



Evolving the Collaborative Enterprise

How to Achieve Modernity and Security in the Digital Workspace Using Collaborative Systems

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About this paper

A Pathfinder paper navigates decision-makers through the issues surrounding a specific technology or business case, explores the business value of adoption, and recommends the range of considerations and concrete next steps in the decision-making process.

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Executive Summary

As the digital enterprise evolves, the criticality and number of information assets increases. Likewise, so do the demands on technology to help knowledge workers manage these data flows, render information from them, and bring better efficiency to their processes. A new generation of enterprise-grade collaborative tools has evolved to offer usability and functionality comparable to their consumer counterparts while bringing increased security and visibility to digital assets. The disjointed, one-way information systems of the past have been replaced with interactive and intelligent tools that bring life and continuity to information across the entire corporate ecosystem. These new environments are the employee operating systems of the future and will be the key for uniting people with their colleagues, content and processes. This report covers some of the collaborative challenges that enterprises have faced over the years and explores how organizations can leverage both new and existing technologies to evolve to the new way of working, and better align employee and corporate priorities in the process.

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THE FORCES OF CHANGE IN A CONTEMPORARY WORKPLACE

Historically, there has been corporate hesitation to modernize strategies for managing employee interactions and the resulting assets, partly due to a scarcity of enterprise-appropriate products. But enterprises are entering a new digital age, one that will leave behind those unwilling to adapt to new industry priorities and employee expectations. As more business processes go digital, the influx of unstructured data mandates a strategy that both manages and renders insight from that data. The growth of distributed teams, as well as remote and contingent work, has improved the work/life balance of employees, but has strained information-distribution networks, security frameworks and collaborative dynamics. Organizations must also accommodate major changes in the workforce's technological preferences, habits and priorities:

- Younger workers increasingly prefer chat and virtual communication over face-to-face or – heaven forbid – phone conversations.
- Attention spans and development cycles are shorter than ever thanks to the omnipresence of social media and smartphones.
- The walls between the tools people use at home vs. in the workplace are disappearing.
- This demands that organizations take a serious look at what attracts talent and keeps employees engaged and productive, all while maintaining the right balance with security and compliance. Social technology plays an ever-growing piece of that puzzle.

Additionally, competitive pressures have forced many organizations to totally refresh – or digitally transform – their customer experience. However, this often comes without corresponding adjustments to internal toolsets and architectures. In order for these efforts to succeed, they must bridge the digital gap between external and internal information flows. Organizations need a way to support the continuous cycle of data and content that informs both the modern customer experience and the internal initiatives behind it.

As the concept of digital transformation pervades the corporate consciousness, organizations are beginning to value internal technology decisions as competitive differentiators. Many now consider the employee experience to be a key part of a strategy to stay relevant and agile, and drive engagement across the business ecosystem. We take a look at the ways in which technological advancements have been creatively applied to the collaborative challenge so as to drive a new age of working that better aligns organizations' priorities with the personal and professional priorities of their employees.

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CURRENT STATE OF THE UNION: PAIN POINTS AND INEFFICIENCIES

Collaboration tools exist to help people bring ideas and content from personal productivity spaces to their work communities. The challenge is to do so in a way that supports the way employees want to work, improves the efficiency of their processes and enforces security protocols.

- **The point product pandemic.** The collaboration industry has been plagued by segmentation. Communications, content management and productivity have been treated as separate, isolated markets dominated by distinct players, and as such, many organizations have purchased separate, isolated tools. The resulting disconnection between tasks, conversation and storage creates inefficiencies for employees who are forced to jump from one application to another digging for information and context. The pressure to monitor multiple messaging and point tools is overwhelming from a time management and concentration perspective.

Organizations are also facing challenges to open up flows of information between disparate business groups. Stand-alone, function-specific applications inhibit engagement across departmental borders, creating content and knowledge silos. Email, static and disorganized as it is, remains an irreplaceable tool because other applications have failed to provide better communication options beyond the firewall, especially in managing relationships with customers, partners and suppliers. These walled systems of engagement hinder innovation and collaboration, particularly in geographically diverse corporations.

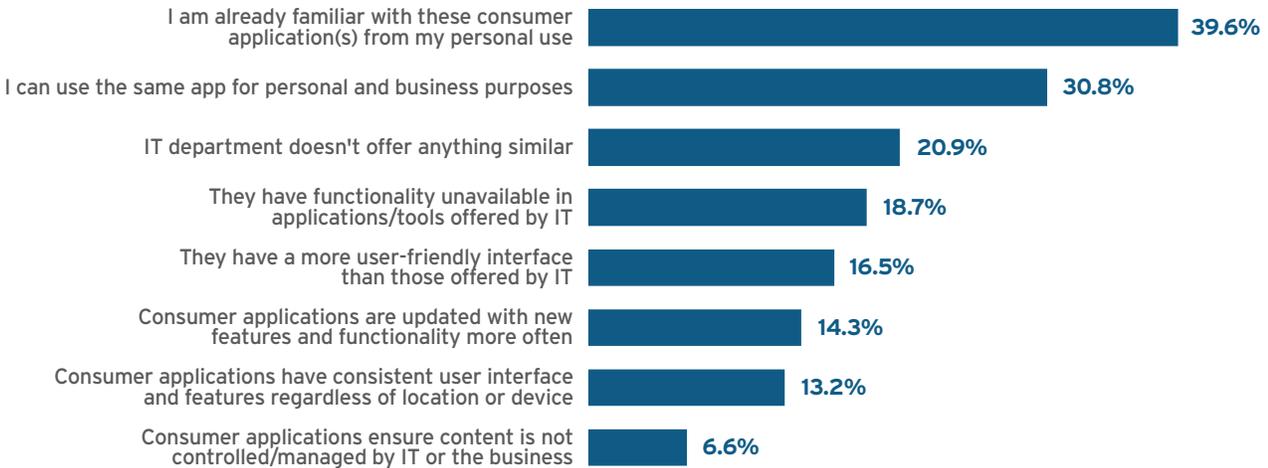
- **The employee has been excluded from the decision-making process.** Historically, the decision as to which tools are deployed enterprise-wide has resided with IT and upper management. This has created a disconnect between employee preferences and perceived organizational needs – with cost often having a disproportionate influence. As a result, tools tend to be relatively general, catering to all roles broadly but few use cases very specifically, and prioritize cost and administrative factors over the end-user experience.
- **The war on shadow IT.** The perceived lack of technological support makes employees susceptible to ‘freemium’ versions of productivity tools that are more user-friendly and consistent with their consumer habits. Many an IT professional has cursed the exposure shadow IT has opened up within corporate infrastructures, especially in the early days of cloud, but this only exemplifies the disconnect between what employees believe they need to be successful and what IT has delivered. When asked to indicate which consumer apps and internet tools they use for business purposes, 48.7% of knowledge workers indicated they use consumer email (Source: 451 Research VoCUL: US Consumer Trends Representative Survey Q2 2016), and 37.2% use web-based productivity tools. As shown in Figure 1, this is often a result of a lack of available enterprise tools and the improved familiarity and user-friendliness of consumer tools. Just as they consider cost and efficiency when evaluating new systems, organizations must weigh usability or run the risk of users moving to unsanctioned systems to work the way they want.

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Figure 1: Reasons knowledge workers use consumer apps and internet tools for business purposes

Q. Why do you choose to use consumer mobile apps and Internet tools for business purposes? n=91

Source: 451 Research, Voice of the Connected User Landscape, US Consumer Trends (Representative Survey), Q2 2016



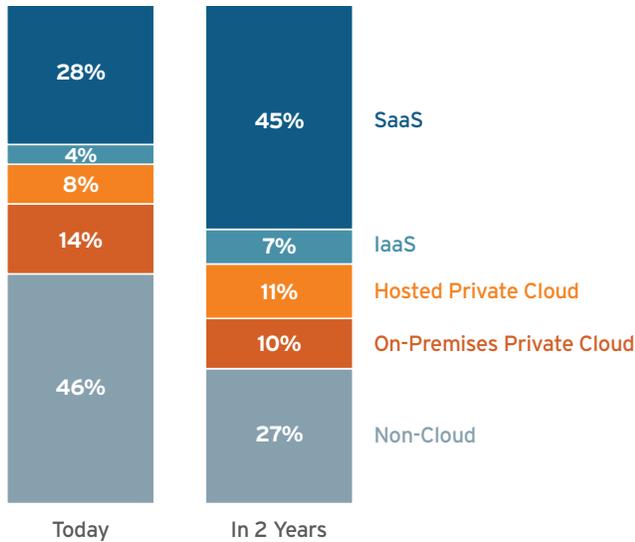
- Data volumes are exploding.** Unstructured data is a vastly underutilized asset that is rapidly growing in volume. These digital assets – PDFs, videos, emails, digital images, chat records, etc. – present a challenge to organize and analyze. But we are entering an age where more business decisions are data-driven, and that puts the impetus on employees and systems to derive the most value out of all sources available. Today, there are effective tools that help analyze patterns in text, image and voice assets – if they can access the content. Inconsistencies in storage and lack of continuity in information flows within most organizations make it difficult to detect patterns across an entire collection of repositories.
- Cloud still represents a major challenge to the way many companies operate.** 451's Voice of the Enterprise: Cloud Computing indicates that email and unified collaboration applications are some of the first workloads to move to the cloud (See Figure 2.) Respondents to the survey cited improved stability and availability as the top reasons for using a cloud-only deployment for such applications. Predictably, other respondents cited security and cost as the two top reasons for maintaining a non-cloud environment. While comfort levels are increasing with the security levels of public cloud providers, in many cases, organizations are bound to the on-premises environments culturally or legally. Highly regulated industries, such as financial services, healthcare and government, are constantly struggling to find balance between modernity and security.

Many of the consumer-based providers most popular with end users offer cloud-only services, which can be incongruous with corporate IT policy. These services pull data and content out of localized servers and beyond the control of administrators and local security frameworks, granting organizations less visibility over threats and data breaches. For those organizations that have or are considering the transition to cloud infrastructure, these cloud-only services fail to offer a migration that is controllable.

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Figure 2: Email and collaborative applications are often the first workloads organizations move to the cloud

Source: 451 Research, *Voice of the Enterprise, Cloud Transformation, Workloads and Key Projects, 2016*



Collaboration Brings the Human Dimension to Business Processes

Organizations are always looking for ways to improve productivity and make employees more efficient. Problematically, however, that line of thinking is often focused on the result rather than the flawed process. Instead, companies should be asking: What can we do to drive better employee engagement? How can we eliminate friction within information flows and build bridges between data sources? Where can we better connect disparate groups? Increasingly, organizations will find collaboration offers a philosophical bridge between employee and technology, bringing in softer, human elements that improve the overall experience to increase workforce effectiveness.

BALANCING USABILITY AND SECURITY

Organizations understand their employees are engaging with unsanctioned applications and moving corporate data through personal accounts, which undermines corporate security measures. How do organizations find equilibrium between keeping employees happy and maintaining a security framework that aligns with corporate policies?

Shadow IT became an industry epidemic because consumer applications offered one key thing that business applications at the time did not: usability. Unlike existing enterprise options, they catered to the end user rather than the IT buying center. This has motivated a reevaluation of the standards and values around which enterprise tools are built. Today, most providers tout usability and intuitive design as one of their core tenets. This is going a long way toward making next-gen collaboration tools the core point of presence for employees, and the preferred interface from which to manage a broader digital experience.

This does not mean, however, that IT concerns have been left out of the equation. Rather, vendors have learned to strike a balance between user-friendliness and corporate needs. Modern enterprise content management (ECM) and enterprise file sync and share (EFSS) platforms have been pioneers here, expanding from basic access provisioning to provide richer information rights management controls. Where historically IT had been concerned with data leaving the corporate firewall, tools today provide increased visibility into what was sent, who accessed which documents and how they did so – offering far more insight than a corporate email server would provide. Features such as expiring links, information governance, private groups and revocable access eliminate much of the risk in involving external parties. Additionally many vendors now offer multiple deployment options – on-premises, hybrid and cloud – to accommodate different corporate comfort levels with the cloud.

Developments in analytics and visualization have enabled IT to render usable data from employee activity. Organizations can see where and how employees are connecting, where they spend their time, and optimize infrastructure and security measures in response. These systems enable IT to be agile and responsive to the way employees want to work.

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BUILDING CONTEXT INTO WORKFLOW

How can organizations better connect disparate tools and systems to provide continuous and contextualized workflows? Can collaboration be purpose-driven instead of disruptive?

The industry has come to an understanding that three factors – content, communications and processes – are symbiotic elements that complete a workflow process, all equally essential for creating the context to inform work and decision-making. Whatever the use case, the power of modern collaborative technology is to connect the single worker with relevant participants, historical data and content, and the tools to get a job done.

In support of this, ECM and business process tools have modernized to deliver interoperability, responsive user interfaces and workflow automation. As a central information hub, ECM is also capable of analytics-driven, contextualized data delivery, which pushes useful information at the right time to those who need it. Blurring the line between systems of record and systems of engagement, with the added benefit of search, is critical for reducing the time spent looking for information and unlocking the knowledge resources that make employees’ lives easier. What makes this all the more powerful is the addition of social dynamics, such as the ability to assign tasks, track dependencies and provide instant feedback. Pervasive communication helps to create a seamless connection between where work happens, where it is stored and how it is socialized.

Collaborative tools must facilitate a personal experience as much as they do the group experience, making it easier to bring comments and information into an individual production process where most work gets done. Many products are interoperable with productivity suites such as Microsoft Office and Google G Suite to support office workers, but this principle extends to any tool critical to an employee’s principle mode of working. For a sales rep, this may involve a CRM system; for media workers, this could be video editing software; for HR personnel, recruitment applications may be a critical plug-in. The resulting ecosystem helps eliminate the walls between different types of workers, fostering a business community that is unified.

THE BUSINESS NETWORK EXPANDS

Rarely does a workflow begin and end within the walls of an organization, yet partners, contractors and clients are often excluded from the collaborative process. How can an organization accommodate the needs of the extended enterprise in facilitating productive yet secure external engagement?

The above-mentioned controls and the concept of project- and team-based channels have broken the dependency between collaboration tools and the active directory. Today, these products often extend collaborative environments beyond corporate firewalls, moving projects involving external stakeholders out of email and into more modern, user-friendly applications. Support for the ‘extended enterprise’ now enables partners, contingent workers (freelance and contracted), and even customers to contribute to processes and conversations in a controlled way. Many users find this use case to be a competitive differentiator. In industries that involve continuous review and approval cycles, such as law, architecture and manufacturing, a system that is easy to use and designed for a specific use case has the power to streamline processes, as well as foster improved client and partner relationships.

The ability to architect ad hoc teams and define specific permissions and access points also helps to build purposeful structure and control into the environment. External participants can be invited into pertinent group structures only, rather than being exposed to the entire system, and they can be actively monitored to ensure appropriate engagement. For the internal use case, teams that are organized around specific projects can define and regulate role-based permissions – helping to eliminate noise from conversations that are not relevant. Granular controls and notification settings enable users to help prioritize conversations themselves, minimizing distraction from less critical conversations.

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THE COGNITIVE ERA IS HERE

The typical workday is often interrupted with laborious, repetitive responsibilities that distract from the immediate tasks at hand. How can organizations today leverage advancements in artificial intelligence to help streamline, prioritize and automate work?

We have entered an age that will wreak havoc on the traditional concepts of work and how humans engage with technology. Artificial intelligence and machine learning have begun to penetrate the end-user experience and are slowly becoming normalized thanks to the prevalence of consumer assistants such as Apple's Siri®, Microsoft's Cortana® and Amazon's Alexa®. In the business context, this technology is changing the way users interact with databases and storage systems, as well as manage workflows.

The chat bots in collaborative systems today come in two forms: external bots that facilitate information exchange with connected systems, and native bots that function as personal assistants and automate workflows. The latter has the power to automate basic activities such as scheduling meetings, suggesting email and chat replies, and assigning action items, all with the goal of decreasing the amount of repetitive, administrative tasks that eat up unreasonable hours of work. Down the road, there is enormous potential for personalization of the employee experience and prioritization of data delivery that will enable people to work more efficiently and with less distraction.

Content analytics has been another significant area of investment as ECM and EFSS vendors seek to automate the controls and data protections that have become key in managing digital assets. Image recognition and full text analysis can now drive automatic media classification to ensure collateral is treated with the sensitivity it requires, and control over information rights, lifecycle management and access will be less of a burden on an administrator or team manager. Content analytics will help improve the consistency with which information is handled. It will also permit companies to track trends and patterns across unstructured datasets that would have previously been obscured by the sheer size and number of sources.

"Today's ECM and collaborative systems deliver a new kind of user experience, one that is focused on seamless and automated information discovery, delivery and control that bridges systems of record and systems of engagement to support a cohesive social journey."

Conclusions and Recommendations

The larger movements that have transformed the digital landscape for both consumers and business – i.e. artificial intelligence, the internet of things, next-generation infrastructure and cloud – have altered the way we prioritize user experiences, interoperability, contextualized process and automation. Information exchange lies at the heart of this. Today's ECM and collaborative systems deliver a new kind of user experience, one that is focused on seamless and automated information discovery, delivery and control that bridges systems of record and systems of engagement to support a cohesive social journey. Here are some suggestions as to how to leverage and democratize these advancements within your organization.

- **Talk to your employees.** Where do they find support lacking? What processes and tools do they believe are excluded from the existing collaborative strategy? The industry has prioritized the employee experience on a macro level, making customization and personalization easy, but the micro, organizational level must be well understood to make the right development decisions for your organization's success. If your employees are not office workers, video and audio may be a better way of communicating than messaging, and thus a necessary integration. If your workforce is primarily made up of knowledge workers, perhaps content sharing and governance or task management should be the heart of your platform.
- **Select a vendor that can offer support for where your organization is today, as well as where you want to be tomorrow.** Collaborative reinvention does not happen in a day. A solid technology partner will have offerings for companies in multiple technological stages and the ability to usher an organization gracefully through transformation of existing tools. Content migration, hybrid storage and information governance are all examples of capabilities ECM vendors can offer that help maintain control during a transition.

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- **Leverage new tools, as long as they fit naturally alongside what is already in place.** Content storage is often a major pain point here because organizations are hesitant to open a door to a separate repository of information. EFSS and ECM are often viewed as perpetrators of the point product problem, but they can be implemented in a way that offers consistency in storage and controls with systems already in place, using shared servers or clouds. Talk to your existing vendor about its own offerings and where it has built extensions with complementary services and providers. Previous investment should not mean exclusion from technological advancement; good providers will know where their own provisions are lacking and be actively seeking improvements or partnering to provide a complete service for clients.
- **Security and data control must be a priority.** The better control that can be exercised over your digital assets in terms of application security, data residency and information rights management, the better equipped your organization will be to identify and resolve threats. Collaborative systems can contribute to this effort with increased visibility into employee activity and unstructured data to offer better foresight into points of weakness or internal threats. Leverage a provider with a security philosophy consistent with your existing framework.

Employee engagement and fulfillment is critical for the success and growth of any organization. When deployed successfully, today's collaborative systems contribute to a workforce that is better informed, better supported, and better aligned with and understood by management. As the world evolves to a point where human capital and knowledge are our most valuable organizational assets, we will look to technology to help us to manage our collective minds, unlocking and remembering ideas and information so we can act upon them in a profitable way. Collaboration ushers in a generation of technology that will help to enhance the strength of our most critical corporate resource: collaborative human intelligence.