

A Forrester Total Economic
Impact™ Study
Commissioned By
Smartsheet

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The Total Economic Impact™ Of Smartsheet

Cost Savings And Business Benefits
Enabled By The Smartsheet Work
Management Tool

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Executive Summary

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

To better understand the benefits, costs, and risks associated with a Smartsheet implementation, Forrester interviewed several customers with multiple years of experience using Smartsheet. They use the tool to manage complex projects, roll out new products, and manage business processes that involve multiple stakeholders across departmental and geographic boundaries, including external collaborators such as customers, consultants, and vendors. Smartsheet increases work productivity for those who manage projects and the internal and external stakeholders who contribute to them, because the tool replaces overly complex project management software with an intuitive, spreadsheet interface that is web-based. Furthermore, it eliminates the need to exchange emails with spreadsheet attachments (the common default for organizations), which is an inefficient and error-prone approach that leads to lower-quality work, decreased customer satisfaction, and a constant interruption to productivity.

Prior to Smartsheet, customers had used standard packaged software for project management. They combined it with existing systems of engagement such as email and social collaboration, and systems of record such as enterprise resource planning (ERP), customer relationship management (CRM), and supply chain management (SCM). However, this left a productivity gap that employees were filling with complex spreadsheets, disruptive “reply all” email exchanges, and a culture of chasing for status updates. Visibility was low into the progress and quality of the work, reporting was cumbersome and difficult, and the project owners spent up to a full day of their work week requesting and compiling updates from team members. With Smartsheet, customers were able to empower project, product, and process owners and their diverse work teams to collaborate and manage complex work efforts in a single, web-based location with an intuitive and easy-to-use interface. Using the tool, they can add structure and business logic to unstructured work, which increases their team productivity, leading to faster completion of projects, higher-quality products, and more satisfied customers. Because the licensing arrangement requires that only those creating sheets in Smartsheet pay for licenses (not those editing or collaborating around them), customers receive additional productivity gains at no additional license cost. This has significant financial impact when estimating that for every paid “creator” license seven or more “collaborators” gain the benefits at no additional cost. Said one product manager: “Smartsheet gave me a way to enable 47 people to do their part rolling out a product suite efficiently and cleanly. I got beautiful notifications along the way about task completion or delays, which I could act on. We were able to roll it out for half the cost in one-third of the time. I credit Smartsheet a lot with this.”

The Smartsheet work management tool improves productivity significantly for those managing a project, product, or process. It gives them back 21% of their work week and is an efficient means to collaborate with team members across geographic and departmental boundaries. Furthermore, it shifts the culture toward collaboration and empowerment and away from passive participation on a project. Employees, customers, and partners can collaborate easily and cost-effectively, which leads to rapid, viral adoption.

The primary benefits for a composite organization of 10,000 employees, based on customer interviews, include:

- **21% time savings for project, product, and process managers.**
- **25% increase in productivity of work teams, at no cost for their licenses.**
- **Cost savings of over \$1 million over three years from better consolidation of customer issues through the web forms.**

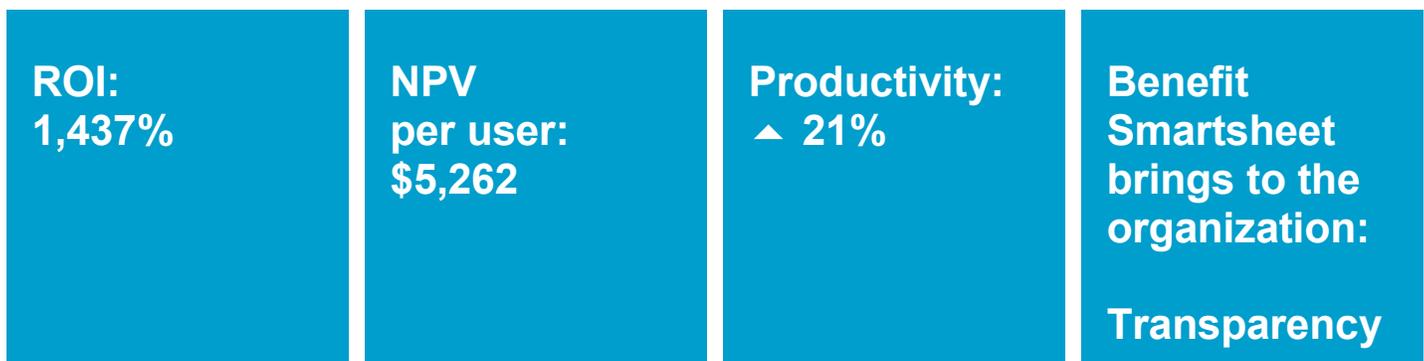
SMARTSHEET INCREASES WORK TEAM PRODUCTIVITY FOR OWNERS AND CONTRIBUTORS

Our interviews with four existing customers and subsequent financial analysis found that a composite organization based on these interviewed organizations experienced the risk-adjusted ROI, benefits, and costs shown in Figure 1.¹ (See Appendix A for a description of the composite organization.)

The composite organization analysis points to benefits of \$971,225 in the first year versus implementation costs of \$72,480, adding up to a net present value (NPV) of \$7,893,498 as adoption of the tool spreads virally over three years.

With Smartsheet, productivity for the manager of a project, product, or process was improved more than 20%, and the composite organization experienced additional savings in terms of work team productivity, avoidance of hiring more full-time equivalents (FTEs) than needed, and consolidation and cost savings around centrally managing customer issues.

FIGURE 1
Financial Summary Showing Three-Year Risk-Adjusted Results



Source: Forrester Research, Inc.

SMARTSHEET PROVIDES BENEFITS BEYOND THE TOOL AND EMPOWERS EMPLOYEES

While productivity gains contributed most significantly to the positive ROI of the implementation of Smartsheet, the customers interviewed for the study identified ways that it had a significant impact on their organization beyond the time and productivity savings. It inspired a culture of collaboration and empowerment for employees and provided a flexible, easy-to-implement means of solving challenging work team productivity issues, such as collecting status updates, reporting important customer information from the field, consolidating issues and information, avoiding duplicate data entry, and communicating across the boundaries of the organization to customers and partners. Using Smartsheet, nontechnical employees without project management training could document their unique business processes and build their own web-based productivity systems with the common spreadsheet interface. Below are some of the most frequently mentioned benefits of the high-level impact Smartsheet had on the organization:

Using Smartsheet, nontechnical employees without project management training could document their unique business processes and build their own web-based productivity systems with the common spreadsheet interface.

- › **Manage large-scale, cross-team projects and schedules easily.** Many customers interviewed for this study described the relief of finding Smartsheet after a panicked search for available tools when they were assigned a complex, challenging, or unwieldy project and short timeline. Said one product director: “One of the biggest challenges we had was

that everyone was distributed and it was difficult to manage complex, large, dynamic projects with Excel, Word, and emails. We were chomping at the bit for a new tool.” Regardless of industry, the customers interviewed described the challenge of coordinating dozens of people inside and outside of the organization on the completion of work. They struggled to get diverse team members, often including those who didn’t report to them, to update their work status proactively. This led to project delays, anxiety-fraught meetings and emails, and lower-quality work. With Smartsheet, these common issues were solved by the web-based interface, easy administration, and ability to invite resources to participate securely for their specific contributions. The interviewees credited Smartsheet, in part, with completing projects with greater accuracy and higher quality. The feature cited most often for improving productivity was “request an update” — the trigger that Smartsheet enables to ask for project contributors to make updates to the rows that represent their unique contribution to the project. Another valued, time-saving feature is the “reverse Gantt chart” that provides a project timeline based on an end date.

- › **Unify the organization, creating a culture of collaboration.** The enterprise-sized organizations interviewed for this study estimated that at any given time, they had hundreds of employees managing team-based work efforts — whether projects, products, or processes — that involved multiple stakeholders, a timeline, action items, dependencies, and constantly moving parts and pieces. Because the majority are not traditional project managers by title, they lacked the discipline and tool set (and often training) to work with the inflexible and overly complex project management tools available to them. With the flexibility and ease of use of Smartsheet, these work managers can now communicate and manage their projects more effectively without having to train on a difficult tool set. Adoption is high, and usage spreads virally because employees, from the most tech-averse to the Millennials, enjoy using it and ramp up quickly. Said one product manager: “Until Smartsheet, 10 different people would tell me they were using 10 different tools and didn’t like any of them. It’s about unification instead of stratification. The more unification behind the tool and templates, [the more] it becomes a runaway train of success with the thousands of projects happening in our organization.” A CIO said that upon the release of Smartsheet, “The adoption was phenomenal. We had 200 users immediately. It absolutely took off within our organization and we haven’t turned back.” She credits Smartsheet with creating a culture of collaboration and project management discipline, even when the majority who use it are not technically titled “project managers.”
- › **Have visibility. . . . but at the right level.** One of the most common words used to describe the benefits of Smartsheet was “transparency” into a work product, project, or process. At the team level, team members can see how their individual contributions link to others within the project. External customers and partners can see only the information that pertains to them and are not overwhelmed by the information they see, nor do they get access to what they should not see. Accounting and finance can better understand how resources are deployed and managed on repeatable projects or processes. Perhaps most importantly, the project, product, or process owner and the management team members who need to analyze the progress of the work get easy, regular access to reports that don’t require hours to create. Said one power user and team coordinator: “I can export out the data and

“Until Smartsheet, 10 different people would tell me they were using 10 different tools and didn’t like any of them — it’s about unification instead of stratification. The more unification behind the tool and templates, [the more] it becomes a runaway train of success with the thousands of projects happening in our organization.”

~Product manager, high-tech industry

analyze it immediately. I don't have to ask John for one piece of information and Emily another. I have the confidence that it's accurate when pulling reports." The team coordinator estimated that prior to Smartsheet, she spent two days doing what she can now do in minutes.

- › **It is an IT-friendly tool that meets the toughest scrutiny around security and single sign-on.** The customers interviewed for the study converted to enterprise plans, typically after individual users found Smartsheet and purchased individual licenses. This "shadow IT" is nothing new to CIOs, and the ones who seek to partner with the business want to bring the tool to the forefront and apply appropriate security and administrative controls to mitigate risk to the company. That risk could include losing valuable information if an employee leaves, exposing the company to security threats because the tool is not integrated with existing security protocols, and paying for duplicate or redundant licenses at a high cost. Unlike many similar software-as-a-service (SaaS) companies that start as a "consumer tool" that gains popularity within a business, Smartsheet was designed to meet enterprise IT requirements. With capabilities such as single sign-on and integration with back-end systems, IT leaders can be enablers, rather than enforcers, of the use of Smartsheet. Furthermore, they mentioned that the agreements they have with Smartsheet meet the scrutiny and customization they required. Said one technology strategist: "Lots of people have deadlines, find a tool, and simply sign up, but they are working on public terms and conditions. I've approached many companies about using those tools in a structured, sanctioned way so that valuable and sensitive corporate information doesn't get lost or mishandled. So few companies are set up to deal with that, and that's where Smartsheet really scored."
- › **Level the playing field for the ability to design and implement a productivity system.** The ease of use and flexibility of Smartsheet means that it can be adapted to reflect the hundreds of processes and projects that exist in an enterprise. But rather than relying on an IT administrator, business analyst, or PM-certified resource to create templates and sheets, the Smartsheet tool makes it possible for any employee to customize it for their use. The creative applications mentioned in interviews included customer issue management systems, vendor management systems, product portfolio rollouts, account management, marketing campaign management, content and technology asset management, and survey capture and analysis, among many others. Most significant, however, was that the people who created these sheets and templates ranged from office coordinator to middle manager to senior product leader. With the use of the online video tutorials provided at no cost to the customer, the person with the idea and the determination could create a work system that was more effective than many paid systems of record. In one example, a mid-sized organization made attempts to track IT assets as they moved around the organization through a variety of software tools, but the most effective solution came from a Smartsheet web form that the organization integrated with the corporate Intranet. Said one evangelist of Smartsheet: "Smartsheet lets me have control and customize how I need it. It isn't a set form. It's flexible."
- › **Speed the completion of projects with fewer errors.** The customers interviewed for this study use Smartsheet extensively across the organization for projects that generate revenue, such as new product development, sales and account management, and supply chain management, along with projects that save costs, such as client issue resolution, supplier management, and internal resource planning. They reported a decrease in time-to-completion for their projects. The value of that project — whether it is revenue-generating or cost-saving — varies by company and industry, but its potential is significant. In one example, a product manager of a high-tech industry cited being about to get a portfolio of products out for half the cost and in one-third of the time, generating \$12 million in three months compared with the \$2 million the same portfolio previously generated in the entire year. Another power user cited the fact that his team could generate proposals more quickly using Smartsheet, which led to more submissions and more wins. Furthermore, the transparency the tool provides for potential project delays enables faster error resolution and more "catches" of errors before they affect the project. One customer cited a 30% reduction in errors, which saved the project an estimated \$200,000. Another customer reported that Smartsheet's mobile phone integration reduced their error rate for linking properties to pictures. Previously, property managers spent up to a full day every month downloading pictures and matching them to the right property, with a high rate of errors because of the volume of properties and the similarity of their images. Now, they snap a photo on-site with their mobile phones and upload them immediately to the Smartsheet cell that matches the property.

› **Benefits.** The composite organization experienced the following risk-adjusted benefits that represent those experienced by the interviewed companies:

- **A 21% productivity improvement to manage a project, product, or process, leading to \$5,890,500 in savings over three years.** The average time a project, product, or process manager had to spend managing the status of a project and gathering updates from stakeholders was reduced significantly after implementing Smartsheet. This not only increased productivity of the manager of the work, but it also shifted the spirit of the effort. Previously, work team members reacted to “hounding” from project managers; now they are proactive participants in the successful completion of the project. One head of project management of a publishing company commented: “I just can’t tell you how much time the Update Requests feature has saved me. Not just the time, but the nagging feeling in the back of your mind. It’s peace of mind, and [because] it’s set to be a recurring task, I can move on to something else. It’s almost like delegating a task to another person.” The time savings of 160 hours every quarter could enable that project manager to take on more projects per year, leading to more revenue or cost savings for the company.
- **A 25% productivity gain for work teams over three years, leading to \$3,609,375 in savings over three years.** Not only do the managers of work benefit from the use of Smartsheet, but the teams that surround each project, product, or process also gain productive time back in their day by using the tool. Examples of how this benefit is realized include being able to update customer records while in the field on a smartphone instead of waiting to come back to the office and transfer notes, receiving automated reminders to update the work status on a project, and also having fewer interruptions per day with emails around a team work effort.
- **A reduced cost of \$835,200 over three years to consolidate customer issues, increasing the responsiveness of sales and service engineers.** Field employees such as service technicians and field sales engineers were able to report customer issues or provide real-time updates to customer data more quickly with Smartsheet. They reported saving a minimum of an hour per week of administrative work that was previously required to capture and consolidate customer issues and updates. Furthermore, Smartsheet removed the communication layer of email and phone that delayed those updates. The web forms tool enabled quick and easy capture of issues and changes through iPads, iPhones, and Android devices, enabling faster customer service.
- **Improved resourcing around projects, resulting in a cost avoidance of \$450,000 over three years.** The customers interviewed reported that they could save money on hiring a full-time equivalent because they had better visibility into the staffing of a project. This is due to the increased transparency of the workloads among workers within an organization, better reporting tools, and the ability to hire strategically for the right level of resource. After analyzing resources in Smartsheet, the organization was able to determine when a particular project could be staffed with a support person instead of a full-time, higher-cost replacement.

› **Costs.** The composite organization experienced the following risk-adjusted costs:

- **Software licensing fees of \$19 per user per month (dropping to \$15 per month for over 1,000 users).** These are monthly recurring one-time license fees paid to Smartsheet for access to the full tool. After the enterprise reaches 1,000 users, the price per user drops to \$15 per user per month. Note that the user licenses are distinguished between “creator” licenses for users who can create sheets and “collaborator” licenses for those users who edit but do not create sheets. The software licensing fee includes an unlimited number of collaborators at no cost to the company. The average ratio within an enterprise is roughly 1 to 7, or seven collaborators for every one creator.
- **Implementation costs of \$211,200 over three years to create and customize templates.** These are internal costs reported by the customers interviewed for the study. They described the time that they spend with the tool setting up alerts, building business logic, and customizing the template to their specific use. This time investment may not have been needed in a traditional tool but yields the productivity gains captured in the Benefits section.
- **Internal training costs of \$57,600 over three years for creators to be proficient.** This is a one-time cost to train the “creators” on the tool so that they can fully integrate it into their workflow and project tool set. Although

Smartsheet offers on-site training, most of the customers opted to create their own classes and integrate them with training that had already been planned. Furthermore, they referenced the free video tutorials provided by Smartsheet on its website as important resources for learning how to use individual features, such as reporting and alerts.

Disclosures

The reader should be aware of the following:

- › The study is commissioned by Smartsheet 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 report to determine the appropriateness of an investment in Smartsheet.
- › Smartsheet 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.
- › Smartsheet provided the customer names for the interviews but did not participate in the interviews.

TEI Framework And Methodology

INTRODUCTION

From the information provided in the interviews, Forrester has constructed a Total Economic Impact (TEI) framework for those organizations considering implementing the Smartsheet work management tool. The objective of the framework is to identify the cost, benefit, flexibility, and risk factors that affect the investment decision.

APPROACH AND METHODOLOGY

Forrester took a multistep approach to evaluate the impact that Smartsheet can have on an organization (see Figure 2). Specifically, we:

- › Interviewed Smartsheet marketing, sales, and/or consulting personnel, along with Forrester analysts, to gather data relative to the work management tool and the marketplace for Smartsheet.
- › Interviewed four organizations currently using Smartsheet to obtain data with respect to costs, benefits, and risks.
- › Designed a composite organization based on characteristics of the interviewed organizations (see Appendix A).
- › Constructed a financial model representative of the interviews using the TEI methodology. The financial model is populated with the cost and benefit data obtained from the interviews as applied to the composite organization.
- › Risk-adjusted the financial model based on issues and concerns the interviewed organizations highlighted in interviews. Risk adjustment is a key part of the TEI methodology. While interviewed organizations provided cost and benefit estimates, some categories included a broad range of responses or had a number of outside forces that might have affected the results. For that reason, some cost and benefit totals have been risk-adjusted and are detailed in each relevant section.

Forrester employed four fundamental elements of TEI in modeling Smartsheet's service: benefits, costs, flexibility, and risks.

Given the increasing sophistication that enterprises have regarding ROI analyses related to IT investments, Forrester's TEI methodology serves to provide a complete picture of the total economic impact of purchase decisions. Please see Appendix B for additional information on the TEI methodology.

FIGURE 2
TEI Approach



Source: Forrester Research, Inc.

Analysis

COMPOSITE ORGANIZATION

For this study, Forrester conducted a total of four interviews with representatives from the following companies, which are Smartsheet customers based in the US and England:

- › A multinational education company and the largest book publisher in the world, with \$8.3 billion in annual revenue.
- › A leader in global real estate, offering comprehensive services to investors, property owners, tenants, and developers, with annual revenue of \$2.3 billion.
- › A nonprofit research and development agency headquartered in California and working at the national, state, and local levels, with \$140 million in annual revenue.
- › A multinational technology corporation with \$47 billion in annual revenue.

Based on the interviews, Forrester constructed a TEI framework, a composite company, and an associated ROI analysis that illustrates the areas financially affected. The composite organization that Forrester synthesized from these results represents an organization with the following characteristics:

- › A US-based global organization.
- › 10,000 employees globally.
- › 200 creator licenses and 1,000 collaborators in the first year of implementation.
- › Work teams of about 10 people collaborating on a project, product, or process throughout the organization.

The composite organization first identified the tool through individual evangelists who began using it on their own to solve a problem with a process or project. Those evangelists had purchased creator licenses directly from Smartsheet and invited others on their work team as collaborators. Within those “under the radar” or “shadow IT” implementations, the people who were invited to collaborate on the project quickly adopted the tool and realized more uses for it to solve different productivity challenges. Thus, viral adoption took hold and one or two licenses quickly ballooned to dozens. After analyzing the viral adoption of the tool within the organization, the composite organization chose to implement Smartsheet at the enterprise level:

- › First, the IT and business organizations analyzed their use of it in the organization and decided to pilot the tool with specific projects.
- › Once convinced that the tool met the technical, security, and business requirements, the organization purchased an enterprisewide license.
- › The organization then did a soft launch with some publicity and posts, followed by a “beat the drum” launch later with more extensive training.

“The CEO and executive team love it. I have been in meetings and the CEO says, ‘Maybe we can make a Smartsheet for that.’ We’re using it really well for different projects, and it’s saving our business money.”

~Smartsheet administrator, real estate services industry

- › It plans to steadily add users every year, more than doubling the number of licenses in Year 2 and tripling them in Year 3. A corresponding increase in collaborators is expected for this organization as the tool's use spreads through the organization and expands to include external customers and partners. One Smartsheet evangelist interviewed for this study reported, "With the rate of adoption that we've already had, we'll quickly hit a point where half of our 72,000 employees worldwide will be using Smartsheet." It's important to note that the tool provides that productivity reach without the per-user license cost. On average, there will be seven free collaborator licenses used for each paid creator license.

INTERVIEW HIGHLIGHTS

Situation

The representative organization on which this study was based is enterprise-sized with geographically dispersed employees. The organization has countless cross-departmental, ongoing work efforts that span the realm of project management, product management, and process management. Many of the use cases for the tool have a direct impact on external customers in terms of the products rolled out to them or the management and ongoing service to their accounts. The work teams for these efforts rely on individual contributors, often outside of their direct teams and often beyond the organizational structure, to update their individual pieces of the project. While not necessarily considering itself a project-management-focused organization, it relies on repeatable processes and templates to complete work. The completion of that work improves client satisfaction, reduces risk in project delivery, streamlines workflows, and leads to bottom-line savings.

While scrutinizing the range of work productivity tools available to the organization, the key stakeholders decided that:

- › The tool needed to satisfy a diverse range of skillsets and needs. It had to both provide sophisticated project management tools and reporting features (like Gantt charts with dependencies and business-logic-based alerts) to project managers, without intimidating work team members. It was essential to have an intuitive user interface that less technical contributors and outside partners and customers could use easily.
- › The tool needed to be web-based so that it could be available anytime, anywhere, and users could collaborate in real time in one location. However, it needed to meet enterprise security requirements and support single sign-on. And because an estimated 30% of collaborators are external to the company, the tool needed to provide different views into the data depending on role and level of access.
- › The tool needed to be ready for enterprise-level integration with many existing tools such as Salesforce, Okta, Evernote, Marketo, Google Drive, and Box. This was a requirement so that the tool could work with existing technology investments and systems of record, exchanging data when necessary.
- › The workforce is often in the field and needs access to the tool from their mobile devices. The experience needed to be seamless when users moved between devices and reflect the way that business is done.
- › The tool needed to be implemented quickly and require little training for the average user. It needed to well-liked and make employees feel empowered, rather than stressed, when opening it (e.g., no coding or IT requests to fit specific needs).
- › Rather than the organization fitting the process or project to fit the tool, the tool needed to be flexible and easily adapted to reflect the different capabilities within the organization for which it is used.

"In my day job, I can't live without it. I have Smartsheet open at all times, with half a dozen sheets and reports open all the time."

~Product manager, hightech industry

Solution

The composite organization selected Smartsheet because it could serve a multitude of use cases within the organization, satisfying the needs of dozens of teams and hundreds of creators and collaborators, without requiring a significant investment in licenses, technology labor, or infrastructure. The tool satisfies both “consumer” expectations in use and flexibility and enterprise security requirements to pass muster with the CIO. Furthermore, it is easy and intuitive to use, so it could be rolled out quickly. Creators have paid licenses, but “collaborators” can be internal or external colleagues, customers, or partners who can work within the Smartsheet tool without having to pay for a license.

Results

The interview revealed that:

- › **There were productivity improvements for the managers and collaborators of projects, products, and processes.** The most significant benefits experienced were from time saved by having a web-based, unified source of truth for all information related to a project, product, or process that could be updated in real time. For project managers, this meant a reduction in time chasing team members for status updates through email and phone and consolidating multiple spreadsheets. For collaborators, this meant fewer interruptions to their work and a simplified means of updating their status using a range of devices.
- › **Quality of work improved for customers through better collaboration.** The composite organization was able to improve the quality of its work because all work team members could see and understand their contribution to the finished product. Project managers could see potential issues and delays occurring and correct course before they became a hindrance to the project rollout. Higher-level stakeholders could get ongoing reports about work progress, allowing them to strategize around resources and product strategy.
- › **The tool enabled a culture of collaboration.** The composite organization described Smartsheet as an important catalyst to promoting collaboration — and even more importantly, ownership — of a work effort. Many described the tool as “enjoyable to use” and inspiring more curiosity and loyalty than the derisiveness and skepticism that can often accompany a new tool’s rollout. The advanced features and flexibility had nontechnical employees trying new uses across functional areas. There are as many uses for the tool as there are roles within an organization. One product manager recalled how he described Smartsheet to his work team members at the start of a particularly challenging effort: “I sat in the room with 74 people and said, ‘The days of project managers scribing and bugging you with face-to-face meetings, conference calls, email requests, and IMs to get your status ends right here, right now. The days of you being responsible and empowered to report [in] real time where you are *starts now*. We’re going to be a runaway success if everyone does their part.’”

“Collaboration is the entire point of Smartsheet. We have teams that never set foot in the office — they are constantly using the tool on their mobile device and tablets.”

~ Smartsheet administrator, real estate services industry

BENEFITS

The composite organization experienced a number of quantified benefits in this case study:

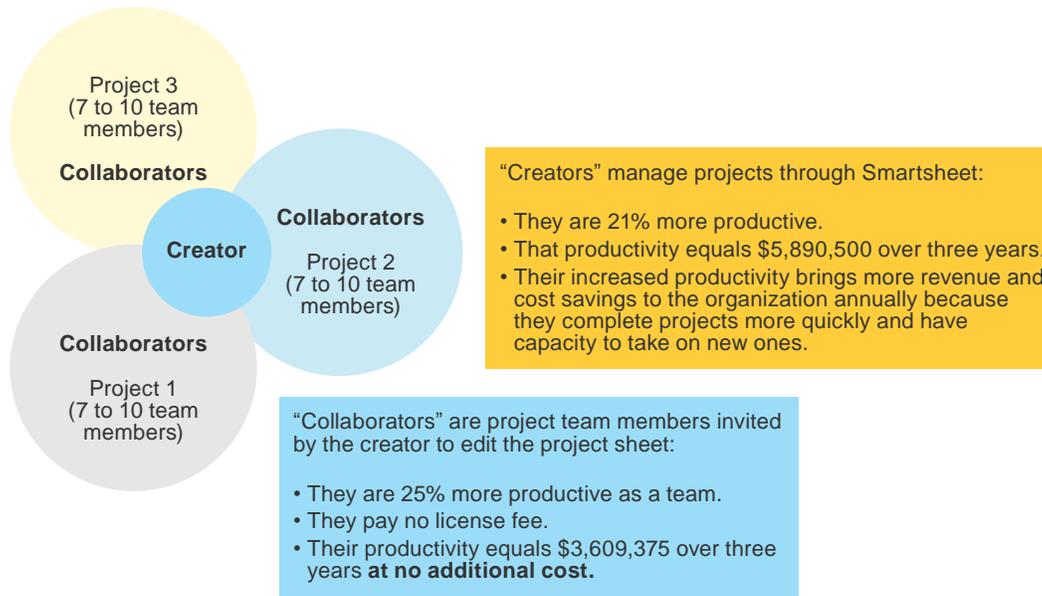
- › Increased project, product, or process management productivity.
- › Increased work team productivity around a project, product, or process.
- › Reduced costs due to consolidating customer issues or vendor information.
- › Improved resourcing around projects, leading to cost savings.

Another important benefit mentioned by the composite organization was increased visibility into a project or process, which led to earlier error detection and resolution. This decreased costs and improved the time-to-market for projects and products. Also not captured in the financial model but mentioned frequently was how using Smartsheet with external customers provided a competitive advantage to the organization. External customers, often collaborators, were so impressed with the use of the tool as it applied to them, that they were more likely to be repeat customers.

⊕ Increased Project, Product, Or Process Management Productivity

The composite organization indicated that a key benefit from the Smartsheet implementation was increased project, product, or process management productivity. Prior to Smartsheet, the composite organization's project, product, or process managers had to rely on email, spreadsheets, and phone calls to track down updates on the project from stakeholders and project contributors. They estimated that they spent 21% of their work weeks requesting updates, consolidating multiple versions of spreadsheets, and creating reports on the status of the project. With Smartsheet, their use of the Update Requests feature, built-in business logic, and one central location for managing the project has cut hours off of their workload. Furthermore, they have an easier way to start a project and deploy resources more quickly by using Smartsheet templates. The productivity gains they realized with Smartsheet not only changed the amount and focus of their work but also changed the behavior of their work teams by empowering them to own their individual contribution to a project.

FIGURE 1
Productivity Improvement Provided By Smartsheet



Source: Forrester Research, Inc.

Following the Smartsheet implementation, the composite organization reduced average project manager workloads by 8.5 hours per week. Before Smartsheet, project, product, and process managers wasted hours chasing for status updates. With Smartsheet, work team members update their individual rows for which they are responsible and get reminders to do so automatically. As a result, with an average project manager gaining 8 hours per week back into his or her schedule, the composite organization saved 20,000 hours in Year 1; 50,000 hours in Year 2; and 150,000 hours in Year 3. At a wage of \$48 per hour for each project, product, or process manager, the total benefit resulting from improved productivity over the three years was \$8,415,000.

Interviewed organizations provided many examples of how Smartsheet was used to manage a project, product, or process. The use cases varied by industry and, because of the tool’s flexibility, reflected the need that it was adapted for. Across all examples, the owners of the project reported significant ongoing time savings for their work. They estimated a productivity gain of 21%, but not all project owners earn the same amount of income or will immediately apply their productivity gains to other work. To compensate, this benefit was risk-adjusted and reduced by 30%. The risk-adjusted total benefit resulting from increased project, product, or process owner productivity over the three years was \$5,890,500. See the section on Risks for more detail.

TABLE 1
Increased Project, Product, Or Process Management Productivity

Ref.	Metric	Calculation	Year 1	Year 2	Year 3
A1	Number of owners of a project, product, or process		50	125	375
A2	Number of hours saved weekly		8.5	8.5	8.5
A3	Average hourly rate		\$48	\$48	\$48
A4	Number of weeks per year		50	50	50
A5	Percentage of utilization annually		0.75	0.75	0.75
At	Increased project, product, or process management productivity	$A1 \cdot A2 \cdot A3 \cdot A4 \cdot A5$	\$765,000	\$1,912,500	\$5,737,500
	Risk adjustment		↓ 30%		
Atr	Increased project, product, or process management productivity (risk-adjusted)		\$535,500	\$1,338,750	\$4,016,250

Source: Forrester Research, Inc.

★ Increased Work Team Productivity Around A Project, Product, Or Process

In addition to the project owners, the project teams collaborating on a project, product, or process benefited collectively from increased productivity of about 25%. These productivity gains are attributed to the ease of providing status updates for individual milestones for a project and a reduction in overall steps to enter data. Also, the mobile access available to employees provided a significant productivity gain: Instead of having to collect their inputs and wait to get back to their desk to make updates, they could instantly add them to the Smartsheet tool on the fly through their smartphones. These work team members also learned the tool very quickly, which led to a reduced time-to-productivity on a tool. Multiple customers described training new users of the tool in hours, rather than days. Another productivity gain came from the reduction in interruptions due to multiple emails. Generally, a project owner circulates an email with an attached spreadsheet and requests inputs, which interrupts workflow. Multiple team members “reply all,” which adds further interruption. After implementing Smartsheet, the project teams gained an average of 10 hours back that could be redirected to other activities, including taking on other projects or completing their tasks more quickly. This financial benefit is even more powerful because the organization does not pay for collaborator licenses, only creator licenses. The work team members, assumed to be collaborators because they edit a sheet rather than manage it, gain this 25% productivity benefit at no additional user license cost to the organization. An estimated 30% to 40% of the collaborators for a typical organization come from the outside, including external partners and customers. These gains are not captured in this analysis but lead to further customer satisfaction increases and streamlining of processes and communication.

Interviewed organizations provided a broad range when asked about the size of work teams on any given work effort; they ranged anywhere from five to 70 people. Furthermore, the salary and skill level of those collaborators vary depending on how the tool is used. Productivity gains should be treated conservatively because employees may not immediately apply the time they gain back into their workday to a productive use. To compensate, this benefit was risk-adjusted and reduced by 30%. The risk-adjusted total benefit resulting from increased productivity around a project or process over the three years was \$3,609,375, or about \$962 per collaborator on a work team, at no additional cost to the company. See the section on Risks for more detail.

TABLE 2
Increased Work Team Productivity

Ref.	Metric	Calculation	Year 1	Year 2	Year 3
B1	Number of employees on a work team		10	10	10
B2	Number of teams throughout organization		50	125	375
B3	Weekly productivity gain for team (hours)		10	10	10
B4	Number of weeks per year (vacation excluded)		50	50	50
B5	Average hourly rate		\$25	\$25	\$25
B6	Percentage of utilization annually		0.75	0.75	0.75
Bt	Increased employee productivity within a work team	$B2*B3*B4*B5*B6$	\$468,750	\$1,171,875	\$3,515,625
	Risk adjustment		↓ 30%		
Btr	Increased employee productivity within a work team (risk-adjusted)		\$328,125	\$820,313	\$2,460,938

Source: Forrester Research, Inc.

★ Reduced Costs Due To Consolidating Customer Issues Or Vendor Information

Another unique financial benefit cited by customers was the ability to use Smartsheet's web forms functionality to consolidate customer issues or preferred vendor lists. In the use cases described by customers, field employees such as service technicians and field sales engineers were able to quickly report customer issues or provide real-time updates to customer data. Previously, they had error-prone, inefficient means of communicating client issues. This included email, phone calls, and spreadsheets that passed through multiple layers of people, often resulting in service delays. With Smartsheet, they input client issues immediately into a web form, often using the Smartsheet iPad/iPhone and Android mobile apps, and they were able to respond more quickly to the client. Although this is primarily a productivity savings calculation, ultimately these systems improved customer service and satisfaction. Another common use for the web forms reported by clients was to consolidate preferred vendor or contractor information, including preferred pricing and ratings of vendor performance. Through the centralization of this information, the organization could more easily contract with preferred vendors and contractors and, ultimately, save the company money. Between these two examples of consolidation of issues and information, the composite organization realized a substantial gain.

Interviewed organizations provided a broad range of numbers of service engineers or field sales personnel. Furthermore, the salary and skill level of those who will benefit from the consolidation system vary depending on the industry. Not all organizations will have an extensive group of field employees. To compensate, this benefit was risk-adjusted and reduced by 50%. See the section on Risks for more detail.

TABLE 3
Reduced Costs Due To Consolidating Customer Issues

Ref.	Metric	Calculation	Year 1	Year 2	Year 3
C1	Number of service technicians, field engineers, and sales engineers reporting customer account issues		100	300	1,050
C2	Number of hours saved monthly		2	2	2
C3	Number of months in year		12	12	12
C4	Average hourly rate		\$48	\$48	\$48
Ct	Reduced costs to consolidate customer issues	$C1 \times C2 \times C3 \times C4$	\$115,200	\$345,600	\$1,209,600
	Risk adjustment		↓ 50%		
Ctr	Reduced costs to consolidate customer issues (risk-adjusted)		\$57,600	\$172,800	\$604,800

Source: Forrester Research, Inc.

★ Improved Resourcing Around Projects, Leading To Cost Savings

The fourth financial gain reported by the interviewed organizations was the ability to more accurately resource their projects because of the visibility the Smartsheet tool provides. By Smartsheet codifying and collecting the steps in a project or process and standardizing it, the expected workload for each employee could be estimated more accurately. Employee productivity can be compared more easily side by side, and when an employee leaves the company, temporarily (e.g., a vacation) or permanently, Smartsheet provides an easy way for the organization to determine the resources required to backfill this employee. The customers interviewed reported that they could save money on hiring a FTE because they realized that in some cases, a particular project could be staffed with a support person rather than a full replacement. Although this could vary dramatically by company, a conservative estimate of half an FTE was estimated for the cost savings. This savings represents the salary that would have gone to a project manager but instead was allocated to junior staff. However, an individual organization could stand to gain a lot more in terms of this efficiency. Assuming that each project manager gains 400 hours per year in productivity, he or she could take on two or more additional projects depending on the project's average duration. In a large organization, this could translate into avoiding multiple full-time project management hires.

TABLE 4
Improved Resourcing Around Projects

Ref.	Metric	Calculation	Year 1	Year 2	Year 3
D1	Average salary of a junior project manager		\$90,000	\$90,000	\$90,000
D2	Average salary of project support staff		\$40,000	\$40,000	\$40,000
D3	Number of hired FTEs avoided because of improved resourcing		1	3	5
Dtr	Improved resourcing around projects	$(D1 - D2) \times D3$	\$50,000	\$150,000	\$250,000

Source: Forrester Research, Inc.

Total Benefits

Table 5 shows the total of all benefits across the four areas listed above, as well as present values (PVs) discounted at 10%. Over three years, the composite organization expects risk-adjusted total benefits to be a PV of more than \$8 million, or \$5,333 per creator license.

TABLE 5
Total Benefits (Risk-Adjusted)

Ref.	Benefit	Year 1	Year 2	Year 3	Total	Present Value
Atr	Increased project, product, or process management productivity	\$535,500	\$1,338,750	\$4,016,250	\$5,890,500	\$4,610,691
Btr	Increased employee productivity within a work team	\$328,125	\$820,313	\$2,460,938	\$3,609,375	\$2,825,178
Ctr	Reduced costs due to consolidating customer issues	\$57,600	\$172,800	\$604,800	\$835,200	\$649,569
Dtr	Improved resourcing around projects	\$50,000	\$150,000	\$250,000	\$450,000	\$357,250
	Total benefits	\$971,225	\$2,481,863	\$7,331,988	\$10,785,075	\$8,442,689

Source: Forrester Research, Inc.

COSTS

The composite organization experienced a number of costs associated with the Smartsheet solution:

- › Enterprise user license fees.
- › Implementation fees when creating or customizing a capability template.
- › Internal training costs.

These represent the mix of internal and external costs experienced by the composite organization for initial planning, implementation, and ongoing rollout of the work management tool.

🔗 Enterprise User License Fees

Enterprise user license fees for Smartsheet creators were incurred during the first year and recur annually. They grow along with the usage of the tool. Enterprise user license monthly fees for fewer than 1,000 users or creators are \$19 per user per month. After 1,000 users or creators, that fee drops to \$15 per user. During initial implementation, the composite organization incurred software licensing fees for Smartsheet for a total of \$45,600, or \$19 per creator.

TABLE 6
Enterprise User License Fees

Ref.	Metric	Calculation	Year 1	Year 2	Year 3
E1	Number of creator licenses		200	500	1,500
E2	Number of collaborator licenses (at no charge)		1,000	3,000	10,500
E3	Price per user per month		\$19	\$19	\$15
E4	Months per year		12	12	12
Etr	Total enterprise user license fees	$E1 * E3 * E4$	\$45,600	\$114,000	\$270,000

Source: Forrester Research, Inc.

🔗 Implementation Fees — Creating Or Customizing A Capability Template

Doing an enterprise rollout of the tool so that it can be used in a repeatable way to capture business process requires a project owner to spend time setting it up to reflect business logic and process. On average, the project, product, or process manager spends 40 hours gathering input from stakeholders, designing the template, and creating the template with built-in business logic. The majority of that 40 hours is for standard project setup, but an estimated 4 hours is required to set up alerts, build business logic, and customize using the tool. This is an investment of time that may not have been needed in a traditional tool but yields the productivity gains captured in the Benefits section. The composite organization incurred around a \$19,000 cost for those templates to be created, and that fee increases as more creators initiate projects. Although not every project requires a new template to be created, the template will need to be customized for the use case and the unique team member, deadlines, and milestones within it.

TABLE 7
Implementation Fees — Creation Or Customization Of A Capability Template

Ref.	Metric	Calculation	Year 1	Year 2	Year 3
F1	Time required to program the Smartsheet template to reflect a capability		4	4	4
F2	Hourly rate for the project owner		\$48	\$48	\$48
F3	Number of project owners creating capability templates		50	125	375
F4	Number of capability templates		2	2	2
Ftr	Implementation fees — creation or customization of a capability template	$F1 * F2 * F3 * F4$	\$19,200	\$48,000	\$144,000

Source: Forrester Research, Inc.

Internal Training Costs

The clients interviewed for the research typically provide internal training on the tool as they roll it out enterprisewide. On average, the project, product, or process managers spend 4 hours learning the tool in either a formal or informal setting. In some cases, the project management function took over the planning and training of the tool to roll it out in conjunction with other project management process training. In other cases, an evangelist became the default trainer, recording videos or creating templates that could be used by others. No matter the method, the tool requires some initial training and setup, including reviewing the online tutorials, to implement it fully. For the financial model, only an estimated 25% of the project, product, or process managers who are creators were assumed to have been trained. The cost was further risk-adjusted down by 20% to reflect the range of formality and investment behind that training. The composite organization incurred a \$7,680 risk-adjusted cost for that training, which increases as usage across the organization grows.

TABLE 8
Internal Training Costs

Ref.	Metric	Calculation	Year 1	Year 2	Year 3
G1	Number of project owners to train on the use of Smartsheet (applied to the organization's use)		50	75	250
G2	Number of hours to train		4	4	4
G3	Hourly rate for the project owner		\$48	\$48	\$48
Gt	Internal training costs	$G1 * G2 * G3$	\$9,600	\$14,400	\$48,000
	Risk adjustment	↓ 20%			
Gtr	Internal training costs (risk-adjusted)		\$7,680	\$11,520	\$38,400

Source: Forrester Research, Inc.

Total Costs

Table 9 shows the total of all costs as well as associated present values, discounted at 10%. Over three years, the composite organization expects total costs to total a net present value of a little more than \$549,190, or \$366 per creator.

Because the collaborator licenses are at no cost to the organization and provide significant additional productivity gains, there is even more value that can be realized behind the associated costs.

TABLE 9
Total Costs (Risk-Adjusted)

Ref.	Cost	Year 1	Year 2	Year 3	Total	Present Value
Etr	Enterprise user license fees	\$45,600	\$114,000	\$270,000	\$429,600	\$338,524
Ftr	Implementation fees — creation or customization of a capability template	\$19,200	\$48,000	\$144,000	\$211,200	\$165,313
Gtr	Internal training costs	\$7,680	\$11,520	\$38,400	\$57,600	\$45,353
	Total costs	\$72,480	\$173,520	\$452,400	\$698,400	\$549,191

Source: Forrester Research, Inc.

FLEXIBILITY: VISUALIZATION OF WORK

Flexibility, as defined by TEI, represents an investment in additional capacity or capability that could be turned into business benefit for some future additional investment. This provides an organization with the “right” or the ability to engage in future initiatives but not the obligation to do so. There are multiple scenarios in which a customer might choose to implement Smartsheet and later realize additional uses and business opportunities. Flexibility would also be quantified when evaluated as part of a specific project (described in more detail in Appendix B).

WorkMap, a service that Smartsheet provides to organizations, diagrams the productivity and viral adoption of the tool throughout the organization. It looks much like an airline routing map or a social influencer map, with hubs and spokes and concentrations of activity. The WorkMap is color coded: Blue represents people who are using Smartsheet inside the company, and white represents those who are outside. This can help companies identify where work is happening and who is using the tool to the greatest advantage to the organization by mapping the usage and reach of the creator. Furthermore, it can give them a better understanding of how work is distributed across the organization. Several interviewed customers mentioned being able to more accurately analyze and predict workloads for a given role as a result of using Smartsheet. For example, they can determine the right number of client accounts for account managers’ book of business or the right capacity for property managers to manage properties. With more visibility into the work actions and people involved in the effort, an organization can perform better resource planning. It can make workload allocation decisions, better cover workloads that are left open through vacation and attrition, and identify the employees who are making the most significant impact on collaboration and productivity across the organization. Exactly how the WorkMap service will be used to the advantage of an organization is still to be determined, but it follows along the same lines of “influencer” mapping for a marketing organization: It leads the organization to make better investment decisions around supporting the individuals who can have the most impact on top-line growth or bottom-line savings. Similarly, Smartsheet can identify those work patterns and people in the organization that are leading to the most positive financial outcome for the organization.

Another potential future benefit of using Smartsheet is the long-term impact of having a defined project or program management approach on the organization’s overall performance. Both Aberdeen Group and PwC have conducted surveys that link stronger business results to companies that have successful project management practices. Because Smartsheet enables companies to codify their project management approach and spread it widely through the organization, the companies using the tool may stand to realize increased top-line growth and higher margins.

RISKS

Forrester defines two types of risk associated with this analysis: “implementation risk” and “impact risk.” Implementation risk is the risk that a proposed investment in Smartsheet may deviate from the original or expected requirements, resulting in higher costs than anticipated. Impact risk refers to the risk that the business or technology needs of the organization may not be met by the investment in Smartsheet, resulting in lower overall total benefits. The greater the uncertainty, the wider the potential range of outcomes for cost and benefit estimates.

TABLE 10
Benefit And Cost Risk Adjustments

Benefits	Adjustment
Increased project, product, or process management productivity	↓ 30%
Increased work team productivity	↓30%
Reduced costs due to consolidating customer issues	↓50%
Costs	Adjustment
Internal training costs	↓20%

Source: Forrester Research, Inc.

Quantitatively capturing implementation risk and impact risk by directly adjusting the financial estimates results provides more meaningful and accurate estimates and a more accurate projection of the ROI. In general, risks affect costs by raising the original estimates, and they affect benefits by reducing the original estimates. The risk-adjusted numbers should be taken as “realistic” expectations since they represent the expected values considering risk.

The following impact risks that affect benefits are identified as part of the analysis:

- › **Increased project, product, or process management productivity.** Across all examples provided by interviewees, the manager of the project reported significant ongoing time savings for their work. They estimated a productivity gain of 20%, but not all project owners earn the same amount of income or will immediately apply their productivity gains to other work. To compensate, this benefit was risk-adjusted and reduced by 30%.
- › **Increased work team productivity.** Interviewed organizations provided a broad range when asked about the size of work teams on any given work effort: They cited anywhere from five to 70 people. Furthermore, the salary and skill level of those collaborators vary depending on how the tool is used. Productivity gains should be treated conservatively because employees may not immediately apply the time they gain back into their workday to a productive use. To compensate, this benefit was risk-adjusted and reduced by 30%.
- › **Reduced costs due to consolidating customer issues.** Interviewed organizations provided a broad range of numbers of service engineers or field sales personnel. Furthermore, the salary and skill level of those who will benefit from the consolidation system vary depending on the industry. Not all organizations will have an extensive group of field employees. To compensate, this benefit was risk-adjusted and reduced by 50%.

The following implementation risk that affects costs is identified as part of the analysis:

- › **Internal training costs.** The clients interviewed for the research typically provide internal training on the tool as they roll it out enterprisewide. On average, the project, product, or process managers spend 4 hours learning the tool in either a

formal or informal setting. In some cases, the project management function took over the planning and training of the tool to roll it out in conjunction with other project management process training. In other cases, an evangelist became the default trainer, recording videos or creating templates that could be used by others. The cost was risk-adjusted down by 20% to reflect the range of formality and investment behind that training.

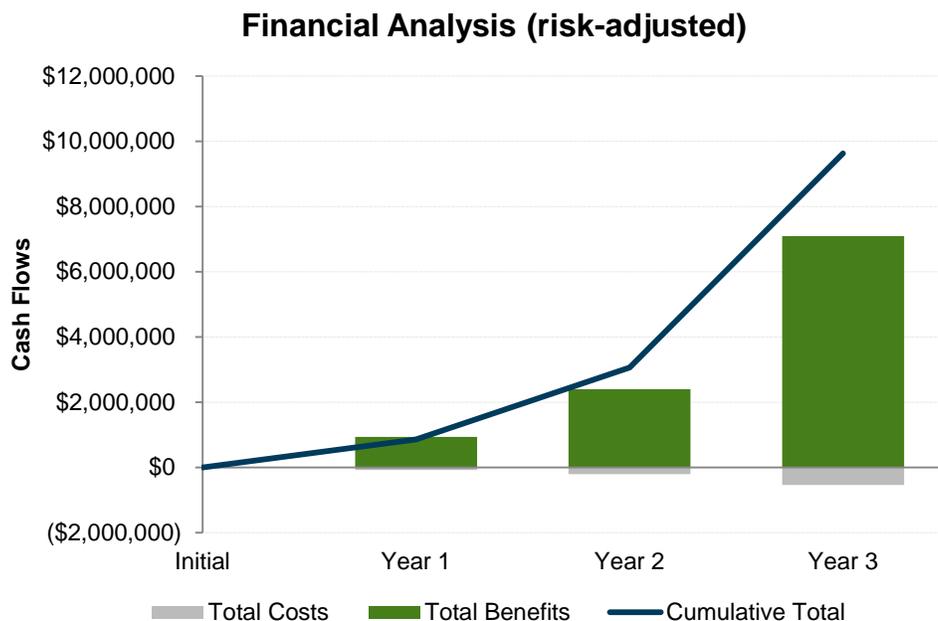
Table 10 shows the values used to adjust for risk and uncertainty in the cost and benefit estimates for the composite organization. Readers are urged to apply their own risk ranges based on their own degree of confidence in the cost and benefit estimates.

Financial Summary

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 in Smartsheet.

Table 11 below shows the risk-adjusted ROI, NPV, and payback period values. These values are determined by applying the risk-adjustment values from Table 10 in the Risks section to the unadjusted results in each relevant cost and benefit section.

FIGURE 3
Cash Flow Chart (Risk-Adjusted)



Source: Forrester Research, Inc.

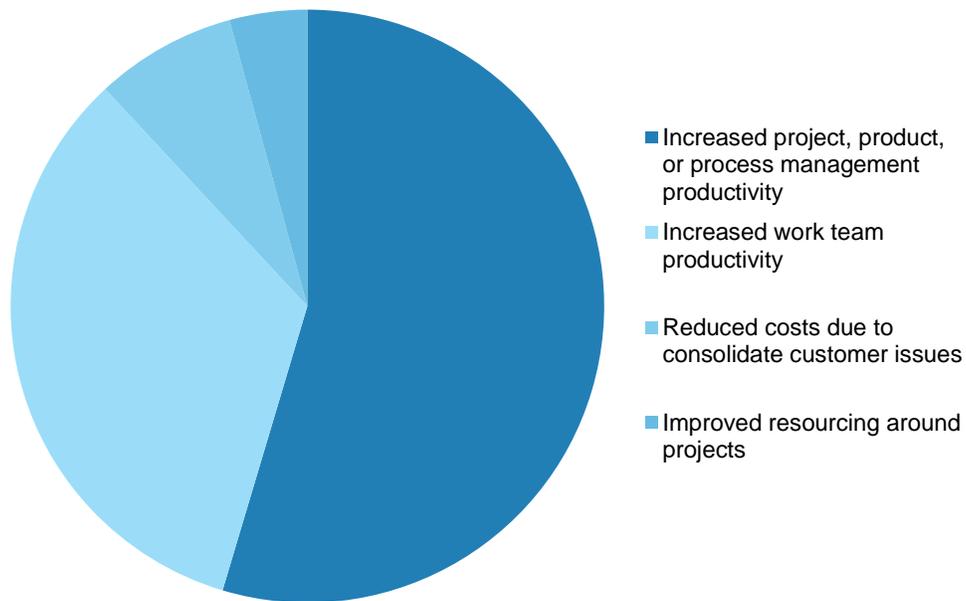
TABLE 11
Cash Flow (Risk-Adjusted)

	Initial	Year 1	Year 2	Year 3	Total	Present Value
Costs		(\$72,480)	(\$173,520)	(\$452,400)	(\$698,400)	(\$549,191)
Benefits		\$971,225	\$2,481,863	\$7,331,988	\$10,785,075	\$8,442,689
Net benefits		\$898,745	\$2,308,343	\$6,879,588	\$10,086,675	\$7,893,498
ROI						1,437%
Payback period		< 2 months				

Source: Forrester Research, Inc.

FIGURE 4
Primary Financial Benefits By Category

Benefits by category (risk-adjusted)



Source: Forrester Research, Inc.

Smartsheet: Overview

The following information is provided by Smartsheet. Forrester has not validated any claims and does not endorse Smartsheet or its offerings.

Smartsheet, a leading SaaS company, offers an enterprise-ready cloud app for work management and collaboration. More than 55,000 businesses and millions of users in over 170 countries rely on the award-winning tool.

The Smartsheet work productivity tool is a web-based tool that combines the familiar interface of a spreadsheet and useful project management tools such as Gantt charts, calendaring, web forms, file sharing, and alerts and reminders. The flexible tool is used for a variety of use cases across all departments of the organization to manage projects, products, and processes, including marketing campaigns, product launches, business operations, manufacturing processes, strategic planning, and HR initiatives.

Through built-in collaboration capabilities, teams and their external customers and partners share sheets associated with projects and processes along with the notes, discussions, files, and other information in a centralized, always-available location. They collaborate and communicate in real time and access the sheets from any browser, device, or operating system. Adoption across organizations grows quickly as users share sheets to collaborate with others.

Additionally, Smartsheet meets companies' staunch requirements for enterprise-level security, mobile capabilities, administrative controls, and integration with cloud tools and core systems. With the combination of "consumer-easy" and "enterprise-ready" capabilities, the number of people using Smartsheet in enterprise accounts quadruples on average in the first year.

Smartsheet is deployed in a broad range of customer environments, including many of the world's industry-leading organizations such as Google, Netflix, Cisco, Bayer, GSA, Groupon, Pearson, HomeAway, McGraw-Hill Education, DHL, ESPN, Sony Music, and MetLife. Customers include construction companies, consulting firms, schools and universities, utility firms, government entities, healthcare organizations, high-tech firms, nonprofits, and manufacturing and law firms, among others. Additionally, Smartsheet offers mobile apps, prebuilt templates, and integrations with leading cloud apps such as Box, Dropbox, Evernote, Salesforce, and Google Drive to ensure users are up and running quickly.

The company's headquarters are located in Bellevue, Wash. Investors include Sutter Hill Ventures, Insight Venture Partners, and Madrona Venture Group.

Appendix A: Composite Organization Description

For this TEI study, Forrester has created a composite organization to illustrate the quantifiable benefits and costs of implementing Smartsheet. The composite company is intended to represent an enterprise-sized organization with 10,000 employees and is based on characteristics of the interviewed customers.

The composite company has 10,000 employees globally and is headquartered in the United States.

In purchasing Smartsheet, the composite company has the following objectives:

- › Provide a work productivity tool that is popular among its users and easy to learn but meets enterprise requirements around single-sign on and security protocols.
- › Bring more discipline and a better tool set to support the execution of myriad project, product, and process management initiatives in the organization.
- › Reduce the frequent ongoing exchange of spreadsheets through email, which was a highly fragmented means of communicating and collaborating around projects, products, and processes.
- › Roll out a tool that would be adopted quickly and require little training and IT investment or ongoing management.

For the purpose of the analysis, Forrester assumes that the organization has hundreds of employees and work teams collaborating to complete work throughout the organization. The assumption is that if the time-consuming and ineffective means of collecting status updates and communicating around project expectations is eliminated, work products can be created more quickly and with higher quality. Furthermore, having a work team aligned around one tool in support of the delivery of client projects can lead to a better customer experience.

FRAMEWORK ASSUMPTIONS

Table 12 provides the model assumptions that Forrester used in this analysis.

The discount rate used in the PV and NPV calculations is 10%, and the time horizon used for the financial modeling is three years. Organizations typically use discount rates between 8% and 16% based on their current environment. Readers are urged to consult with their respective company's finance department to determine the most appropriate discount rate to use within their own organizations.

TABLE 12
Model Assumptions

Ref.	Metric	Calculation	Value
C1	Hours per week		40
C2	Weeks per year (excluding vacation)		50
C3	Average salary of a project, product, or process manager		\$100,000
C4	Average salary of a service technician, field engineer, or sales engineer		\$100,000
C5	Average salary of a work team member		\$52,000
C6	Hourly salary	C3 and C4/2,080	\$48
C7	Average percentage of creators who are benefitting most from the productivity savings of the tool		25%
C8	Percentage of collaborators in an organization who have the role of service technicians, field engineers, or sales engineers		10%
C9	Percentage of collaborators who are from outside of the company walls (customers and partners)		30%

Source: Forrester Research, Inc.

Appendix B: Total Economic Impact™ Overview

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.

The TEI methodology consists of four components to evaluate investment value: benefits, costs, flexibility, and risks.

BENEFITS

Benefits represent the value delivered to the user organization — IT and/or business units — by the proposed product or project. Often, product or project justification exercises focus just on IT cost and cost reduction, leaving little room to analyze the effect of the technology on the entire organization. The TEI methodology and the resulting financial model place 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. Calculation of benefit estimates involves a clear dialogue with the user organization to understand the specific value that is created. In addition, Forrester also requires that there be a clear line of accountability established between the measurement and justification of benefit estimates after the project has been completed. This ensures that benefit estimates tie back directly to the bottom line.

COSTS

Costs represent the investment necessary to capture the value, or benefits, of the proposed project. IT or the business units may incur costs in the form of fully burdened labor, subcontractors, or materials. Costs consider all the investments and expenses necessary to deliver the proposed value. In addition, the cost category within TEI captures any incremental costs over the existing environment for ongoing costs associated with the solution. All costs must be tied to the benefits that are created.

FLEXIBILITY

Within the TEI methodology, direct benefits represent one part of the investment value. While direct benefits can typically be the primary way to justify a project, Forrester believes that organizations should be able to measure the strategic value of an investment. Flexibility represents the value that can be obtained for some future additional investment building on top of the initial investment already made. For instance, an investment in an enterprisewide upgrade of an office productivity suite can potentially increase standardization (to increase efficiency) and reduce licensing costs. However, an embedded collaboration feature may translate to greater worker productivity if activated. The collaboration can only be used with additional investment in training at some future point. However, having the ability to capture that benefit has a PV that can be estimated. The flexibility component of TEI captures that value.

RISKS

Risks measure the uncertainty of benefit and cost estimates contained within the investment. Uncertainty is measured in two ways: 1) the likelihood that the cost and benefit estimates will meet the original projections and 2) the likelihood that the estimates will be measured and tracked over time. TEI risk factors are based on a probability density function known as "triangular distribution" to the values entered. At a minimum, three values are calculated to estimate the risk factor around each cost and benefit.

Appendix C: Glossary

Discount rate: The interest rate used in cash flow analysis to take into account the time value of money. Companies set their own discount rate based on their business and investment environment. Forrester assumes a yearly discount rate of 10% for this analysis. Organizations typically use discount rates between 8% and 16% based on their current environment. Readers are urged to consult their respective organizations to determine the most appropriate discount rate to use in their own environment.

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.

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.

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.

Return on investment (ROI): A measure of a project's expected return in percentage terms. ROI is calculated by dividing net benefits (benefits minus costs) by costs.

A NOTE ON CASH FLOW TABLES

The following is a note on the cash flow tables used in this study (see the example table below). The initial investment column contains costs incurred at "time 0" or at the beginning of Year 1. Those costs are not discounted. All other cash flows in years 1 through 3 are discounted using the discount rate (shown in the Framework Assumptions section) at the end of the year. PV calculations are calculated for each total cost and benefit estimate. NPV calculations are not calculated until 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.

TABLE [EXAMPLE]
Example Table

Ref.	Metric	Calculation	Year 1	Year 2	Year 3

Source: Forrester Research, Inc.