

FORRESTER®

The Total Economic Impact™ Of The Box Content Cloud

Cost Savings And Business Benefits Enabled By
The Box Content Cloud

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Executive Summary

Cloud-native productivity applications have changed the way that employees work. Yet, legacy enterprise content management systems have largely remained the same – built on an architecture based on folders and files. Documents and other information sources have largely moved to cloud-native, thus businesses will need more agile content management solutions that support new cloud-first ways of work.

Box commissioned Forrester Consulting to conduct a Total Economic Impact™ (TEI) study and examine the potential return on investment (ROI) enterprises may realize by deploying its suite of cloud-based content management solutions. The purpose of this study is to provide readers with a framework to evaluate the potential financial impact of the Box Content Cloud on their organizations.

To better understand the benefits, costs, and risks associated with this investment, Forrester interviewed four customers with experience using the Box Content Cloud. This experience includes working with: the Box Core platform for file storage and collaboration; Box Relay for workflow automation; Box Shield for intelligent security; and Box Governance for data retention management. Forrester then aggregated the experiences of the interviewed customers and combined the results into a single [composite organization](#).

Prior to deploying Box, customers typically used a legacy enterprise content management platform. However, the legacy system presented several limitations: employees reported that their data was hard to access due to poorly designed user experience (UX) and cumbersome log-in procedures. Furthermore, they did not allow external user access, hindering collaboration with partners and vendors.

With Box, customers were able to improve employee productivity, save on IT hardware and resource costs, provide a single content layer across their applications, and improve their security posture.

KEY STATISTICS



Return on investment (ROI)
332%



Net present value (NPV)
\$11.83M



Benefits PV
\$15.39M



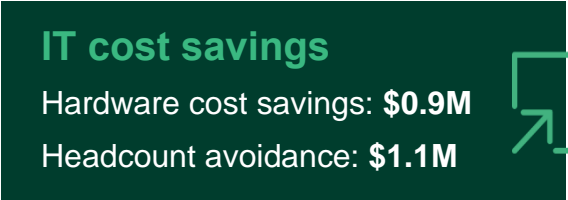
Payback
<6 months

KEY FINDINGS

Quantified benefits. Risk-adjusted present value (PV) quantified benefits include:

- **End-user productivity gains.** Box’s content management platform provided several convenient and productivity-enhancing features that improved employees’ ways of working. One interviewed customer estimated that general employees could save 12 minutes a week by just migrating their content to Box and providing access from any device. Some employees could save an additional 36 minutes a week, if they made use of Box’s advanced features, e.g., external collaboration, integrations with productivity applications, document version controls, rich media management, annotations, and more. Over three years, this amounted to \$8.8 million in end-user productivity gains.
- **Time savings with Box Relay workflow automation.** Interviewed customers also gained further time savings with Box Relay. Automating routine workflows, e.g., customer or employee onboarding, document reviews and approvals, etc., could save an additional 152,000 hours over a three-year period, amounting to a PV of \$3.5 million in savings.
- **IT cost savings from the retirement of legacy content management systems.** This included hardware costs of supporting 100 TB of data, as well as six systems administration staff. In all, IT cost savings were \$2.0 million over three years.

IT cost savings
 Hardware cost savings: **\$0.9M**
 Headcount avoidance: **\$1.1M**



- **Reduced risk of data breach from accidental data leakage.** Each year, close to one-third of organizations suffer from data breaches costing

them multi-millions in expenses to address. Box helps to mitigate some of these risks by detecting and preventing leakage of sensitive data and/or access to content from unsafe devices or compromised user accounts. Over three years, the reduced risk is estimated to be \$580,000.

- **Cost savings on monitoring employee content access.** Insider threats are a rising risk for organizations: it is estimated that 35% of employees take sensitive data with them when they leave a job. To prevent this data loss, which can lead to loss of reputation, customers and/or revenue, organizations need to spend time monitoring anomalous content access, especially of employees leaving the organization. With its automated anomalous content access and download detection and alerts, Box Shield saves organizations \$237,000 in time and resources spent on monitoring content access.
- **Avoided costs of third-party security and compliance solutions and certifications.** Box’s built-in security capabilities and certifications improved the ease of securing the enterprise content environment. One interviewed customer shared that Box Shield allowed them to save on engaging a third-party security vendor, as well as getting their security practices certified by an external auditor. This led to a savings of \$245,000 over three years.
- **Improved ease of data governance and compliance management.** With data privacy laws constantly evolving, interviewed customers reported they faced increasing complexities in managing their global data governance — e.g., maintaining auditable records of their data management practices. With Box Governance, the interviewed customers saved time and resources on both preparing for data governance audits and the daily management of data compliance. Over three years, these cost savings were approximately \$63,000.

Unquantified benefits. Interviewed customers also reported several other benefits that are not quantified for this study, including:

- **Reduced burden on IT staff and support to handle administrative work.** Box eased the burden on IT systems admin staff, as they no longer had to deal with low-value work such as managing servers and responding to support tickets related to their legacy content management solution. Further, IT support also gained additional time and resources to handle higher value, higher priority work.
- **Reduced risk of ransomware and malware attacks.** One feature of Box Shield is its ability to detect malware and ransomware embedded in content uploaded to Box, and to prevent its spread by automatically disabling downloads and sharing of at-risk content content. Furthermore, as users can access files and work in the cloud, it allows for business continuity while IT teams investigate security breaches. While interviewees did not report any incidences of malicious attacks, they mentioned that Box Shield provided them with additional security and assurance against potential security breaches.
- **Increased efficiency for security teams.** Customers also reported that the ease and granularity of Box Shield’s security controls gave them peace of mind when it came to data security and compliance. The product’s ease of use requires little to no training to set-up, and the transparency of the tool made it easier and more efficient for security teams to communicate access restrictions with the organization.
- **Improved employee experience.** In their legacy environment, employees were often frustrated by bolted-on security solutions and clunky UI’s that required a VPN login. Box provided a modern, mobile solution which eased one of their key technology pain points.

- **Ease of migrating from legacy systems and onboarding new users.** Two interviewed customers also reported that, even with frequent mergers and acquisitions (M&As), the process of migrating users from other solutions to Box was extremely easy and without complication.

“In our legacy environment, we had data everywhere – network drives, hard drives, data centers, etc. The problem with on-premise storage is that you have no control, and no security, over them.”

*Head of enterprise end-user experience,
semiconductors*

Costs. Risk-adjusted PV costs include:

- **Box subscription and professional service fees.**
- **Ongoing management and development costs.** Interviewed customers reported they had 0.5 to 1 FTEs dedicated to managing Box; this is a significant reduction from their legacy environment.

The customer interviews and financial analysis found that a composite organization experiences benefits of \$15.39M over three years versus costs of \$3.56M, adding up to a net present value (NPV) of \$11.83M and an ROI of 332%.

Benefits (Three-Year)



End-user productivity gains



\$8.8M



Time savings with Box Relay workflow automation



\$3.5M



IT hardware cost savings



\$2.0M



Reduced risk of data breach from accidental data leakage



\$580K



Cost savings on monitoring employee content access



\$237K



Avoided cost of third-party security and compliance solutions and certifications



\$245K



Improved ease of data governance



\$63K

TEI FRAMEWORK AND METHODOLOGY

From the information provided in the interviews, Forrester constructed a Total Economic Impact™ framework for those organizations considering an investment in the Box Content Cloud.

The objective of the framework is to identify the cost, benefit, flexibility, and risk factors that affect the investment decision. Forrester took a multistep approach to evaluate the impact that the Box Content Cloud can have on an organization.

DISCLOSURES

Readers should be aware of the following:

This study is commissioned by Box and delivered by Forrester Consulting. It is not meant to be used as a competitive analysis.

Forrester makes no assumptions as to the potential ROI that other organizations will receive. Forrester strongly advises that readers use their own estimates within the framework provided in the study to determine the appropriateness of an investment in Box.

Box reviewed and provided feedback to Forrester, but Forrester maintains editorial control over the study and its findings and does not accept changes to the study that contradict Forrester's findings or obscure the meaning of the study.

Box provided the customer names for the interviews but did not participate in the interviews.



DUE DILIGENCE

Interviewed Box stakeholders and Forrester analysts to gather data relative to the Box Content Cloud.



CUSTOMER INTERVIEWS

Interviewed four decision-makers at organizations using the Box Content Cloud to obtain data with respect to costs, benefits, and risks.



COMPOSITE ORGANIZATION

Designed a composite organization based on characteristics of the interviewed organizations.



FINANCIAL MODEL FRAMEWORK

Constructed a financial model representative of the interviews using the TEI methodology and risk-adjusted the financial model based on issues and concerns of the interviewed organizations.



CASE STUDY

Employed four fundamental elements of TEI in modeling the investment impact: benefits, costs, flexibility, and risks. Given the increasing sophistication of ROI analyses related to IT investments, Forrester's TEI methodology provides a complete picture of the total economic impact of purchase decisions. Please see Appendix A for additional information on the TEI methodology.

The Box Content Cloud Customer Journey

Drivers leading to the Box Content Cloud investment

Interviewed Organizations			
Industry	Region	Interviewee	Number of employees
Semiconductors	Global	Head of enterprise end-user experience	>15,000
Mortgage insurance	Based in US	VP, enterprise program delivery	2,000
Public sector civil engineering	Based in US	Head of innovation, research and technology	3,000
Health information management	Based in US	Director of change management	~200

KEY CHALLENGES

Prior to investing in Box, interviewed organizations all used a combination of local storage, network share drives, and a legacy enterprise content management tool to support their content management needs.

However, this legacy environment had several limitations and challenges, including:

- **Poor end-user experience.** All four interviewed organizations said this was the top issue they wanted to address. In the legacy environment, employees often struggled with slow VPN logins, poor UI, and limited mobile/remote access.
- **Poor integration of co-existing solutions.** Two of the interviewees also reported that with a string of mergers and acquisitions, and with different departments adopting their own solutions, their content management environment had become fragmented. They therefore wanted to unify these disparate systems into one.
- **Overburden on IT staff.** In the legacy environment, employees often sought IT support for technical issues with logging in and accessing their content. Furthermore, the legacy environment required significantly more effort and time to manage.

- **Technical limitations.** Several interviewees reported that their legacy solution could not support the full range of their data needs — for example, they either had design files that were too large and/or product and engineering blueprint file formats that were not supported.
- **Poor collaboration.** It was also hard for them to collaborate and share content with external parties as they either had to deal with bounced emails due to oversized attachments or a cumbersome process of getting the external users access to local networks.

“[Our legacy cloud-based solution] didn’t support CAD, GIS, or DWG files, so we had to host most of our content on traditional LAN servers and drives. Each regional and field office had to have their own server.”

Head of innovation, research and technology, public sector civil engineering



INVESTMENT OBJECTIVES

To address the limitations in their legacy environment, the interviewed organizations searched for a solution that:

- Could provide a modern and easy end-user experience.
- Had strong, built-in security protocols.
- Was easy to deploy.

After a business case process and trial period that evaluated multiple alternative vendors, the interviewed organizations chose Box largely because it was the easiest to use and implement.

“We conducted pilot testing for three different solutions and put it to a vote. Our team chose Box because it was easier to implement and migrate to, and to use.”

VP, enterprise program delivery, mortgage insurance

COMPOSITE ORGANIZATION

Based on the interviews, Forrester constructed a TEI framework, a composite company, and a ROI analysis that illustrates the areas financially affected. The composite organization is representative of the four companies that Forrester interviewed and is used to present the aggregate financial analysis in the next section. The composite organization has the following characteristics:

- It is a financial services firm with 5,000 employees globally. Their workforce is comprised mostly of knowledge workers, and email communications and file sharing are an integral part of their daily work.

Deployment characteristics. The composite organization deployed Box across the entire organization and provided every employee with a license and access.

Key assumptions

- **5,000 employees**
- **Operates in a highly regulated industry**

Analysis Of Benefits

■ Quantified benefit data as applied to the composite

Total Benefits						
Ref.	Benefit	Year 1	Year 2	Year 3	Total	Present Value
Atr	End user productivity gains	\$3,070,080	\$3,624,941	\$3,972,384	\$10,667,405	\$8,771,312
Btr	Time savings with Box Relay workflow automation	\$653,184	\$1,399,680	\$2,332,800	\$4,385,664	\$3,503,231
Ctr	IT cost savings from retirement of legacy content management systems	\$696,600	\$793,800	\$929,880	\$2,420,280	\$1,987,938
Dtr	Reduced risk of data breach from accidental data leakage	\$232,625	\$232,625	\$232,625	\$697,874	\$578,503
Etr	Cost savings on monitoring content access of departing employees	\$92,527	\$95,331	\$98,135	\$285,992	\$236,631
Ftr	Avoided cost of security risk and compliance management and certification	\$153,568	\$66,784	\$66,784	\$287,136	\$244,976
Gtr	Improved ease of data governance and compliance management	\$25,440	\$25,440	\$25,440	\$76,320	\$63,266
	Total benefits (risk-adjusted)	\$4,924,024	\$6,238,600	\$7,658,047	\$18,820,671	\$15,385,857

END-USER PRODUCTIVITY GAINS

One benefit of Box that was reported by all four interviewed customers was an improvement in the end-user experience. Several interviewees mentioned that it was now easier for employees to organize, access, and search for their data. Additionally, they were able to share content with third parties without having to worry about file-size limitations. To that end, one interviewee estimated that these improvements in UX saved a typical employee 12 minutes a week. In addition, interviewees described that employees could save even more time if they also started using more advanced features like integration with productivity applications, document version controls, in-document collaboration and multiuser authoring, assigning tasks to content, using annotations, etc. These features further enhanced employee productivity, saving them an additional 36 minutes a week.

Modeling and assumptions. For the composite organization, Forrester assumes:

- Box is deployed to all employees.
- Similar to the interviewees' experiences, about 35% of employees are "power users," who take full advantage of Box's full suite of features.
- Of the time saved, 80% of time is recaptured and put back into productive work.
- The average fully loaded salary of a general employee is \$83,200.

Risks. Several factors also influence the impact that Box has on end-user productivity gains. They include:

- The nature of employees' work.
- The scale and complexity of an organization's operations.

To account for these inherent variances, Forrester adjusted this benefit downward by 10%, yielding a three-year, risk-adjusted total PV (discounted at 10%) of \$8.77 million.

“Beyond the time savings, it’s also about making our employees’ jobs that little bit more convenient and easier.”

VP, enterprise program delivery, mortgage insurance

End-User Productivity Gains					
Ref.	Metric	Calculation	Year 1	Year 2	Year 3
A1	Number of employees	Composite	5,000	5,150	5,305
A2	Time savings per employee per week (hours)	Composite	0.2	0.2	0.2
A3	Total time savings from using general Box features (hours)	A1*A2*52	52,000	53,560	55,172
A4	Percent of employees using advanced Box features (i.e., collaboration, document version controls, rich media management, etc.)	Composite	35%	45%	50%
A5	Time savings per employee per week with advanced features (hours)	Composite	0.60	0.60	0.60
A6	Total time savings from using advanced Box features (hours)	A1*A4*A5*52	54,600	72,306	82,758
A7	Total end user time savings from using Box (hours)	A3+A6	106,600	125,866	137,930
A8	Productivity captured	Assumption	80%	80%	80%
A9	Average fully loaded salary of employees (per hour)	Assumption: \$83,200/2,080	\$40	\$40	\$40
At	End-user productivity gains	A7*A8*A9	\$3,411,200	\$4,027,712	\$4,413,760
	Risk adjustment	↓10%			
Atr	End-user productivity gains (risk-adjusted)		\$3,070,080	\$3,624,941	\$3,972,384
Three-year total: \$10,667,405			Three-year present value: \$8,771,312		

TIME SAVINGS WITH BOX RELAY WORKFLOW AUTOMATION

Box also offers organizations the potential to automate routine content-centric workflows through Box Relay. Interviewed customers reported disparate experiences on Box Relay: While two customers automated only the suggested out-of-the-box workflows, a third customer took a more decentralized approach and encouraged its employees to identify their own automation opportunities.

Some workflows that are commonly automated across the interviewed customers include customer or employee onboarding, paperwork processing, document reviews and approvals, etc.

Modeling and assumptions. For the composite organization, Forrester assumes:

- Employees are trained to understand the capabilities of Box Relay and to identify automation opportunities.
- On average, these automated workflows are run 180 times a month, and each process run, if done manually, would take employees 20 minutes to perform.

Risks. Additional factors that also influence the impact that Box Relay has on time savings with workflow automation include:

- The organization’s approach to deploying and managing Box Relay.
- The nature of employees’ tasks.

To account for these variances, Forrester adjusted this benefit downward by 10%, yielding a three-year, risk-adjusted total PV of \$3.5 million.

“Our engineers came up with some interesting ways to make their jobs easier. They used Box Relay to sync and control test equipment within clean rooms so they didn’t have to risk contaminating the environment. There’s no limit on the possibilities of Box Relay — it’s up to your employees to get creative.”

Head of enterprise end-user experience, semiconductors

Time Savings With Box Relay Workflow Automation					
Ref.	Metric	Calculation	Year 1	Year 2	Year 3
B1	Number of workflows automated with Box Relay	Composite	35	75	125
B2	Average number of times workflow is run per month	Composite	180	180	180
B3	Average time saved per workflow (hours)	Composite	0.30	0.30	0.30
B4	Total time saved with Relay (hours)	$B1*B2*B3*12$	22,680	48,600	81,000
B5	Productivity captured	Assumption	80%	80%	80%
B6	Average fully loaded salary of employees (per hour)	Assumption: \$83,200/2,080	\$40	\$40	\$40
Bt	Time savings with Box Relay workflow automation	$B4*B5*B6$	\$725,760	\$1,555,200	\$2,592,000
	Risk adjustment	↓10%			
Btr	Time savings with Box Relay workflow automation (risk-adjusted)		\$653,184	\$1,399,680	\$2,332,800
Three-year total: \$4,385,664			Three-year present value: \$3,503,231		

IT COST SAVINGS FROM RETIREMENT OF LEGACY CONTENT MANAGEMENT SYSTEMS

All interviewed customers reported cost savings from replacing servers and hardware for data storage. The volume of data migrated from on-premises storage varied greatly amongst the interviewed organizations.

One large organization mentioned how they moved, “a few petabytes of data,” from on-premises servers to Box. A civil engineering firm said: “By moving our entire operations to Box, we could do away with setting up on-site servers to host our data. Depending on the project, this could be hosted in a trailer, or even an entire building.”

Additionally, interviewed customers reported that their legacy solution required significantly more dedicated headcount and resources to manage. Depending on the size and complexity of their operations, this ranged from 5 to 12 FTEs.

Modeling and assumptions. Forrester took a more conservative estimate by assuming that the composite organization currently has about 135 TB of data stored on-premises. It migrates about 75% of these (or 100 TB) to Box. Over the next two years, the volume of data grows at about 40% annually.

Further, it is estimated that hardware costs are about \$2,700 per TB; this includes server fees, management costs, and overhead fees such as electricity, switches, rent, labor, etc.

Risks. Several factors also influence the impact that Box has on hardware cost savings, including:

- Data storage needs.
- Current data storage model.

To account for these inherent variances, Forrester adjusted this benefit downward by 10%, yielding a three-year, risk-adjusted total PV of \$2.0 million.

IT Cost Savings From Retirement Of Legacy Content Management Systems					
Ref.	Metric	Calculation	Year 1	Year 2	Year 3
C1	Total TB migrated to Box	Composite	100	140	196
C2	Hardware costs per TB	Assumption	\$2,700	\$2,700	\$2,700
C3	Headcount dedicated to managing legacy solution	Composite	6	6	6
C4	Average fully loaded salary of IT systems administrator (per hour)	Assumption	\$84,000	\$84,000	\$84,000
Ct	IT cost savings from retirement of legacy content management systems	$(C1 \times C2) + (C3 \times C4)$	\$774,000	\$882,000	\$1,033,200
	Risk adjustment	↓10%			
Ctr	IT cost savings from retirement of legacy content management systems (risk-adjusted)		\$696,600	\$793,800	\$929,880
Three-year total: \$2,420,280			Three-year present value: \$1,987,938		

REDUCED RISK OF DATA BREACH FROM ACCIDENTAL DATA LEAKAGE

Each year, close to one-third of organizations suffer from data breaches costing them multi-millions of dollars in expenses to address¹. Of these breaches, it is estimated that 48% are caused unintentionally, either by user error or by system misconfiguration.

In particular, unstructured data, which makes up about 80% of data within an enterprise, is at higher risk as it is often more complex and time-consuming to categorize and manage at scale. This increases their likelihood of being missed by access control or data loss prevention tools, thus increasing their vulnerability to unauthorized access.

Box helps to mitigate some of these risks by detecting and preventing leakage of sensitive data via granular classifications and controls, and by preventing access from unsafe devices or compromised user accounts.

Modeling and assumptions. For the composite organization, Forrester assumes:

- The cost of a data breach is \$3.79 million, in line with the 7-year weighted average found by the Ponemon Institute’s Cost of Data Breach Report 2020.
- The likelihood of a data breach incidence is 29.6% in any given year.
- About 80% of the organization’s data is unstructured. Of these, 60% of these is migrated to Box.

Risks. Several factors also influence Box’s ability to mitigate some data breach risk, including:

- Nature of industry.
- Current security environment.

To account for these risks, Forrester adjusted this benefit downward by 10%, yielding a three-year, risk-adjusted total PV of \$579,000.

Reduced Risk Of Data Breach From Accidental Data Leakage

Ref.	Metric	Calculation	Year 1	Year 2	Year 3
D1	Average cost of data breach	Ponemon Institute	\$3,790,000	\$3,790,000	\$3,790,000
D2	Risk of data breach incidence	Ponemon Institute	29.6%	29.6%	29.6%
D3	Annual risk of data breach	D1*D2	\$1,121,840	\$1,121,840	\$1,121,840
D4	Percentage of unstructured content in an enterprise	Assumption	80%	80%	80%
D5	Percentage of unstructured content in stored in Box	Composite	60%	60%	60%
D6	Percentage of breaches caused unintentionally (i.e. by user error or system misconfiguration)	Ponemon Institute	48%	48%	48%
D7	Risk mitigated by use of Box Shield	D4*D5*D6	23%	23%	23%
Dt	Reduced risk of data breach from accidental data leakage	D3*D7	\$258,472	\$258,472	\$258,472
	Risk adjustment	↓10%			
Dtr	Reduced risk of data breach from accidental data leakage (risk-adjusted)		\$232,625	\$232,625	\$232,625
Three-year total: \$697,874			Three-year present value: \$578,503		

COST SAVINGS ON MONITORING EMPLOYEES CONTENT ACCESS BEHAVIOR

35% of employees take sensitive data with them when they leave a job, posing a significant business threat (e.g. with the loss of intellectual property) and compliance risk (e.g. unauthorized access to or use of customers’ personally identifiable information) for organizations. To combat this, IT security analysts have to spend time reviewing logs for employees’ content access behavior, especially for those who are leaving the organization. This, however, can be time-consuming and ineffective, as logs do not always provide business context around content (e.g. their sensitivity and security classifications), and security analysts may not be able to detect anomalous trends.

Box Shield helps organizations monitor content access patterns of all employees in real time, and automatically alerts security teams to unusual access or download patterns, preventing data leakage which can lead to loss of reputation, customers and/or revenue.

Modeling and assumptions. For the composite organization, Forrester assumes:

- The annual employee turnover rate is 22%.
- Security analysts manually review content access activities of all departing employees, spending about 1.5 hours on each review.
- With Box Shield, only 20% of departing employees trigger an anomalous content access alert. Security analysts spend about 20 minutes investigating each of these alerts.

Risks. Several factors also impact how much time and costs organizations can save on monitoring content access with Box:

- Nature of industry and sensitivity of data.
- Current security practices.

Results. To account for these risks, Forrester adjusted this benefit downward by 10%, yielding a three-year, risk-adjusted total PV of \$237,000.

Cost Savings On Monitoring Employee Content Access Behavior					
Ref.	Metric	Calculation	Year 1	Year 2	Year 3
E1	Number of employees	A1	5,000	5,150	5,305
E2	Annual turnover	Assumption	22%	22%	22%
E3	Number of departing employees	E1*E2	1,100	1,133	1,167
E4	Time taken to review content access activities without Box Shield (hours)	Composite	1.5	1.5	1.5
E5	Time taken to review content access activities with Box Shield (hours)	Composite	0.3	0.3	0.3
E6	Percentage of departing employees who trigger a Box Shield alert	Composite	20%	20%	20%
E7	Time savings on content access monitoring with Box Shield (hours)	(E3*E4)-(E3*E5*E6)	1,584	1,632	1,680
E8	Average fully loaded salary of IT security analyst (per hour)	Assumption: \$135,000/2,080	\$65	\$65	\$65
Et	Cost savings on monitoring employee content access behavior	E7*E8	\$102,808	\$105,923	\$109,038
	Risk adjustment	↓10%			
Etr	Cost savings on monitoring employee content access behavior (risk-adjusted)		\$92,527	\$95,331	\$98,135
Three-year total: \$285,992			Three-year present value: \$236,631		

AVOIDED COST OF THIRD-PARTY SECURITY AND COMPLIANCE SOLUTIONS AND CERTIFICATIONS

One interviewed organization that dealt with sensitive health records reported that, prior to Box, they had to engage third-party vendors to oversee and certify their data security policies and management. The certification, and its associated assessments, cost approximately \$100,000 every three years, whereas the external security solution costs approximately \$75,000 per annum.

With Box’s built-in security capabilities and certifications, one interviewed organization was able to entirely avoid these costs. Other interviewees who used Box Shield also reported that the ease and granularity of access controls provided with Box Shield made implementing and monitoring security policies a breeze. To that end, interviewees estimated that they could save about three to four hours a week on managing security risks.

Modeling and assumptions. For the composite organization, Forrester makes the following assumptions:

- As the composite organization works with sensitive financial data, many clients require proof of Financial Industry Regulatory Authority (FINRA) compliance and/or ISO 27001 certification. To meet these stringent requirements, the composite organization would also need to engage a third-party vendor to secure their data.
- The composite organization saves about 160 FTE hours a year (or 3 hours 20 minutes per week) on actively monitoring and configuring security policies. This is double in Year 1, where additional time is needed for audits and assessments required for their certifications.

Risks. Additional factors that influence the amount of cost and resource savings organizations can realize in their security risk and compliance management:

- The nature of their industry.
- Their current security practices and needs.

To account for these variances, Forrester adjusted this benefit downward by 20%, yielding a three-year, risk-adjusted total PV of \$244,976.

Avoided Cost Of Third-Party Security And Compliance Solutions And Certifications					
Ref.	Metric	Calculation	Year 1	Year 2	Year 3
D1	Avoided cost of independent security certification	Composite	\$100,000	-	-
D2	Avoided cost of engaging third-party security vendor	Composite	\$75,000	\$75,000	\$75,000
D3	Time spent on security risk and compliance assessment and management (hours)	Composite	320	160	160
D4	Average fully loaded salary of IT security manager (per hour)	Assumption: \$110,000/2,080	\$53	\$53	\$53
D5	Resource cost of security risk and compliance management	D3*D4	\$16,960	\$8,480	\$8,480
Dt	Avoided cost of third-party security and compliance solutions and certifications	D1+D2+D5	\$191,960	\$83,480	\$83,480
	Risk adjustment	↓20%			
Dtr	Avoided cost of third-party security and compliance solutions and certifications (risk-adjusted)		\$153,568	\$66,784	\$66,784
Three-year total: \$287,136			Three-year present value: \$244,976		

IMPROVED EASE OF DATA GOVERNANCE AND COMPLIANCE MANAGEMENT

With data privacy laws constantly evolving, interviewed customers reported that they faced increasing complexity in managing their global data governance — e.g., in maintaining auditable records and trails of their data management practices.

One interviewed customer related that this was especially challenging in their legacy environment as their content systems were not well-integrated, which meant that record management efforts had to be duplicated across multiple systems.

With Box, the interviewed customers saved time and resources on preparing for data governance audits, as well as on the daily management of data compliance. For instance, one interviewee mentioned that the ability to tag files and/or folders with specific retention policies was especially helpful.

Modeling and assumptions. For the composite organization, Forrester makes the following assumptions:

- It goes through eight (internal and external) data governance audits per year, and each audit requires approximately 42 FTE hours to prepare for.
- With the ease of managing data retention policies, the data protection officer (or a similar role/function in smaller organizations) saves approximately 10% of their time on ensuring compliance.

Risks. Additional factors that impact the improvement in ease of data governance and compliance management include:

- The nature of their industry.
- Their current data governance practices.

To account for these variances, Forrester adjusted this benefit downward by 20%, yielding a three-year, risk-adjusted total PV of \$63,000.

Improved Ease Of Data Governance And Compliance Management					
Ref.	Metric	Calculation	Year 1	Year 2	Year 3
E1	Number of data governance audits	Composite	8	8	8
E2	Total FTE hours spent preparing for each audit	Composite	42	42	42
E3	Average fully loaded salary of compliance manager (per hour)	Assumption: \$105,000/2,080	\$50	\$50	\$50
E4	Resource cost savings on data compliance audits	E1*E2*E3	\$16,800	\$16,800	\$16,800
E5	Average time savings for a data protection officer	Composite	10%	10%	10%
E6	Average fully loaded salary of a data protection officer	Assumption	\$150,000	\$150,000	\$150,000
E7	Resource time savings for a data protection officer	E5*E6	\$15,000	\$15,000	\$15,000
Et	Improved ease of data governance and compliance management	E4+E7	\$31,800	\$31,800	\$31,800
	Risk adjustment	↓20%			
Etr	Improved ease of data governance and compliance management (risk-adjusted)		\$25,440	\$25,440	\$25,440
Three-year total: \$76,320			Three-year present value: \$63,266		

UNQUANTIFIED BENEFITS

Additional benefits that customers experienced but were not able to quantify include:

- **Reduced burden on IT staff and support to handle administrative work.** Similarly, Box also helped to ease the burden on IT systems admin staff, as they no longer had to deal with low-value work such as like managing servers and responding to support tickets related to their legacy content management solution. Further, IT support also gained additional time and resources to handle higher value, higher priority work.
- **Reduced risk of ransomware and malware attacks.** One feature of Box Shield is its ability to detect malware and ransomware embedded in content uploaded to Box, and to prevent its spread by automatically disabling downloads and sharing of at-risk content content. Furthermore, as users can access files and work in the cloud, it allows for business continuity while IT teams investigate security breaches. While interviewees did not report any incidences of malicious attacks, they mentioned that Box Shield provided them with additional security and assurance against potential security breaches.
- **Increased efficiency for security teams.** Customers also reported that the ease and granularity of Box Shield's security controls gave them peace of mind when it came to data security and compliance. The product's ease of use requires little to no training to set-up, and the transparency of the tool made it easier and more efficient for security teams to communicate access restrictions with the organization.
- **Improved employee experience.** In their legacy environment, employees were often frustrated by bolted-on security solutions and clunky UI's. Box provided a modern, mobile solution which eased one of their key technology pain points.

- **Ease of migrating from legacy systems and onboarding new users.** Two of the interviewees have a history of M&As taking place every few years. They have both said that onboarding users en masse to Box is extremely easy and without complication. There is virtually no learning curve, and no need to train users on the interface.

“You can’t put a time savings on some of these benefits. It’s about giving your employees more modern and agile tools to work with and increasing their job satisfaction.”

VP, enterprise program delivery, mortgage insurance

FLEXIBILITY/FUTURE VALUE

Customers value flexibility in different ways. There are multiple scenarios in which a customer might implement Box and later realize additional uses and business opportunities, including:

- **Integration with business and productivity applications across the entire enterprise ecosystem.** Box partners with numerous other technology solution providers to help organizations integrate their content management platform with other business apps and business processes (e.g., customer relationship management (CRM) platforms, security and identity providers, project management apps, enterprise platforms, and more). Organizations can also develop custom-built applications with an extensive set of APIs and developer tools, which are available via the Box Platform. All interviewed customers reported that they had integrated with a few applications, but they were always looking out for new integration possibilities.
- **Widening the scope of the Box deployment.** Interviewed customers deployed: Box Core for file storage and collaboration; Box Relay for workflow automation; Box Shield for enhanced security; and Box Governance for enhanced data governance controls. Other Box services not discussed in this study include: the Box Platform for custom-built applications; Box Zones for data residency controls; Box KeySafe for encryption key management; and Box GxP Validation for GxP compliance in life sciences. In particular, one interviewee mentioned they were looking forward to integrating Box Sign, a natively integrated e-signature solution, which would bring additional conveniences while allowing them to reduce third-party e-signature costs.

Flexibility would also be quantified when evaluated as part of a specific project (described in more detail in [Appendix A](#)).

Analysis Of Costs

■ Quantified cost data as applied to the composite

Total Costs							
Ref.	Cost	Initial	Year 1	Year 2	Year 3	Total	Present Value
Htr	Total Box service fees	\$275,000	\$1,204,500	\$1,240,635	\$1,277,975	\$3,998,110	\$3,355,479
Itr	Ongoing management and development costs	\$0	\$81,013	\$81,389	\$82,143	\$244,545	\$202,627
	Total costs (risk-adjusted)	\$275,000	\$1,285,513	\$1,322,024	\$1,360,118	\$4,242,655	\$3,558,106

TOTAL BOX SERVICE FEES

The primary cost component for deploying Box is the subscription fees. This is largely calculated based on the number of licenses an organization needs, and it is affected by the range of Box subscription deployed. For the composite organization, the license fees account for the deployment of Box's Digital Workplace Suite, which includes Box Core, Box Relay, Box Shield, and Box Governance. Those fees are estimated to be \$1.15 million in Year 1 for 5,000 users. This increases slightly in Years 2 and 3 as the number of employees increases.

It is also assumed that the composite organization engages Box's Consulting Services for support in the

deployment of Box and in the migration of data and users over to the new platform. The associated professional service fees amount to \$250,000 at the start of deployment.

Risks. Factors that will determine the overall incurred fees include:

- Scale and scope of Box deployment.
- Complexity of integration needs.

To account for these variances, Forrester adjusted this cost upward by 10%, yielding a three-year, risk-adjusted total PV (discounted at 10%) of \$3.4 million.

Total Box Service Fees							
Ref.	Metric	Calculation	Initial	Year 1	Year 2	Year 3	
F1	Box subscription fees	Provided by Box	-	\$1,095,000.00	\$1,127,850.00	\$1,161,685.50	
F2	Professional service fees	Provided by Box	\$250,000	-	-	-	
Ft	Total Box service fees	F1+F2	\$250,000	\$1,095,000	\$1,127,850	\$1,161,686	
	Risk adjustment	↑10%					
Ftr	Total Box service fees (risk-adjusted)		\$275,000	\$1,204,500	\$1,240,635	\$1,277,854	
Three-year total: \$4,135,988				Three-year present value: \$3,464,177			

ONGOING MANAGEMENT AND DEVELOPMENT COSTS

Interviewed customers all reported that very little monitoring and management was needed for their Box deployment. Across the four organizations, between 0.5 to 1 FTEs was required to manage Box in its entirety — from strategic planning, all the way to administrative and operational matters.

Interviewed customers also accounted for the incremental time taken to set up workflow automation.

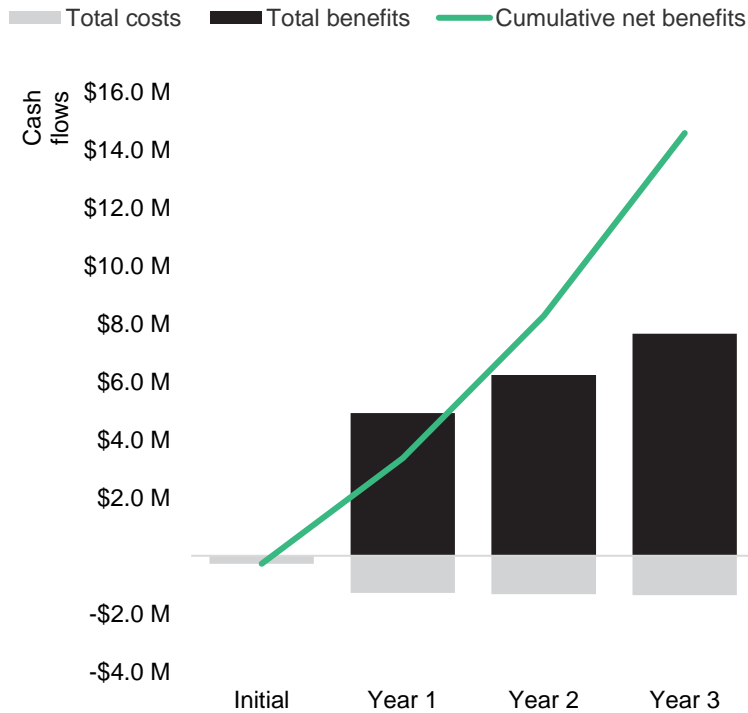
To account for variances in the complexity of the Box deployment, Forrester adjusted the ongoing cost of managing Box upward by 10%, yielding a three-year, risk-adjusted total PV of \$203,000.

Ongoing Management And Development Costs						
Ref.	Metric	Calculation	Initial	Year 1	Year 2	Year 3
I1	Number of FTEs required to manage Box	Composite		0.75	0.75	0.75
I2	Fully loaded salary of Box program manager	Assumption		\$95,000	\$95,000	\$95,000
I3	Number of new workflows automated	B1 (current year to previous year)		35	40	50
I4	Time taken to set up workflows	Composite		1.5	1.5	1.5
I5	Fully loaded salary of Box program manager (per hour)	G2/2,080		\$46	\$46	\$46
I6	Cost of setting up workflows	G3*G4*G5		\$2,398	\$2,740	\$3,425
I7	Ongoing management and development costs	(G1*G2)+G6		\$73,648	\$73,990	\$74,675
	Risk adjustment	↑10%				
I7r	Ongoing management and development costs (risk-adjusted)			\$81,013	\$81,389	\$82,143
Three-year total: \$244,545				Three-year present value: \$202,627		

Financial Summary

CONSOLIDATED THREE-YEAR RISK-ADJUSTED METRICS

Cash Flow Chart (Risk-Adjusted)



The financial results calculated in the Benefits and Costs sections can be used to determine the ROI, NPV, and payback period for the composite organization's investment. Forrester assumes a yearly discount rate of 10% for this analysis.

These risk-adjusted ROI, NPV, and payback period values are determined by applying risk-adjustment factors to the unadjusted results in each Benefit and Cost section.

Cash Flow Analysis (Risk-Adjusted Estimates)

	Initial	Year 1	Year 2	Year 3	Total	Present Value
Total costs	(\$275,000)	(\$1,285,513)	(\$1,322,024)	(\$1,360,118)	(\$4,242,655)	(\$3,558,106)
Total benefits	\$0	\$4,924,024	\$6,238,600	\$7,658,047	\$18,820,671	\$15,385,857
Net benefits	(\$275,000)	\$3,638,511	\$4,916,576	\$6,297,930	\$14,578,017	\$11,827,751
ROI						332%
Payback period (months)						<6

Appendix A: Total Economic Impact

Total Economic Impact is a methodology developed by Forrester Research that enhances a company's technology decision-making processes and assists vendors in communicating the value proposition of their products and services to clients. The TEI methodology helps companies demonstrate, justify, and realize the tangible value of IT initiatives to both senior management and other key business stakeholders.

TOTAL ECONOMIC IMPACT APPROACH

Benefits represent the value delivered to the business by the product. The TEI methodology places equal weight on the measure of benefits and the measure of costs, allowing for a full examination of the effect of the technology on the entire organization.

Costs consider all expenses necessary to deliver the proposed value, or benefits, of the product. The cost category within TEI captures incremental costs over the existing environment for ongoing costs associated with the solution.

Flexibility represents the strategic value that can be obtained for some future additional investment building on top of the initial investment already made. Having the ability to capture that benefit has a PV that can be estimated.

Risks measure the uncertainty of benefit and cost estimates given: 1) the likelihood that estimates will meet original projections and 2) the likelihood that estimates will be tracked over time. TEI risk factors are based on "triangular distribution."

The initial investment column contains costs incurred at "time 0" or at the beginning of Year 1 that are not discounted. All other cash flows are discounted using the discount rate at the end of the year. PV calculations are calculated for each total cost and benefit estimate. NPV calculations in the summary tables are the sum of the initial investment and the discounted cash flows in each year. Sums and present value calculations of the Total Benefits, Total Costs, and Cash Flow tables may not exactly add up, as some rounding may occur.



PRESENT VALUE (PV)

The present or current value of (discounted) cost and benefit estimates given at an interest rate (the discount rate). The PV of costs and benefits feed into the total NPV of cash flows.



NET PRESENT VALUE (NPV)

The present or current value of (discounted) future net cash flows given an interest rate (the discount rate). A positive project NPV normally indicates that the investment should be made, unless other projects have higher NPVs.



RETURN ON INVESTMENT (ROI)

A project's expected return in percentage terms. ROI is calculated by dividing net benefits (benefits less costs) by costs.



DISCOUNT RATE

The interest rate used in cash flow analysis to take into account the time value of money. Organizations typically use discount rates between 8% and 16%.



PAYBACK PERIOD

The breakeven point for an investment. This is the point in time at which net benefits (benefits minus costs) equal initial investment or cost.

Appendix B: Endnotes

¹ “2020 Cost of a Data Breach Study: Global Overview,” Ponemon Institute, July 2020.

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