Break Down Content And Information Silos To Accelerate The Flow Of Work

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Executive Summary

According to Forrester Research, every business will become either a digital predator or digital prey by 2020.[1] To avoid demise, organizations must rapidly create new sources of value in their end-to-end customer experiences. True digital predators also must break down information and process silos and extend digital transformation initiatives to empower employees with the digital resources needed to win, serve, and retain customers.

> **Digital transformation must extend beyond direct customer experience to include employees and business processes. Only then can firms become true digital predators.**

In April 2016, Alfresco commissioned Forrester Consulting to evaluate organizations' evolving needs for technologies that support enterprise content and business processes. To further explore the topic, Forrester developed and tested the following hypothesis: In order to maximize the value of content and processes, enterprises must transform information and content into context and insights that are delivered in the moment to business processes that touch employees and customers.

> **Context is king. Delivering context in the moment within a business process requires a platform that blurs the lines between enterprise content management (ECM) and business process management (BPM) capabilities.**

In conducting an online survey with 158 IT professionals at the director level or above in the US and the UK, Forrester found that firms seek to transform their current content and processes into digitally driven systems and insights. However, decades-old technologies are not up to the job, and application silos create many pain points across core business processes. As firms progress on their digital journeys, they need platforms that create greater context for business processes by delivering information and content to end users when and where they need it. This context includes what needs to be done, who is involved, relevant history, and what is required to move forward.

KEY FINDINGS

Forrester's study yielded four key findings:

› **Firms must accelerate digital transformation efforts or become digital prey.** Top business priorities include growing revenues and improving customer experiences while maintaining regulatory compliance. To achieve these goals in the digital age, IT leaders recognize that they must accelerate their digital capabilities, and 68% plan to undertake a business transformation to become more digital-ready. But most are already behind the maturity curve: For example, only 14% have fully digitized their enterprise content.

› **IT leaders need to overhaul their firms' legacy business applications to meet ambitious digital goals.** The next two years represent a turning point in the digitization of enterprise content and the automation of business processes. Our survey showed that over that time period, the number of firms with virtually all digital content will shift from a significant minority (14%) to half (50%). Similarly, manual processes will become digital, as the percentage of firms that use workflow or BPM systems for most of their processes rises from 26% to 69%. To achieve these ambitious goals, IT leaders will need to break their organizations' reliance on legacy technologies — such as email, local files, and shared drives — that perpetuate silos, impede productivity, and weaken customer experiences.

› **Content and process silos impede contextual awareness in core business processes.** Across the organization, in customer-facing and internal business processes alike, the recurring theme is that end users need to reference too many applications and files to complete a task or make a decision. Without embedded access to content in workflow applications, users lack contextual awareness for tasks and decisions and waste time searching for it elsewhere.

› **Platforms that merge content and process to provide context can help firms become digital predators.** IT leaders believe these types of platforms can not only help them alleviate major pain points but also deliver benefits that help them achieve business goals. By improving end user experiences in content and process applications, firms can boost their agility and productivity, which helps them deliver better customer experiences and achieve business growth. As one respondent said, "The ability to get work done faster will pretty much deliver an ROI."

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Business Imperatives Propel Digital Transformation For Enterprise Content And Processes

Firms must accelerate their digital transformation efforts to remain relevant and competitive in today's environment, and organizations that transform into digital businesses will win in the age of the customer.[2] This means not only leveraging digital technologies to create greater value for customers, but also fostering greater operational agility to better serve those customers and deliver value back to the business. And in highly regulated industries such as financial services and insurance, government, healthcare, and manufacturing, compliance requirements make the challenge of digital transformation all the more complex. IT leaders at these firms, in particular, are constantly searching for ways to meet current and future business needs while complying with regulations and requirements.

> **Organizations that transform into digital businesses will win in the age of the customer.**

In surveying senior IT professionals at US and UK firms, we found that the next two years represent a turning point in the digitization of enterprise content and processes. IT leaders plan to push their organizations toward digitally driven content and processes to better compete in the age of the customer. However, reliance on siloed systems and outdated technologies will create hurdles on the path to digital transformation. Our survey revealed that:
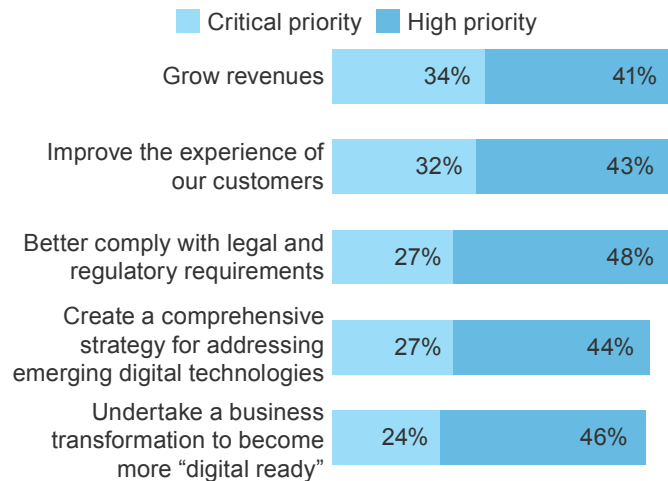
› **Digital transformation is a major focus for firms tackling growth, customer, and compliance goals.** The organizations we surveyed face the onerous tasks of growing revenues and improving customer experiences, while also maintaining compliance in their highly regulated environments. Three out of four (75%) considered these high or critical priorities for the next year. In addition, 70% and 71%, respectively, said that undertaking digital transformation initiatives and creating comprehensive strategies for emerging technologies like mobile, social, and smart products are high on their priority lists (see Figure 1). Accelerating their digital capabilities will help firms achieve their broader business goals by enabling richer digital experiences and more productive, engaged employees in order to win, serve, and retain customers.

FIGURE 1
Digital Transformation Is Key To Achieving Revenue Growth, CX, And Compliance Goals

"Which of the following business initiatives are your organization's top business priorities over the next 12 months?"

Critical priority | High priority

Initiative	Critical	High
Grow revenues	34%	41%
Improve the experience of our customers	32%	43%
Better comply with legal and regulatory requirements	27%	48%
Create a comprehensive strategy for addressing emerging digital technologies	27%	44%
Undertake a business transformation to become more "digital ready"	24%	46%

Base: 158 IT decision-makers at the director level and above in the US and the UK

(top five responses shown)

Source: A commissioned study conducted by Forrester Consulting on behalf of Alfresco, April 2016

› **Decades-old technologies are the default for most firms, but they're not up to the job.** The most critical systems to support day-to-day business processes are email, files on local drives, and internal or network shared drives (see Figure 2). Some industries face bigger hurdles than others; for example, 60% of healthcare firms critically rely on shared drives (compared with 48% overall), indicating that they are far behind on digital maturity. These legacy technologies are inefficient, discourage collaboration, and ultimately fail to support modern and evolving business needs. For example, 80% of firms seek to increase the quantity and quality of embedded content in workflow systems by using metadata to improve content searchability and analytics, as well as increasing support for cloud and rich media (e.g., videos). But in order to do this successfully, they will need to overhaul their largely archaic content systems and business processes.

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FIGURE 2
Outdated Systems And Tools Drive Today's Business Processes

"To what extent do employee end users rely on the following systems, tools, and applications to complete tasks and business processes?"
(Critical to day-to-day business processes; most users access multiple times per day)

Email	57%
Files on local drives (e.g., spreadsheets)	49%
Internal network/shared drives	48%
Customer relationship management (CRM) system	47%
Line-of-business systems	46%
Collaboration applications	46%
Enterprise content management system	44%
Cloud-based file sharing and storage applications	40%
Workflow management system other than BPM	39%
Business process management (BPM) system	37%
Forms management applications	36%

Most critical system/tool/app by Industry:

Government: Email (62%)

Financial services: Email (58%)

Healthcare: Internal network drives (60%)

Manufacturing: CRM system (58%)

Base: 158 IT decision-makers at the director level and above in the US and the UK

Source: A commissioned study conducted by Forrester Consulting on behalf of Alfresco, April 2016

› **Digital capabilities will mature over the next two years as firms digitize and data-enable enterprise content.** IT leaders aspire to move their organizations' paper files to data-driven digital content over the new few years. While only 14% said their firm's collective content is virtually all digital today, this percentage will nearly quadruple to 50% over the next two years. About half of these forward-thinking firms (25% of all respondents) seek to not only digitize their content but also make it useful for search and analytics through embedded data and insights (see Figure 3).

› **They also seek to replace manual processes with digital workflows.** Today, only 26% of firms use BPM or workflow systems to support the majority of their business processes. BPM systems are most prevalent in manufacturing environments, where success is contingent upon process precision and continuity, compared with other industries we surveyed (critical for 50% of manufacturing firms versus 37% overall). However, across industries, firms are moving toward systems-driven processes: 69% believe that BPM or workflow systems will support most or all of their firm's processes in the next two years (see Figure 4).
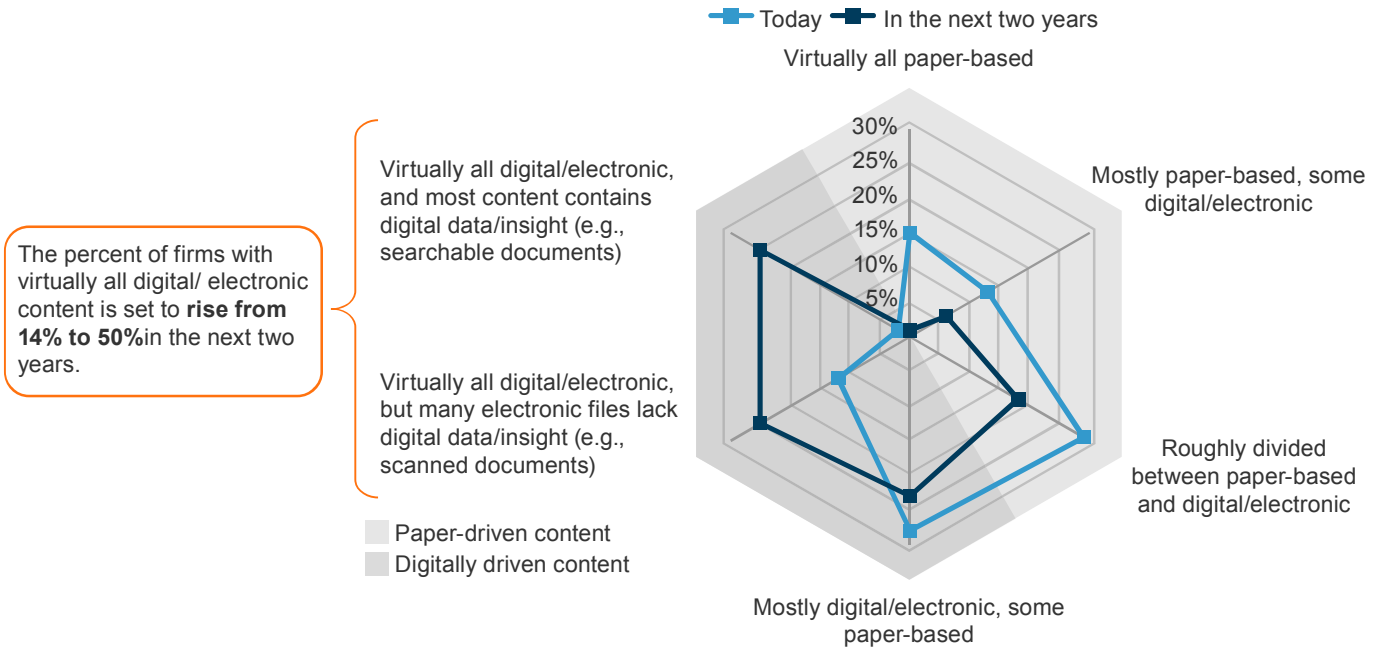
"Anything that allows for more innovation, more collaboration, and more application of the newest technology and data will help our organization. Building and customizing our applications will allow all employees to comprehend and help to push our company forward in our ever-changing world."

— IT director at a government agency in the US

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FIGURE 3

IT Leaders Will Push To Convert Legacy Paper Files To Digital, Data-Driven Content In The Next Two Years

"Which of the following best describes the level to which your organization's collective content (documents, data, assets, contracts, etc.) is digital? How do you anticipate this evolving over the next two years?"

The percent of firms with virtually all digital/ electronic content is set to **rise from 14% to 50%** in the next two years.

Virtually all digital/electronic, and most content contains digital data/insight (e.g., searchable documents)

Virtually all digital/electronic, but many electronic files lack digital data/insight (e.g., scanned documents)

Paper-driven content
Digitally driven content

Virtually all paper-based

Mostly paper-based, some digital/electronic

Roughly divided between paper-based and digital/electronic

Mostly digital/electronic, some paper-based

— Today —■— In the next two years

Base: 158 IT decision-makers at the director level and above in the US and the UK

Source: A commissioned study conducted by Forrester Consulting on behalf of Alfresco, April 2016

FIGURE 4

Organizations Plan To Support Most Core Processes With Workflow Or BPM Systems In The Next Two Years

"Which of the following best describes the level to which your organization's business processes are completed manually or supported by a system/application? How do you anticipate this evolving over the next two years?"

Today   In the next two years

Mostly/completely supported by systems today: 26%
In the next two years: 69%

9%	23%	43%	22%	4%
1%	8%	22%	35%	34%

Completely manual

Mostly manual, with some processes supported by workflow and/or BPM systems

Roughly divided between manual processes and processes supported workflow and/or BPM systems

Mostly supported by workflow and/or BPM systems, with some manual processes

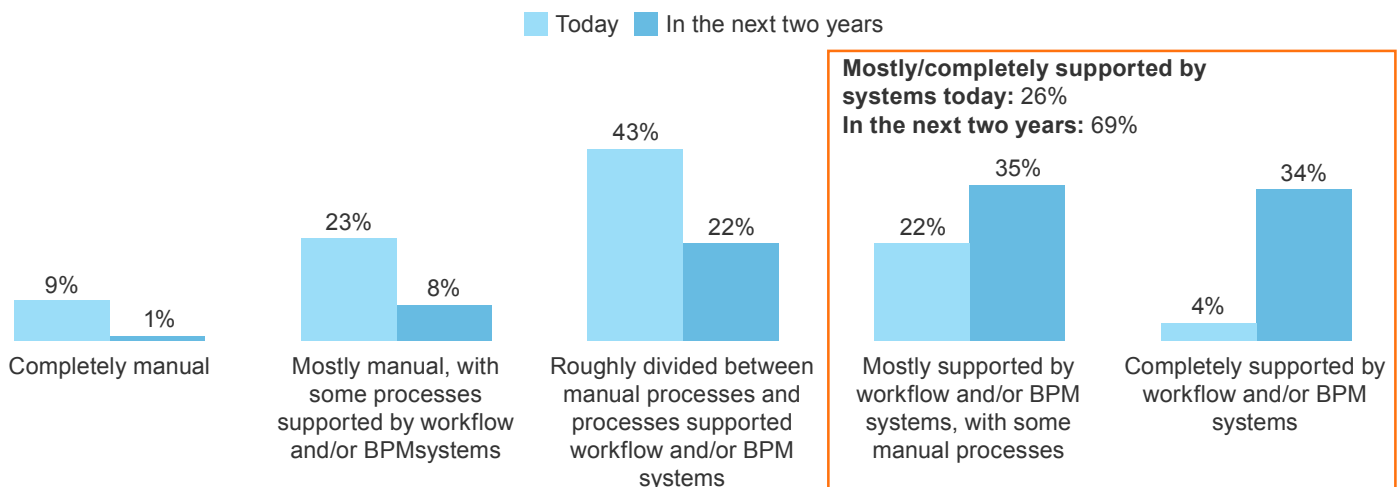Completely supported by workflow and/or BPM systems

Base: 158 IT decision-makers at the director level and above in the US and the UK

Source: A commissioned study conducted by Forrester Consulting on behalf of Alfresco, April 2016

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Poor Integration And Lack Of Context Create Pain Points In Core Business Processes

As IT leaders look toward digitizing their organizations' business operations, they must solve today's challenges while simultaneously readying their organizations for changing future needs. Many organizations mistakenly opt for a bolt-on approach that simply adds digital tools to existing processes rather than using more complete technology solutions to rethink how processes are executed.[3] Such well-intentioned but misguided tactics limit the value that organizations can recognize from their digital initiatives, and often exacerbate existing challenges by creating more application silos in an already fragmented IT landscape.

In order to understand the issues that today's fragmented, bolt-on digital systems create, we asked survey respondents to evaluate pain points for end users and IT organizations across three categories of core business processes: onboarding new customers or partners, customer or partner servicing processes, and financial or accounting processes. We found that:

› **Core processes lack context — end users constantly need to reference external content to complete tasks.** Most firms lack integrated systems to simplify core processes like onboarding new customers or partners, addressing customer service requests, and managing financial or accounting processes. Two-thirds (67%) reported that end users need to reference external content frequently or every time they complete one of these processes (see Figure 5). Employees lose momentum and efficiency when jumping back and forth between applications, emails, and local files, and scattered information creates an environment that is ripe for errors. These issues can compromise product and service experiences and damage customer relationships.

› **The greatest pain points occur when end users must reorient themselves across application silos.** End users who carry out core business processes — such as onboarding new customers — often are not the task originators, and they need to quickly understand the context of the task. Pain points occur when end users must scour multiple applications, systems, files, and tools for vital information. For these reasons, more respondents reported pain points during process execution versus setup or post-completion. Top pain points during

execution relate to scattered content (49%) and lack of contextual information (47%) (see Figure 6). And as users jump from application to application, their ad hoc actions can create downstream issues. For example, 42% of respondents selected lack of information for audit trail and lack of visibility into process status as other major pain points during execution. Without a holistic view across systems, firms are underprepared for audits — a major liability for highly regulated industries.

FIGURE 5

Content That Is Relevant For Business Processes Is Most Often Scattered Across Many Locations

"How often do end users need to reference external content when completing this process?"

- ▢ Never — all relevant content is embedded in the workflow application
- ▢ Occasionally — end users may need to reference some content that is not available in the workflow application
- ▢ Frequently — there are many types of content not embedded/integrated into the workflow application
- ▢ Every time — there is no embedded content in the workflow application, so employees must use multiple tools to reference

| 4% | 29% | 54% | 13% |

Two-thirds (67%) need to access external content frequently or every time.

Base: 157 IT decision-makers at the director level and above in the US and the UK

Source: A commissioned study conducted by Forrester Consulting on behalf of Alfresco, April 2016

"Compliance issues are a constant problem and occur throughout the process."

— CIO at a US commercial banking company

FIGURE 6

Most Pain Points Occur When Users Lack Content Or Context While Executing A Process

"Based on your knowledge about this process, what would you say are the primary pain points in the process for end users and/or your IT organization and where in the process do these pain points occur?"
(Select all that apply)

	Beginning — initiating the process	Middle to end — executing the process, conducting analytics	Post-process management and reporting — e.g., audit
Content is stored in too many different places	29%	49%	30%
Lack of contextual information for decisions/tasks	27%	47%	23%
Lack of information for audit trail	24%	42%	28%
Lack of visibility into process status (in progress, complete)	31%	42%	24%
Lack of content immediately available	29%	42%	23%
Lack of support for ad hoc and dynamic processes	27%	39%	30%
Poor integration across multiple data sources	30%	38%	24%
Lack of collaboration with other teams	25%	38%	25%

Base: 136 IT decision-makers at the director level and above in the US and the UK

Source: A commissioned study conducted by Forrester Consulting on behalf of Alfresco, April 2016

› **Lack of embedded content and context is the recurring theme across business processes.** Differences in the three processes we explored revealed distinct issues and pain points at different stages (setup, execution, and post-process). However, recurring themes across processes and stages include scattered content, lack of context, and lack of immediately available content, (see Figure 7). Poor integration of data sources is another issue that affects specific industries at different stages. For example, government organizations struggle more with data integration during setup (45%, versus 30% of all respondents), while financial services and insurance firms face more issues post-process (38%, versus 24% overall). Better integration across systems and processes will help alleviate these pain points. Integrated platforms that house enterprise content and support workflows are one potential solution.

"[Our biggest pain point is] sourcing the relevant data, which could be in a number of places and not necessarily online."

— CIO at a UK healthcare organization

FIGURE 7

Lack Of Content Integration And Context Are Recurring Pain Points Across Process Categories And Stages

"Based on your knowledge about this process, what would you say are the primary pain points in the process for end users and/or your IT organization and where in the process do these pain points occur?"

Top pain points	Beginning — initiating the process	Middle to end — executing the process, conducting analytics	Post-process management and reporting — e.g., audit
Overall	• Lack of visibility into process status • Poor integration of data sources	• Content stored in too many places • Lack of contextual information for decisions	• Content stored in too many places • Lack of support for ad hoc/dynamic processes
Onboarding new customers/partners	• Content stored in too many places • Lack of collaboration with other teams	• Content stored in too many places • Lack of information for audit trail	• Content stored in too many places • Lack of content immediately available
Customer/ partner servicing	• Lack of content immediately available • Lack of collaboration with other teams	• Lack of contextual information for decisions • Lack of support for ad hoc/ dynamic processes	• Lack of information for audit trail • Lack of collaboration, lack of support for ad hoc processes
Financial/accounting	• Lack of visibility into process status • Lack of contextual information for decisions	• Lack of content immediately available • Lack of contextual information for decisions	• Lack of support for ad hoc/dynamic processes • Lack of visibility into process status

Base: 136 IT decision-makers at the director level and above in the US and the UK

Source: A commissioned study conducted by Forrester Consulting on behalf of Alfresco, April 2016

"Integration is essential to the smooth workflow of all or most applications in order to assist and ensure there is a vital link between the before-and-after processes."

— CIO at a UK manufacturing company

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A Context-Driven Platform That Merges Content With Processes Can Solve Many Of These Challenges

Most of the systems that firms use today to manage enterprise content and processes make it difficult to accelerate the flow of work. As they work to digitize business operations, IT leaders must understand end user pain points and choose technologies to help alleviate those pain points. When done successfully, these technology solutions can contribute to broader business goals of growing revenues, improving customer experiences, and complying with regulations; for example, they can help employees better serve customers while ensuring content is properly governed.

In exploring the concept of platforms that create context by integrating content with business processes, we found that:

› **Firms need robust process and content platforms that are easy to use and integrate with other systems.** As firms undertake digital transformation initiatives, they need their process and content platforms to have a wide range of capabilities. Two-thirds or more consider a variety of features and functions we asked about to be very or extremely important. Integration is paramount, and 82% and 81% of respondents, respectively, consider integration of data and content across systems to be very or extremely important to their organization. Speed-to-value — or the ability to get users up and running quickly — is also a top consideration for 79% of firms, and a similar number (78%) value ease of use for end users (see Figure 8). Additionally, as IT leaders strive for interoperability across their heterogeneous application landscapes, 67% value open source platforms built on an open core with open standards.

› **Platforms that merge content with process will boost agility and productivity, ultimately benefitting customers.** IT leaders envision many tangible benefits from applications that merge process flows with content and information. About half (49%) see opportunity to improve end user experiences, alleviating the many pain points that employees experience while executing tasks and processes. By breaking down these barriers to process execution, organizations will become more agile and productive — benefits that 44% of respondents expect. And these organizational benefits will trickle down to customers: 47% believe these platforms will help them

create better customer experiences that will foster retention, loyalty, and, ultimately, business value (see Figure 9). In addition, respondents described in their own words the potential benefits of better process and content integrations, which include greater productivity and collaboration, better preparedness for audits, enriched customer experiences, and cost savings (see Figure 10).

FIGURE 8
Integration, Speed-To-Value, And Ease Of Use Are Critical In Process And Content Platforms

"As your organization looks to evolve its technology landscape, what aspects of process and content platforms are most important?"
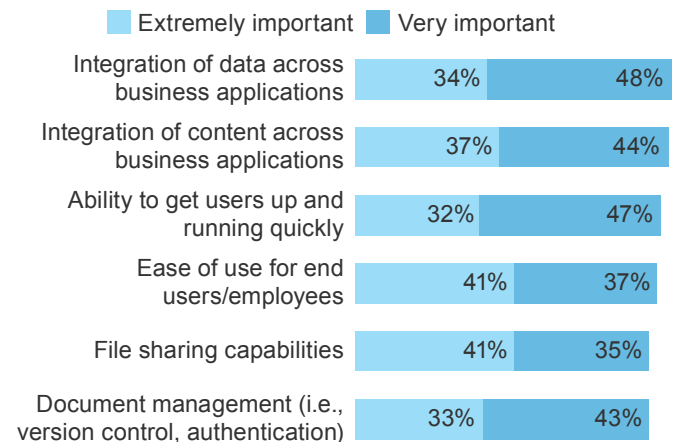
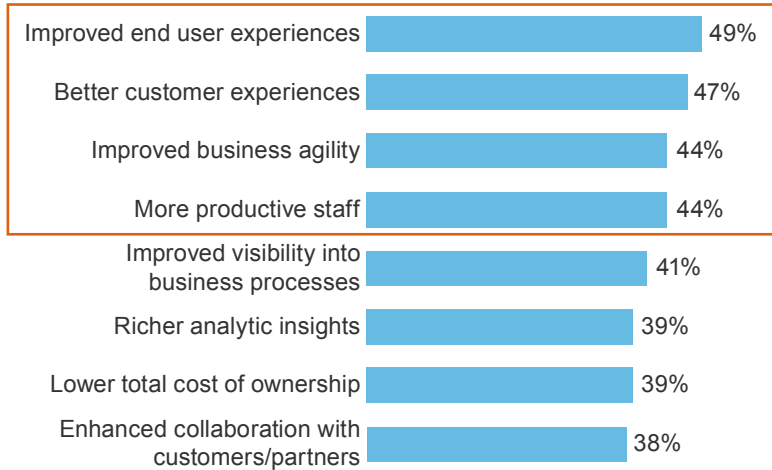Base: 158 IT decision-makers at the director level and above in the US and the UK

(top six response options shown)

Source: A commissioned study conducted by Forrester Consulting on behalf of Alfresco, April 2016

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FIGURE 9

Merging Process And Content Into A Single Platform Can Deliver Business And Customer Benefits

"What benefits could your organization realize from a platform that uses information and content to create real-time context for business processes?"

Benefit	Percentage
Improved end user experiences	49%
Better customer experiences	47%
Improved business agility	44%
More productive staff	44%
Improved visibility into business processes	41%
Richer analytic insights	39%
Lower total cost of ownership	39%
Enhanced collaboration with customers/partners	38%

Top benefit by industry:

Manufacturing:
Improved end user experiences (53%)

Healthcare:
Better customer experiences (55%)

Financial services:
Business agility (48%)

Government:
More productive staff (67%)

Base:158 IT decision-makers at the director level and above in the US and the UK

Source: A commissioned study conducted by Forrester Consulting on behalf of Alfresco, April 2016

FIGURE 10

IT Leaders See Many Benefits In Integrating Process And Content In Applications To Provide Greater Context

"Thinking about building or customizing business applications for your organization, how might those applications benefit from greater context enabled by process and content integrations?"

"Greater context is needed so that we can be on the **leading edge of technology** for our customers."

"We will be able to provide **enriched customer experience.**"

"Data is currently the biggest challenge. To be able to **integrate the processes with consistent and clear data** regularly is the biggest benefit that these apps will have."

"Staff will **spend less time doing manual analysis** of data, and the systems can **show staff where audits can occur**."

"Will ease the process and make it **more efficient**, hopefully leading to **cost/time savings**."

"Reduced complexity will lead to **quicker deployment**."

"The ability to **get work done faster** will pretty much **deliver an ROI**."

"**Smoother process** and collaboration, while **easing compliance concerns**."

"We will be able to make **business apps for customers**."

"If you make a bespoke service app, you have **better control of information** and how it will be processed."
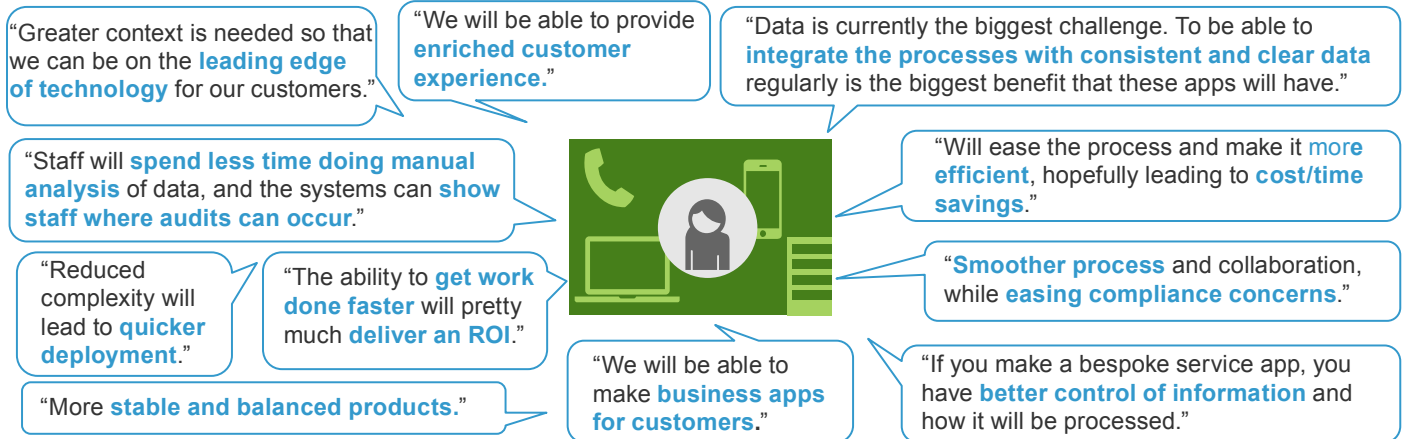
"More **stable and balanced products.**"

Base: IT decision-makers at the director level and above in the US and the UK

Source: A commissioned study conducted by Forrester Consulting on behalf of Alfresco, April 2016

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Key Recommendations

As IT leaders build upon their organizations' digital business capabilities in the age of the customer, they must recognize the pivotal role that employees play in delivering superior customer experiences and, in turn, the role that employee-focused technologies play in creating more productive, agile enterprises. Bolt-on digital initiatives and legacy technologies perpetuate application silos that create barriers for efficiently completing work tasks. IT leaders will seek technologies that eliminate these silos in order to deliver the right information to the right person within the right application environment at the right time. Firms looking to drive their businesses forward with digitally driven content and processes should consider the following recommendations:

› **Mine your landscape of unstructured content to deepen contextual awareness.** The best way to increase contextual awareness for employees is to identify the sources of unstructured content that drive decisions connected to winning, serving, and retaining customers. Take time to survey employees to gain insight into where untamed content and business processes hide, and to also understand which processes are most affected by siloed and hidden content. If available, use analytics to dig into existing content and process platforms and uncover patterns of work and communications, such as how documents are used, by whom, and for which tasks.

› **Tear down artificial barriers between content and process with a single platform.** For years, technology management leaders have approached BPM and content management as distinctly different software domains, requiring distinct and separate disciplines. This separation is no longer sustainable, since digital business blurs the lines between process and content. To succeed with digital business, technology management leaders will need to evaluate and invest in solutions that merge process and content into a single platform.

› **Simplify content integration across end-to-end business processes.** To deliver contextual awareness, IT leaders will need to integrate a wide range of structured and unstructured content across different business processes and systems. This level of integration will present the greatest challenge for building context-driven business applications. IT leaders will need to adopt platforms that expose content sources in simple ways and that can be configured and embedded in applications without the need for significant custom coding.

› **Create a business case that accounts for direct employee benefits and downstream customer benefits.** As our survey revealed, organizations can alleviate pain points and boost productivity by selecting technologies that deliver greater contextual awareness to employees. However, these internal benefits ultimately empower employees with the resources to better win, serve, and retain customers. In creating a business case for process and content platforms, remember to account for business benefits from improved customer service — such as increased satisfaction, higher retention, and repeat business — rather than relying on productivity metrics alone.

› **Extend the benefits of context across all digital channels.** Contextual awareness can shorten the time it takes employees to move from insight to action. However, this same contextual awareness can be extended to improve decision speed for partners, customers, and employees in the field. Technology management leaders will need to invest in solutions that simplify extending context to custom web and mobile applications that cut across multiple channels.

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Appendix A: Methodology

In this study, Forrester conducted an online survey of 158 respondents at financial services and insurance, government, healthcare, and retail firms in the US and the UK to evaluate evolving needs for technologies to support enterprise content and business processes. Survey participants included decision-makers in IT roles that hold director-level or above positions related to application development and delivery, enterprise architecture, or information architecture. Questions provided to the participants asked about current technologies and tools for executing day-to-day processes and managing enterprise content, pain points that arise when executing core business processes, and potential benefits of process and content platforms. Respondents were offered a small incentive as a thank you for time spent on the survey. The study was completed in April 2016.
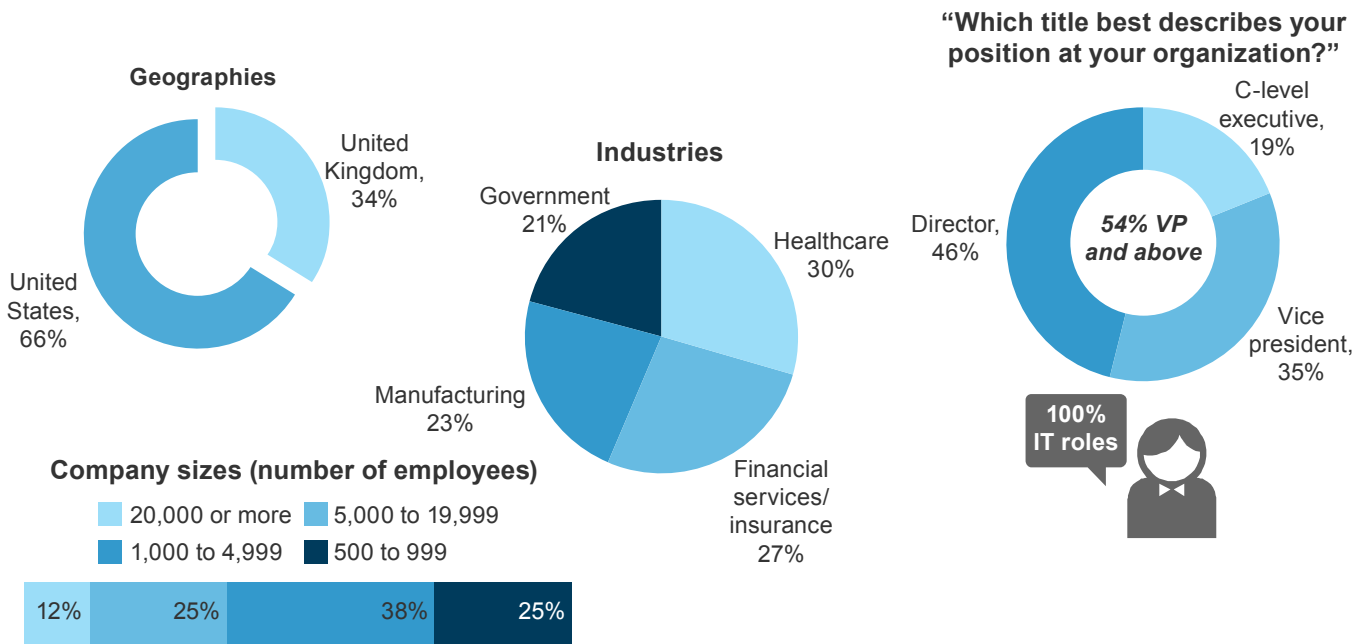
Appendix B: Supplemental Material

RELATED FORRESTER RESEARCH

"The Digital Business Imperative," Forrester Research, Inc., December 7, 2015

"Future Look: BPM Programs Shift Gears To Accelerate Digital Transformation," Forrester Research, Inc., May 2, 2016

Appendix C: Demographics/Data

FIGURE 11
Respondent And Company Details

Geographies
- United Kingdom, 34%
- United States, 66%

Company sizes (number of employees)
- 20,000 or more
- 5,000 to 19,999
- 1,000 to 4,999
- 500 to 999

| 12% | 25% | 38% | 25% |

Industries
- Government 21%
- Healthcare 30%
- Financial services/ insurance 27%
- Manufacturing 23%

"Which title best describes your position at your organization?"
- C-level executive, 19%
- Director, 46%
- Vice president, 35%

54% VP and above

100% IT roles

Base: 158 IT decision-makers at the director level and above in the US and the UK

(percentages may not total 100 because of rounding)

Source: A commissioned study conducted by Forrester Consulting on behalf of Alfresco, April 2016

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Appendix D: Endnotes

[1] Source: "Digital Predator Or Digital Prey?" Forrester Research, Inc., March 3, 2015.

[2] Forrester defines digital businesses as those that win, serve, and retain customers by continuously creating and exploiting digital assets to simultaneously deliver new sources of customer value and increase their operational agility.

[3] Source: "Craft Your Digital Vision," Forrester Research, Inc., February 9, 2016.