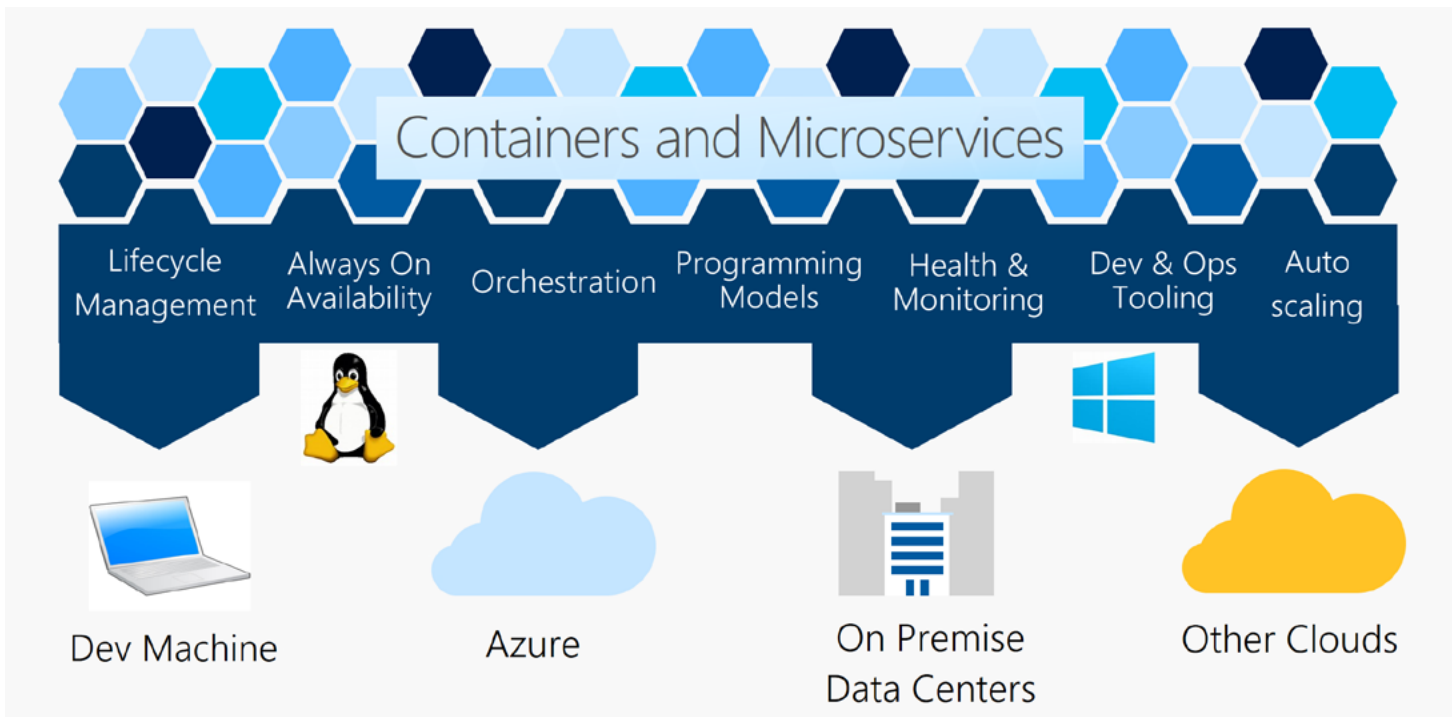
manufacturing, go-to-market plans and services. When an enterprise in the service industry doesn't have speed, it ultimately is "travolged."⁸

Traditionally, ERP architectures have been built with the opposite design point in mind—as extremely large, heavy platforms and processes. They were all about coping with the peak demands on ERP (such as financial close or payroll) and would sit idle the rest of time, with average and much lower utilization.

With the rise of microservices, more recently in conjunction with serverless computing, platform processes can be geared toward the more nimble and lightweight designs that service industries require. Unit4 has been a pioneer in this process, starting the transition to microservices in 2015.

On the platform side, Microsoft was one of the first infrastructure-as-a-service (IaaS) vendors to establish a service mesh (see Figure 10)—effectively, a serverless infrastructure component to build modern platforms and next-generation applications. This shows great foresight from Microsoft because it established a serverless infrastructure for Azure. Not surprisingly, Unit4 is now adapting and starting to use the Azure Service Mesh.

Figure 10. The Microsoft Azure Service Fabric



Source: Microsoft

Microservices power key capabilities of the People Platform today, most prominently:

- Smart Automation Services
- Extension Kit
- Wanda

The underlying microservices architecture allows for these capabilities to be very lean in terms of resource consumption, making them affordable while being powerful and creating a dynamic user experience that leads to a better people experience.

Most importantly, the microservices architecture allows automation across the Unit4 business functionality. This makes capabilities that span traditional functional silos of ERP applications easy to create, which is paramount for services companies to be able to respond and innovate in a lean, agile and rapid way.

For example, a conversational user experience with Wanda cannot be constrained to a single functional area (for instance, finance) but needs to support the business-driven conversation by the user. This can be achieved only at the speed of human conversation with the power of a microservices architecture, which has the elasticity to launch small-footprint microservices with high performance and low cost of operation.

People Experience

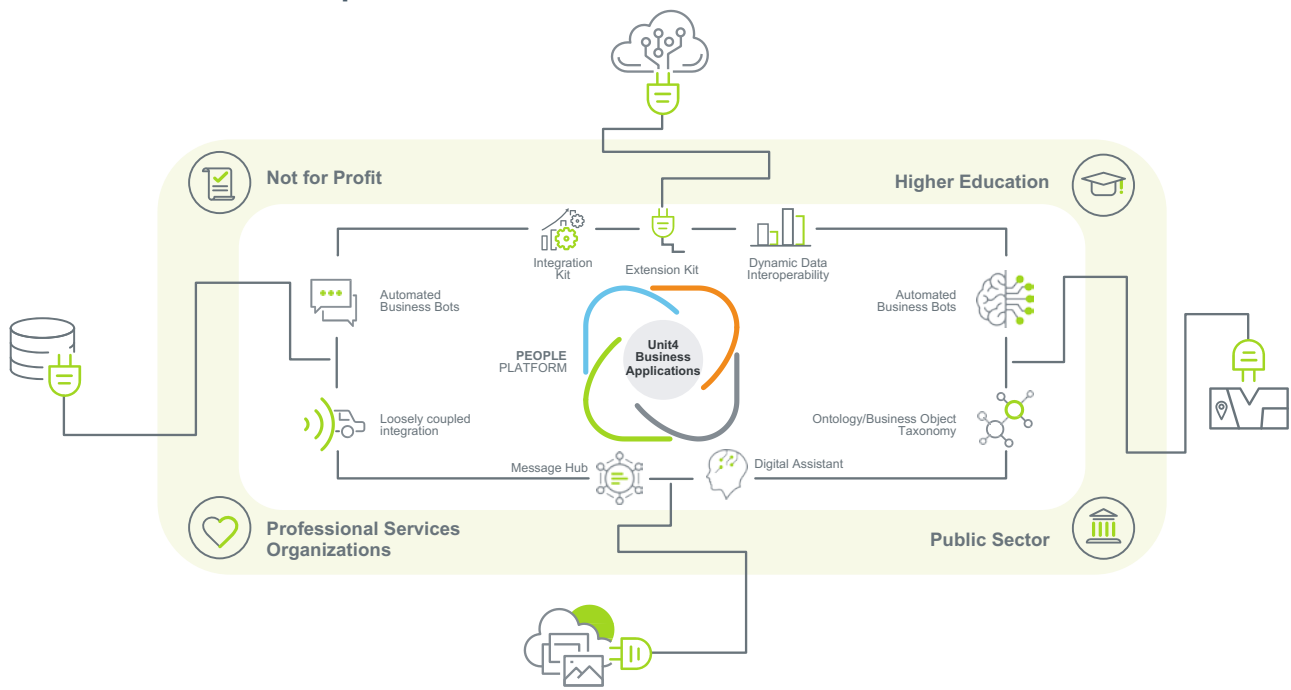
For a long time, usability and, with that, the user experience of ERP systems have been cumbersome. As ERP systems have been traditional systems of record, the record creation, record keeping and analysis have been more important than the usability of the overall process. Today, many ERP systems still make their users suffer from that legacy because it is hard to overcome the underlying concepts of ERP design and architecture. Effectively, only platform and functionality innovation can address the usability challenge that ERP users face.

Unit4 has addressed that challenge with platform innovation, via the Unit4 People Platform on the technology side. More importantly, Unit4 is also addressing people productivity with a more holistic approach than user experience—that is, with people experience. Traditionally, user experience has been narrowed down to the experience of a user of a system. Given the layered and multisystem nature of ERP, and the addition of often acquired systems thrown into the mix, the ERP user experience has been fragmented and incongruent at best. Unit4 is aiming at a consistent and holistic user experience across the company's solutions, focused on people productivity. That means, for instance, that integration to other key people applications (Microsoft Office, for example) needs to be enabled because users spend time in ERP and document applications.

Specifically, here are some examples (see Figure 11) of how the Unit4 People Platform enhances and enables the people experience.

- **Loosely coupled integration.** To enable “mesh-ups” of business capabilities at the speed that service industries need, Unit4's People Platform allows for loosely coupled integration via REST-based APIs. This allows the automation of business needs on a faster and more agile basis, ultimately enabling a better people experience.

Figure 11. The Unit4 People Platform



Source: Unit4

- **Dynamic data interoperability.** Being able to exchange and interoperate on data without having to move it across systems is a key factor for faster and better insights. Instead of having to wait for IT resources to move and prep data, Unit4 users can bring the data together when they need to answer their business questions.
- **Ontology business object taxonomy.** What sounds like a boring technology topic is the enabler for Unit4 users to achieve a better people experience. People in service industries must combine capabilities in a dynamic way, and a common taxonomy of business objects is needed so that their systems can speak to each other.
- **Message hub.** Modern architectures scale through messages and achieve their agility through a low-latency but asynchronous messaging architecture. Being able to integrate and communicate via a messaging hub makes applications and integration using the Unit4 People Platform easier to integrate. The benefit is that users of the Unit4 applications have to spend less (if not no) time for integration of their service applications.

Partnerships and Alliances

Unit4 has many partners and strategic alliances, but the following ones are the most prominent ones for the Unit4 People Platform:

- **Microsoft.** As Unit4's platform partner, the vendors partner closely. Across the board, Unit4 is leveraging Microsoft technology, starting with Azure, Microsoft Power BI and development tools. Unit4 has also brought its PSA Suite to the Microsoft Dynamics platform, allowing a tighter integration between customer relationship management and professional services automation processes.
- **Capgemini.** The relationship between Unit4 and Capgemini is unique in that it is not only the traditional system integrator partnership, but Capgemini is also using Unit4 to enable business-process-as-a-service processes to run business process outsourcing with Unit4. This partnership would not be possible without the modern Unit4 People Platform.

ANALYSIS AND OBSERVATIONS

Unit4 People Platform SWOT

The Unit4 People Platform is an innovative ERP platform. Like all software products, it has its strengths, weaknesses, opportunities and threats (see Figure 12 on page 28).

Strengths

- **Innovative platform.** Unit4 has one of the most innovative ERP platforms in the market. Built on microservices and utilizing a service mesh, pluggable extensions and conversational assistant capabilities all powered in the public cloud are not available in toto from any ERP competitor. Unit4 needs to do more to position and promote this because the innovation light cannot shine on the platform forever.

- **Using Azure at its best.** When vendors build on a public cloud platform, they need to use it as its fullest. And Unit4 is doing this—for instance, with the uptake of the Azure Services Mesh and some of the conversational assistant capabilities.
- **Microservices architecture.** ERP applications can no longer be monoliths; instead, they must be broken down into smaller pieces of automation that often allow even parallel and similar automation. Unit4 is well positioned to deliver this based on its microservices architecture and its rewrite for these services.
- **Wanda, its conversational assistant.** With Wanda, Unit4 is the first ERP vendor to name an assistant and the first to put conversational UX into production. Because conversational UX is a more natural and productive way to interact with ERP software, Wanda is a cornerstone for Unit4's people experience.

Weaknesses

- **You can have the cloud, but it is from Microsoft.** While using Microsoft Azure is a strength, the dependence on a single public cloud platform may be too restrictive from commercial and overall capability perspectives. But Unit4 has engineered its People Platform to be all-in with Azure and will have to invest substantially to move to any other public cloud services provider.
- **Azure is a good choice for AI but not the best.** Azure is a very good choice for a public cloud provider, and Microsoft is continuing to invest in Azure capabilities as well as in data center capacity from both a location and a compute volume capacity. The only area where Microsoft falls behind its competition is in AI/ML, where Microsoft has not unveiled any algorithm-on-silicon capabilities. Consequently, Unit4 is extending AI/ML capabilities on its own, using .NET ML.
- **Complex upgrades for customers.** It's not easy for the Unit4 customers to move from older on-premises architecture and platforms to the new People Platform. This is the

price to pay for a truly innovative platform, and there is no way around this issue, but it remains an upgrade deterrent for the Unit4 installed base.

- **Slow platform evolution speed.** All key platform announcements are from three to four years ago. And while Unit4 has delivered on all its platform announcements, it would be good to see it innovate faster in platforms. Support of voice input, better low-code/no-code capabilities, the enablement of DLNs and big data capabilities are all key technology platform innovations for ERP—and Unit4 has been quiet so far on all of these.

Opportunities

- **Move to speech input for Wanda.** Enabling speech input for Wanda is an easy innovation step for the Unit4 People Platform, and Unit4 should make that step sooner rather than later. It would be a key enabler for its people experience strategy.
- **Standardize on Microsoft Power BI.** Microsoft has put a lot of work into its Power BI offering, with interesting OEM offerings for independent software vendors (ISVs) like Unit4. Unit4 should standardize on Power BI and save the capex of an internal BI platform development and reinvest it into its generic platform capabilities.
- **Deeper integration with Office.** Microsoft Office is pervasive on people's desktops in the enterprise. Next to ERP applications, much time is spent in Office, and a better integration between Unit4's product and platform will improve the people experience, which is on Unit4's road map.
- **Microsoft's mixed reality (MR).** Although the track record of Microsoft's HoloLens is mixed, Microsoft has not given up on the platform and just shipped HoloLens 2. The prize in the enterprise for MR is to use the human ability to process 3D in very efficient ways. The first ERP vendor that manages to show business data and its evolutionary dynamics in MR will do very well in the market—and, most importantly, will dramatically change the people experience with data in general and ERP specifically.

Threats

- **Microsoft is pushing apps.** The relationship between Unit4 and Microsoft is “coopetition”—that is, characterized by cooperation on the IaaS and PaaS side and competition on the SaaS side. A Microsoft offensive on the apps space, particularly with its strong presence in the Nordic market with Navision, is a potential threat for Unit4.
- **Azure stability.** While moving to public cloud infrastructure is the right strategy, operational issues above the average of the competition have plagued Azure. Business continuity is paramount, and while Microsoft is addressing the challenges (usually DNS/network based), they are a threat for Unit4 customers.
- **“Me too” for competition.** While Unit4 deserves a lot of credit for its people experience positioning, this can be copied by competitors. Unit4 will do well when competing with other ERP vendors, thanks to its early start, but is at a disadvantage compared with other vendors that capture even more time of people at work, specifically productivity suite vendors (for instance, Microsoft Office and Google G Suite) and operating vendors (such as Apple iOS/macOS, Google Android and Chrome OS, Microsoft Windows).
- **Weak marketing.** Unit4 suffers from a challenge faced by many European enterprise software vendors, which tend to build great products and then do not market them aggressively. For example, Unit4 has had one of the most modern, if not the most modern, ERP platform with the People Platform for more than three years. But outside of the existing Unit4 customer base, it’s one of the industry’s best-kept secrets.

Figure 12. Unit4 People Platform SWOT



Source: Constellation Research

Competitive Positioning of Unit4

Unit4 is well positioned as an ERP player; specifically, we see the following competitive situation (see Figure 13 on page 30):

Strengths

- **Deep vertical capabilities.** While most of Unit4's ERP competition is struggling to move to a cloud platform and convince its installed base to upgrade, these competitors have not tackled vertical capabilities. Unit4's deep experience in the public sector, higher education, professional services and not-for-profit industries allows the company to take market share in these verticals while the competition is busy rebuilding and replatforming.

- **Modern ERP platform.** Unit4 was very early to exploit the Azure platform with the Azure Service Mesh and has built a compelling vision with the direction of self-driving applications and the focus on a superior people experience. One testament to this innovation is that Unit4 has beaten its platform partner Microsoft in terms of application uptake of Azure.
- **European roots.** If the history of ERP applications is any guide for the future, European DNA provides an advantage over other backgrounds (mainly North American ones). European vendors understand and master the “multis” (multilanguage, multicurrency, etc.) faster than the North American vendors, which can build for the large U.S. market for a longer time. A typically higher commitment to quality and the understanding of business processes helps European vendors when they expand beyond the continent.

Weaknesses

- **Competition is strengthening.** Unit4 has seen a competitively “quiet” period with both horizontal and more vertically focused ERP players that are busy rebuilding and replatforming products. The future will not remain as quiet going forward and will require greater efforts by Unit4 on the go-to-market, services and R&D sides.
- **Product innovation speed.** Because Unit4 was very early in the market with a public cloud platform, the company has a substantial lead over the competition. But the competition is catching up and is mostly showing a relatively greater innovation speed than Unit4. Unit4 will have to find allies to accelerate its R&D efforts soon.
- **Reduce reliance on Unit4 services.** Unit4 still handles a large part of its product implementation in-house. And while a certain strategic implementation group is crucial to create early customer adoption success, a large implementation workforce is a cost factor compared with more software-focused competitors. Moreover, leaving the implementation business to partners makes them more likely to bring in Unit4 in software selections.

Figure 13. Competitive Positioning of Unit4

STRENGTHS	WEAKNESSES
<ul style="list-style-type: none">• Deep vertical capabilities• Modern ERP platform• European roots	<ul style="list-style-type: none">• Competition is strengthening• Product innovation speed• Reliance on Unit4 professional services

Source: Constellation Research

Competitive Positioning of Unit4 People Platform

We see the following strengths and weaknesses for the Unit4 People Platform (see Figure 14 on page 31).

Strengths

- **Deep leverage of Microsoft Azure.** When ISVs choose to depend on a platform product, they had better use it at its fullest. And that's what Unit4 is doing with Azure for the People Platform. Unit4 needs to keep following that course and, for example, evaluate the update of the Microsoft Power BI Suite, the Microsoft Flow end-user programming capabilities, etc.
- **Leadership with conversational UX.** Unit4 was the first ERP player to name an assistant, Wanda, and to ship real-world conversational use cases in a product. Voice is the new UX because humans interact more naturally with speech and are faster at entering information by speech than via QWERTY keyboards.
- **Focus on microservices.** Unit4 was very early across all ERP players to focus on microservices. It now benefits from that early start by being able to peel off microservices from the common, traditional monolithic architecture. These lightweight and scalable microservices are key to powering Unit4 platform offerings, such as the Extension Kit and Smart Automation Services.

Weaknesses

- **No multicloud support.** While the reliance on a single public cloud partner helps R&D speed, it is also a substantial commitment to a single platform. This raises potential commercial, availability and competitive concerns. This is likely not going to be a factor for Unit4 but is still an area that customers and Unit4 need to watch closely.
- **No PaaS/low-code/no-code offering.** Enterprises must operate in the era in which business best practices are unclear because, for the first time in the history of enterprise software, technology innovation has surpassed the computing demands of business best practices. Enterprises must experiment and be able to build what they think is key to extend and complement their SaaS packages. Unit4's competition has PaaS and/or low-code/no-code capabilities, and the vendor must formulate its own strategy.
- **No marketplace.** The era of lengthy ERP requests for proposals, software selection and demo cycles are turning out to be over for good. Enterprises must be able to try, evaluate and buy complementary software offerings from other vendors that enhance the value of an Unit4 installation. Unit4 needs to evaluate the creation of a marketplace to enable these new enterprise software adoption and consumption practices.

Figure 14. Competitive Positioning of Unit4 People Platform

STRENGTHS	WEAKNESSES
<ul style="list-style-type: none">• Deep leverage of Microsoft Azure• Leadership in conversational UX• Focus on microservices	<ul style="list-style-type: none">• No multicloud support• No PaaS/low-code/no-code offering• No marketplace

Source: Constellation Research

Key Differentiators

With the delivery of the People Platform, Unit4 has achieved a number of key differentiators in the competitive ERP market:

- **Early public cloud commitment.** The cloud is the platform on which to operate ERP, one of most elastic enterprise applications out there. ERP platforms had to be sized for the traditional three peaks of ERP software: financial close, payroll runs and manufacturing resource planning runs. Today, the peaks are based on usage, analytics, ML and AI. With its elasticity, the public cloud provides a technically and commercially viable platform.
- **Agility for service enterprises.** Service enterprises need very agile enterprise software to quickly respond and out-innovate the competition on services. That agility can only be enabled efficiently with a modern platform, one that allows the easy integration and superior automation of tasks. And Unit4 does this with Unit4 Extension Kit and Unit4 Smart Services Automation.
- **People orientation.** With no production of material goods, service industries' biggest assets and expenses are people. The focus on better serving them and making them more productive and more successful at what they do is true north for any enterprise software vendor. Unit4 has taken a step further, though, making people experience a cornerstone to its architecture, focusing on the creation of engaging and efficient user experiences.

USE CASES

Unit4 offers horizontal capabilities for the following use cases that are powered by the Unit4 People Platform:

- **Cloud ERP.** With Unit4 Business World, Unit4 offers a people-centered cloud ERP solution that covers finance, HR and performance management. Powered by the People

Platform, Unit4 Business World is a modern, cloud-based ERP product. Key references are Global Green Growth Institute, Magnox and Port Coquitlam.

- **Financial management.** Unit4 Financial Management is a global financial management and accounting solution that runs on the People Platform. Additional capabilities are found in procurement, billing and asset management. Built on a single ledger, Unit4 Financial Management is strong on the “multis” (multilanguage, multicurrency, etc.) and interoperable with third-party systems. Key references are ALTEN, CGIAR and LGSS.
- **Corporate performance management.** The acquisition of Prevero in 2016 made Unit4 an instant player in corporate performance management. The combination of platform flexibility and usability in the Prevero product makes it a powerful solution to help CFOs and their teams know where an enterprise stands and get where it needs to be. Key references are GoCompare, Port Moody and Villeroy & Boch.
- **Talent management.** With the March 2019 acquisition of Intuo, Unit4 has extended its reach in human capital management.⁹ Next to traditional HCM capabilities, Unit4 has gained important talent management abilities, specifically in the areas of engagement management, performance management, learning and people analytics. Key references are BMW, Brussels Airport and USG People.

Additionally, Unit4 has a strong vertical focus on the following industries, in which it automates all the relevant financial, people and operational processes:

- **Professional services.** Unit4 has a long tradition and proven track record in the professional services industry. This has resulted in targeted subvertical capabilities. Specifically, Unit4 has functionality for the following professional services subverticals in its PSA Suite:
 - **Accountancy.** With support for the additional regulatory pressure in this industry, Unit4 delivers complete customer life cycle support from the first contact all the way to billing. Key references are MTH Advisors, BDO and Witlox van den Boomen.

- **Consultancy.** Unit4 delivers key vertical capability such as time entry for consultants, skill management for HR departments, revenue recognition and project accounting for finance departments. Key references are ALTEN, KPN Consulting and thecrmbusiness.

- **Architecture.** Architect firms struggle with project integration with third-party systems, and Unit4 provides integration to the relevant CAD systems. Effective project accounting, better time entry and review of actual efforts as well as talent management round out the offering. Key references are Santiago Calatrava, Snetselaar and wsp.

- **Engineering.** Dynamic markets are a key challenge for engineering bureaus that have to efficiently allocate costs and talent to the right projects. Revenue recognition for finance and effective project creation and management tools are key capabilities. Key references are ALTEN, Ingerop and Santiago Calatrava.

- **IT services.** Few industries are in more turmoil than IT services because infrastructure and applications have moved to the cloud. Unit4 provides a better overview on projects for management, better ways to manage revenue recognition for finance departments, efficient ways to manage projects for project managers and easier time entry for IT workers. Key references are KPN Consulting, Parature and thecrmbusiness.

- **Public services.** With a focus on security, Unit4 has built up holistic support for public services. Key capabilities for financial management include knowing and tracking budgets and fulfilling regulatory reporting requirements. More effective resource management through project management capabilities is a key benefit as well. Support of increased mobile needs in the public sector are addressed with a mobile application. Key references are Bergen Stad, Stockholms Stad and Whistler.

- **Higher education.** Unit4 provides key student management capabilities for higher education institutions with a dedicated student information system as well as capabilities for research management for research staff. Coupled with vertical

capabilities added to Prevero, Unit4 has a competitive higher education solution. Key references are Cranfield University, ESS, Excelsior College, Manchester Metropolitan, Relay/GSE and Stadio Multiversity.

- **Not-for-profit.** People are at the center of not-for-profit organizations, which often operate globally but with very little if no local support staff. Unit4 offers Unit4 Business World as Cloud ERP and specifically for nonprofit analysis capabilities via Prevero. Key references are CGIAR, Global Green Growth Institute, Heifer International, International Potato Center, Places for People and Save the Children.

PRICING

Unit4's pricing works around three key dimensions:

- **User number.** A common metric for enterprise software, customers pay per user accessing the system.
- **User type.** As different users use different functionality and consume different IT resources, user-type pricing is a common best practice.
- **Engines.** To capture value created by automation, many enterprises software vendors use engine-based pricing.

As with all pricing, CxOs negotiating with Unit4 should make sure they are aware of the current and future metrics determining pricing. CxOs are well advised to project future demand and needs and include them in the negotiation process.

Recently, Unit4 has been reviewing its pricing to get more in line with the business value created by the company's products. That is a fair approach but typically involves more negotiation than the "hard" metrics used so far. CxOs need to prepare for negotiation. Ultimately, value-based pricing, when negotiated fairly for both sides, is the better approach for enterprise software customers and vendors.

RECOMMENDATIONS

CxOs should consider the following recommendations when deciding which ERP platform they should use to extend their investment or to build custom applications:

- **Enable enterprise acceleration.**¹⁰ Enterprises have to move faster than ever before. An enterprise software selection must help an enterprise to accelerate—that is, become more agile, efficient and nimble for both external and internal processes.
- **People productivity is key.** Economies are facing a skilled labor shortage, and retaining talent is key. For an enterprise to succeed, it must get more out of its people as costs go up. When an enterprise software vendor has a people focus, it is likely to generate more win/win relationships.
- **Cloud is almost always a must.** The future is uncertain, and IT resources cannot be sized to the future automation needs of an enterprise. The elasticity of IT resources and commercial terms is key for enterprises to make sure they have the right enterprise software product and platform going forward.
- **Modern architecture propels solution longevity.** A modern underlying architecture gives enterprises the option to run enterprise software longer because it has a longer life span. And as enterprise software implementations take time and resources, operating on an appropriate enterprise software application and platform means lower costs as well as time and resources left over for other strategic priorities.
- **Functional fit.** Enterprise software needs to fit to an enterprise's automation needs. It's important that during the selection process, CxOs not only look in the rearview mirror for best practices but also project the demand for automation in the following foreseeable years. Nothing is more expensive than selecting enterprise software that is not a functional fit ... tomorrow.

- **Cultural fit.** Enterprise software is riddled with potential and likely challenges. Commercial and legal negotiations can only get an enterprise to point X; to get further, there needs to be a cultural fit and personal relationships between an enterprise and its enterprise software vendors. CxOs must make sure that its vendor is compatible or, better yet, a great match.

ENDNOTES

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- ¹ For more on infinite computing and how it triggers business best practice uncertainty, see this Research Report: Holger Mueller, “The Era of Infinite Computing Triggers Next-Generation Applications,” June 1, 2018. <https://www.constellationr.com/research/era-infinite-computing-triggers-next-generation-applications>
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- ² For more on the statement at an AWS event in 2014, see: Holger Mueller, “Event Report – AWS Summit in SFO,” March 26, 2014. <https://www.constellationr.com/blog-news/event-report-aws-summit-sfo-aws-keeps-doing-what-it-has-been-working-8-years>
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- ³ For more on the Prevero acquisition, see: Holger Mueller, “Unit4 Acquires Prevero – Analysis,” July 11, 2016. <https://www.constellationr.com/blog-news/unit4-acquires-prevero-analysis>
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- ⁴ For the press release from 2018, see: “Unit4 Releases People Platform Extension Kit,” May 14, 2018. <https://www.unit4.com/about/news/2018/05/unit4-releases-people-platform-extension-kit-ability-to-extend-powerful-enterprise-erp-with-custom-apps-in-any-industry-standard-marketplace>
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- ⁵ For the press release from 2017, see: “Unit4 Releases Wanda Bot,” May 2, 2017. <https://www.unit4.com/about/news/2017/05/unit4-releases-wanda-bot-the-first-true-self-driving-erp-user-experience>
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- ⁶ Unit4 beat Infor’s Coleman by a few months for first place. Coleman was announced in July 2017 and went GA in September 2018. See: “Infor Delivers Coleman AI Digital Assistant,” September 25, 2018. <https://www.infor.com/news/infor-coleman-digital-assistant-inforum-2018>
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- ⁷ For more analysis at the time of Wanda’s release, see: Holger Mueller, “Unit4 Releases Wanda Bot,” May 4, 2017. <https://www.constellationr.com/blog-news/unit4-releases-wanda-bot>
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- ⁸ This is the author’s signature verb, anglicized from the Italian “travolgere,” as the English language does not have a corresponding word. It means the active/passive change of something at a pace faster than organic, but slower than disruptive.
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- ⁹ For more on recent HCM trends, see: Holger Mueller, “Eight Trends Affecting HCM in 2018,” September 11, 2018. <https://www.constellationr.com/research/eight-trends-affecting-hcm-2018>
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- ¹⁰ For more on enterprise acceleration, see: Holger Mueller, “Why People Leaders Must Embrace Enterprise Acceleration,” July 3, 2018. <https://www.constellationr.com/research/why-people-leaders-must-embrace-enterprise-acceleration>

ANALYST BIO

Holger Mueller

Vice President and Principal Analyst

Holger Mueller is vice president and principal analyst at Constellation Research, providing guidance for the fundamental enablers of the cloud, IaaS, PaaS, with forays up the tech stack into big data, analytics and SaaS. Holger provides strategy and counsel to key clients, including chief information officers (CIO), chief technology officers (CTO), chief product officers (CPO), investment analysts, venture capitalists, sell-side firms and technology buyers.

Prior to joining Constellation Research, Holger was VP of products for *NorthgateArinso*, a KKR company. He led the transformation of products to the cloud and laid the foundation for new business-process-as-a-service (BPaaS) capabilities. Previously, he was the chief application architect with *SAP* and was also VP of products for *FICO*. Before that, he worked for *Oracle* in various management functions—both on the application development (CRM, Fusion) and business development sides. Holger started his career with *Kiefer & Veitinger*, which he helped grow from a startup to Europe's largest CRM vendor from 1995 onwards. Holger has a Diplom Kaufmann from University of Mannheim, with a focus on Information Science, Marketing, International Management and Chemical Technology. As a native European, Mueller speaks six languages.

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