

The ROI of Acrobat and PDF Document Management

About this Research

This report presents the findings of a research project conducted by Pfeiffer Consulting for Adobe, focusing on Acrobat for the enterprise. The main aim of the research was two-fold: to conduct technology analysis of key Acrobat services and technologies, and to measure the productivity gains in a variety of tasks to PDF-related document creation, editing and sharing.

Benchmarks were executed using *Pfeiffer Consulting's Methodology for Productivity Benchmarking*, which has been fine-tuned over more than a decade, and measures the time that experienced operators take to execute specific tasks. Please refer to the Methodology section on the last page of this document for more information.

About Acrobat Apps and Services

Acrobat apps and services combine PDF creation and editing with advanced tools for document management, form creation, redacting and document security. Combined, they allow users to access and work on documents on a variety of devices and platforms, including signing and tracking of documents, as well as automated document capture and processing using mobile devices or through integration with commonly used applications, such as Microsoft Office.

Benchmarks of 22 different workflow scenarios, with over 360 individual benchmark measures, showed that Acrobat is, on average, well over two times faster than using traditional methods for achieving the same results. (See chart below.)

Key Benchmark Results: Average of 22 Workflow Benchmarks

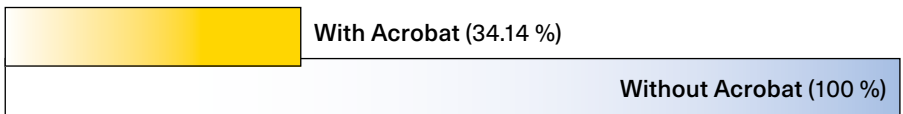


Chart based on the average of 22 different sets of workflow benchmarks.
A total of 360 individual benchmark measures were taken.
Reference value: Average time when working with other workflows. **Shorter is better.**

Executive Summary

- Acrobat, Document Cloud and associated apps and services **provide a robust platform for PDF-centric document management, collaboration and editing** on PC, mobile apps and through a full-featured web-client.
- This research covers **detailed technology analysis of Acrobat apps and services**, as well as in-depth **productivity benchmarks** of six distinct application areas and 22 workflow scenarios. **Over 360 individual benchmarks were executed.**
- Data from the benchmarks were used to establish **ROI projections based on productivity gains**, documenting the fact that the cumulative effect of small individual productivity gains **can result in thousands of pounds of ROI per year** and per user.

The Acrobat Document Management Hub

Connecting Targeted Services and Technologies

Since its first release over twenty-five years ago, Adobe Acrobat has evolved much more than a casual observer might suspect, and it is safe to say that the PDF format has profoundly changed the way we interact with documents. What is less obvious, however, is the way in which the underlying concepts have grown into a fully-fledged ecosystem of document-related technologies, by far exceeding the process of seamlessly encoding a variety of data-types into a secure, completely platform-agnostic format. This trend has been heightened by the increasingly important role that mobile devices play in our lives, which in turn has had a lasting impact on the needs of enterprises working with documents.

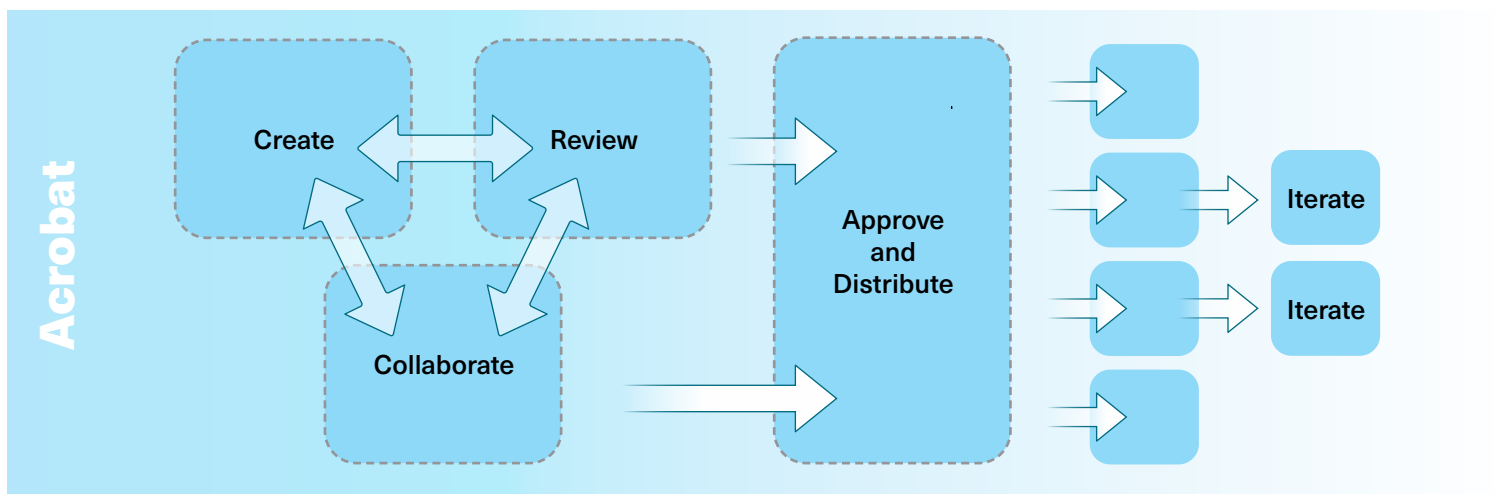
The Importance of Acrobat

The evolution of Acrobat tools and services is a reflection of this trend towards ever more complex document workflows. Clearly, Adobe realised several years ago that dealing with the intricacies of

Major Points

- Acrobat **provides a fully-fledged collaboration and document management platform**, that can be securely accessed from PCs, mobile apps and web browsers.
- In an enterprise environment where PDF files have become ubiquitous for document sharing, review and distribution, **Acrobat offers significant productivity advantages**, as benchmarks for this research show.

The Acrobat Document Life-Cycle



In an enterprise environment where PDF documents are increasingly central to the document life-cycle, Acrobat offers an integrated solution that covers creation, collaboration

and the review process from start to finish, including simplified document iteration before and after distribution.

modern PDF management goes well beyond the reach of a single application. It requires a robust, cloud-based document workflow and management infrastructure, as well as additional technologies, services and, increasingly important, mobile apps. By creating Acrobat apps and services, Adobe made it possible to securely work with PDF files, not only from within the Acrobat application for PC and Mac, but also from mobile platforms and web browsers which can be essential in collaborative processes such as reviewing, approving and signing documents.

The Question of Productivity

While applications such as Microsoft Office or Google Docs play an important role in the enterprise workflow and have a rich feature-set, there are many workflow situations where the features and services of Acrobat can provide a significant productivity boost. Take a simple example: the preparation of a document that has to include text files, spreadsheets, some images and parts of a slide presentation. In office software, this is a rather involved process at best. Acrobat, on the other hand, can combine all of these different documents in a single operation, producing a composite PDF file that can be edited and rearranged page by page – including editing text and adding or replacing images. Another good example is form creation; Acrobat can not only create forms automatically, based on an office template, it can even create a fillable form from a scanned original. (See sidebar.)

For this research, we have benchmarked a comprehensive set of workflow scenarios. The results underscore the productivity gains that Acrobat can provide in the enterprise. (For details, see section 4, page 8 and 9.)

Form Creation

Forms are an important part of the enterprise document ecosystem – but **creating and managing forms can be complex**, especially when it involves reproducing existing collateral, and the need to include calculations.

Acrobat streamlines the form creation process significantly, by automatically inserting and naming form fields based on a template; setting up calculations is extremely straightforward.

More importantly, while Acrobat can use text documents or PDF files as a starting point, it can also **automatically create a form based on a scanned original that would otherwise need to be recreated manually**.

Acrobat: Key Workflow Benefits

	Without Acrobat	With Acrobat
Document Management and Editing	<ul style="list-style-type: none">Combining several office documents into a single PDF is a complex multi-step process.Last minute changes to a distribution-ready document requires changing the original file.Office applications cannot access text in scanned documents.	<ul style="list-style-type: none">Acrobat can combine files in different formats into a single document in a single step.Pictures and text in distribution-ready PDF files can be directly modified up to the last minute.Acrobat can perform OCR on scanned documents, and replace text in the scanned file.
Form Creation	<ul style="list-style-type: none">No automatic form creation.Manual form creation is time-consuming.No form creation from scanned originals.	<ul style="list-style-type: none">Acrobat can create forms automatically.Automatic form creation from scanned originalsPowerful form creation and management tools.
Document Redaction	<ul style="list-style-type: none">No redaction tools.Redaction is a complex, multi-step process.No tools for removing embedded data.	<ul style="list-style-type: none">Powerful redaction tools.Redacted data is removed, not only hidden.Hidden metadata can be automatically erased.
Working with Web and Mobile Devices	<ul style="list-style-type: none">Accessing documents on a mobile device can be complex.Document sharing can be an issue.	<ul style="list-style-type: none">Acrobat allows accessing, editing, sharing and sending for signature of documents from PC, web browser and mobile devices.
Document Capture and Processing with Smartphone	<ul style="list-style-type: none">Scanning documents, such as receipts, with a smartphone is complex and time-consuming since each shot needs to be tweaked manually.	<ul style="list-style-type: none">Adobe Scan automatically straightens scanned documents, combines several photos into a multi-page PDF, and performs OCR on the file.

Acrobat integrates tightly with office productivity software, and can increase productivity significantly in a number of areas, such as document management, form creation, document

redaction, as well as document capture using the Adobe Scan app. Productivity gains can be significant. (See page 8 and 9.)

Acrobat: Advanced Document Features and Security

It's All About Streamlining Workflows

As far as general office data is concerned, the necessity of document management and the optimisation of related processes has been apparent for many years. PDF files, on the other hand, have long been perceived as the standard for document exchange for most organisations globally, yet the role they play in the enterprise has evolved significantly, and for a good reason. Not only are PDF files a unique and trusted way of displaying the same document on any platform or device, precisely reproducing typography and designs, but they can be secured in a way that makes tampering with the content extremely unlikely.

This (as well as the expanding capacities of PDF files) has led to a wide variety of possible use-cases and collaboration scenarios that

Major Points

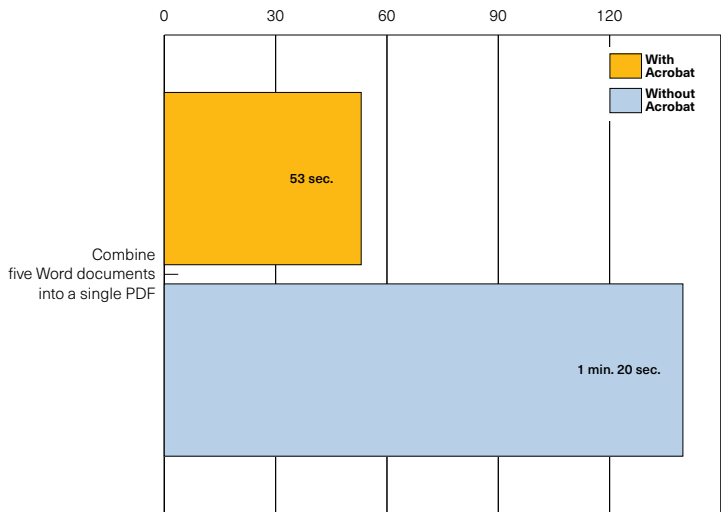
- Acrobat offers many **advanced document management options**, such as form creation, document redaction and an integrated signature process.
- Acrobat can easily **combine text documents, spreadsheets, presentations and images into a single PDF** that can be easily distributed, as well as edited and rearranged if necessary.

Acrobat Key Productivity Data: Document Management

Document Editing Benchmarks 1

Timescale in seconds. All data is the average of 3 individual benchmarks

Shorter is better.

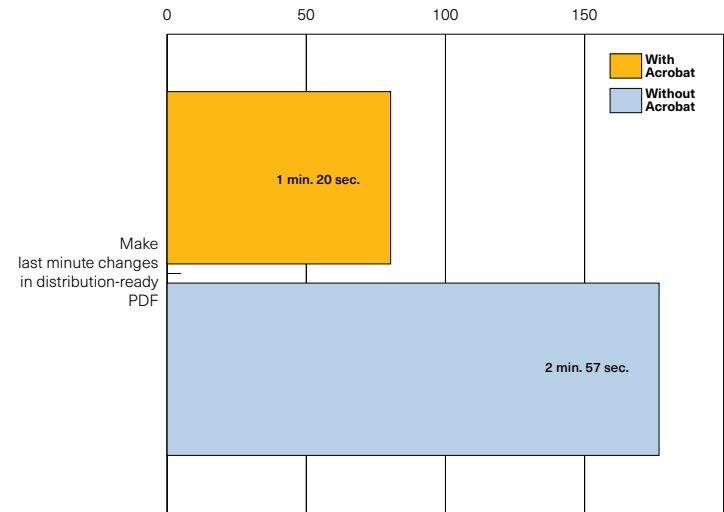


Combining several office documents into a single PDF is significantly faster with Acrobat. The application can also combine different file types (text documents, spreadsheets, presentations and images) in a single operation, resulting in

Document Editing Benchmarks 2

Timescale in seconds. All data is the average of 3 individual benchmarks

Shorter is better.



significant productivity gains. (Chart on the left.) Acrobat can directly make last minute changes to a distribution-ready PDF, saving significant time by not having to edit the original file and recreate a PDF. (Chart on the right.)

require much more than a capable PDF application – to streamline PDF-related enterprise and individual workflows, proper PDF document management is needed.

Document Management for PDF Processes

In order to properly evaluate the requirements for such a system, looking at the respective role of authorship and collaboration is essential. As is understanding at what point it becomes important to separate the possibility of changing every aspect of a document (with the obvious risks attached to this capability) from the process of sharing and collaborating, which in many cases is much more efficiently handled with PDF documents.

This applies to common office documents, but even more so to more sensitive material, such as contracts and electronic forms, where commenting, document protection and encryption come into play. It also encourages the analysis of the general document workflow in the enterprise, and to understand that many common processes are better and more securely handled by PDF-centric workflows than working with generic office documents.

This, in turn, means analysing Acrobat apps and services as a set of cloud-based processes that integrate with the data available in an enterprise, whilst taking control of the heavy lifting of aspects that can be insufficiently robust in many office environments. Creating forms, even from scanned originals, is a good example, but there are many others. We've already mentioned document security (see sidebar on page 6); redacting documents is another case whereby automating the process of removing sensitive information not only speeds up the task, but helps to eliminate the risk of exposing hidden information. And finally, there is the case of pervasive access to data; given the evolution of the technology landscape, only a system that works on every available platform can truly streamline document processes and collaboration.

Document Security

Document security has become one of the biggest challenges in modern document management. While it is, of course, possible to protect many documents to some extent, the security offered by word-processing documents or spreadsheets can be insufficient. It is not surprising, therefore, that PDF files have long been leading the way when a document needs to be distributed widely and securely.

PDF files can be encrypted **using 256-bit, AES standards-based encryption and are compliant with security standards such as ISO 27001.**

PDF files also support **digital and electronic signatures**, and can be **redacted if needed.**

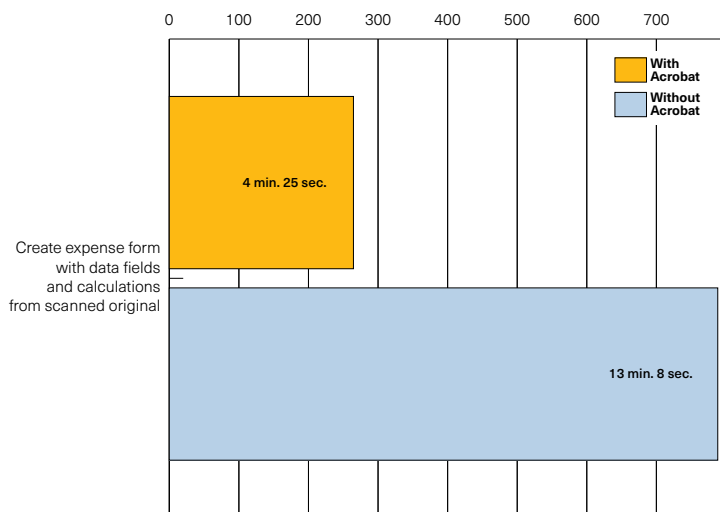
Equally important is access control; PDF files can be **password-protected**, but its also possible to allow the simple viewing of a file, whilst **disabling the possibility to print or copy content.**

Acrobat Key Productivity Data: Document Editing and Redaction

Form Creation Benchmarks

Timescale in seconds. All data is the average of 3 individual benchmarks

Shorter is better.

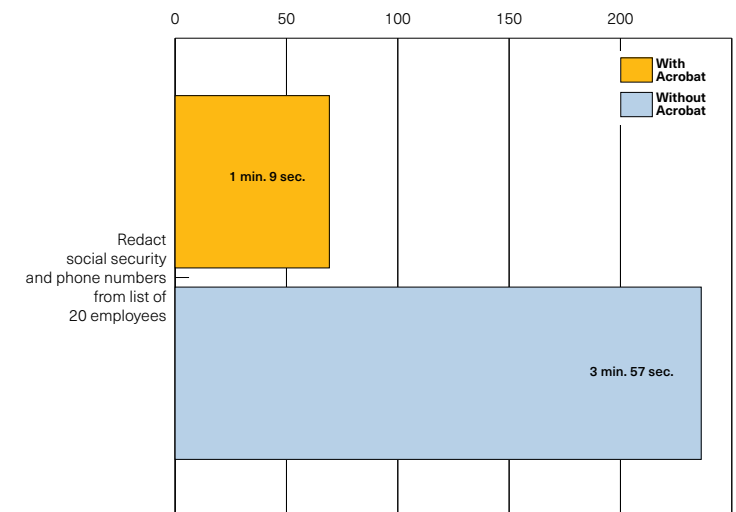


Acrobat can create form fields in scanned documents, making form creation much faster than recreating the entire form with general apps used in an office environment. (Chart on the left.) Document redaction in office applications is complex, since

Document Redaction Benchmarks

Timescale in seconds. All data is the average of 3 individual benchmarks

Shorter is better.



it is difficult to permanently black out content and remove hidden metadata. Acrobat was over three times faster when redacting a document compared to achieving the same result in an office application. (Chart on the right.)

The Impact of Acrobat on Collaboration

The Evolution of Collaboration in the Enterprise

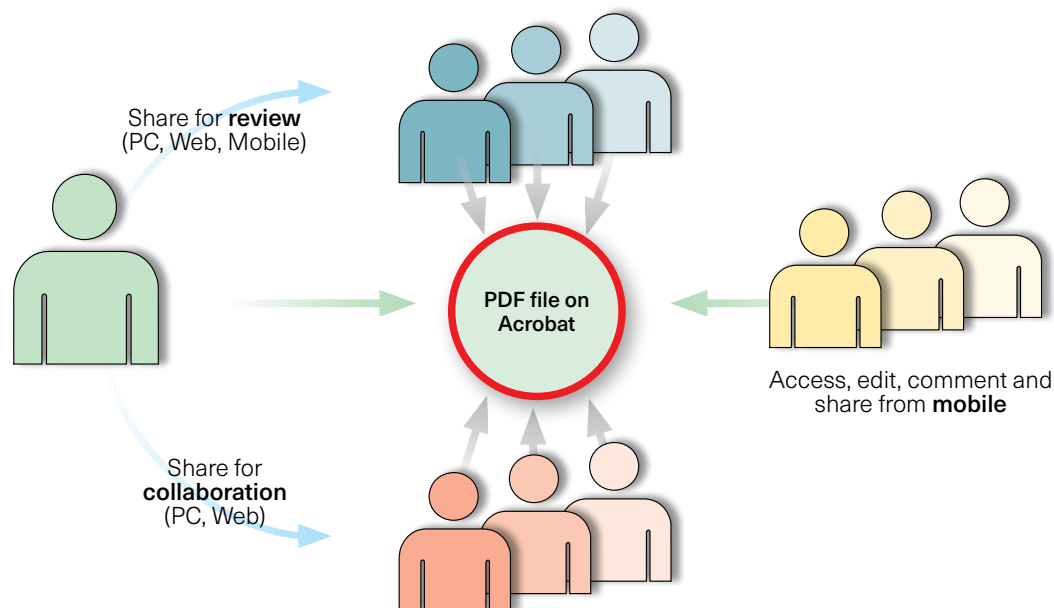
It used to be that collaboration in the enterprise was mainly centred around a locally managed client-server architecture, and this meant that it was PC-centric in its approach, and managed in a top-down manner. In other words, hardware and software, as well as documents produced by users, could stay within a walled garden of approved and centrally managed workstations and servers.

A lot has changed in the past few years. Mobile devices are playing an increasingly important role in the document life-cycle. In addition, the trend to work from home, due to the pandemic, has brought its own share of management challenges, and has increased the demand for secure, cloud-based document management that does not prevent users from creating, editing and collaborating efficiently, wherever they are, and whatever device they use. This is where Acrobat comes into its own, by offering a robust and more secure way of collaborating in a decentralised way.

Major Points

- PDF has become an **enterprise standard that covers a wide variety of collaboration scenarios** and use-cases.
- To make the most out of the potential the PDF ecosystem provides, **Adobe has developed Acrobat into a fully-fledged, PDF-centric document management system.**
- The Acrobat mobile app is a powerful client platform for Document Cloud, and **significantly extends the efficiency of team collaboration** through extensive support for editing and managing PDF documents.

The Integrated Acrobat Platform



Acrobat allows for a centralised approach to document creation, management and collaboration to significantly reduce unnecessary and time-consuming exchange of documents during the creation, review and iteration of documents.

Core Principles of Modern Enterprise Collaboration

There's more to collaboration than sharing documents – a lot more. Imagine the scenario where the PDF proposal for a client is ready to be sent out – and you realise that one of the figures needs to be changed, but all you have with you is your smartphone. In a traditional office workflow, you'd need to phone somebody at the office, get them to open the original proposal, correct the mistake, generate a new PDF and send it back to you. And what if you can't reach that person, and nobody else in the office has the log-in credentials to access the file?

With the Acrobat app, you can make last minute changes to PDF documents directly on your smartphone. You can edit and add text, reorganise pages, and even images, and you can send a file for an e-signature from your smartphone too.

The Acrobat mobile app has become a powerful document management environment that allows you to do most things that would previously require a PC, such as reviewing and commenting, managing files, or combining several documents into a single PDF document.

The pervasive access to the entire array of editing and management functionality across platforms, operating systems and devices is one of the key aspects of the collaborative potential Acrobat can provide. (See graphic page 6). In addition, the Adobe Scan app provides a powerful document capture functionality, and is tightly integrated with Acrobat. (See sidebar.)

Adobe Scan

Adobe Scan is a companion app for Acrobat that **speeds up the process of acquiring and optimising document capture with a mobile device**. The app automatically crops the picture to the document borders. It can also **combine several scans to create a multi-page PDF document**.

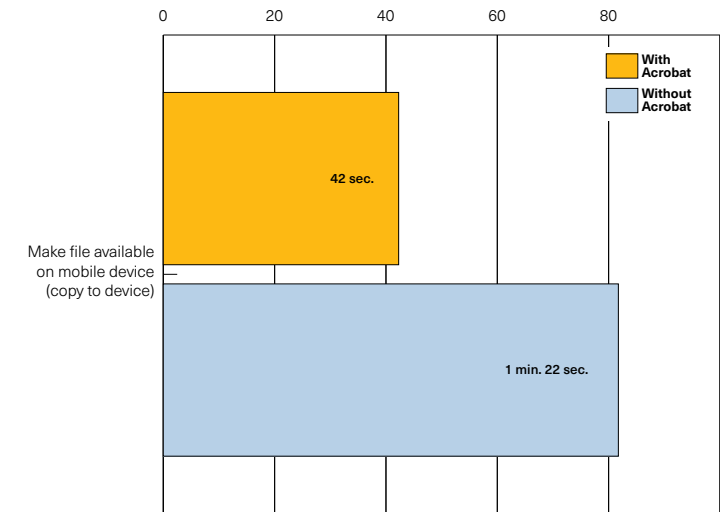
Adobe Scan ties directly into Acrobat, **saving captured files and uploading them. In the process, it applies OCR to the files**, meaning that they are immediately searchable, making it much easier to locate information once they are stored.

In addition, when converting pictures that have already been taken, **Adobe Scan automatically distinguishes documents from other kinds of images in a photo library**.

Acrobat Collaboration Benchmarks: Key Results

Mobile Device Benchmarks

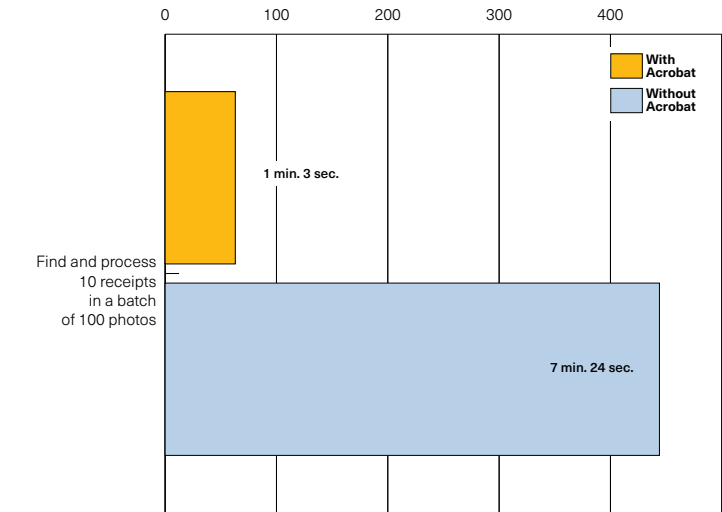
Timescale in seconds. All data is the average of 3 individual benchmarks
Shorter is better.



Acrobat significantly reduces the time to make a file available on a mobile device. (Chart on the left.) Adobe Scan can recognise documents in batches of mixed photographs, and

Adobe Scan Benchmarks

Timescale in seconds. All data is the average of 3 individual benchmarks
Shorter is better.



automatically combine them into a multi-page PDF, correcting and cropping the photographs in the process. (Chart on the right.)

Acrobat:

The Question of ROI

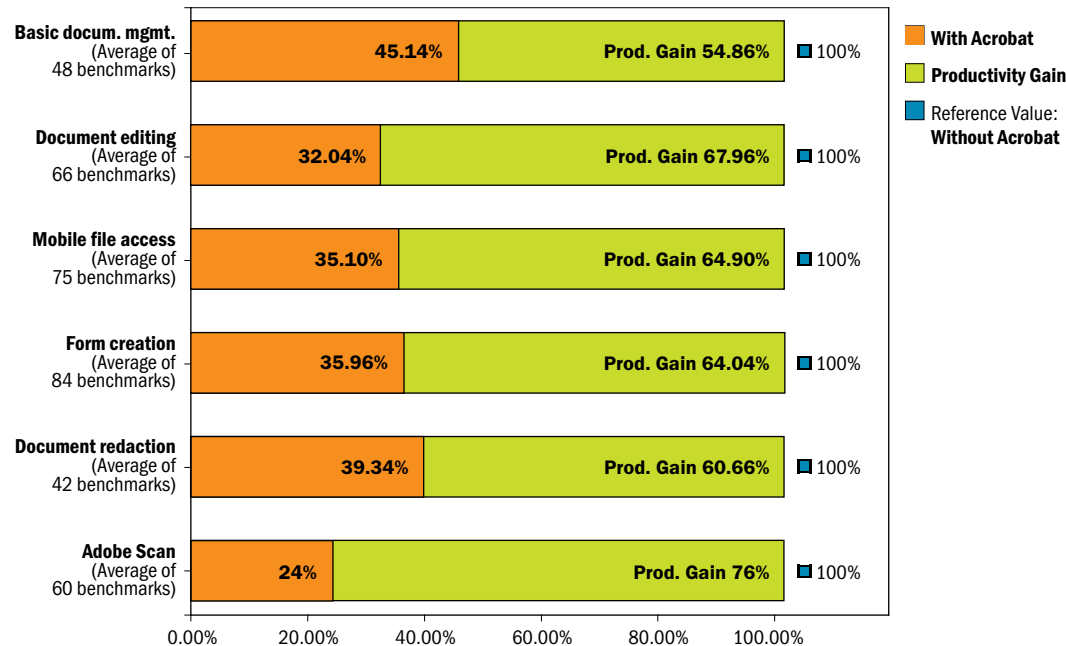
Invisible Productivity Gains

There is one factor that is almost universally underestimated when analysing return on investment, namely the considerable cumulative effect of small productivity gains in everyday operations that a software platform, such as Acrobat apps and services, can bring. Our benchmarks show that, on average, each time Acrobat is used to open an office document (transforming it into a PDF file in the process) and saving it to Document Cloud rather than exporting it from an office application to the local file system, the user saves 35 seconds. Repeated just three times a day, this can save a worker over 15 minutes per month. And we are only considering a small, isolated (and seemingly minor) feature group. According to our benchmarks, Acrobat apps and services increase the productivity of average users by providing efficiency gains in a considerable number of everyday operations. The resulting ROI can very easily reach thousands of pounds per workstation per year. (See table following page.)

Major Points

- Even **seemingly minor productivity gains** on frequently repeated operations can **lead to a significant return on investment**.
- The ROI projections provided in this report **are based on over 360 benchmarks and productivity measures** conducted with Acrobat apps and services.
- The ROI projections show that **the cumulative effect of small productivity gains can easily reach thousands of pounds per user**.

Analysing Benchmark Results: Average Productivity Gains by Type of Activity



In order to better visualise the overall impact on productivity, we calculated the average productivity gains (green bar) for each segment of the benchmarks, using the results for conventional methods as the reference values.

The Cumulative Effect of Productivity Gains: How Acrobat Can Impact ROI

Over 360 individual benchmarks have been conducted for this project. The figures presented in this table are average values of groups of several benchmarks.	Prod. Measures without Acrobat (time in seconds)	Prod. Measures with Acrobat (time in seconds)	Individual time savings (Seconds)	Productivity gain (%)	ROI generated (1 hour @ £100)
Incremental productivity gains (Return on Investment generated by individual operation)					
Document management and editing					
Conversion of office documents (Average of 48 benchmarks)	64.18	28.97	35.21	54.86%	£0.98
Find text in scanned document (Average of 6 benchmarks)	123.21	16.14	107.07	86.90%	£2.97
Find and replace text in scanned document (Average of 13 benchmarks)	221.32	62.31	159.01	71.85%	£4.42
Last minute changes in distribution-ready PDF (Average of 21 benchmarks)	176.75	80.31	96.44	54.56%	£2.68
Combine 5 text documents into a single PDF (Average of 12 benchmarks)	139.75	53.06	86.69	62.03%	£2.41
Form creation					
Create simple form from scanned original (Average of 15 benchmarks)	330.09	25.77	304.33	92.19%	£8.45
Create expense report with calculations – scanned original (Average of 30 benchmarks)	788.23	264.63	523.60	66.43%	£14.54
Create order form with calculations from Word template (Average of 39 benchmarks)	1014.02	476.46	537.56	53.01%	£14.93
Document redaction					
Simple document redaction (Average of 18 benchmarks)	99.74	62.92	36.82	36.92%	£1.02
Complex document redaction (Average of 24 benchmarks)	236.27	69.26	167.01	70.69%	£4.64
Working with mobile devices					
Make single file available on mobile device – copy to device (Average of 12 benchmarks)	81.75	42.28	39.47	48.28%	£1.10
Update file, access from 3 mobile devices – using cloud service (Average of 27 benchmarks)	121.90	53.40	68.50	56.19%	£1.90
Document capture and processing with smartphone					
Capture single document, crop and optimise (Average of 12 benchmarks)	66.22	20.65	45.57	68.81%	£1.27
Find specific receipt in batch (Average of 6 benchmarks)	26.86	6.72	20.14	74.99%	£0.56
Find and process documents in large batch of photos (Average of 24 benchmarks)	443.99	63.01	380.98	85.81%	£10.58
ROI projections (based on incremental productivity gains)	Time saved (seconds)	Occurrences (per week/ user)	ROI/person		ROI (5 person team)
Document management and editing					
Conversion of office documents (Average of 48 benchmarks)	35.21	10	£9.78		£48.91
Find text in scanned document (Average of 6 benchmarks)	107.07	1	£2.97		£14.87
Find and replace text in scanned document (Average of 13 benchmarks)	159.01	0.5	£2.21		£11.04
Last minute changes in distribution-ready PDF (Average of 21 benchmarks)	96.44	1	£2.68		£13.39
Combine 5 text documents into a single PDF (Average of 12 benchmarks)	86.69	2	£4.82		£24.08
Form creation					
Create simple form from scanned original (Average of 15 benchmarks)	304.33	1	£8.45		£42.27
Create expense report with calculations – scanned original (Average of 30 benchmarks)	523.60	0.5	£7.27		£36.36
Create order form with calculations from Word template (Average of 39 benchmarks)	537.56	0.5	£7.47		£37.33
Document redaction					
Simple document redaction (Average of 18 benchmarks)	36.82	1	£1.02		£5.11
Complex document redaction (Average of 24 benchmarks)	167.01	1	£4.64		£23.20
Working with mobile devices					
Make single file available on mobile device – copy to device (Average of 12 benchmarks)	39.47	3	£3.29		£16.44
Update file, access from 3 mobile devices – using cloud service (Average of 27 benchmarks)	68.50	4	£7.61		£38.06
Document capture and processing with smartphone					
Capture single document, crop and optimise (Average of 12 benchmarks)	45.57	4	£5.06		£25.31
Find specific receipt in batch (Average of 6 benchmarks)	20.14	2	£1.12		£5.59
Find and process documents in large batch of photos (Average of 24 benchmarks)	380.98	1	£10.58		£52.91
	Total ROI generated/week		£68.40		£341.98
	Total ROI gen./month		£273.58		£1 367.90
	Total ROI gen./year		£3 009.38		£15 046.91

Methodology

This benchmark project was commissioned by Adobe and independently executed by Pfeiffer Consulting.

All the productivity measures presented in this document are based on real-world workflow examples, designed and executed by professionals with many years of experience with the programs and workflows involved.

How we measure productivity

The basic approach is simple. In order to assess productivity gains that a program or solution may (or may not) bring, we start by analysing the minimum number of steps necessary to achieve a given result in each of the applications or workflows that have to be compared.

Once this list of actions has been clearly established, we start to execute the operation or workflow in each solution, with the help of seasoned professionals who have long-standing experience in the field and with the solutions that are tested.

Every set of steps is executed three times, and the average of the three measures is used.

About Pfeiffer Consulting

Pfeiffer Consulting is an independent technology research and benchmarking operation focused on the needs of publishing, digital content production, and new media professionals.

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