

The Total Economic Impact™ Of Google Workspace

Cost Savings And Business Benefits Enabled By Workspace

A Forrester Total Economic Impact™ Study
Commissioned By Google, December 2023

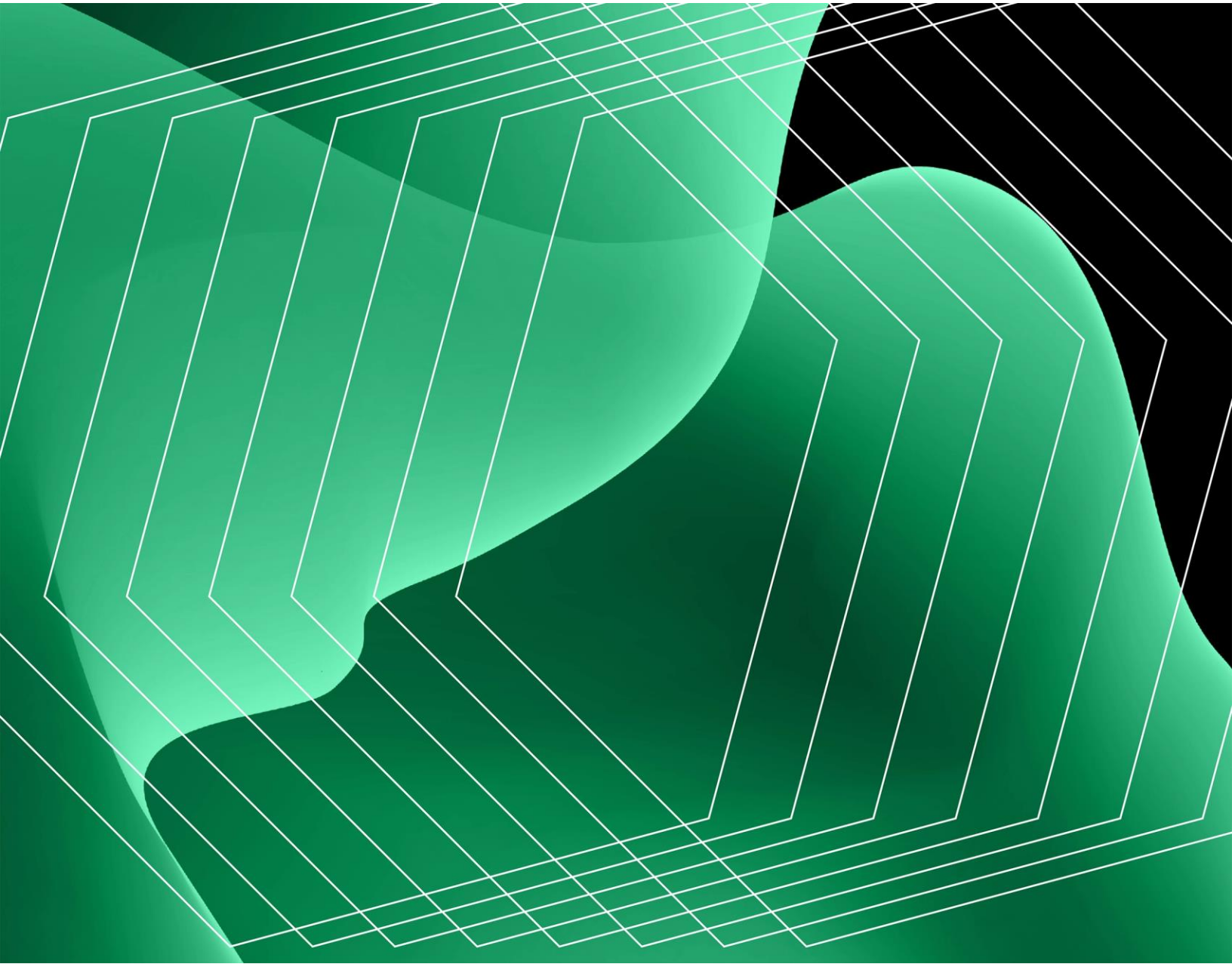


Table Of Contents

Executive Summary	3
The Google Workspace Customer Journey	12
Analysis Of Benefits	15
Analysis Of Costs	45
Financial Summary	48

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Executive Summary

Google Workspace is a suite of tools that enables transformation toward a more collaborative and connected workplace culture that empowers employees across all roles with intuitive apps like Gmail, Docs, Sheets, and Meet. Workspace allows employees to accomplish more in a Zero Trust, cloud-native security environment, focusing on what matters most. With Workspace, organizations improve the productivity of both office and frontline workers, enhance security, grow revenue, and drive innovation.

[Google Workspace](#) includes tools, such as Drive, Gmail, Calendar, Chat, Meet, Docs, Forms, Sheets, Slides, and AppSheet, that come together to provide a collaborative and secure environment that drives efficiency across the entire workforce. The platform supports greater digitization and continual adaptation with an easy-to-use, cloud-native solution. AI-powered features in Workspace help employees save time, remove the burden of routine tasks, and stay safe against malware and phishing attacks.

Google commissioned Forrester Consulting to conduct a Total Economic Impact™ (TEI) study and examine the potential return on investment (ROI) enterprises may realize by deploying Workspace. The purpose of this study is to provide readers with a framework to evaluate the potential financial impact of Workspace on their organizations.¹

“The value of Workspace is collaboration and the stability of the system. We’re an organization that works 24/7. It’s the most reliable and collaborative system that we have.”

HEAD OF IT, TECHNOLOGY

EXECUTIVE SUMMARY

To better understand the benefits, costs, and risks associated with this investment, Forrester interviewed six representatives at five enterprise organizations with experience using Google Workspace. For the purposes of this study, Forrester aggregated the interviewees' experiences and combined the results into a single [composite organization](#), which is an organization with 10,000 employees in office roles and 10,000 in frontline roles.

Interviewees said that prior to using Workspace, their organizations used a mix of on-premises and cloud collaboration tools. Office workers who used these legacy tools could not effectively collaborate in real time, hindering productivity and innovation. Frontline workers often lacked access to these tools altogether, leaving them disconnected from their organizations' larger digitization and modernization efforts, impeding efficiency, collaboration, and access to convenient communication channels. In addition, IT teams struggled with the uncertain security standards of these legacy systems and saw a need for solutions that enhanced their organizations' security.

After the investment in Workspace, the interviewees saw a more collaborative, productive, and secure workplace. Key results from the investment include improved collaboration, faster searching for and finding information, more efficient workflows and application development, security tool cost savings and IT productivity, increased incremental profit, and a more connected and inclusive work community.

KEY STATISTICS



Return on investment (ROI):

336%



Net present value (NPV):

\$57.3 million



Payback:

<6 months



Benefits PV:

\$74.3 million

KEY FINDINGS

Quantified benefits. Three-year, risk-adjusted present value (PV) quantified benefits for the composite organization include:

- **Improved collaboration by 30%.** Improved collaboration is a top benefit the composite organization experiences by transitioning to Workspace as office and frontline workers alike see significant time savings due to improvements brought by Workspace that drive collaboration, such as AI automation, better and faster communication, easier information sharing, and more data-driven approaches. The improved collaboration, enabled by apps such as Drive, Chat, Gmail, Meet, Docs, and Sheets, leads to users saving 1.5 hours a week on average and is worth \$49.5 million for the composite organization over three years.
- **Improved speed of searching for and finding information by 40%.** Workspace makes information easily accessible, and this, combined with the platform's advanced search capabilities, allows individual users at the composite organization to quickly find the files and information they need. This is valued at \$6.6 million for the composite organization over three years.
- **More efficient workflows and decreasing application development time by up to 80%.** The composite organization greatly increases the efficiency of app development with AppSheet, an easy-to-use no-code platform that empowers actual end users to build and modify apps. The composite uses AppSheet to create apps with various use cases but focuses on those that automate processes and streamline workflows. AppSheet and other Workspace apps like Drive, Forms, and Sheets improve the efficiency of certain defined workflows. This saves \$8.7 million for the composite organization over three years.
- **Enhanced security resulting in security tool cost savings.** Given the superior security features built into Workspace as a cloud-based platform,

the composite organization is less reliant on its third-party anti-spam, anti-phishing, encryption, ransomware, and data loss solutions. This decreased reliance on external vendors enables the composite organization to retire certain legacy security solutions, resulting in cost savings of \$1.8 million over three years.

- **Enhanced security resulting in security team and IT team productivity, including 90% less time to configure workstations and a 20% reduction in tickets.** The IT team at the composite organization easily administers Workspace as it is straightforward to create and manage Google accounts, integrate the platform with their active directory, onboard and offboard staff members, and flag problem accounts. SSO provides simplicity for both IT and end users, and a lack of outages prevents downtime. Moreover, the Workspace admin console empowers the IT team to immediately take action as necessary.

“The fact that there’s a bunch of AI features inside Workspace is one of the reasons we chose it in the first place. The AI functionalities help automate. We want the people at our organization to focus their time on using their brains, not monotonous tasks that could be automated.”

CHANGE MANAGEMENT LEADER, MANUFACTURING

- **Increase in incremental profit by 1.5% for certain revenue streams.** Workspace enables an increase in revenue generation at the composite organization. Apps such as Drive, Sheets, and AppSheet are used to access data, optimize store inventory counts, and provide better customer service. In addition, productivity gains from improved collaboration, AI-powered workflows, and enhanced security allow employees to focus on higher-value, revenue-generating work. Over three years, this leads to a revenue uplift of \$26 million and ultimately results in profit worth \$2.4 million for the composite organization.
- **Decommissioned legacy systems.** Upon adoption, Workspace serves as the composite organization's primary productivity suite for employees. As such, the composite decommissions redundant legacy productivity tools and saves costs totaling \$4.8 million over three years.

Unquantified benefits. Benefits that provide value for the composite organization but are not quantified for this study include:

- **Supports a connected and inclusive work community.** Workspace strengthens connection and inclusion by allowing employees to easily communicate and collaborate, both in real time and asynchronously. Google Meet features AI-powered capabilities that help all employees fully participate, including with real-time captions in multiple languages. Meanwhile, Chat features inclusive and custom emojis, and smart chips across Docs, Sheets, and Slides bring in recommended people and content to broaden collaboration for both frontline and office workers.
- **Improved employee experience and morale.** As an effective and modern tool that allows employees to work smarter and faster, Workspace improves employee experience and morale. With AI infused across Workspace, employees have more time to focus on the best parts of their jobs and spend less time on routine tasks like responding to emails. Frontline and office workers, particularly younger employees, often use

Google products and Workspace apps in their private lives, leading to existing familiarity with the platform.

- **Easier onboarding and training for HR.** Workspace speeds the onboarding process with greater digitization; with a Google account, user provisioning for accounts and devices occurs quickly, so that workers receive, sign, and return documents digitally. Workspace unlocks new training opportunities, particularly for frontline workers, who are reached by Gmail and directed to training opportunities, including live ones on Meet.

“A value of Workspace for frontline workers is definitely the sense of belonging to the digitalization of the company. It eliminates the distance between headquarters and the shops. It increases the quality of the work.”

DIRECTOR OF IT, RETAIL

Costs. Three-year, risk-adjusted PV costs for the composite organization include:

- **Subscription costs.** The composite organization pays subscription costs to Google for the use of Workspace. This cost is driven by factors such as the number of users and how many are in office versus frontline roles. This costs the composite organization \$15.4 million over three years.
- **Internal labor for implementation and management.** The composite organization dedicates a small team of FTEs to the implementation and ongoing management of Workspace, while users on average spend a few hours learning and getting comfortable with the platform. This costs \$4.6 million for the composite organization over three years.

The representative interviews and financial analysis found that a composite organization experiences benefits of \$74.3 million over three years versus costs of \$17.1 million, adding up to a net present value (NPV) of \$57.3 million and an ROI of 336%.

“Being data-driven and collaborative are two big benefits of Workspace. Those are two pillars of what you need for successful innovation. From a security perspective, it’s a very, very safe environment for our data. Workspace has zero reports of data loss or ransomware attacks.”

CHANGE MANAGEMENT LEADER, MANUFACTURING

EXECUTIVE SUMMARY



Return on investment (ROI)

336%



Benefits PV

\$74.3 million



Net present value (NPV)

\$57.3 million



Payback

<6 months

Benefits (Three-Year)



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 Workspace.

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 Workspace can have on an organization.

DISCLOSURES

Readers should be aware of the following:

This study is commissioned by Google 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 Workspace.

Google 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.

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

Due Diligence

Interviewed Google stakeholders and Forrester analysts to gather data relative to Workspace.

Interviews

Interviewed six representatives at five enterprise organizations using Workspace to obtain data about costs, benefits, and risks.

Composite Organization

Designed a composite organization based on characteristics of the interviewees' 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 interviewees.

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 Google Workspace Customer Journey

Drivers leading to the Workspace investment

Interviews				
Role	Industry	Region	Number Of Employees	Revenue
Director of IT	Retail	EMEA	15,000	\$1.5B
Head of IT	Technology	APAC	20,000	\$3B
Head of emerging technologies	Technology	APAC	20,000	\$3B
VP of operations	Healthcare	North America	35,000	\$7.5B
Change management leader	Manufacturing	Global	200,000	\$60B
Senior consultant	Professional services	Global	600,000	\$30B

Key Challenges

Before their investment in Google Workspace, interviewees noted how their organizations struggled with common challenges using their on-premises and cloud-based legacy solutions, including:

- **Lack of effective collaboration tools.** Interviewees repeatedly emphasized that they sought a tool that allowed all employees to collaborate in real time more effectively with convenient communication channels, easy access to information, and version control. The change management leader in manufacturing said, “Like many companies, we had a lot of bad habits — sending different copies as email attachments, different versions of documents stored all over the place.” The head of emerging technologies in technology said, “We needed to drastically change the way we were doing online collaboration at the company.”

- **Time-consuming processes.** Closely related to limitations around collaboration, interviewees noted that both office and frontline workers experienced inefficiency when conducting core tasks like searching for and accessing information, communicating both internally and externally, and working jointly on the same files. Moreover, interviewees explained that several processes and workflows needed to be more automated so that employees could focus on higher-value work, such as strategy, and delivering high-quality products and services.
- **Security and technical limitations.** Interviewees described legacy systems that required several third-party tools to ensure security. The VP of operations in healthcare noted, “The biggest thing we were combating were the security vulnerabilities in the [legacy] platforms.” Interviewees also identified other technical limitations of their legacy products, such as downtime during updates and email inboxes that quickly reached capacity. This environment required the heightened attention of IT personnel.
- **Need for tools to drive cultural transformation.** Interviewees spoke of needing collaboration and productivity solutions that supported enterprisewide cultural transformation. Specific goals varied across interviewees’ organizations but centered around greater connection between office and frontline workforces, more innovation and revenue generation, and a focus on cloud-based, digital approaches. The change management leader in manufacturing sought tools that provided “an actual opportunity to really change our ways of working.”

Composite Organization

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

Description of composite. The composite organization generates \$4 billion in annual revenue and employs 20,000 employees representing a wide variety of job roles; 10,000 are in office roles and 10,000 are in frontline roles. Before adopting Google Workspace, the composite organization relied on a set of legacy productivity tools that left it struggling with limited collaboration capabilities, time-consuming processes, and less robust security features.

Deployment characteristics. The composite organization adopts Workspace as its primary productivity suite, making it available to all employees. For most frontline workers, it is their first time using an enterprise productivity and collaboration suite at the company. The composite implements Workspace over six months. All 20,000 employees are Workspace users.

Key Assumptions

\$4 billion in annual revenue

20,000 employees

Varying employee job roles: 10,000 in office roles and 10,000 in frontline roles

All employees are Workspace users

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	Improved collaboration	\$19,890,000	\$19,890,000	\$19,890,000	\$59,670,000	\$49,463,486
Btr	Improved speed of searching for and finding information	\$2,652,000	\$2,652,000	\$2,652,000	\$7,956,000	\$6,595,131
Ctr	More efficient workflows and decreasing application development time	\$3,494,400	\$3,494,400	\$3,494,400	\$10,483,200	\$8,690,056
Dtr	Enhanced security resulting in security tool cost savings	\$495,000	\$742,500	\$990,000	\$2,227,500	\$1,807,438
Etr	Enhanced security resulting in security team and IT team productivity	\$254,232	\$254,232	\$254,232	\$762,696	\$632,237
Ftr	Increase in incremental profit	\$960,000	\$960,000	\$960,000	\$2,880,000	\$2,387,378
Gtr	Decommissioned legacy systems	\$1,912,500	\$1,912,500	\$1,912,500	\$5,737,500	\$4,756,104
	Total benefits (risk-adjusted)	\$29,658,132	\$29,905,632	\$30,153,132	\$89,716,896	\$74,331,830

Improved Collaboration

Evidence and data. All interviewees emphasized that improved collaboration was a top benefit of transitioning to Workspace and the collaborative capabilities of the platform were significantly more robust than those of their legacy solutions. They noted a wide array of improvements, such as AI automation, better and faster communication, greater and easier information sharing, and improved use of data, which were brought by Workspace. These improvements drove collaboration, leading to significant time savings for office and frontline workers alike. The time savings during collaborative activities due to Workspace varied at interviewees' organizations but was typically 30% and, in some cases, over 50%.

- Interviewees reported that improved collaboration due to Workspace was widespread across all types of workers. The change management leader in manufacturing stated: “In the last survey we did, around 85% of our employees said Workspace was improving their day-to-day collaboration. ... Approximately 60% of our workers are what we would call frontline workers, either on the shop floor or visiting customers for maintenance. We have several support functions as well — sales, marketing, communications, and so on.”
- The AI functionality embedded in Workspace contributed to the improved collaboration. The director of IT in retail explained, “Automatic completion of sentences, translations, suggested calendar times, and suggested email recipients based on historical trends are really useful and simplify daily activities.” The VP of operations in healthcare added: “The AI capabilities in Workspace are beneficial for quick email replies or automatic sentence completion. Our team members have come to rely on them and probably don’t even think about it anymore.”
- Interviewees said that the Workspace apps were well integrated, and their functionalities worked smoothly in concert as employees executed their daily tasks.

“If you really want to collaborate, there’s no competition with Workspace — working on the same Doc or Sheet together, tracking histories and permissions, and so on. And everything is available on mobile, so it’s seamless. I can stay at home, at the office. There’s no changes in the ways of working.”

DIRECTOR OF IT, RETAIL

- Workspace brought about a cultural shift toward sharing more information at interviewees' organizations. The director of IT in the retail space said: "Workspace changed the ways we are working in terms of collaboration — sharing information, product presentations, documents, data in Sheets. For sure, it's a smarter way of working."
- Several interviewees identified Drive as a key enabler of increased collaboration. Employees saved time and ensured version control by sharing files with Drive links, as opposed to email attachments or traditional shared folder hierarchies. Drive offered flexibility as files could be shared internally or externally and as view-only or with editing privileges. The VP of operations in healthcare described the app as collaborative and easy to use, concluding, "Google Drive single-handedly is a game changer."
- Version control was repeatedly highlighted as a benefit of Workspace. The head of emerging technologies in technology explained: "We have version control with Sheets, Docs, and Slides. No more merging files or emails [back and forth]. We can also provide comments and assign tasks." The change management leader in manufacturing added: "One click of a button, and you can bring someone into the document. This really breaks down barriers. Co-editing is something the vast majority use."

"I couldn't give up Google Workspace. It all goes right back to the collaboration capabilities with Drive, Meet, Chat, and all the other apps. I cannot imagine working without Workspace now."

VP OF OPERATIONS, HEALTHCARE

- Chat, Meet, and Gmail became primary communication channels at interviewees' organizations, allowing both office and frontline workers to continually collaborate and align on work using any device. Directors, managers, and coworkers regularly used the apps to convey information and get messages out, whether one-on-one or to larger groups. Interviewees also noted that the apps kept workers connected and made them feel more like a team.
- Employees utilized features in Meet such as voice captioning and translations of the captions into a wide number of languages. Interviewees said this facilitated communication, fostered inclusion, and added value to the day-to-day operations of their organizations.
- Several interviewees explained that Workspace enabled collaboration between frontline and officer workers, resulting in more efficient work. The head of IT in technology said: "Workspace is more collaborative, and developers understand what's going on in the field. Developers and the infrastructure guys can work together to build or maintain applications and see what's working well. Our teams have shifted to Google Chat spaces to work faster. There's a clear impact because of Workspace."

"Chat is of tremendous value to the frontline workers. It allows them to communicate with each other regardless [of device], and it provides a great vehicle for sharing information with team members regardless of which shift they work. Using Chat Spaces is incredibly popular to enable team communication."

VP OF OPERATIONS, HEALTHCARE

- The director of IT in retail laid out how Workspace specifically benefited individual frontline workers across several key metrics, stating, “Engagement, inclusion, communication, transparency, retention — these are the reasons why we are still using Workspace even after six years.”
- The same interviewee noted how store locations benefited from Workspace: “We use Google Meet to connect headquarters to the shops. The most important appointments for the shops, like monthly inventory or expense deadlines, are in Calendar and everyone can access it.”
- Interviewees observed that the time savings was particularly beneficial because employees tended to use it for higher-value work. Time previously consumed by building slides, spreadsheets, and reports was instead often dedicated to analyzing data and communicating presentations more effectively.
- Workspace supported the interviewees’ organizations’ larger efforts to be more data driven as it made data accessible so that multiple users could benefit. Interviewees said information flowed smoothly and more detail and data was available for employees to leverage.

30%

Improved efficiency for collaborative activities

Modeling and assumptions. Based on the interviews, Forrester assumes the following about the composite organization:

- There are 10,000 users in highly collaborative roles that spend an average of 8 hours a week in collaborative activities.
- There are 10,000 users in intermediately collaborative roles that spend an average of 2 hours a week in collaborative activities.

ANALYSIS OF BENEFITS

- Due to Workspace, users save 30% of their time spent in collaborative activities.
- The productivity recapture rate for employees is 50%. Employees convert 50% of hours saved into productive time.
- The average fully burdened salary of employees is \$30 per hour.

Risks. The benefit of improved collaboration will vary based on:

- The adoption rate of Workspace and the amount of time users spend in collaborative activities.
- The tools used for collaboration prior to the implementation of Workspace.
- The average fully burdened salary of employees.

Results. To account for these risks, Forrester adjusted this benefit downward by 15%, yielding a three-year, risk-adjusted total PV (discounted at 10%) of \$49.5 million.

Improved Collaboration					
Ref.	Metric	Source	Year 1	Year 2	Year 3
A1	Users in highly collaborative roles	Composite	10,000	10,000	10,000
A2	Time spent each week in collaborative activities using tools (hours)	Composite	8	8	8
A3	Users in intermediately collaborative roles	Composite	10,000	10,000	10,000
A4	Time spent each week in collaborative activities using tools (hours)	Composite	2	2	2
A5	Organizationwide collaborative hours annually	$(A1 \cdot A2 \cdot 52) + (A3 \cdot A4 \cdot 52)$	5,200,000	5,200,000	5,200,000
A6	Time saved in collaborative activities with Workspace	Interviews	30%	30%	30%
A7	Organizationwide hours saved with Workspace	$A5 \cdot A6$	1,560,000	1,560,000	1,560,000
A8	Productivity recapture	TEI standard	50%	50%	50%
A9	Average fully burdened hourly salary for an employee	TEI standard	\$30	\$30	\$30
At	Improved collaboration	$A7 \cdot A8 \cdot A9$	\$23,400,000	\$23,400,000	\$23,400,000
	Risk adjustment	↓15%			
Atr	Improved collaboration (risk-adjusted)		\$19,890,000	\$19,890,000	\$19,890,000
Three-year total: \$59,670,000			Three-year present value: \$49,463,486		

Improved Speed Of Searching For And Finding Information

Evidence and data. Workspace made information easily accessible at interviewees' organizations and this — together with the platform's advanced search capabilities — allowed individual users to quickly find the files and information they needed. Among interviewees who could quantify this benefit, on

average, there was a time savings of 40% when searching for information with Workspace.

- Interviewees described the search functionality of Workspace as strong and able to quickly surface the information being sought. For example, the VP of operations in healthcare said, “Workspace has made searching for and finding information significantly easier ... finding things that I can’t seem to put my fingers on easily has probably gotten 75% easier.”
- The extent to which employees realized time savings depended on how much they needed to search for information throughout their workweeks. However, interviewees described the benefit as widespread because a wide mix of roles, both office and frontline, required referencing earlier conversations or existing documents.
- In some cases, the robust search functionality in Workspace was used to foster an open culture, as it could facilitate broad and easy access to documents for all employees across the organization.

The change management leader in manufacturing described how this worked: “Before Workspace, we didn’t have a way of indicating a document should come up in the search results for anyone at our company. Now we’re able to do that. We’re trying to foster a culture where you make this your default setting on each file, and you only restrict it if you really need to. [Workers in all roles] don’t have to build something from scratch; they can start with something already prepared.”

“Searching for information is absolutely faster with Workspace. The search functionality is excellent. The searching within Gmail, Calendar, Docs, Drive, or Meet is much faster.”

SENIOR CONSULTANT, PROFESSIONAL SERVICES

Modeling and assumptions. Based on the interviews, Forrester assumes the following about the composite organization:

- There are 10,000 users who need to regularly search for and find information, and they spend an average of 1 hour a week doing so.
- Due to Workspace, users save 40% of their time spent searching for and finding information.
- The productivity recapture rate for employees is 50%. Employees convert 50% of hours saved into productive time.
- The average fully burdened salary of employees is \$30 per hour.

40%

Reduction in time to search for and find information

Risks. The benefit of improved speed of searching for and finding information will vary based on:

- The adoption rate of Workspace and the amount of time users spend searching for and finding information.
- The search tools and approaches used prior to the implementation of Workspace.
- The average fully burdened salary of employees.

Results. To account for these risks, Forrester adjusted this benefit downward by 15%, yielding a three-year, risk-adjusted total PV (discounted at 10%) of \$6.6 million.

Improved Speed Of Searching For And Finding Information					
Ref.	Metric	Source	Year 1	Year 2	Year 3
B1	Users who regularly search for and find information	Composite	10,000	10,000	10,000
B2	Average time spent per week searching (hours)	Composite	1	1	1
B3	Organizationwide hours spent searching	$B1*B2*52$	520,000	520,000	520,000
B4	Time saved in searching for and finding information with Workspace	Interviews	40%	40%	40%
B5	Organizationwide hours saved with Workspace	$B3*B4$	208,000	208,000	208,000
B6	Productivity recapture	TEI standard	50%	50%	50%
B7	Average fully burdened hourly salary of an employee	TEI standard	\$30	\$30	\$30
Bt	Improved speed of searching for and finding information	$B5*B6*B7$	\$3,120,000	\$3,120,000	\$3,120,000
	Risk adjustment	↓15%			
Btr	Improved speed of searching for and finding information (risk-adjusted)		\$2,652,000	\$2,652,000	\$2,652,000
Three-year total: \$7,956,000			Three-year present value: \$6,595,131		

More Efficient Workflows And Decreasing Application Development Time

Evidence and data. Some interviewees' organizations included AppSheet as part of their Workspace implementation, greatly increasing the speed of app development. Additionally, as an easy-to-use, no-code platform, AppSheet empowered the end users to build and modify apps. Though AppSheet was used to create apps of all kinds, interviewees highlighted those that automated processes and streamlined workflows. At interviewees' organizations, AppSheet led to 80% faster app development on average. Moreover, AppSheet and other

Workspace apps improved the efficiency of defined workflows by 20%, although this time savings varied significantly based on the use case.

- For interviewees' organizations that added it to their Workspace plans, the use of AppSheet was widespread. For example, one interviewee reported that every month, over 300 AppSheet applications were developed, while another reported that over 1,000 were actively used at their organization.
- The apps had multiple use cases, described as both enterprisewide and niche, as teams across the organization created apps to suit their purposes. Interviewees tended to highlight apps that orchestrated workflows and provided significant time savings.
- The head of emerging technologies in technology discussed some specific examples: "Over time we are getting more complex [in what we accomplish with AppSheet]. We created an app that predicts cell outages due to weather events. We were able to create an [internal employee] e-commerce app. It's end-to-end — from inventory to delivery, everything is done through the app."

"We have a lot of AppSheet success stories. We have more than a thousand applications actively deployed and in use. Different groups and divisions are creating apps for their own purposes. ... We now have citizen development, so they themselves can actually modify the process and build their own app."

HEAD OF IT, TECHNOLOGY

- The same interviewee said AppSheet empowered the end user to create apps, which often led to more effective solutions: “What AppSheet does is focus on the real problem because the one who is creating the application is the end user. They really understand the problem and they really understand what needs to be solved.”
- The change management leader in manufacturing emphasized that AppSheet benefited frontline workers as well: “AppSheet allows us to automate a lot of processes on the shop floor. We have processes that were previously manually done with paper, which are now being managed with scanning a QR code on a smartphone, and it brings up a no-code application that was written in AppSheet. All the data is then stored inside Sheets. Those on the shop floor, on the factory floor, benefit.”
- The ease of using AppSheet made it more possible to test and innovate. The head of IT in technology explained: “An underrated feature of Workspace is you can prototype things faster. With AppSheet, we can progressively launch an application. We can test it, and after a few days, add more features once we understand the impact of the application.”
- Interviewees’ organizations without AppSheet could also streamline workflows using core Workspace apps and noted several efficiencies that were not possible in their prior environment. Examples included improvements to workflows related to payroll, medical verifications, and the distribution of supplies. The senior consultant in professional services said process enhancements and attendant productivity gains ultimately improved their organization’s competitive advantage.

Modeling and assumptions. Based on the interviews, Forrester assumes the following about the composite organization:

- Each year, 30 apps are developed with AppSheet.
- Before the implementation of AppSheet, on average, it required 5,200 employee hours to develop an app (i.e., five FTEs working for six months).
- Due to AppSheet, there is an 80% reduction in the hours needed to develop an app.

ANALYSIS OF BENEFITS

- The average fully burdened salary of employees developing apps is \$60 per hour.
- There are 10 defined workflows orchestrated with Workspace.
- Before the implementation of Workspace, executing each workflow required an average of 20,800 employee hours annually (i.e., 10 FTEs).
- Due to Workspace, there is a 20% reduction in the hours needed to execute the workflows.
- The average fully burdened salary of employees executing these workflows is \$30 per hour.
- The productivity recapture rate for employees is 50%. Employees convert 50% of hours saved into productive time.

80%

Faster app development with AppSheet

Risks. The benefit of more efficient workflows and decreasing application development time will vary based on:

- The adoption rate of AppSheet and the number of apps developed.
- Tools and processes in place prior to the implementation of AppSheet to develop apps.
- The number and types of workflows, the employee hours required to execute them, and the extent to which Workspace is used.
- The optimization applied to workflows prior to Workspace.
- The organization's ability to identify workflows that can be improved with Workspace.
- The average fully burdened salary of employees.

Results. To account for these risks, Forrester adjusted this benefit downward by 20%, yielding a three-year, risk-adjusted total PV (discounted at 10%) of \$8.7 million.

“The combination of AppSheet, which allows you to automate without any code, and then the AI functionalities, which help automate without needing to do anything, means that there are a bunch of things that are more efficient. ... With the AI in Sheets, if you make a mistake in a formula, it can fix it for you. It’s obvious that this has a huge benefit.”

CHANGE MANAGEMENT LEADER, MANUFACTURING

ANALYSIS OF BENEFITS

More Efficient Workflows And Decreasing Application Development Time					
Ref.	Metric	Source	Year 1	Year 2	Year 3
C1	Number of apps developed with AppSheet	Composite	30	30	30
C2	Average hours to develop an app before AppSheet (five FTEs working for six months)	Composite	5,200	5,200	5,200
C3	Hours to develop apps before AppSheet	C1*C2	156,000	156,000	156,000
C4	Time saved to develop apps with AppSheet	Interviews	80%	80%	80%
C5	Hours saved with AppSheet	C3*C4	124,800	124,800	124,800
C6	Average fully burdened hourly salary of an employee developing apps	TEI standard	\$60	\$60	\$60
C7	Workflows orchestrated with Workspace	Composite	10	10	10
C8	Average hours spent executing workflows (10 FTEs)	Composite	20,800	20,800	20,800
C9	Total time spent on workflows before Workspace	C7*C8	208,000	208,000	208,000
C10	Reduction in in time spent on workflows after Workspace	Interviews	20%	20%	20%
C11	Hours saved on workflows with Workspace	Composite	41,600	41,600	41,600
C12	Average fully burdened hourly salary of an employee engaged in workflows	TEI standard	\$30	\$30	\$30
C13	Productivity recapture	TEI standard	50%	50%	50%
Ct	More efficient workflows and decreasing application development time	(C5*C6*C13)+ (C11*C12*C13)	\$4,368,000	\$4,368,000	\$4,368,000
	Risk adjustment	↓20%			
Ctr	More efficient workflows and decreasing application development time (risk-adjusted)		\$3,494,400	\$3,494,400	\$3,494,400
Three-year total: \$10,483,200			Three-year present value: \$8,690,056		

Enhanced Security Resulting In Security Tool Cost Savings

Evidence and data. All interviewees identified enhanced security as a key value proposition of Workspace. Interviewees' organizations were less reliant on their third-party antispam, antiphishing, encryption, ransomware, and data loss solutions given the superior security features built into Workspace. In some cases, organizations retired security solutions after adopting Workspace and realized cost savings.

- The senior consultant in professional services summarized: "Google provides enhanced functionalities. Workspace is much more secure, and [ever since implementation] we have not had any actual issues related to security and related concerns."
- Interviewees experienced a financial benefit from the enhanced security with Workspace, as they could discontinue using and paying for third-party solutions for antispam, antiphishing, and email encryption. Instead, they were able to rely on the security built into Workspace.
- The director of IT in retail said: "We are using a lot of antiphishing from Google and have found it very valuable. It's included in Workspace and is really powerful, strong, and simple to use and configure. It delivers new features every week. It's incredible, you don't have to do anything."
- The change management leader in manufacturing said of their organization discontinuing its encryption solution, "We don't have to maintain that specific software or even that specific server that was running the encryption keys because we can do that all in the Google environment."
- The same interviewee said their organization experienced no ransomware or data loss with Workspace.

“There was an ample amount of cost savings because we removed spam-filtering solutions that we were previously using. We just use the Google spam-filtering solution. Another we discontinued was for email encryption, which was cumbersome. So, we decided to remove it and just use the confidential mode within Google and the native encryption of Workspace also.”

HEAD OF IT, TECHNOLOGY

Modeling and assumptions. Based on the interviews, Forrester assumes the following about the composite organization:

- Due to the enhanced security of Workspace, third-party antiphishing solutions are decommissioned over time. The cost savings from decommissioning these tools is \$250,000 in Year 1, \$375,000 in Year 2, and \$500,000 in Year 3.
- Due to the enhanced security of Workspace, third-party encryption solutions are decommissioned over time. The cost savings from decommissioning these tools is \$300,000 in Year 1, \$450,000 in Year 2, and \$600,000 in Year 3.

Risks. The benefit of enhanced security resulting in security tool cost savings will vary based on:

- The number and cost of third-party security solutions and what the organization decides to decommission given the enhanced security of Workspace.
- The security strategy and needs of the organization.

“[In our experience,] Workspace is completely ransomware resilient. We use it as the backbone for our ransomware resilience plan.”

CHANGE MANAGEMENT LEADER, MANUFACTURING

Results. To account for these risks, Forrester adjusted this benefit downward by 10%, yielding a three-year, risk-adjusted total PV (discounted at 10%) of \$1.8 million.

Enhanced Security Resulting In Security Tool Cost Savings					
Ref.	Metric	Source	Year 1	Year 2	Year 3
D1	Decommissioned antiphishing solutions	Interviews	\$250,000	\$375,000	\$500,000
D2	Decommissioned encryption solutions	Interviews	\$300,000	\$450,000	\$600,000
Dt	Enhanced security resulting in security tool cost savings	D1+D2	\$550,000	\$825,000	\$1,100,000
	Risk adjustment	↓10%			
Dtr	Enhanced security resulting in security tool cost savings (risk-adjusted)		\$495,000	\$742,500	\$990,000
Three-year total: \$2,227,500			Three-year present value: \$1,807,438		

Enhanced Security Resulting In Security Team And IT Team Productivity

Evidence and data. IT teams at interviewees' organizations found it easy to administer Workspace as it was straightforward to create and manage accounts, integrate the platform with their active directories, onboard and offboard staff members, and flag problem accounts. Additionally, single sign-on (SSO) provided simplicity for IT as well as end users, and a lack of outages prevented downtime. While it was not possible for interviewees to quantify all of these benefits, interviewees did calculate a 90% reduction in the time needed to set up new workstations and a 20% reduction in tickets on average.

- The setup of Workspace accounts, which was cloud-based and device-agnostic, took considerably less time than with legacy solutions. One interviewee, for example, quantified that with their legacy tools, a new workstation could be set up in approximately 2 hours, but it only took 5 or 10 minutes with Workspace.
- Interviewees noted that there were far fewer technology issues with Workspace compared to their legacy environments, and this similarly translated into a time savings. For example, the senior consultant in professional services reported: "There's around a 20% reduction of tickets with Workspace. Issues pertaining to the browser are very limited. Also, issue resolution is much faster."
- When there were issues, coworkers could often provide a quick solution. The change management leader in manufacturing said: "Communities have appeared inside Google Chat. If they have a problem with Workspace, they're asking the community and 90% of the time they're getting their answer."
- Interviewees explained that Workspace empowered IT teams as it allowed them to act quickly. For instance, an account could be deactivated immediately when needed. Interviewees explained that not only Google apps, but all of an employee's apps could be deactivated by suspending the Workspace account.

“The administration of Google Workspace — all I can call it is ‘easy.’”

VP OF OPERATIONS, HEALTHCARE

- The head of IT in technology said: “The security team can immediately take action. Whether they need to suspend an account or somebody requested it because they lost their phone, Workspace empowers them. It gives them the liberty to take action immediately.”
- Single sign-on with Workspace further streamlined IT operations, as the director of IT in retail described: “The IT department benefits in terms of user management because we are leveraging the single sign-on. So, no more user and password management. The IT people don’t need to create a ton of users and passwords to maintain because everything is integrated with the HR system and so on.”
- The head of IT in technology described how SSO benefited end users as well: “SSO is powering almost all our applications. Our executives like it because they don’t have to maintain passwords, they make just one. It saves time and promotes proper sanity also.”
- Some interviewees noted that in their previous environments, every month, some employees would not be able to work because systems were down. In contrast, they described Workspace as highly reliable.
- The senior consultant in professional services reported: “We have not faced any outages [with Workspace]. They have maintained the backend infrastructure services at their end seamlessly. It’s a significant change from the predominantly on-prem setup we used to have.” The head of IT in technology added: “We can continuously work wherever we are. That improves productivity a lot. There is no excuse anymore.”

“Workspace provides the ability to work without worrying about security — regardless of the device, regardless of location, we don’t worry about security. We can access information anywhere, anytime.”

HEAD OF EMERGING TECHNOLOGIES, TECHNOLOGY

Modeling and assumptions. Based on the interviews, Forrester assumes the following about the composite organization:

- Each year, 5,000 workstations are newly configured.
- The legacy productivity tool replaced by Workspace takes 2 hours on average to configure on a workstation.
- Workspace takes 90% less time to configure.
- Each year, 2,080 hours (i.e., one FTE) are required for internal help desk tickets related to the legacy product.
- With Workspace, there is a 20% reduction in tickets.
- The average fully burdened salary of employees executing these workflows is \$30 per hour.

Risks. The benefit of enhanced security resulting in security team and IT team productivity will vary based on:

- The legacy product and how long it takes to configure on a new workstation.
- How many tickets result due to the legacy product.
- The skill set of employees.
- The average fully burdened salary of employees.

ANALYSIS OF BENEFITS

Results. To account for these risks, Forrester adjusted this benefit downward by 10%, yielding a three-year, risk-adjusted total PV (discounted at 10%) of \$632,200.

Enhanced Security Resulting In Security Team And IT Team Productivity					
Ref.	Metric	Source	Year 1	Year 2	Year 3
E1	Number of employee work devices newly configured each year	Composite	5,000	5,000	5,000
E2	Average time to configure devices with legacy product (hours)	Interviews	2	2	2
E3	Reduction in time to configure with Workspace	Interviews	90%	90%	90%
E4	Hours saved to configure devices with Workspace	$E1 * E2 * E3$	9,000	9,000	9,000
E5	Time dedicated to internal help desk tickets related to legacy product	Interviews	2,080	2,080	2,080
E6	Reduction in tickets with Workspace	Interviews	20%	20%	20%
E7	Hours saved due to reduction in tickets with Workspace	$E5 * E6$	416	416	416
E8	Total time saved with Workspace (hours)	$E4 + E7$	9,416	9,416	9,416
E9	Average fully burdened hourly salary	TEI standard	\$30	\$30	\$30
Et	Enhanced security resulting in security team and IT team productivity	$E8 * E9$	\$282,480	\$282,480	\$282,480
	Risk adjustment	↓10%			
Etr	Enhanced security resulting in security team and IT team productivity (risk-adjusted)		\$254,232	\$254,232	\$254,232
Three-year total: \$762,696			Three-year present value: \$632,237		

Increase In Incremental Profit

Evidence and data. Multiple interviewees said that Workspace supported revenue generation at their organizations, noting that Workspace facilitated data analysis and inventory management, led to better customer service, and enabled innovation. One interviewee was able to quantify the revenue uplift, estimating that certain revenue streams grew by between 1% and 2% due to Workspace.

- Some interviewees noted that in their organizations' physical stores, employees used Workspace apps such as Drive, Sheets, and AppSheet to collaborate effectively, access data, and quickly optimize inventory counts so that the stores' offerings better met customer demand.
- Moreover, time savings brought by Workspace enabled employees to focus on higher-value work that helped ensure store success. For example, the head of emerging technologies in technology said: "With introducing AppSheet, the intention is to eliminate time-consuming administrative tasks so employees can focus on more valuable work like analysis."
- Workspace also facilitated better communication with customers, as store employees could communicate with them directly on Workspace apps. Additionally, frontline workers at one organization used AppSheet to build an app that managed customer service queuing in the physical stores. Interviewees noted that the process innovations and more effective customer service encouraged business and ultimately supported revenue generation.

"A percentage of revenue is coming from innovation, and we believe that the move to Workspace is helping put the tools in place for us to be a more innovative company."

— CHANGE MANAGEMENT LEADER, MANUFACTURING

- Interviewees noted that for frontline workers specifically, Workspace increased their sense of belonging to the digitization of the company and provided them with tools to increase the quality of their work, which in turn improved the quality of products and services and made customers more likely to purchase.
- Interviewees ultimately tied the core Workspace benefits of greater collaboration and security to revenue generation.
- The change management leader in manufacturing elaborated: “The benefits we’re getting as a result of the transformation to Workspace are really clear. We very concretely see that people are collaborating more. We have fewer copies of data, meaning there’s less chance of someone opening the wrong data source. We have better transparency. Whether it’s increased productivity and churning out more [product], or increased security, meaning we have less downtime on the shop floor. All of this, at some point, will impact the bottom line.”
- The senior consultant in professional services added, “Workspace has contributed to our culture of being more innovative, more dynamic.”

Modeling and assumptions. Based on the interviews, Forrester assumes the following about the composite organization:

- The total annual revenue is \$4 billion and the percentage of revenue affected by Workspace is 20%.
- There is a 1.5% increase in this revenue stream due to Workspace.
- The operating margin is 10%.

1.5%

Revenue uplift for affected revenue streams

Risks. The benefit of an increase in incremental profit will vary based on:

- The annual revenue and the percentage of revenue impacted by Workspace.
- The processes and tools in place to increase revenue prior to Workspace.
- The ability to identify revenue-generating use cases for which Workspace can be used.
- The operating margin.

Results. To account for these risks, Forrester adjusted this benefit downward by 20%, yielding a three-year, risk-adjusted total PV (discounted at 10%) of \$2.4 million.

Increase In Incremental Profit					
Ref.	Metric	Source	Year 1	Year 2	Year 3
F1	Total revenue	Composite	4,000,000,000	4,000,000,000	4,000,000,000
F2	Percentage of revenue affected by Workspace	Interviews	20%	20%	20%
F3	Dollar amount of revenue stream affected (before Workspace)	F1*F2	\$800,000,000	\$800,000,000	\$800,000,000
F4	Increase in this revenue stream due to Workspace	Interviews	1.5%	1.5%	1.5%
F5	Revenue uplift due to Workspace	F3*F4	\$12,000,000	\$12,000,000	\$12,000,000
F6	Operating margin	Composite	10%	10%	10%
Ft	Increase in incremental profit	F5*F6	\$1,200,000	\$1,200,000	\$1,200,000
	Risk adjustment	↓20%			
Ftr	Increase in incremental profit (risk-adjusted)		\$960,000	\$960,000	\$960,000
Three-year total: \$2,880,000			Three-year present value: \$2,387,378		

Decommissioned Legacy Systems

Evidence and data. Upon adoption, Workspace served as the primary productivity suite for employees at interviewees' organizations. Interviewees' organizations thus decommissioned various legacy productivity tools that were replaced by Workspace and saved costs.

- Some interviewees' organizations completely retired their legacy solutions upon the implementation of Workspace. While adopting Workspace as their primary solution and retiring most of the licenses for their legacy products, others retained some solutions for certain employees to continue to use at least for some time.
- The senior consultant in professional services explained: "Workspace works with other products with interoperability. ... There does not need to be complete dependency on a particular vendor from the SaaS [software-as-a-service] model perspective."
- In some cases, Workspace was the first time providing a productivity suite to frontline workers, so there was no corresponding cost savings from decommissioning a legacy system for those users. However, the director of IT in retail said, "The cost of Workspace [for frontline workers] is sustainable compared to other products."

"One of the most important cultural changes with Workspace is we can work completely on the cloud — we can have everything on the cloud. I think for organizations that are looking for a change from their on-prem environment, Workspace will provide a much better option."

SENIOR CONSULTANT, PROFESSIONAL SERVICES

Modeling and assumptions. Based on the interviews, Forrester assumes that the composite organization decommissions legacy systems after implementing Workspace, saving \$2.25 million dollars annually.

Risks. The benefit of decommissioned legacy systems will vary based on:

- The cost of legacy systems and how quickly they are decommissioned.
- The extent of decommissioning and whether any solutions are retained in part.

Results. To account for these risks, Forrester adjusted this benefit downward by 15%, yielding a three-year, risk-adjusted total PV (discounted at 10%) of \$4.8 million.

Decommissioned Legacy Systems					
Ref.	Metric	Source	Year 1	Year 2	Year 3
G1	Cost of legacy systems	Interviews	\$2,250,000	\$2,250,000	\$2,250,000
Gt	Decommissioned legacy systems	G1	\$2,250,000	\$2,250,000	\$2,250,000
	Risk adjustment	↓15%			
Gtr	Decommissioned legacy systems (risk-adjusted)		\$1,912,500	\$1,912,500	\$1,912,500
Three-year total: \$5,737,500			Three-year present value: \$4,756,104		

Unquantified Benefits

Interviewees mentioned the following additional benefits that their organizations experienced but were not able to quantify:

- **Supported a connected and inclusive work community.** Interviewees offered several examples of Workspace strengthening connection and inclusion at their organizations. For example, the VP of operations in healthcare noted that workers communicated with ease on Chat, and phone calls were replaced by Meet, which is more personal. They

concluded: “Culturally, that’s been a major shift. ... Connecting on a less formal basis with managers and coworkers engenders some cultural significance.”

Interviewees noted that Chat Spaces empowered various communities like musicians and coders to come together during the COVID-19 pandemic and has continued since then. Some organizations used Forms and Sheets to poll frontline workers. The change management leader in manufacturing noted several features in Workspace, such as captions in Meet, support for Braille keyboards, and inclusive emojis, and added, “On top of that, inclusivity requires silos to be broken down, which is happening as a result of Workspace.”

- **Improved employee experience and morale.** Interviewees said the increased connection also improved employee morale. Providing effective and modern tools also enhanced the employee experience. For instance, the director of IT in retail reported that employees said they work smarter and faster with Workspace. Some interviewees said that, while they could not measure it, they believed Workspace probably helped attrition.

Frontline and office workers often used Workspace apps in their private lives already. Similarly, the senior consultant in professional services noted broad familiarity with the products, including younger generations: “On the personal level, employees heavily use Google products. That makes it much simpler for them to learn. Also, most of the colleges and universities are using Google products. For the next generation who are joining, it’s a familiar platform. That’s an advantage.”

“When it comes to cultural transformation, we need ways to make it a more inclusive [and] collaborative environment. Google provides tools to do both.”

CHANGE MANAGEMENT LEADER, MANUFACTURING

- **Improved onboarding and training for HR.** Interviewees' organizations used Workspace to reduce the time to onboard by adding greater digitization to the process. With a Google account, new employees could receive the welcome pack digitally and sign and return documents. This saved administrative time for both new employees and HR.

Some interviewees noted that Workspace unlocked training opportunities, particularly for frontline workers. Interviewees used Meet for live events, noting the Jamboard and whiteboard functionalities, while Gmail was used to reach frontline workers better and direct them to training courses. The director of IT in retail added: "Thanks to the Google ID, the frontline workers have the chance to enter a ton of different platforms. We film videos showing how to make and prepare [products and services], maintain equipment, and so on. The content definitely helps the people feel more empowered to do their job."

Flexibility

The value of flexibility is unique to each customer. There are multiple scenarios in which a customer might implement Workspace and later realize additional uses and business opportunities, including:

- **Enabling future cultural transformation.** Interviewees said Workspace positioned their organizations for continued cultural and digital transformation into the future. The head of IT in technology said that Workspace lived up to the expectation of helping drive cultural transformation and that it inspired their attitude to solutions going forward as they sought those that were like Workspace.

The head of emerging technologies at the same company said, "Workspace is really part of how we were able to transition [the company] to more digital collaboration." Similarly, the change management leader in manufacturing said, "From a cultural transformation perspective, Workspace has been a key enabler."

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

“Whenever we use a solution now or are buying a new solution, we are always looking into how can that solution be more Workspace-like.”

HEAD OF IT, TECHNOLOGY

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	Subscription costs	\$0	\$5,117,500	\$5,117,500	\$5,117,500	\$15,352,500	\$12,726,465
Itr	Internal labor costs	\$3,312,000	\$414,000	\$414,000	\$414,000	\$4,554,000	\$4,341,557
	Total costs (risk adjusted)	\$3,312,000	\$5,531,500	\$5,531,500	\$5,531,500	\$19,906,500	\$17,068,022

Subscription Costs

Evidence and data. Interviewees’ organizations paid Google subscription costs for the use of Workspace. These subscription fees were based on factors such as the number of users, the scope of the implementation, and the inclusion of any add-ons like AppSheet.

- There was some variance in the percentage of employees at interviewees’ organizations with Workspace accounts. At most organizations, all employees had accounts; at one organization, around 20% had accounts.
- Subscription costs also varied based on whether users were in office or frontline roles. The subscription costs for frontline workers tended to be discounted.

Modeling and assumptions. To model this cost for the composite organization, Forrester assumes:

- The composite pays \$4,450,000 per year for the Workspace subscription with AppSheet.
- Pricing may vary. Contact Google for additional details.

Risks. The subscription cost will vary based on:

ANALYSIS OF COSTS

- The number of users, including how many are in office versus frontline roles.
- The scope of the implementation, including any add-ons.

Results. To account for these risks, Forrester adjusted this cost upward by 15%, yielding a three-year, risk-adjusted total PV (discounted at 10%) of \$12.7 million.

Subscription Costs						
Ref.	Metric	Source	Initial	Year 1	Year 2	Year 3
H1	Subscription costs	Interviews	\$0	\$4,450,000	\$4,450,000	\$4,450,000
Ht	Subscription costs	H1	\$0	\$4,450,000	\$4,450,000	\$4,450,000
	Risk adjustment	↑15%				
Htr	Subscription costs (risk-adjusted)		\$0	\$5,117,500	\$5,117,500	\$5,117,500
Three-year total: \$15,352,500			Three-year present value: \$12,726,465			

Internal Labor Costs

Evidence and data. At interviewees' organizations, a small group of employees dedicated some of their time to implementing and managing Workspace, while users spent a few hours getting to know the platform.

- Interviewees noted that the implementation of Workspace took three months or longer. The size of the internal team dedicated to the implementation varied but was most often five to 10 FTEs.
- Interviewees who could quantify the amount of internal labor required for the ongoing management of Workspace estimated it was two to three FTEs.
- Interviewees said Workspace was largely learned through use and that end users on average only needed to dedicate a few hours to getting up to speed with the platform.

Modeling and assumptions. To model this cost for the composite organization, Forrester assumes:

- Eight FTEs are dedicated to the implementation of Workspace over the course of six months.

ANALYSIS OF COSTS

- Three FTEs are dedicated to the ongoing management of Workspace.
- The average fully burdened salary of employees dedicated to the implementation and ongoing management of Workspace is \$120,000 per year.
- There are 20,000 users and, on average, they spend 4 hours learning and getting comfortable with Workspace.
- The average fully burdened salary of users is \$30 per hour.

Risks. The cost of internal labor will vary based on:

- The scope of the implementation.
- The skill set of employees.
- The average fully burdened salary of employees.

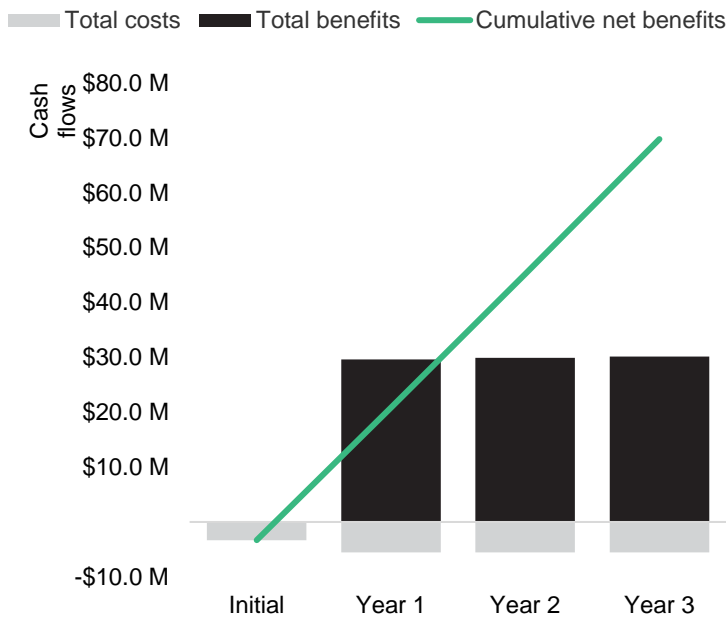
Results. To account for these risks, Forrester adjusted this cost upward by 15%, yielding a three-year, risk-adjusted total PV (discounted at 10%) of \$4.3 million.

Internal Labor Costs						
Ref.	Metric	Source	Initial	Year 1	Year 2	Year 3
I1	FTEs dedicated to implementation and ongoing management	Interviews	8	3	3	3
I2	Average fully burdened annual salary of FTE	TEI standard	\$120,000	\$120,000	\$120,000	\$120,000
I3	Length of implementation (months)	Interviews	6			
I4	Users	Composite	20,000			
I5	Average user time spent learning and getting comfortable with Workspace (hours)	Interviews	4			
I6	Average fully burdened hourly salary of a user	TEI standard	\$30			
I _t	Internal labor costs	$(I1 \cdot I2 \cdot I3 / 12) + (I4 \cdot I5 \cdot I6) + (I1 \cdot I2)$	\$2,880,000	\$360,000	\$360,000	\$360,000
	Risk adjustment	↑15%				
I _{tr}	Internal labor costs (risk-adjusted)		\$3,312,000	\$414,000	\$414,000	\$414,000
Three-year total: \$4,554,000			Three-year present value: \$4,341,557			

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)

	Initial	Year 1	Year 2	Year 3	Total	Present Value
Total costs	(\$3,312,000)	(\$5,531,500)	(\$5,531,500)	(\$5,531,500)	(\$19,906,500)	(\$17,068,022)
Total benefits	\$0	\$29,658,132	\$29,905,632	\$30,153,132	\$89,716,896	\$74,331,830
Net benefits	(\$3,312,000)	\$24,126,632	\$24,374,132	\$24,621,632	\$69,810,396	\$57,263,808
ROI						336%
Payback						<6 months

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."

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.

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.

Appendix B: Endnotes

¹ 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.

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