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Business Value Highlights

379%
three-year ROI

13 months
to payback

63%
faster delivery of new forms/documents

56%
faster updates to existing forms/documents

64%
higher productivity for teams authoring forms/documents

61%
faster onboarding of new customers

20%
lower customer form abandonment rate

The Business Value of Adobe Experience Manager Forms

EXECUTIVE SUMMARY

Few aspects of digital transformation have as much impact on overall workforce productivity and customer satisfaction as streamlining, simplifying, and automating the design, management, deployment, and tracking of forms and documents. Forms have long been the de facto standard for gathering information from people, whether employees or customers.

But the drive for both data and control of processes has caused forms to multiply. And multiply. And multiply. For many, form overload has become a symbol of red tape and laborious bureaucracy.

The combination of robust digital form offerings, simple user interfaces and mobile deployment has the potential to address these challenges. Smooth integration with workflow and productivity applications have given the enterprise opportunities to automate and manage processes in ways that were previously not possible.

IDC spoke with organizations that are using Adobe Experience Manager Forms (AEM Forms) to create, deliver, manage, and update digital forms and documents. These study participants have leveraged AEM Forms to better engage users and customers as well as execute their business strategies more efficiently and effectively. They are realizing strong value with AEM Forms, which IDC quantifies at an annual average value of \$242,300 per 100,000 forms and documents submitted per year, by:

- Delivering a more uniform, robust, and user-friendly form and document experience
- Increasing mobile and self-service use rates for forms and documents, which in turn contributes to higher form and document completion rates and results in higher revenue

- Reducing the amount of time employees must spend handling data collected through forms and documents
- Improving productivity for teams that author and deliver digital forms and documents

SITUATION OVERVIEW

Forms have remained a complicated and complex business process element, requiring a great deal of human effort to control, design, deploy, manage, collect, and interpret. Agencies, firms, and organizations often have dozens, hundreds, or even thousands of forms, many of which contain redundant fields or information, and yet require a new answer each time. It is true that a great deal of progress has been made in the capture and digitization of completed forms — advanced image and text recognition software, automated extraction, and indexing — but little has been done to alleviate the redundancy in human effort that arises in forms management and completion from either the knowledge worker or the applicant/customer perspective.

Today, the very best forms engines and platforms directly address these issues, making it much easier for forms creators to update, reuse, and redeploy forms; to measure and analyze forms response rates; and to iterate forms design based on results. This leads to much more efficient and effective forms use and can create a far better customer experience.

Improving Customer Experience

Few areas of customer experience are as time consuming, error prone, and subject to abandonment as forms. Few things are as irritating as asking a customer to fill in basic information over and over on multiple forms. Rightly or not, the modern customer expects a smooth, intuitive and efficient experience when it comes to dealing with a business, government agency, or organization. Yet, too often, the customer is disappointed and frustrated by the manual, redundant reality of these interactions.

Modern forms platforms address these issues by allowing data connections for prefilling forms, making them available on a variety of devices, and automating the process of ingesting the collected data into systems of record. At a minimum, this requires capabilities for effective web deployment and mobile device support (preferably including industry-specific hardware such as signature pads), real-time data connections to multiple data sources, and the ability to reuse form components that can streamline the customer experience and reduce the time required for completion.



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While improving customer experience is a major benefit of modernizing the forms platform, the customer is not the only beneficiary. In general, the business user and enterprise benefit significantly.

Reducing Cost, Inefficiency, and Errors

While improving customer experience is a major benefit of modernizing the forms platform, the customer is not the only beneficiary. In general, the business user and enterprise benefit significantly. The easier a form is to complete, the less likely the customer is to make an error and, in the case of voluntary forms, to abandon the effort. This leads to increased accuracy and customer satisfaction for the enterprise.

The more a form, or form components, can be reused, the less labor is required to design and create forms, which eases the forms management and deployment processes. And the easier it is to reuse form components, the easier it is to rationalize and reduce the overall forms inventory.

Further, by submitting data from digital forms directly to back-end systems for straight-through processing, organizations also reduce the often lengthy manual workflows required to process customer onboarding.

When combined, these improvements lead to improved efficiency, less time spent on data validation or error correction, simplified process flow, and a lower cost for the enterprise.

3rd Platform Technologies: The Benefit of AI/ML, Cloud Services, and Data Integrations

The future of forms platforms holds a lot of promise as modern technologies such as artificial intelligence (AI), machine learning (ML), A/B testing, and data integrations to third-party sources become more readily available. The work being done by major cloud vendors on image and text recognition is significant and stands to make high-quality forms conversion, data extraction, and recognition available on a much wider basis.

In addition, the market for third-party data services is expanding rapidly and, while third-party data has limited use today and is subject to varying levels of regulation, there are significant opportunities for the use of legitimate third-party data to improve the customer and knowledge worker interactions in the course of business processes.

ADOBE EXPERIENCE MANAGER FORMS

Overview

Adobe Experience Manager Forms is an enterprise-grade form and document management system which is part of the Adobe Experience Cloud suite of offerings. It provides form and document design and management, form rationalization and reuse, and omni-channel deployment. AEM Forms also provides robust form analytics and optimization as well as workflow and process integration.

With AEM Forms, organizations can author web and mobile-responsive forms and documents via a create once, publish everywhere experience. While AEM Forms can be used for simple, transaction-based interactions, it can also be used to simplify and streamline the complex transactions seen in regulated industries and government services. Typical use cases are customer enrollment and onboarding, employee onboarding, customer service, and customer communications. The product includes workflow capabilities, which support the automated progression of forms-based processes from one individual to another, and a field worker mobile app that allows employees in the field to access and complete forms as well as capture data in scenarios such as remote enrollment, sales, and service calls. Further, AEM Forms has robust customer communications management capabilities, including the ability to efficiently output documents to print and web channels by merging communication templates with data.

The product supports reusable components, called fragments, which simplify the creation and optimization of forms and documents by users, and provides a variety of reusable themes and components out of the box. Design and deployment are done through a visual, drag-and-drop user interface to minimize IT involvement, and integrations with products such as Adobe Sign, Adobe Analytics, and Adobe Target are provided.

Adobe's adaptive form technology can be integrated with optimization tools, which allow users to A/B test multiple form versions (on web and mobile devices) after deployment. This can be extremely useful in determining problem areas and assessing changes for forms optimization and personalization.

The product can be deployed on-premise or in Adobe's managed cloud. The managed cloud offering is compliant with FedRAMP, HIPAA, and the Gramm–Leach–Bliley Act for safeguarding sensitive data.



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Customer Experience: Multichannel, Adaptive, and Mobile

Once forms have been properly designed and appropriate data models put in place, AEM Forms provides the customer (or, in appropriate cases, the field/branch agent) with a simplified experience regardless of the viewing device. Forms design is responsive — it will adapt to small and large screens without user intervention — and adaptive, meaning that forms dynamically change based on real-time user input.

Users get a visually similar experience even if they switch devices, common fields can be prefilled based on existing customer data, and once a form is submitted, the data in the form can be retained to prefill additional forms.

The product can also be linked to first-party data sources — such as CRM, ERP, and commonweb services — to provide additional data validation and support for preemptive field completion.



AEM Forms allows business users to design forms, documents, and workflows without coding, programming, or scripting knowledge.



Fields can be added to forms through a clean, drag-and-drop user interface, and characteristics such as field properties and data validation can be similarly selected.

Business User Experience

AEM Forms allows business users to design forms, documents, and workflows without coding, programming, or scripting knowledge. Documents and forms can be effectively styled for print, web, and mobile deployment without HTML or CSS knowledge. Fields can be added to forms through a clean, drag-and-drop user interface, and characteristics such as field properties and data validation can be similarly selected.

Business logic can also be defined — from simple show/hide logic to more complex rules and scripts — without requiring the user to write scripting code. If, however, the user wants to use advanced scripting logic, this is also allowed. Logic can be used to automatically generate required documents of record based on the submitted data, eliminating manual steps for composition.

In addition, forms creators can — with a single click — assign the form to the field worker app. This makes it available for offline use to field agents, branch agents, and others who may need to collect data in an offline environment. Once the user is connected, the app will upload the form data and kick off the proper workflow sequence.

The interactive editor allows users to design once and publish anywhere. If a user creates a print document and later decides that a web or mobile version is needed, the interactive synchronization feature offers a simple process for autogenerating the additional channels.

Analytics, A/B Testing, and Optimization

Form analytics can be easily enabled to measure usage. Overall usage data — such as whether the form is being viewed on a browser or mobile device and which operating system is being used — as well as field-level data can be collected. This is especially useful for assessing the time spent on a particular field, what was entered, and other information that can assist in determining how/when a user abandons a form or gets stuck. Multiple variations of a form can be deployed and tested against each other — A/B testing — to aid in determining overall usability and optimization.

Artificial Intelligence and Automated Conversion

Adobe Sensei is the extensible artificial intelligence and machine learning framework of Adobe Cloud Platform, and AEM Forms uses Sensei for the conversion of existing paper-based forms. Sensei provides text, data and form recognition technology that can rapidly transform legacy forms into modern digital formats. Once in this digital format, optimizations such as form analytics, branding and styling, and design best practices can be easily applied to quickly modernize entire form collections for organizations.



One of the most important aspects of effectively using AEM Forms is the ease with which it can be connected to other business systems.



Once the log-in is established, the data entities, structures, and capabilities are available in the AEM Forms visual interface. The integration is smooth and seamless and is available for use in forms and documents.

Integration with Business Systems

One of the most important aspects of effectively using AEM Forms is the ease with which it can be connected to other business systems. While legacy systems — such as the 1980s-era COBOL mainframes still running in some companies — will require IT involvement, connecting with modern business applications such as Microsoft Dynamics and Salesforce is as simple as entering your log-in credentials. Once the log-in is established, the data entities, structures, and capabilities are available in the AEM Forms visual interface. The integration is smooth and seamless and is available for use in forms and documents.

In addition, AEM Forms Data Integration allows users to configure and connect to disparate data sources. The following are supported out of the box (however, with customization, other data sources can be integrated as well):

- Relational databases — MySQL, Microsoft SQL Server, IBM DB2, and Oracle RDBMS
- AEM user profile
- RESTful web services



The ease with which modern business systems can be connected — and with which business users can quickly build complex data models — will significantly reduce an often labor-intensive effort.

- SOAP-based web services
- OData services

Rapid Time to Value

The combination of interactive, create once/publish anywhere editing; analytics and data integrations; out-of-the-box templates and themes; and low-code/no-code deployment and management of forms offers a solid platform for companies in search of a robust solution for reengineering their forms- and documents-centric business processes. IT involvement will still be required by firms that need to integrate legacy systems, but the ease with which modern business systems can be connected — and with which business users can quickly build complex data models — will significantly reduce an often labor-intensive effort.

THE BUSINESS VALUE OF AEM FORMS

Study Demographics and Use of AEM Forms

IDC conducted in-depth interviews with seven organizations using AEM Forms to create, deliver, and manage digital forms and documents (see Table 1). These organizations were generally large organizations, with an average employee size of 26,929 (20,000 median) and average annual revenue of \$22.7 billion (\$15.0 billion median). This worldwide customer sample is using AEM Forms to support substantial digital form and document environments. On average, they have just under 1,000 digital forms and documents (998 on average) and process 2.24 million forms and documents per year. Overall, their use of digital forms and documents is weighted toward customer facing, although they also support substantial use of digital forms and documents by employees.

TABLE 1 Demographics of and Use of AEM Forms by Interviewed Organizations

	Average
Number of employees	26,929
Annual revenue	\$22.7 billion
Number of forms and documents in total	998
Number for customer use	627
Number for partner use	148
Number for employee use	274
Number of forms and documents submitted per year	2.24 million
Number for customer use	1.24 million
Number for partner use	150,250
Number for employee use	850,200
Countries	United States, Canada, Switzerland, United Kingdom, South Africa, India, and Australia
Industries	Financial services (4), government (2), and insurance (1)

n=7 Source: IDC, 2018



“AEM Forms became a part of our digitization strategy ... We did an analysis of the account-opening process and discovered that there were about 30-odd physical processes ... There was a huge need to minimize this process and do it quickly to benefit from getting more new customers.”

Interviewed Adobe customers moved to AEM Forms after concluding that their approaches to building, delivering, and managing forms no longer met business demand. They cited various drivers for selecting AEM Forms, with themes such as customization and digitization figuring prominently:

- Ability to customize forms and documents:** *“We have high volumes of customized forms that use a template environment. We have a standard form and perhaps 500 customized forms based on it ... When we needed to make a content change in our old environment, we had to make it on every single form. One of the key reasons we bought the AEM Forms platform was the ability to utilize fragments across multiple forms.”*
- Ability to bring forms and documents into broader digitization initiatives:** *“AEM Forms became a part of our digitization strategy ... We did an analysis of the account-opening process and discovered that there were about 30-odd physical processes ... There was a huge need to minimize this process and do it quickly to benefit from getting more new customers.”*



Study participants explained that AEM Forms enables them to better support their business operations with timely and highly functional digital forms and documents. They reported that users — both employees and customers — enjoy a more streamlined, digitized experience on the AEM Forms platform.

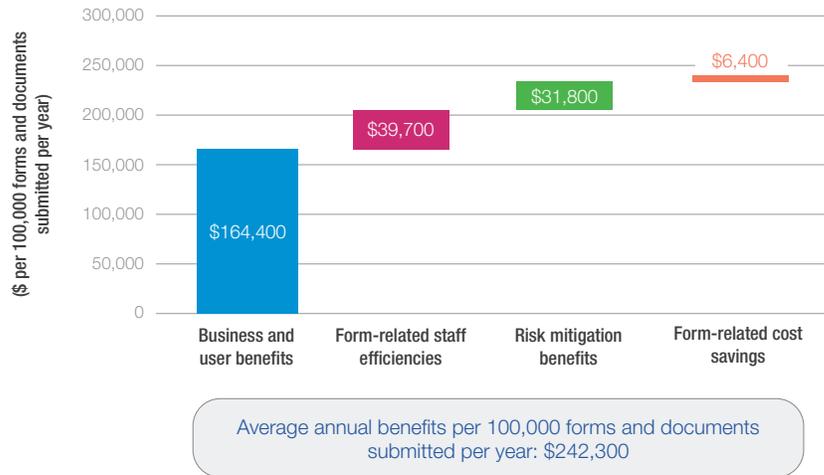
Study participants reported deploying AEM Forms to replace a mix of less robust vendor solutions, enterprise collaboration tools being used for forms and documents, and manual processes. All interviewed organizations said they are running AEM Forms with on-premise infrastructure, and several organizations mentioned integrating AEM Forms with other Adobe products, including Adobe Target and other Adobe content management solutions.

Quantifying the Business Value of AEM Forms

Study participants explained that AEM Forms enables them to better support their business operations with timely and highly functional digital forms and documents. They reported that users — both employees and customers — enjoy a more streamlined, digitized experience on the AEM Forms platform. Further, they establish a virtuous cycle in which they create and deliver better performing and more timely digital forms and documents. Based on analysis of the study participants' experiences with AEM Forms, IDC puts the average value that these Adobe customers will achieve at \$242,300 per 100,000 forms and documents submitted per year (\$5.42 million per organization) in the following areas (see Figure 1):

- Business and user benefits.** Study participants leverage higher quality and more functional forms and documents to increase user engagement, which results in higher completion rates and less staff time spent handling related information and data. IDC puts the value of related higher revenue and user time savings at an annual average of \$164,400 per 100,000 forms and documents submitted per year (\$3.68 million per organization).
- Form-related staff efficiencies.** Teams responsible for creating new forms and documents and making changes to existing forms and documents are significantly more efficient using the Adobe platform, and less staff time is needed to handle form- and document-related errors. IDC quantifies these staff time savings and productivity gains at an annual average of \$39,700 per 100,000 forms and documents submitted per year (\$0.89 million per organization).
- Risk mitigation benefits.** Study participants reduce the frequency of form- and document-related outages and enable more efficient compliance activities. IDC calculates the value of these staff efficiencies at an annual average of \$31,800 per 100,000 forms and documents submitted per year (\$0.71 million per organization).
- Form-related cost savings.** Interviewed organizations reported rationalizing their form and document collections on the Adobe platform and reducing spend on other tools and costs such as paper and printing materials. IDC calculates that they will save an average of \$6,400 per 100,000 forms and documents submitted per year (\$0.14 million per organization).

FIGURE 1 Average Annual Benefits per 100,000 Forms and Documents Submitted per Year



Source: IDC, 2018



The impact of AEM Forms has been substantial for study participants: They are providing an improved experience for customers and other external users of their form and document collections, which leads to lower form abandonment rates and often higher revenue.

Enabling the Business Through Forms and Documents

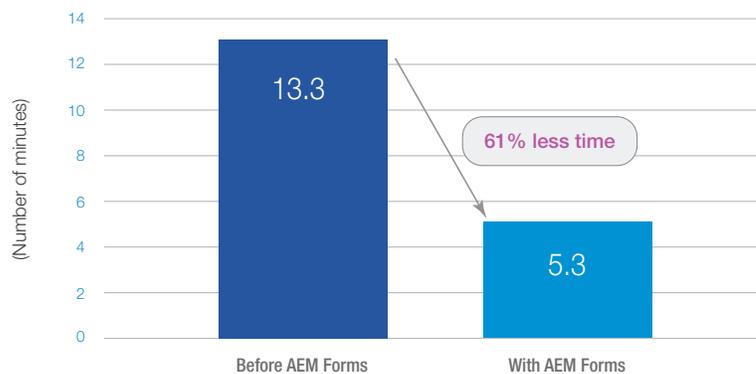
Study participants reported that they have leveraged the AEM Forms platform to provide a more consistent and functional experience to employees and customers using their form and document collections. These forms and documents are often either a first means of interacting with a potential customer or a conduit for collecting and then applying critical customer data and information. The impact of AEM Forms has been substantial for study participants: They are providing an improved experience for customers and other external users of their form and document collections, which leads to lower form abandonment rates and often higher revenue. In doing so, they are also realizing operational efficiencies by saving significant amounts of time for staff who work with forms and documents.

Improving the User Experience Through Better Performance and Access

Study participants are delivering a streamlined and improved user experience for their form and document collections with AEM Forms. The ability of customers and employees to access high-quality and user-friendly forms and documents resonates across their businesses. Needing to complete a clunky form leaves a bad impression on a customer and can lead to lower completion rates while employees struggle to convert data from inefficient forms and documents into actionable information.

Study participants have made substantial strides in providing more accessible, user-friendly forms and documents, which is reflected in key metrics surrounding form and document use. As an initial matter, users require 61% less time to complete forms and documents (13 minutes reduced to 5 minutes on average), reflecting a streamlined user experience (see Figure 2). Not surprisingly, speeding up the completion process eases user frustration, a key contributor to 20% lower form abandonment rates (dropping from 69% to 55% on average), as shown in Figure 3.

FIGURE 2 Impact on Time for User Completion of Forms and Documents



Source: IDC, 2018

Study participants described how AEM Forms has created new behavioral patterns related to access to and use of forms and documents among their customers, partners, and employees:

- Greater use of digital forms:** *“We still have customers who print forms out and mail or email them. I think that about 50% still come in that way, but it was 90% before AEM Forms.”*
- More self-service access and use:** *“We offer more processes for self-service with AEM Forms. For example, we didn’t previously offer self-service for payment processes ... I would say that 5–10% of employees used digital forms before, and it’s now close to 30% with AEM Forms.”*

Study participants also explained that AEM Forms has changed how customers and employees access and complete forms and documents. By digitizing their form and document collections and giving more agency to users through mobile enablement (100% more forms and documents submitted via mobile devices) and self-service access (113% increase in self-service access), they have provided users with quality and choice in how to access and use forms and documents (see Figure 3).



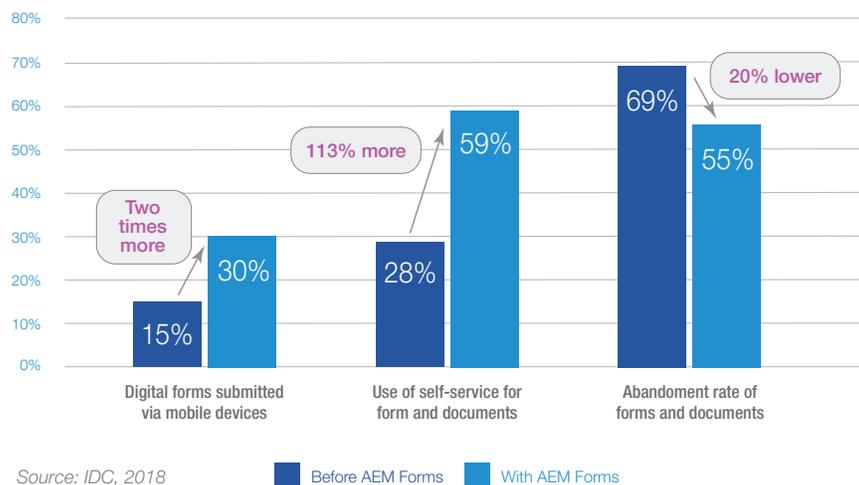
“We offer more processes for self-service with AEM Forms. For example, we didn’t previously offer self-service for payment processes ... I would say that 5–10% of employees used digital forms before, and it’s now close to 30% with AEM Forms.”



“AEM Forms is more user-friendly, and we are also more capable of improving user experiences, so our conversion rates have changed quite dramatically. Previously, we had a loss of nearly 70% through the process, and now it’s 30–40% ... We measured the revenue loss we’re avoiding at hundreds of thousands of dollars, and I would say half of that is related to AEM Forms.”

For customers and external users, this ensures a more optimized experience. An agent at a leading U.S. financial institution who accesses and uses databases on governmental websites on a daily basis praised the forms and documents on one governmental agency’s website that uses AEM Forms: *“Out of all of the sites that I use, their forms and documents are the most intuitive and user-friendly.”* An improved customer experience with forms and documents can lead to improved business results. One Adobe customer described the business impact of higher form completion rates: *“AEM Forms is more user-friendly, and we are also more capable of improving user experiences, so our conversion rates have changed quite dramatically. Previously, we had a loss of nearly 70% through the process, and now it’s 30–40% ... We measured the revenue loss we’re avoiding at hundreds of thousands of dollars, and I would say half of that is related to AEM Forms.”*

FIGURE 3 Impact on Access to Forms and Documents



Improving the Quality of Form and Document Collections

Study participants have also improved the quality of the form and document collections, as reflected in fewer errors and outages that impact users and their businesses. This means that teams responsible for supporting these environments spend less time addressing errors and outages impacting their forms and documents platforms and collections while business operations face fewer interruptions (see Table 2). Study participants reported reducing the amount of lost productive time by an average of 96% to these types of outages with AEM Forms. From a customer-facing perspective, ensuring high availability and strong performance of form and document collections means a better user experience and contributes to the improved metrics and business results discussed elsewhere in this white paper.

TABLE 2 Impact on Form and Document Quality

	Before AEM Forms	With AEM Forms	Difference	Benefit (%)
Form-Related Errors				
Frequency of forms and document platform-related errors per week	1.1	0.9	0.2	21
Development life cycle (weeks)	22.1	7.5	14.6	66
Form-Related Unplanned Outages				
Frequency of outages per year	8.6	7.0	1.6	19
Mean time to repair (MTTR)	23.3	9.3	13.9	60
Lost productivity per organization per year (FTEs)	2.7	0.1	2.6	96

Source: IDC, 2018



Significant numbers of employees across these organizations whose work involves handling data collected by forms and documents save time. From a business perspective, study participants capture more revenue when more functional and digital forms and documents support their business initiatives.

Generating Value Through User Enablement and Higher Revenues

The result of providing customers and employees with a more timely and robust user experience for their form and document collection is business and operational enablement. Significant numbers of employees across these organizations whose work involves handling data collected by forms and documents save time. From a business perspective, study participants capture more revenue when more functional and digital forms and documents support their business initiatives. As Table 3 shows, the benefits are substantial: time savings and productivity gains for employees that have strong value (2.2 FTEs of productive time saved/gained per 100,000 forms and documents submitted per year), more efficient form- and document-related compliance efforts (0.3 FTEs of productive time saved/gained per 100,000 forms and documents submitted per year), and increased revenue (\$77,100 of higher revenue per 100,000 forms and documents submitted per year).

TABLE 3 User and Business Operations Impact

	Per Organization	Per 100,000 Forms and Documents Submitted per Year
User Productivity Impact		
Impact of higher productivity (FTEs)	48.8	2.2
Value of time savings/higher productivity per year	\$3.42 million	\$152,900
Compliance Team Impact		
Impact of higher productivity (FTEs)	7.5	0.3
Value of time savings/higher productivity per year	\$524,200	\$23,400
Revenue Impact		
Gross additional revenue per year	\$1.73 million	\$77,100
Net additional revenue* per year	\$258,800	\$11,600

* IDC applies a 15% operating margin assumption to all revenue benefits for purposes of quantifying revenue for the IDC Business Value model created to support this study.

Source: IDC, 2018



“Previously, our customers and our team had to use paper-based forms, which was very lengthy and time consuming. This meant we were doing a lot of unnecessary data collection. This was one of the significant problems that we faced, and that’s why we decided to move to a digital form solution with AEM Forms.”

Employee Time Savings and Efficiencies

By improving the quality and functionality of their collections with AEM Forms, study participants have streamlined processes associated with form and document submission and use. This includes not only the time employees must spend completing and submitting forms and documents but also the time spent supporting and handling the collected information and data. Given the importance of such information, these efficiencies are significant for most interviewed organizations. They provided examples of how employees across their organizations benefit from the AEM Forms platform:

- **Benefits of digitization and platform capabilities:** *“We have people who manually process forms, and they don’t have to do as much now with AEM Forms because more forms are digitized, and they can browse electronically. I’d say that about 1,000 people are saving time because of this — probably a couple hours each month.”*
- **Streamlining data collection:** *“Previously, our customers and our team had to use paper-based forms, which was very lengthy and time consuming. This meant we were doing a lot of unnecessary data collection. This was one of the significant problems that we faced, and that’s why we decided to move to a digital form solution with AEM Forms.”*



“We can now onboard a new customer in one to two days with AEM Forms compared with three to four days previously ... We’ve gained over a million dollars in additional revenue because it’s easier to use and we can do customer onboarding much faster.”



“AEM Forms has allowed us to make changes on the fly, and our time to market has been massively reduced. It’s also given us the ability to reach a wider market by connecting with customers via mobile devices.”

- **Time savings on data validation:** *“We have many staff members who no longer have to requalify information because it’s prevalidated. They were probably spending 30% of their time doing this ... Our compliance team is also benefiting because we don’t get any submissions unless they are already compliant. That team is doing other work now instead of only worrying about the forms.”*

Generating Higher Revenue

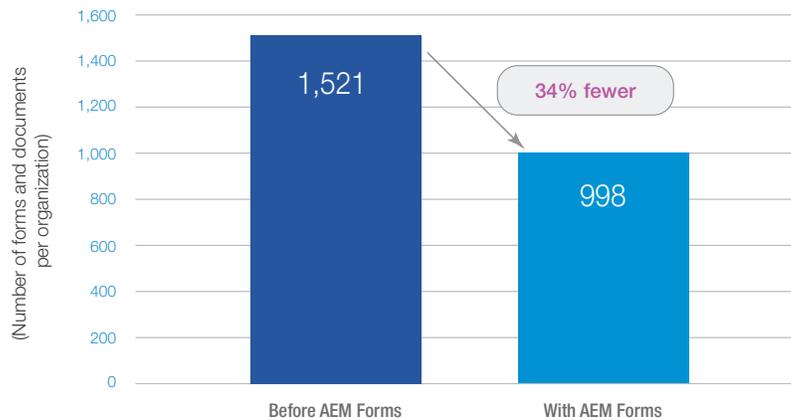
Study participants are also converting improved user experience into higher revenue. With AEM Forms, they can win business that was previously missed because of friction created by their form and document collections. Study participants provided examples of how AEM Forms has enabled them to generate more revenue, including:

- **Onboarding new customers faster and recognizing revenue earlier:** Study participants complete form- and document-related customer onboarding activities 61% faster with AEM Forms (going from 3.4 days to 1.3 days on average). This ensures a smoother initial customer experience and can help Adobe customers begin to recognize revenue sooner. One Adobe customer explained: *“We can now onboard a new customer in one to two days with AEM Forms compared with three to four days previously ... We’ve gained over a million dollars in additional revenue because it’s easier to use and we can do customer onboarding much faster.”*
- **Higher form and document completion rates:** Interviewed organizations rely on forms and documents as a key component of winning new customers. This means that they can lose potential new business when a poor user experience or errors lead a prospect to abandon completion of a form or a document. One study participant commented on the business impact of higher form and document completion rates with AEM Forms: *“We’ve seen an uptake of about 50% in form completion, so the revenue impact is probably about \$5-8 million per year.”*
- **Agility to match forms and documents to business demand:** Efficiencies in the creation and delivery of new and updated forms and documents help study participants ensure that they can match business demand. One Adobe customer said: *“AEM Forms has allowed us to make changes on the fly, and our time to market has been massively reduced. It’s also given us the ability to reach a wider market by connecting with customers via mobile devices.”*

Rationalizing Form and Document Collections

Moving to the AEM Forms platform has helped study participants rationalize their form and document collections. With AEM Forms, they streamline collections by minimizing overlapping and outdated forms and documents. One study participant explained that before the move to AEM Forms, a separate “lead form” was required for every type of business lead, but a single common form can now handle all of these user interactions. Consolidation of form and document environments generates efficiencies because Adobe customers no longer require staff time to manage, update, and support bloated collections. Further, they provide a more unified and updated user experience by focusing on the forms and documents essential to their businesses. Interviewed Adobe customers reported rationalizing their form and document collections by more than one-third (34%), moving from an average of more than 1,500 unique forms and documents to fewer than 1,000 forms and documents (see Figure 4).

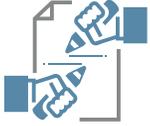
FIGURE 4 Impact on Form and Document Rationalization



Source: IDC, 2018

Creating and Delivering Functional and Timely Forms and Documents

Study participants rely on their customers and employees having access to high-performing forms and documents. They use forms and documents on the AEM Forms platform to carry out processes most essential to their businesses and missions as follows:



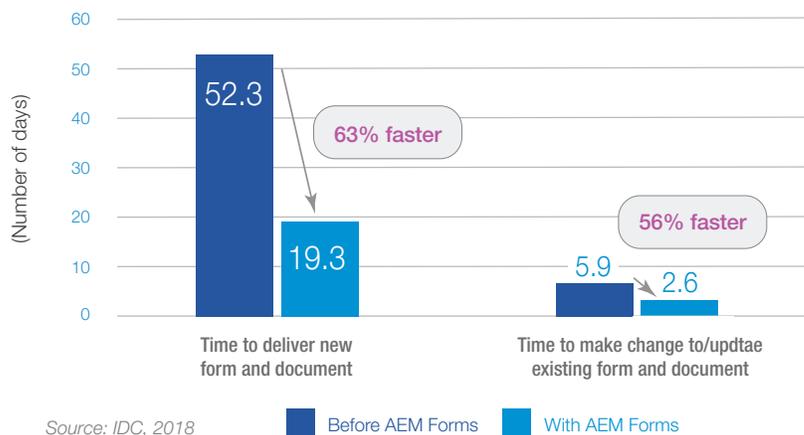
“It’s faster to create new forms with fragments using AEM Forms. We have object and code libraries, and you can repurpose code and not just content. That’s very helpful in document development because we have a standards document. Every posted field uses this code and content and can be repurposed across form sets.”

- **The financial services organizations** use forms and documents to onboard new customers and accept applications for loans and other financial products.
- **The insurance company** uses forms and documents to process claims and to support its sales efforts.
- **The governmental organization** provides forms and documents to constituents to complete mandated tasks.

Study participants reported increasing the velocity at which they create and deliver new forms and documents and add features to existing ones. They cited specific capabilities of AEM Forms that speed up the cadence of their creation and delivery of forms and documents. One study participant explained the value of using fragments: *“It’s faster to create new forms with fragments using AEM Forms. We have object and code libraries, and you can repurpose code and not just content. That’s very helpful in document development because we have a standards document. Every posted field uses this code and content and can be repurposed across form sets.”*

Study participants require substantially less time to develop new forms and documents and make changes to existing forms and documents with AEM Forms. One interviewed organization’s experiences were representative: *“Before AEM Forms, we needed an average of two to three months to deliver a new form. Now, with AEM Forms, it takes three weeks for more complex forms, and the easy forms are delivered within one business day.”* Figure 5 shows that study participants have lowered the amount of time required to deliver a new form and document by an average of 63% (10 weeks to 4 weeks) and to implement changes to an existing form and document by 56% (5.9 days to 2.6 days).

FIGURE 5 Impact on Development of/Changes to Forms and Documents



Source: IDC, 2018



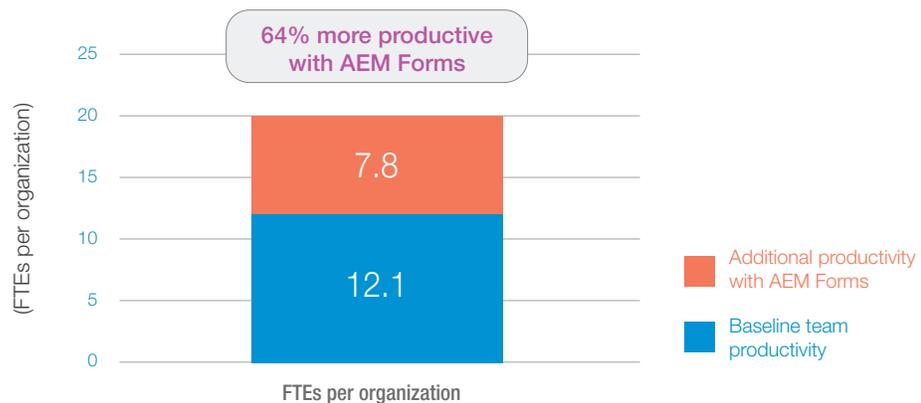
“We save time on the creation of forms and documents with AEM Forms because it’s a drag-and-drop tool, so we don’t have to test and deploy everything. We have the same number of developers, but the time to market is different. In terms of productivity, I think this team is 50% more productive.”

Teams responsible for development activities are significantly more effective on the AEM Forms platform. Their increased productivity is reflected not only in faster creation and delivery but also in terms of providing more accessible and functional form and document collections. On average, interviewed Adobe customers reported a 64% productivity gain for development teams (see Figure 6).

Study participants provided numerous examples of how AEM Forms increases the efficiency of development teams and how these teams generate more value as a result:

- More efficient testing and deployment:** *“We save time on the creation of forms and documents with AEM Forms because it’s a drag-and-drop tool, so we don’t have to test and deploy everything. We have the same number of developers, but the time to market is different. In terms of productivity, I think this team is 50% more productive.”*
- Agility that supports faster delivery and higher functionality:** *“AEM Forms allows us to make changes to forms and documents on the fly and has massively reduced our time to market. It’s also allowed us to reach a wider market by connecting with customers via mobile devices.”*
- Ability to personalize:** *“We are currently starting with real personalization on our website with AEM Forms. This is part of the reason we chose it ... our whole personalization project and measures.”*

FIGURE 6 Impact on Form and Document Development Staff



Source: IDC, 2018

ROI Analysis

IDC based the ROI analysis on interviews with organizations that are using AEM Forms to support the creation, management, delivery, and updating of digital forms and documents. Based on these interviews, IDC has calculated the benefits and costs to these organizations of using AEM Forms. IDC used the following three-step method for conducting the ROI analysis:

1. Gathered quantitative benefit information during the interviews using a before and after assessment of the impact of AEM Forms. In this study, the benefits included staff efficiency and productivity benefits, increased revenue, and cost reductions.
2. Created a complete investment (three-year total cost analysis) profile based on the interviews. Investments go beyond the initial and annual costs of using AEM Forms and can include additional costs related to planning, consulting, migrations, and staff or user training.
3. Calculated the ROI and payback period. IDC conducted a depreciated cash flow analysis of the benefits and investments for the organizations' use of AEM Forms over a three-year period. ROI is the ratio of the net present value (NPV) and the discounted investment. The payback period is the point at which cumulative benefits equal the initial investment.

Table 4 provides the results of IDC's analysis of the benefits and investment costs for interviewed organizations in using AEM Forms. IDC projects that these Adobe customers will realize discounted benefits over three years with an average value of \$12.51 million per organization (\$559,500 per 100,000 forms and documents submitted per year) compared with a discounted investment of \$2.61 million per organization, which includes the cost of AEM Forms licensing, staff time costs required for implementation and migration, and any third-party support/consulting costs (\$116,800 per 100,000 forms and documents submitted per year). At this level of benefits and investment costs, study participants will realize an average three-year ROI of 379% and break even on their investment in AEM Forms on average in 13 months.



IDC projects that study participants will realize an average three-year ROI of 379% and break even on their investment in AEM Forms on average in 13 months.

TABLE 4 Three-Year ROI Analysis

	Per Organization	Per 100,000 Forms and Documents Submitted per Year
Benefit (discounted)	\$12.51 million	\$559,500
Investment (discounted)	\$2.61 million	\$116,800
Net present value (NPV)	\$9.90 million	\$442,700
Return on investment (ROI)	379%	379%
Payback period	13 months	13 months
Discount rate	12%	12%

Source: IDC, 2018

CHALLENGES AND OPPORTUNITIES

Today, Adobe's AEM Forms is primarily an on-premise solution that takes advantage of certain Adobe cloud services such as Adobe Sensei for forms conversion and Adobe Target for forms analysis. IDC research indicates that a significant number of organizations are actively pursuing cloud strategies and looking at ways to mitigate or eliminate their datacenter and infrastructure expenditures. In response, Adobe offers AEM Forms as a managed service, and this has become its primary deployment offering. The majority of Adobe's AEM Forms customers are running on-premise, but demand has grown for the fully managed offering. Some existing on-premise customers are now moving to Adobe's cloud offering. The opportunities for forms rationalization are significant but not without costs. Organizations should plan to invest both time and effort in understanding not only how their forms are used today but also how they ought to be used in the future. Tools such as Adobe Analytics can provide significant insight into how users respond to specific forms, but only the organization can make the strategic analysis of whether the right form is being used at the right time and in the right way.

The greatest opportunity is to revamp and streamline forms-intensive business processes and customer interactions. As this white paper has demonstrated, there are significant business benefits to deploying AEM Forms, but these businesses have invested the time and effort to understand the role of forms in the business, the impact of forms on customers, and the nature of the interaction between forms and the various business units and functions that rely on them.

While deploying a solution such as AEM Forms can have immediate and visible benefits, the maximum benefit will accrue only to organizations that take the time to integrate a forms and documents strategy into their overall business strategy. Thinking "customer first" and "process first" does not come naturally to those who have developed habits over years of doing things as they've always been done; often, the simple idea of change is enough to limit the potential progress. Change management is, and will continue to be, a challenge whenever fundamental change is desired, but true competitive advantage will be achieved only in cases where the underlying perspective of the business users is aligned with the new technology and inspires them to adapt and advance its use in a way that the organization could not have done before.



While deploying a solution such as AEM Forms can have immediate and visible benefits, the maximum benefit will accrue only to organizations that take the time to integrate a forms and documents strategy into their overall business strategy.



IDC's research for this study shows that organizations using the AEM Forms platform are realizing significant efficiencies while better supporting their businesses with their forms and documents collections.

CONCLUSION

Organizations have long relied on forms and documents to gather critical information from employees, customers, and partners. Forms and documents that function well and integrate well with broader business processes can be a competitive differentiator by offering a positive early interaction for customers and prospects, but organizations have often struggled to meet this standard, especially as the amount of data collected and processed has rapidly grown. This leaves many organizations with forms and documents collections that not only are costly to build, maintain, and update but also fail to deliver the necessary functionality. In recent years, the emergence of digital forms platforms that combine simple user interfaces, automation, and improved integration has offered organizations potential ways to address the challenges related to their forms and documents collections.

IDC's research for this study shows that organizations using the AEM Forms platform are realizing significant efficiencies while better supporting their businesses with their forms and documents collections. Improved user experience reflected in metrics such as lower abandonment and faster completion rates helps generate more revenue, whereas staff save significant amounts of time in collecting, handling, and processing data while onboarding customers and personalizing communications. Meanwhile, the AEM Forms platform enables faster delivery of new forms and documents and timely changes to existing forms and documents. Taken together, these results demonstrate the strong value that Adobe customers are achieving with AEM Forms, which IDC quantifies as having an average annual value of \$242,300 per 100,000 forms and documents submitted per year, which would mean a three-year ROI of 379%.

APPENDIX

IDC's standard ROI methodology was utilized for this project. This methodology is based on gathering data from organizations currently using AEM Forms as the foundation for the model. Based on interviews with study participants, IDC performs a three-step process to calculate the ROI and payback period:

- Measure the savings associated with using AEM Forms in terms of staff efficiency and productivity benefits related to the creation, management, delivery, and updating of digital forms and documents; increased revenue; and cost reductions.
- Ascertain the investment made in deploying and using AEM Forms.

- Project the costs and savings over a three-year period and calculate the ROI and payback for the deployed solution.

IDC bases the payback period and ROI calculations on a number of assumptions, which are summarized as follows:

- Time values are multiplied by burdened salary (salary + 28% for benefits and overhead) to quantify efficiency and productivity savings. For purposes of this analysis, IDC has used assumptions of an average fully loaded salary of \$100,000 per year for IT staff members and an average fully loaded salary of \$70,000 per year for non-IT staff members. IDC assumes that employees work 1,880 hours per year (47 weeks x 40 hours).
- The net present value of the three-year benefits is calculated by subtracting the amount that would have been realized by investing the original sum in an instrument yielding a 12% return to allow for the missed opportunity cost. This accounts for both the assumed cost of money and the assumed rate of return.

Further, because IT solutions require a deployment period, the full benefits of the solution are not available during deployment. To capture this reality, IDC prorates the benefits on a monthly basis and then subtracts the deployment time from the first-year savings.

Note: All numbers in this document may not be exact due to rounding.

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