

A Forrester Total Economic Impact™  
Study Commissioned By Cisco  
October 2019

# The Total Economic Impact™ Of Cisco Webex Meetings + Devices

Cost Savings And Business Benefits  
Enabled By Webex Meetings + Devices

# Table Of Contents

<b>Executive Summary</b>	<b>1</b>
Key Findings	2
TEI Framework And Methodology	5
<b>The Webex Meetings + Devices Customer Journey</b>	<b>6</b>
Interviewed Organizations	6
Key Challenges	6
Solution Requirements	7
Key Results	7
Composite Organization	8
<b>Analysis Of Benefits</b>	<b>10</b>
Productivity Increase From Reduced Time Starting Meetings	10
Travel Cost Savings	14
Productivity Increase Due To Reduced Travel Time Between Meetings	16
IT Hardware And Software Cost Avoidance	18
Unquantified Benefits	19
Flexibility	21
<b>Analysis Of Costs</b>	<b>22</b>
Software License Fees	22
Cost Of Webex Devices	22
Training And Administration Costs	23
Increased Bandwidth Costs	24
<b>Financial Summary</b>	<b>25</b>
<b>Appendix A: Total Economic Impact</b>	<b>26</b>
<b>Appendix B: Endnotes</b>	<b>27</b>

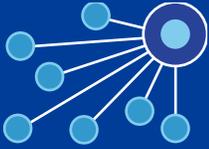
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## ABOUT FORRESTER CONSULTING

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## Cumulative Benefits Of Webex Meetings + Devices



Benefit attributed to the value derived from adding devices to a Webex meetings install

### 45% of total benefits



ROI  
450%



Benefits PV  
\$26 million



NPV  
\$21.3 million



Payback  
<3 months

## Executive Summary

Organizations strive to have intimate relationships with customers, prospects, and employees. To do this, technology leaders must find ways to share more information in more engaging ways. Cisco provides collaboration tools designed to create a broadly available experience to its users. Webex meetings software, including Webex Meetings and Webex Teams, used together with video devices, such as Webex Room Kits or Webex Boards, offers the opportunity for groups to meet, focusing on the content of the meeting, not the technology powering it.

One senior manager of technology services told Forrester: “We have over 650,000 internal clients, and Cisco Webex Boards combined with Webex meetings software allows us to have a really clean experience. The future is Business-to-business video that we will leverage to interact with our customers. You just want to very quickly push a button, have a conversation, and get it done and move on about your day.”

Cisco commissioned Forrester Consulting to conduct a Total Economic Impact™ (TEI) study and examine the potential return on investment (ROI) enterprises may realize by deploying Webex meetings + devices together. While Webex meetings + devices offer value when used on their own, customers experience an incremental uplift when the technologies are used in combination. The purpose of this study is to provide readers with a framework to evaluate the potential financial impact the combination of Webex meetings + devices together brings to their organizations.

Some examples of the improved experience using Webex meetings + devices together include:

- Using the Webex Meetings or Teams apps to effortlessly pair with, start or end a meeting, or wirelessly share content on a Webex device (such as Webex Board, Room Kits or DX80).<sup>1</sup>
- Using your Webex device to dial into a Webex Meetings or Teams call through a variety of ways: clicking the Webex button, clicking on a URL, entering personal meeting rooms, or having the meeting call your device.
- Transferring an ongoing Meetings or Teams call from a mobile device onto a room based Webex device mid-meeting or taking that meeting with you on your mobile device if you have to leave the meeting early.

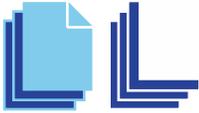
To better understand the benefits, costs, and risks associated with this investment, Forrester interviewed several customers with years of experience using Webex meetings + devices. Prior to using Webex meetings + devices together, interviewees reported spending more time than they wanted just connecting to meetings. After pairing Webex devices with meeting software, users were able to start meetings almost instantly.

Why did you choose to deploy both Webex meetings and devices?

*“The native integration. The fact that it’s all one development strategy makes the software and the hardware interact so much cleaner. The experience itself is a lot simpler and much better.”*

Senior manager, enterprise technology services, financial services





Productivity increase from time savings using both Webex meetings + devices to run efficient meetings

**\$8.58M**



Travel cost savings: 100% attributable to adding meetings + devices

**\$3.54M**

“With the click of a link, the meeting starts in just a couple of seconds on the device. If you connect from your app on your iPhone, you simply put it next to the Webex Board, and it recognizes you. It’s all about the usability; the many ways you can connect to meetings has become easy.”

*IT business analyst, high tech*



## Key Findings

We asked interviewees to discuss the value they received from deploying Webex meeting software together with devices. While the quantified benefits reflect the combined value, one interviewee expressed this sentiment: “Our collaboration efforts were about 50% more successful due to implementing the Webex devices. The Boards and Room Kits allowed the frequent users of Webex Meetings and Teams the simplified ability to run meetings with video, but also gave everyone native wireless sharing capabilities, which was a massive improvement over sharing the wire or installing some software to use a dongle. Combine that with the integration to Webex Meetings, and we had amazing success.”

**Quantified benefits.** The following risk-adjusted present value (PV) quantified benefits are representative of those experienced by the companies interviewed:

- › **Productivity increase from reduced time starting meetings.** By walking into a room and simply clicking the big green button or holding a phone next to a device, customers interviewed for this study described starting meetings as easy and seamless. Users were able to regain 8 minutes of productive meeting time. Over three years, this saved over \$21.3 million dollars in productivity costs.
- › **Travel cost savings.** After organizations got a taste for how real the video and holistic collaboration experience was, they started exploring ways to reduce travel costs. Interviewees reported IT teams choosing to hold annual meetings virtually instead of in-person, saving over \$100,000 in their first year.
- › **Productivity increase due to reduced travel time between meetings.** Organizations with campus-like environments or that have clusters of corporate office buildings in various parts of town reported anywhere from 15- to 45-minute drive time savings from internal meetings. When multiplied across an organization, the productivity boost equated to more than \$2.7 million dollars.
- › **IT hardware and software cost avoidance.** IT executives repeatedly reported being able to eliminate telephony costs in addition to repetitive collaboration tools. This saved more than \$727K over three years.

As part of this analysis, we asked interviewees what percentage of value they would attribute to the use of devices, in combination with Meetings or Teams. Responses ranged from 40% to 50%, with interviewees stating that the addition of hardware made their experiences that much more valuable. For this reason, Forrester assigned a 45% value to the addition of devices to a Meetings or Teams install. These enhancements include functionality examples such as:

- › **Best overview, speaker tracking, and face recognition.** Automatically detects meeting participants by name, placing a nameplate beneath their face; switches between active speakers and provides ideal framing so participants see vivid images of speakers.
- › **Portability of meetings.** Ability to use devices to start and end meetings and move meetings from room devices to mobile devices and vice versa.
- › **Uninterrupted workflow.** Whiteboarding and notations saved in the secure, shared teams space.

**Unquantified benefits.** The interviewed organizations experienced the following benefits, which are not quantified for this study:

- › **Configuration flexibility.** Interviewees described it as a win that Cisco offers so many different configuration options. Customers are not forced to discard their previous technologies that still have lifetime value. “We deployed Webex Meetings and Teams to all of IT, and we introduced this concept of team chat and team meeting, and it really clicked. For me, the light went on when I saw all the integration with meetings and what we can do with Webex. We carried on, and we deployed a Room Kit or Webex Board to every single conference room in the organization. For us, it was full steam ahead.”
- › **Data-driven facilities planning.** Facilities organizations can now utilize data to understand exactly what kind of meeting spaces their companies require. Reporting tools from Cisco Webex Control Hub show who was in the meeting, activity, duration, etc. Companies are using this for space planning purposes, to build out exactly the kind of spaces their users need.
- › **Changing customer experiences.** This seamless collaboration experience gives companies the opportunity to change the way they interact with their customers and prospects. The ability to connect with customers face to face with one push of a button allows employees to better understand what their customers are experiencing in the moment.
- › **Collaboration that works.** Siloed organizational structures exist in most companies, and business schools identify it as a top challenge. Allowing employees to make connections by seeing and reading faces allows for more human relationships and less digital text bombs being tossed over walls. Because of the ease of clicking the big green button from any device to start a meeting, interviewees saw a rapid adoption of these collaboration technologies.
- › **Better handoffs and faster time-to-problem-resolution.** Companies can leverage spaces in Webex Teams to access whiteboard sessions created on Webex Boards and share amongst the global teams. Handoffs are much easier because all communications and documents are stored in a shared, secure place.
- › **Mobile workforce enablement.** Enterprises are increasingly allowing for more flexible schedules and working environments. Interviewees described how they are training their workforces to connect to meetings from any device, to break down barriers between technology and productivity. The simplicity afforded by being able to start meetings and share content from a mobile device or to connect to a Webex video device makes movement between the home office and work office effortless.
- › **Data security.** Regulatory environments require companies to have complete control of their data, which becomes increasingly difficult in a global enterprise. CIOs must ensure users comply with safe data storage practices. By using Webex Meetings and Teams, users will always have the appropriate access to the encrypted company-sanctioned file storage.

“The business loves the fact that they can communicate and collaborate on any device anywhere. People love Webex and the integration it provides. They love the big green button when they walk in the room and they’re able to just click it, start the meeting, and not remember codes and passwords and meeting numbers.”

*Senior director of infrastructure and operations, healthcare*



**Costs.** Organizations chose the combined solution of Webex meetings + devices because of the clear, consistent user experience it provides. Just as compelling was the flexibility in configuration of device choices available. The interviewed organizations experienced the following risk-adjusted PV costs:

- › **Three-year Webex meetings license fees totaled \$2.57M.** The per-user, per-year license costs included both access to Webex Meetings and Teams software.
- › **Webex devices cost \$1.68M.** A combination of Webex Room Kits, Webex Boards, and other collaboration devices allowed for a flexible configuration.
- › **Training and administration cost \$438K over three years.** Training, and the cost of one FTE, totaled a risk-adjusted PV of \$438K. Some organizations chose to manage these processes with existing headcount, eliminating the need for this cost.
- › **Increased bandwidth cost \$50K.** While companies report trends of bandwidth requirements doubling every year, increased video does drive an uptick in bandwidth needs.

Forrester's interviews with five individuals from four existing customers and subsequent financial analysis found that a composite organization based on these interviewed organizations experiences benefits of \$14,333,560 while using Webex Meetings and/or Teams alone and experiences a 45% uplift when Webex devices are added. For the composite organization, this results in total combined benefits of \$26,061,018 over three years versus costs of \$4,739,447, adding up to a net present value (NPV) of \$21,321,571 and an ROI of 450%.



The TEI methodology helps companies demonstrate, justify, and realize the tangible value of IT initiatives to both senior management and other key business stakeholders.

## TEI Framework And Methodology

From the information provided in the interviews, Forrester has constructed a Total Economic Impact™ (TEI) framework for those organizations considering implementing Webex meetings + devices.

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 Webex meetings + devices can have on an organization:



### **DUE DILIGENCE**

Interviewed stakeholders and Forrester analysts to gather data relative to the increased efficacy of Webex meetings + devices when used together.



### **CUSTOMER INTERVIEWS**

Interviewed five individuals from four organizations using Webex meetings + devices to obtain data with respect to costs, benefits, and risks.



### **COMPOSITE ORGANIZATION**

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



### **FINANCIAL MODEL FRAMEWORK**

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



### **CASE STUDY**

Employed four fundamental elements of TEI in modeling the impact of Webex meetings + devices: 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 A for additional information on the TEI methodology.

## DISCLOSURES

Readers should be aware of the following:

This study is commissioned by Cisco 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 Webex meetings + devices.

Cisco 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.

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

# The Webex Meetings + Devices Customer Journey

## BEFORE AND AFTER THE WEBEX MEETINGS + DEVICES INVESTMENT

### Interviewed Organizations

For this study, Forrester conducted five interviews with Webex meetings + devices customers. Interviewed customers include the following:

INDUSTRY	REGION	INTERVIEWEE	EMPLOYEE SIZE
High tech	Headquartered in New York	Product owner, cloud collaboration technology	100,000+ employees in 170 countries
High tech	Headquartered in New York	IT business analyst	100,000+ employees in 170 countries
Healthcare	Headquartered in Lachen, Switzerland	Senior director of IT	8,000 employees in over 80 countries
Financial services	Headquartered in New York	Senior manager, enterprise technology services	14,000 employees with over 100 offices
Healthcare	Headquartered in North Carolina	Senior director, infrastructure and operations	1,500 employees in 22 offices globally

### Key Challenges

- › **Inconsistent quality of experience.** The senior director of infrastructure described with disdain the cries from employees about their previous toolset before they deployed Webex Meetings and Teams. “The No. 1 complaint was that online meetings suck. People consistently dropped off listening to garbage audio, or the mute feature didn’t work, or it took them 15 minutes to start every single meeting. Time and time again, we saw it. It’s just ridiculous how inconsistent that tool operated.”
- › **Loyalty to niche solutions that didn’t translate to ubiquitous conference experience.** As with many technology solutions, different business groups tried and adopted various point solutions and developed a loyalty to them. While one solution may provide an excellent desktop experience, it was cumbersome to join from a conference room or mobile phone.
- › **Multiple choices of tools creating chaos.** Every interviewee described the pain of getting a meeting started, whether it was fiddling with the cables or choosing the right tool. With Webex meetings + devices, employees now understand they just need to click the green button from their mobile or Webex devices.

“We did an evaluation, and we looked at all our tools. I know this is not unique to us, but we had a whole page of different collaboration tools that are out there, and nobody knows which one they should be using. It’s disruptive. It will be neat to see when everybody’s on one common platform how this transforms.”

*Senior manager, enterprise technology services, financial services*



“Every single time people get into a conference room, there’s just so much fumbling going on, and people are not sure how to join the meeting. Which of our three collaboration tools am I supposed to use? Now, everyone knows it’s a Webex meeting.”

*Senior director of infrastructure and operations, healthcare*



- › **It's expensive to run redundant tools.** For every tool in an organization, there are license fees and support costs. By consolidating tools, organizations reduced their overall communications costs. One interviewee listed off all the tools the organization was paying for; the organization was spending an estimated extra \$200,000 per year that it eliminated.

## Solution Requirements

The interviewed organizations searched for a solution that:

- › Is easy to use and works well every time.
- › Provides consistent quality and a single platform for collaborating.
- › Allows customers to leverage their existing infrastructure investments but still provides the same cohesive experience.
- › Enables employees and customers to join meetings easily with the same access to secure collaboration tools.
- › Complies with organizational security requirements.

After an extensive request-for-proposal (RFP) and business case process evaluating multiple vendors, the interviewed organizations chose Webex meetings + devices and began deployment:

- › Three out of four organizations are completely cloud based, but one organization has a hybrid solution for its Webex deployment.
- › Three organizations chose to standardize on Webex Boards in their new built-out conference rooms. The other chose to leverage existing investments in screens and underlying infrastructure but deployed Webex Room Kits in that scenario. Finally, all four organizations were using Webex Meetings and Teams software along with Webex devices.

## Key Results

The interviews revealed key results from the Webex meetings + devices investment:

- › **It enabled remote work organizational structures.** Video is a game changer for creating team connections. The senior director of IT described how the Webex Teams spaces created in conjunction with crisp video enables his ability to manage his team. "We are a pretty much virtual organization, and we have folks that report into each other from all areas of the country. Webex Meetings actually enabled that organizational structure. As an example, five of my direct reports are remote, and they have pretty big responsibilities. If it wasn't for the ability to have an immersive video experience like this and be able to ad hoc meet in our Teams spaces, it wouldn't work."

"Our desired outcome was that we wanted easy, single-button push meetings. We wanted both software and hardware that would work well together for immersive meeting experiences. And we also wanted to start to drag down some of the need to have people physically present in an office location to have an effective meeting."

*Senior manager, enterprise technology services, financial services*



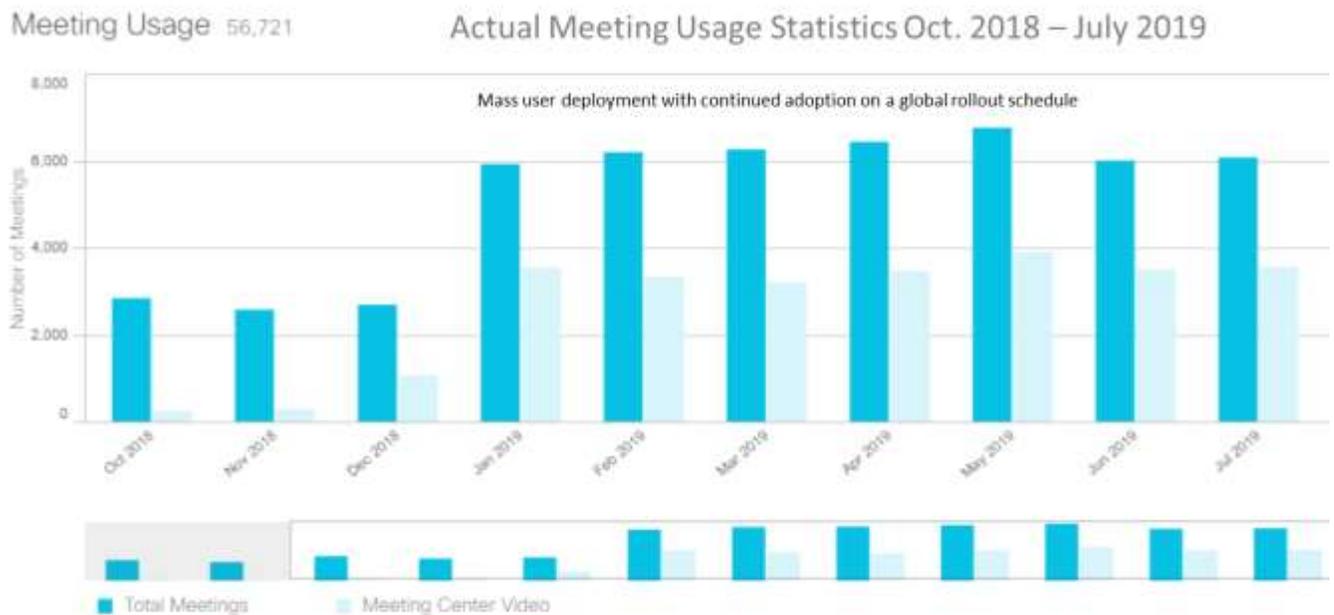
"Just this morning, I happened to be in the room before the meeting started and the voice of Webex came on and said, 'Would you like me to start this meeting for you?' And I said, 'Okay,' and it started the meeting. I mean, it can't be any easier now."

*Senior director, infrastructure and operations, healthcare*



› **It just works.** Consistently, each interviewee described how their organization’s users were happy with their experiences and how much easier meetings became when they used the Meetings or Teams software in combination with the Webex Boards or on their personal devices. One user didn’t just talk about it; they provided proof. Figure 1 shows the rapid adoption of video meetings. The dark blue shows the increase in total meetings being held in Meetings or Teams while the light blue bar shows the rapid increase of meetings utilizing video. By adopting and using these technologies, companies are actually able to realize the productivity benefits, including improved adoption and usage, described in this case study. Interviewees discussed how previous attempts at collaboration initiatives failed because the technology worked inconsistently or was just too cumbersome.

Figure 1



**It enabled cost savings.** Every interviewee described being able to reduce overall costs for collaboration technologies, including a significant reduction in public switched telephone network (PSTN) charges. One interviewee reported saving \$50,000 per year on session initiation protocol (SIP) trunks and \$41,000 per month on redundant collaboration tools. When creating an internal business case to roll out Cisco Webex meetings + devices, the customer reported saving 35% of the organization’s previous spend per month.

## Composite Organization

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 is representative of the four companies that Forrester interviewed and is used to present the aggregate financial analysis in the next section. The composite organization that Forrester synthesized from the customer interviews has the following characteristics:

**Description of composite.** The global, multibillion-dollar, business-to-business organization provides sales, customer support, and service/warranty support for its products and services in high volume. The organization has a strong brand, global operations, a large partner program, and direct customer base. Creating strong customer relationships is its top priority, followed by a commitment to have a dedicated and engaged workforce.

**Deployment characteristics.** The organization has global operations across 45 remote offices and just over 10,000 employees. The company is growing and plans to expand both its regional and national office locations. It also has a 10% work-from-home population and embraces this trend. Of the employee population, 50% are information workers who regularly attend meetings. Of those 50%, 10% are senior leaders who primarily spend their days in meetings. Finally, the company has a tradition of a monthly all-employee meeting in which all offices stream into headquarters.



### Key assumptions

10,000 employees

Campus-like HQ

45 remote offices

50% information worker population

1,000 senior-level employees

“The Webex Boards are the icing on the cake for Teams. Teams itself is a great software with a good amount of potential still, but the Boards really bring the experience to life. Let’s not forget about the mobile app. All three combined are a great experience, consistent, allowing you to truly be mobile and not lose out on the experience. I would say that the hardware gives us more than 40% more success.”

*Senior manager, enterprise technology services, financial services*



# 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	Productivity increase from reduced time starting meetings	\$7,660,800	\$7,660,800	\$7,660,800	\$22,982,400	\$19,051,276
Btr	Travel cost savings	\$1,164,960	\$1,499,904	\$1,656,000	\$4,320,864	\$3,542,822
Ctr	Productivity increase due to reduced travel time between meetings	\$1,101,600	\$1,101,600	\$1,101,600	\$3,304,800	\$2,739,516
Dtr	IT hardware and software cost avoidance	\$292,500	\$292,500	\$292,500	\$877,500	\$727,404
	Total benefits (risk-adjusted)	\$10,219,860	\$10,554,804	\$10,710,900	\$31,485,564	\$26,061,018
	45% of total benefits is attributable to the addition of Webex devices to a Meetings or Teams deployment					<b>\$11,727,458</b>

The table above shows the total of all benefits across the areas listed below, 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 \$26 million.

## Productivity Increase From Reduced Time Starting Meetings

Interviewed organizations all reported a reduced time savings in starting meetings. Depending on their legacy collaboration technology, the ways groups saved time included:

- › Reduced searching for cords and physically connecting to a screen.
- › Enabled easier meeting startup with one button and/or voice assistant, which asks users to start the meeting.

- › Enhanced connections with remote team members because they could see attendees' faces and names in the room quickly and easily.

The high-tech IT business analyst said: "I can see the statistics of how fast the client is able to connect to a meeting. So, in most cases something like 2 to 4 seconds. Joining is as easy on Webex Board as it is on a PC. There are so many ways of connecting, so if you join from the app or you have your iPhone, then you can just put it on a Webex Board. It's all about the usability, and the fact that there are so many different easy ways can you connect to a meeting."

Companies reported ease of use significantly contributed to the rapid adoption of Meetings and Teams: "Ease of use where people who are not technology inclined are able to easily get into a room. They use the big green button for proximity in Webex Teams or ask them if they want to start their meeting on their screen. Or now Webex Assistant is saying, 'Hey, can I start your meeting?' We made it so simple for people to use this stuff, so they use it. It's when technology is difficult, folks tend to shy away and just do things the old way or don't use it. So, the easier we make it, the more they use it."

Forrester took a conservative approach to modeling this productivity increase, as the possibilities for efficiency savings are massive, depending on the size and scale of an organization.

Forrester assumed:

- › There are three "types" of employees: entry-level task workers, mid-level information workers, and senior-level employees.
- › The composite organization is comprised of a total of 10,000 employees, and all employees meet one time per month.
- › There are 5,000 information workers at a mid-level salary and 1,000 senior-level employees at a higher-level, fully burdened salary.
- › Forrester Analytics' Business Technographics® data states that 95% of information workers spend between 2 and 4 hours per day in meetings.<sup>2</sup> The model assumes mid-level information workers meet at least four times per day while senior-level employees meet at least 10 times per week and travel one week out of the month.
- › Employees save 8 minutes per meeting by starting meetings more easily. Interviewees reported that they saved as much as 15 minutes starting a meeting down to literally seconds. Forrester assigned an 8-minute savings as found in research by analyst Nick Barber.<sup>3</sup>

Forrester applied three different salary levels based on findings from job descriptions on PayScale.com. The model applied a 25% productivity recapture because not all time saved will be spent working.

An organization's ability to experience a similar productivity increase will be based on:

- › The size and scope and demographics of the organization.
- › The number of meetings each demographic group conducts monthly.
- › The salaries of each demographic group.

To account for these risks, Forrester adjusted this benefit downward by 10%. In addition, the model assumes 95% of that time saved applies to the overall savings model. This yields a three-year, risk-adjusted total benefit PV of \$19,051,276.

45% of the total benefit, or \$8.57 million, is enabled by the addition of devices.

Impact risk is the risk that the business or technology needs of the organization may not be met by the investment, resulting in lower overall total benefits. The greater the uncertainty, the wider the potential range of outcomes for benefit estimates.

Forrester estimates 45% of the total benefit, or \$8.57M, is enabled by the use of Webex meetings + devices together. Why?

“When we would videoconference, our previous projector and camera was not the best experience because it just showed the bird’s-eye view of the room, not faces. Now, with Webex devices, the camera automatically zooms in and out. The follow-me tracker on the room kits makes for a much better lifelike experience. We actually use it now.”

*Senior manager, enterprise technology services, financial services*



“Joining is as easy on Webex Board as it is on a PC. You can join from an app on your phone or from the link on your PC. Then all you do is position it next to the Webex Board, and it opens. With all the different ways can you connect to this, meeting has become fast and easy.”

*Product owner, cloud collaboration technology, high tech*



## Productivity Increase From Reduced Time Starting Meetings: Calculation Table

Ref.	Metric	Calculation	Year 1	Year 2	Year 3
A1	Number of all employees	Forrester assumption	4,000	4,000	4,000
A2	Number of information workers	Forrester assumption	5,000	5,000	5,000
A3	Number of senior-level employees	Forrester assumption: 1 per month	1,000	1,000	1,000
A4	Average number of meetings per month for all employees	Forrester assumption: 1 per month	1	1	1
A5	Average number of meetings per month for information workers	Forrester assumption	80	80	80
A6	Average number of meetings per month for senior-level information workers	Forrester assumption	30	30	30
A7	Minutes spent starting meetings before Webex Meetings plus devices	Source: Interview	8	8	8
A8	Percent of savings applied to modeled benefits	Interview	95%	95%	95%
A9	Average fully burdened hourly salary of a task worker	PayScale.com	\$30	\$30	\$30
A10	Average fully burdened hourly salary of a mid-level information worker	PayScale.com	\$47	\$47	\$47
A11	Average fully burdened hourly salary of a senior-level information worker	PayScale.com	\$116	\$116	\$116
A12	Productivity recapture	25%	25%	25%	25%
A13	Dollars saved from all workers	$A1 \cdot A4 \cdot (A7/60) \cdot 12 \cdot A8 \cdot A9 \cdot A12$	\$45,600	\$45,600	\$45,600
A14	Dollars saved from mid-level information workers	$A2 \cdot A5 \cdot (A7/60) \cdot 12 \cdot A8 \cdot A10 \cdot A12$	\$7,144,000	\$7,144,000	\$7,144,000
A15	Dollars saved from senior-level information workers	$A3 \cdot A6 \cdot (A7/60) \cdot 12 \cdot A8 \cdot A11 \cdot A12$	\$1,322,400	\$1,322,400	\$1,322,400
At	Productivity increase from reduced time starting meetings	$A13 + A14 + A15$	\$8,512,000	\$8,512,000	\$8,512,000
	Risk adjustment	↓10%			
Atr	Productivity increase from reduced time starting meetings (risk-adjusted)		\$7,660,800	\$7,660,800	\$7,660,800

## Travel Cost Savings

Organizations have long touted the ability to utilize collaboration tools or videoconferencing for meetings, theoretically reducing the need for in-person meetings. But imperfect experiences have discouraged teams from making this a reality. In fact, one interviewee described their conference room devices as “dusty pieces of furniture.” The combination of using Webex meetings + devices allowed users to seamlessly connect across the globe. Unlike past video solutions, where a remote user viewed a room full of faceless participants, Webex devices follow and zoom in on the speaker, and facial recognition positions the participant’s name under their face. Interviewees described forgetting they were not in the same room because the images were engaging.

With the addition of Webex Room Kits and Webex Boards to conference rooms, interviewees provided hard dollar savings they achieved from the following use cases:

USE CASE	DOLLARS SAVED
IT: Three groups within the healthcare firm chose to hold their four-day IT annual meetings online, instead of gathering groups from around the globe.	\$100,000 in the first year
Training: Financial services firm’s HR and training groups transitioned training to video held in geographically dispersed offices, saving travel costs.	\$1,000,000 in the first year
Management: Regional managers stopped traveling twice a week to visit their remote offices.	\$194,400 in the first year

For all of the use cases described above, the interviewees said that they were not willing or able to execute on these initiatives without the seamless technology experiences that having Webex meetings + devices affords. The financial services director said, “The virtual collaboration has improved tenfold in reducing the travel, time, and the reflection on the company improving how an employee views our organization.” The senior director of infrastructure and operations said: “We held our four-day IT summit virtually, and the meeting was quite effective. We had no issues from a technology perspective. We were not sitting around the same table but sitting around a virtual table. We conducted the meeting a little bit differently, but it was very successful.”

For the composite organization, Forrester modeled the three scenarios we heard that would be broadly applicable to most organizations of size. The model assumes:

### IT

- › Two groups hold annual summits the first year, which grow to four and six groups in Years 2 and 3.

### TRAINING

“Did I mention we will save a million dollars on travel? New hires for either our service organization or sales are flown here for training. As a result of this technology, our HR and training department said, ‘Listen, if we can get this technology implemented in some of our bigger centers, we will reduce travel by a million dollars,’ and they committed and followed through.”

*Senior manager, enterprise technology services, financial services*



100% of the total benefit, or \$3,542,822, is enabled by the addition of devices.

- › New employees in sales and service are not flying into one location for onboarding and training.
- › Employees can travel to a local regional office at a greatly reduced travel cost to the organization.

Prior to committing to invest in Webex devices, the organization was able to gain commitment from the HR department to change the way it executes training. With this commitment in hand, the organization used this million-dollar savings to gain executive commitment for the purchase.

**REGIONAL MANAGER TRAVEL:**

- › The cost of travel for two nights hotel, meals, and flight is \$900.
- › The regional managers previously traveled two times a month to their regional offices but now travel infrequently.
- › There are 45 offices, but the company is expanding rapidly and has 108 in its second year and 125 in its third year.

The reduction in travel costs will vary based on the following factors:

- › The willingness of organizations to change their philosophy on training.
- › The size, scope, and location of the existing offices, impacting the cost of travel.

To account for these risks, Forrester adjusted this benefit downward by 10%, yielding a three-year risk-adjusted total PV of \$3,542,822.

“There’s no way we can hire enough regionals and put them on the road long enough to be of value to the office. So, it’s all flight cost, the hotel cost, meal cost, quality-of-life cost. At the end of the day, it’s not right in this day and age to have someone travel so much, when we have so much connectivity, video-to-video. I can feel like, I’m in the room, without even being out of my house.”

*Senior director of IT, healthcare*



## Travel Cost Savings: Calculation Table

Ref.	Metric	Calculation	Year 1	Year 2	Year 3
B1	Costs per manager per trip for two nights hotel, meals, and flight/mileage	Forrester assumption	\$900	\$900	\$900
B2	Number of trips per year	Source: Interview	24	24	24
B3	Number of offices	Source: Interview	45	108	125
B4	Number of managers	5 managers per office (B3/5)	9.0	21.6	25.0
B5	Reduced regional management travel costs	$B1 \times B2 \times B4$	\$194,400	\$466,560	\$540,000
B6	HR costs saved by not flying in candidates for interviews	Source: Interview	\$1,000,000	\$1,000,000	\$1,000,000
B7	Dollars saved due to reduced travel from interviews and training	Source: Interview	\$1,000,000	\$1,000,000	\$1,000,000
B8	Global groups holding meetings virtually instead of in person	Source: Finding	2	4	6
B9	Cost savings from two IT groups holding annual meetings virtually	Source: Finding	\$100,000	\$200,000	\$300,000
Bt	Travel cost savings	$B5 + B7 + B9$	\$1,294,400	\$1,666,560	\$1,840,000
	Risk adjustment	↓10%			
Btr	Travel cost savings (risk-adjusted)		\$1,164,960	\$1,499,904	\$1,656,000

## Productivity Increase Due To Reduced Travel Time Between Meetings

Interviewees described scenarios where they were previously traveling between corporate buildings to have face-to-face meetings. The senior manager of enterprise technology services said: "With traffic, it can take anywhere between 15 and 45 minutes to go from corporate office building to building. One key piece of functionality that cloud-enabled Webex devices allows is the ability to hold interactive whiteboard sessions. Within the Teams software, you create a 'space' and hold your meeting in that space. Any shared documents or whiteboarding sessions created are now saved in that shared, secure space. Not only are meeting participants benefiting from an engaging video experience, but they can collaborate and share documentation without sending around emails or whiteboard photos."

The senior director of IT at a healthcare firm described his use case: "One example of why the Boards fit in so well is because our Agile software development shops are located on campus. We have 13 buildings on our campus. It used to be that you would get in your car and drive from building to building just to have an effective meeting. Now, it really doesn't matter where you are joined from. Via the Teams app, you have the same video experience. All the whiteboarding is interactive, and we're fully leveraging all the documents. We have integrations with Office 365 that have been set up through Teams, so we're using OneDrive as our continued standard. You'll walk around and see teams having scrum

45% of the total benefit, or \$1,232,782, is enabled by the addition of devices.

meetings, doing stand-ups, and doing program updates with people that are in other buildings and around the world.”

For the financial model, Forrester assumes:

- › One thousand employees work in the campus environment and go from building to building for meetings.
- › Those information workers have an average fully burdened salary of \$68 per hour, including all benefits and taxes.
- › The average employee meets at least three times a week.
- › The amount of time saved by not traveling between buildings for meetings is an average of 15 minutes.
- › The employees work 48 weeks per year.
- › There is a 50% productivity capture rate because not time savings results in additional work.

The results may vary depending on the specific scenarios another company may face, such as:

- › The meeting culture of the company.
- › The size of the campus environment or the distance between buildings on campus.
- › The cost of employees located in that campus.

To account for these risks, Forrester adjusted this benefit downward by 10%, yielding a three-year risk-adjusted total PV of \$2,739,513. For the total benefit, Forrester estimates 45% of the total benefit, or \$1,232,782.20, is enabled by the addition of devices.

“It’s really rare that you see folks not using video now and, for me personally, attending meetings with folks without video is a little bit awkward. I made it mandatory in all my team meetings. We’re the champions, but it has spread like wildfire here. It’s really awesome.”

*Senior director of  
infrastructure and operations,  
healthcare*



## Productivity Increase Due To Reduced Travel Time Between Meetings: Calculation Table

Ref.	Metric	Calculation	Year 1	Year 2	Year 3
C1	Average number of information workers who travel between buildings for internal meetings	1,000	1,000	1,000	1,000
C2	Average fully burdened salary for information workers who travel between buildings for internal meetings	\$68 per hour	\$68	\$68	\$68
C3	Number of meetings per week per employee	Forrester assumption	3	3	3
C4	Average travel time between meetings	15 minutes	15	15	15
C5	Dollars saved not traveling between meetings	$\$68/4$	\$17	\$17	\$17
C6	Dollars saved per year per employee	$C1 \times C3 \times C5 \times 48$ weeks	\$2,448,000	\$2,448,000	\$2,448,000
C7	Productivity recapture	50%	50%	50%	50%
Ct	Productivity increase due to reduced travel time between meetings	$C6 \times C7$	\$1,224,000	\$1,224,000	\$1,224,000
	Risk adjustment	↓10%			
Ctr	Productivity increase due to reduced travel time between meetings (risk-adjusted)		\$1,101,600	\$1,101,600	\$1,101,600

## IT Hardware And Software Cost Avoidance

The interviewees all described various costs their organizations were able to eliminate because of their choice of using Webex meetings + devices. Costs eliminated included redundant collaboration software packages, as some described having three or four different messaging and online meeting platforms. In addition, the serious reduction in telephony costs greatly contributed to the cost savings.

The senior director of infrastructure and operations said: "I've done all the math, and we cut our costs by 35%, which I presented to the CIO. So much more traffic is on net now because everybody is just using Webex, Teams, or Meetings, and there is no PSTN involved whatsoever, so that's a big money saver, with better quality."

Based on the following, Forrester modeled a conservative \$500,000-per-year savings in IT costs:

- › One organization reported saving \$50,000 per year in SIP trunk costs.
- › Another organization reported saving \$41,000 per month in redundant collaboration tools and voice costs.

The size of this benefit will depend on the scope of the solutions that were in place previously. It will also be affected by the number of locations and geographic reach. To account for these risks, Forrester adjusted this benefit downward by 10%, yielding a three-year

45% of the total benefit, or \$327K, is enabled by the addition of devices.

"Interestingly, our goal was not to save money; it just happened to be an outcome from this."

Senior director of infrastructure and operations, healthcare



risk-adjusted total PV of \$727,404. For the total benefit, Forrester estimates 45% of the total benefit is enabled by boards, equaling \$327,331.

IT Hardware And Software Cost Avoidance: Calculation Table					
Ref.	Metric	Calculation	Year 1	Year 2	Year 3
D1	Annual IT spend on redundant conferencing software	Forrester assumption	\$500,000	\$500,000	\$500,000
D2	Annual savings by retiring redundant collaboration technologies	35%	35%	35%	35%
D3	Costs saved by retiring SIP trunks	Source: Finding	\$150,000	\$150,000	\$150,000
Dt	IT hardware and software cost avoidance	$D1 * D2 + D3$	\$325,000	\$325,000	\$325,000
	Risk adjustment	↓10%			
Dtr	IT hardware and software cost avoidance (risk-adjusted)		\$292,500	\$292,500	\$292,500

## Unquantified Benefits

In addition to the quantified benefits outlined above, interviewed organizations identified several benefits they gained from using Webex Meetings or Teams software with their devices that were thought to be very positive, but had not yet been measured. These include:

- › **Configuration flexibility.** Interviewed organizations reported different states of maturity with their video investments. Because Cisco offers so many different options, such as Webex Room Kits to be paired with existing equipment, or Webex Boards where there is no previous screen, it allowed companies to leverage their previous investments but still gain the enhanced functionality Webex software provides. One company previously used a hardware solution, paired with its proprietary app. The company was able to jettison that hardware and software solution for the seamless Webex experience. The senior director of IT in healthcare said: “We had previously made a decent investment in screens, and I didn’t want to have to replace them. The Room Kit made so much sense; it was such a homerun. In Europe, not a single conference room had an LED screen. I bought the actual Webex Boards.”
- › **Data-driven facilities planning.** With the reporting tools found in Cisco Webex Control Hub, companies can now utilize this data to understand what kind of meeting spaces they need. The data shows who is accessing from the room versus those who are remote and provides much needed actual data for maximizing the effectiveness of new buildouts. “We are building a new location and were planning to build large conference rooms. After looking at the reports coming out of Webex, we saw that most of the meeting space was tied to about three to five people on average. We took rooms that people were trying to build that support 12 to 15 people, and we cut them in half, and we almost tripled the amount of conference room space,” said the senior manager of enterprise technology services.



Facilities planning based on usage

- › **Changing customer experiences.** Companies crave the opportunity to form tighter bonds with their customers. The ability to connect with customers with one push of a green button changes the game. “We have a lot of interactions whether it’s email, chat, calls, today, but the future of this is going to be video. The Cisco Webex Boards enabled us to have more interactive meetings. I run the client center and get to see all of what’s happening in client meetings. We see a lot more engagement than what we might have seen before. People don’t just sit and look at the presentation; people actually stand up and work together a lot more. We have a lot of consultants who lay out what a solution architecture would look like, and via the software, their customers can see what’s happening in real time. People use the Boards to draw, to show solutions; instead of just using a PowerPoint presentation, you would draw something.”
- › **Collaboration that works.** Most organizations of size wrestle with the issue of siloed organizational structures. Open floorplans, glass walls, and removing offices are physical ways companies have tried to address these issues. Collaboration that works, allowing humans to connect eye to eye, offers new opportunities for truly setting fire to silos. “One of the reasons we moved into a brand-new building was everyone was working in silos, with no collaboration across these different units in the office. We restructured the whole organization in terms of where we were sitting and now you can see sales collaboration across the company. The proof is in the usage statistics showing a spike in video meeting minutes. This has enabled a different way of working,” said the high-tech customer center manager.
- › **Better handoffs and faster time-to-problem-resolution.** The interviewees described this IT use case; however, Forrester sees this being broadly applicable in global companies. Said the senior director of IT: “We completely changed the way we do triage calls. We’re able to spin up a crisis room in Webex Teams. We instantly jump to a Webex and whiteboard solutions amongst the global infrastructure team. We have people in Austria, Stockholm, Germany, U.S. collaborating on one space. We are able to transfer an issue when we start crossing time zones. Our European friends are waking up, and with fresh eyes, they can take over issue resolution and are able to get up to speed on what’s happening quickly because they can see all our notes and saved whiteboards.”
- › **Mobility.** Increasingly, employees are using their tablets, both company- and personally owned for work. In a Forrester survey of 3,699 information workers, the top reasons for using their tablets at work were “It’s more portable than a laptop” and “I can get things done whenever it’s convenient for me.”<sup>4</sup> One interviewee is making a concerted effort to encourage their workforce to connect from any device. “We really put an emphasis on training folks that can use their iPhones or iPads for Webex Teams meetings, so for when they’re on the go, or when they’re at home, they just use their computer. We want them to be able to access their meetings from the place it’s most convenient.”

- › **Data security:** Post GDPR and with PII<sup>5</sup> and the growing regulatory alphabet soup, companies must be on top of where all their information lives.<sup>6</sup> “We have to protect and ensure we know the location of our data so we don’t want things living in all of these different places. There is no reason for you to use anything else outside of Teams because you’ll have the appropriate access to the company sanctioned file storage, which is OneDrive, and you can use Teams to do your whiteboarding storage and shared files. It’s all encrypted.”

## Flexibility

The value of flexibility is clearly unique to each customer, and the measure of its value varies from organization to organization. There are multiple scenarios in which a customer might choose to implement Webex meetings + devices and later realize additional uses and business opportunities, including:

- › **Appspace.** Webex Room Kits and Webex Boards are integrated with Appspace. Idle boards in screensaver mode can show digital content. The senior director of infrastructure and operations gave an example use case where the content broadcast on the Webex Boards could rev up the competitive sales juices broadcasting new business awards: “Congratulations to the sales team group because they just landed this new client. It’s a lot of value-add because it’s one more channel for us to get some type of content out to users. It could be used for anything; it’s very dynamic.”
- › **Controlling meeting room bookings-based attendee numbers.** One client is looking forward to gaining more control of the governance of booking appropriate meeting room spaces. “We’re booking rooms with two people that seat 27, 28. Features that are coming with the Webex Boards are going to allow us to reject meetings if you don’t have the right number of people. The app can suggest a smaller meeting room if possible or suggest going to a cloud-based solution. So we’re looking forward those features coming for our facilities planning purposes.”
- › **Expansion into new regions and countries.** The interviewees said that they would be deploying Webex Meetings software and devices in offices around the world. In addition, as adoption progresses, new use cases will be discovered, such as using video in customer service scenarios. This will drive increased adoption over time.

Flexibility, as defined by TEI, represents an investment in additional capacity or capability that could be turned into business benefit for a 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.

# 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
Etr	Software license fees	\$0	\$1,034,000	\$1,034,000	\$1,034,000	\$3,102,000	\$2,571,405
Ftr	Cost of Webex devices	\$1,680,000	\$0	\$0	\$0	\$1,680,000	\$1,680,000
Gtr	Training and administration costs	\$27,500	\$165,000	\$165,000	\$165,000	\$522,500	\$437,831
Htr	Increased bandwidth costs	\$14,400	\$14,400	\$14,400	\$14,400	\$57,600	\$50,211
	Total costs (risk-adjusted)	\$1,721,900	\$1,213,400	\$1,213,400	\$1,213,400	\$5,362,100	\$4,739,447

## Software License Fees

Webex licenses include access to both Webex Meetings and Webex Teams.

- › The cost per license is \$94 per user/per year.
- › The model assumes these are host licenses.

The pricing will vary by organization based on the volume of the purchase or any special incentives given by Cisco partners.

To account for these risks, Forrester adjusted this cost upward by 10%, yielding a three-year risk-adjusted total PV of \$2,571,405.

The table above shows the total of all costs across the areas listed below, as well as present values (PVs) discounted at 10%. Over three years, the composite organization expects risk-adjusted total costs to be a PV of more than \$4.7 million.

### Software License Fees: Calculation Table

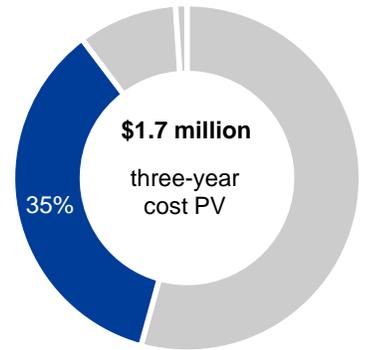
Ref.	Metric	Calculation	Initial	Year 1	Year 2	Year 3
E1	License fees	\$94 per user		\$94	\$94	\$94
E2	Number of users	10,000		10,000	10,000	10,000
Et	Software license fees	E1*E2	\$0	\$940,000	\$940,000	\$940,000
	Risk adjustment	↑10%				
Etr	Software license fees (risk-adjusted)		\$0	\$1,034,000	\$1,034,000	\$1,034,000

## Cost Of Webex Devices

One of the compelling reasons interviewees chose Cisco Webex as their preferred partner was for the flexibility it offers in the types of devices available. Customers can choose from a range of offerings, including smaller desktop DX80 devices to Webex Boards ranging in size from 55 to 85 inches. In addition, Cisco Webex Room Kits allow users to utilize previously installed screens but gain the Webex functionality.

- › The model assumes a purchase mix of Webex devices, including DX80s, Room Kits, and Webex Boards.
- › The model assumes a one-time purchase and that the devices will last for more than three years.
- › The cost of the devices will vary based on the configuration and pricing assigned by the Cisco partner.

To account for these risks, Forrester adjusted this cost upward by 10%, yielding a three-year risk-adjusted total PV of \$1,680,000.



Cost of Webex devices: 35% of total costs

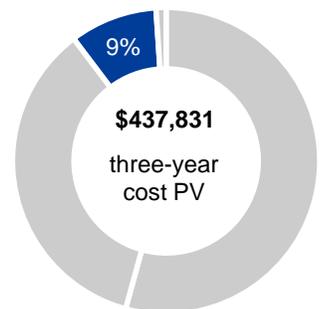
#### Cost Of Webex Devices: Calculation Table

Ref.	Metric	Calculation	Initial	Year 1	Year 2	Year 3
F1	Total cost of devices	Source: Finding	\$1,400,000			
Ft	Cost of Webex devices	F1	\$1,400,000	\$0	\$0	\$0
	Risk adjustment	↑20%				
Ftr	Cost of Webex devices (risk-adjusted)		\$1,680,000	\$0	\$0	\$0

## Training And Administration Costs

Interviewees described hiring a training company to help with their deployments; however, they described it as more of a PR campaign. "We hired a training company to help with our PR campaign and to provide courses to users. Over six weeks, they provided a number of repeated training courses to teach Webex Teams and Meetings." In addition, two interviewees reported hiring one FTE to own the Webex deployment and ongoing maintenance.

The amount of professional services required will depend on the overall size of the organization and the internal IT skills and spare capacity to conduct training. To account for these risks, Forrester adjusted this cost upward by 10%, yielding a three-year risk-adjusted total PV of \$437,831.



Training and administration costs: 9% of total costs

### Training And Administration Costs: Calculation Table

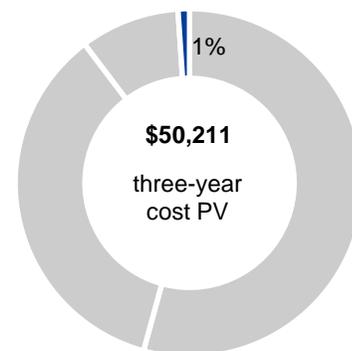
Ref.	Metric	Calculation	Initial	Year 1	Year 2	Year 3
G1	Added administrator costs		\$0	\$150,000	\$150,000	\$150,000
G2	Training fees	\$25,000	\$25,000			
Gt	Training and administration costs	G1+G2	\$25,000	\$150,000	\$150,000	\$150,000
	Risk adjustment	↑10%				
Gtr	Training and administration costs (risk-adjusted)		\$27,500	\$165,000	\$165,000	\$165,000

### Increased Bandwidth Costs

Most of the companies interviewed described increased costs related to bandwidth. However, at the same time, there was a steep reduction in telephony costs, which easily offsets it. "With all of the additional video going on, we found we needed more bandwidth in the bigger offices. However, we're increasing bandwidth pretty much on a rolling basis; video is just one aspect of needing more. The trend for the last 20 years is that bandwidth doubles every five years. So, I think this is just part of that puzzle," said the senior director of infrastructure and operations.

For the composite organization, the \$12,000 uplift in bandwidth costs is that attributed to increased video usage. A company's overall bandwidth costs may cost more.

To account for these risks, Forrester adjusted this cost upward by 20%, yielding a three-year risk-adjusted total PV of \$50,211.



**Increased Bandwidth Costs: 1% of total costs**

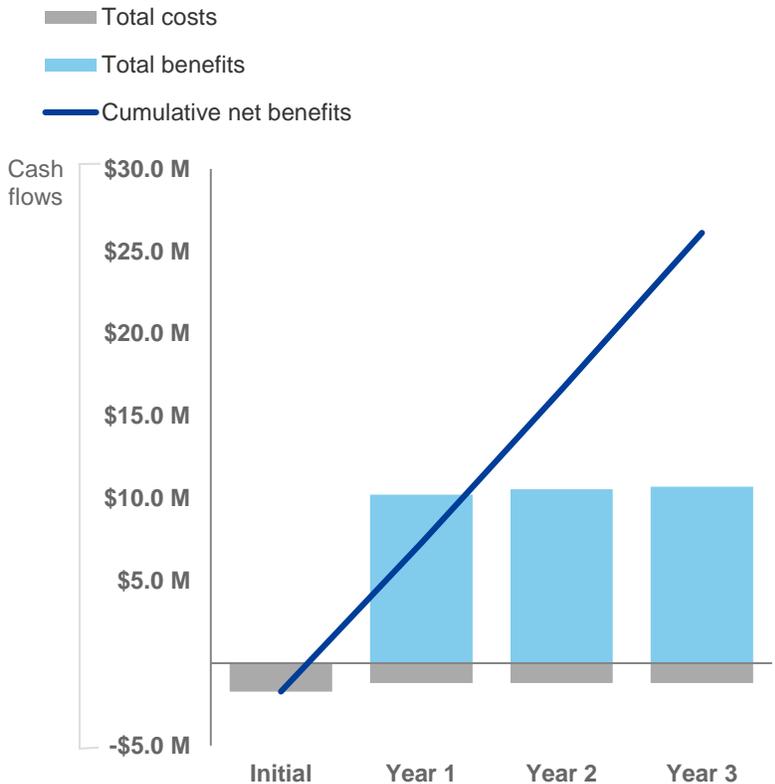
### Increased Bandwidth Costs: Calculation Table

Ref.	Metric	Calculation	Initial	Year 1	Year 2	Year 3
H1	Bandwidth costs	\$12,000 per year	\$12,000	\$12,000	\$12,000	\$12,000
Ht	Increased bandwidth costs	H1	\$12,000	\$12,000	\$12,000	\$12,000
	Risk adjustment	↑20%				
Htr	Increased bandwidth costs (risk-adjusted)		\$14,400	\$14,400	\$14,400	\$14,400

# Financial Summary

## CONSOLIDATED THREE-YEAR RISK-ADJUSTED METRICS

### Cash Flow Chart (Risk-Adjusted)



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



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

### Cash Flow Analysis (risk-adjusted estimates)

	Initial	Year 1	Year 2	Year 3	Total	Present Value
Total costs	(\$1,721,900)	(\$1,213,400)	(\$1,213,400)	(\$1,213,400)	(\$5,362,100)	(\$4,739,447)
Total benefits	\$0	\$10,219,860	\$10,554,804	\$10,710,900	\$31,485,564	\$26,061,018
Net benefits	(\$1,721,900)	\$9,006,460	\$9,341,404	\$9,497,500	\$26,123,464	\$21,321,571
ROI						450%
Payback period (months)						< 3

# Appendix A: Total Economic Impact

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

## Total Economic Impact Approach



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



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



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



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

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



### Present value (PV)

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



### Net present value (NPV)

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



### Return on investment (ROI)

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



### Discount rate

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



### Payback period

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

## Appendix B: Endnotes

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<sup>1</sup> Using the Webex Meetings or Teams apps to effortlessly pair with, start or end a meeting, or wirelessly share content on a Webex device (such as Webex Board, Room Kits or DX80).<sup>1</sup> (DESCRIPTIONS TO FOLLOW)

<sup>2</sup> Source: Forrester Analytics Global Business Technographics® Workforce Benchmark Survey, 2018

<sup>3</sup> See the Forrester brief “Start Your Videoconferences On Time [136170].”

<sup>4</sup> Source: Forrester Analytics Global Business Technographics® Workforce Benchmark Survey, 2018

<sup>5</sup> Definition of PII: Personally identifiable information (PII) is any data that could potentially identify a specific individual. Any information that can be used to distinguish one person from another and can be used for deanonymizing anonymous data can be considered PII. More information can be found here:

<https://csrc.nist.gov/publications/detail/sp/800-122/final>.

<sup>6</sup> Definition of GDPR: The General Data Protection Regulation (GDPR) the Data Protection Law Enforcement Directive and other rules concerning the protection of personal data. More information can be found here:

[https://ec.europa.eu/commission/priorities/justice-and-fundamental-rights/data-protection/2018-reform-eu-data-protection-rules\\_en](https://ec.europa.eu/commission/priorities/justice-and-fundamental-rights/data-protection/2018-reform-eu-data-protection-rules_en).