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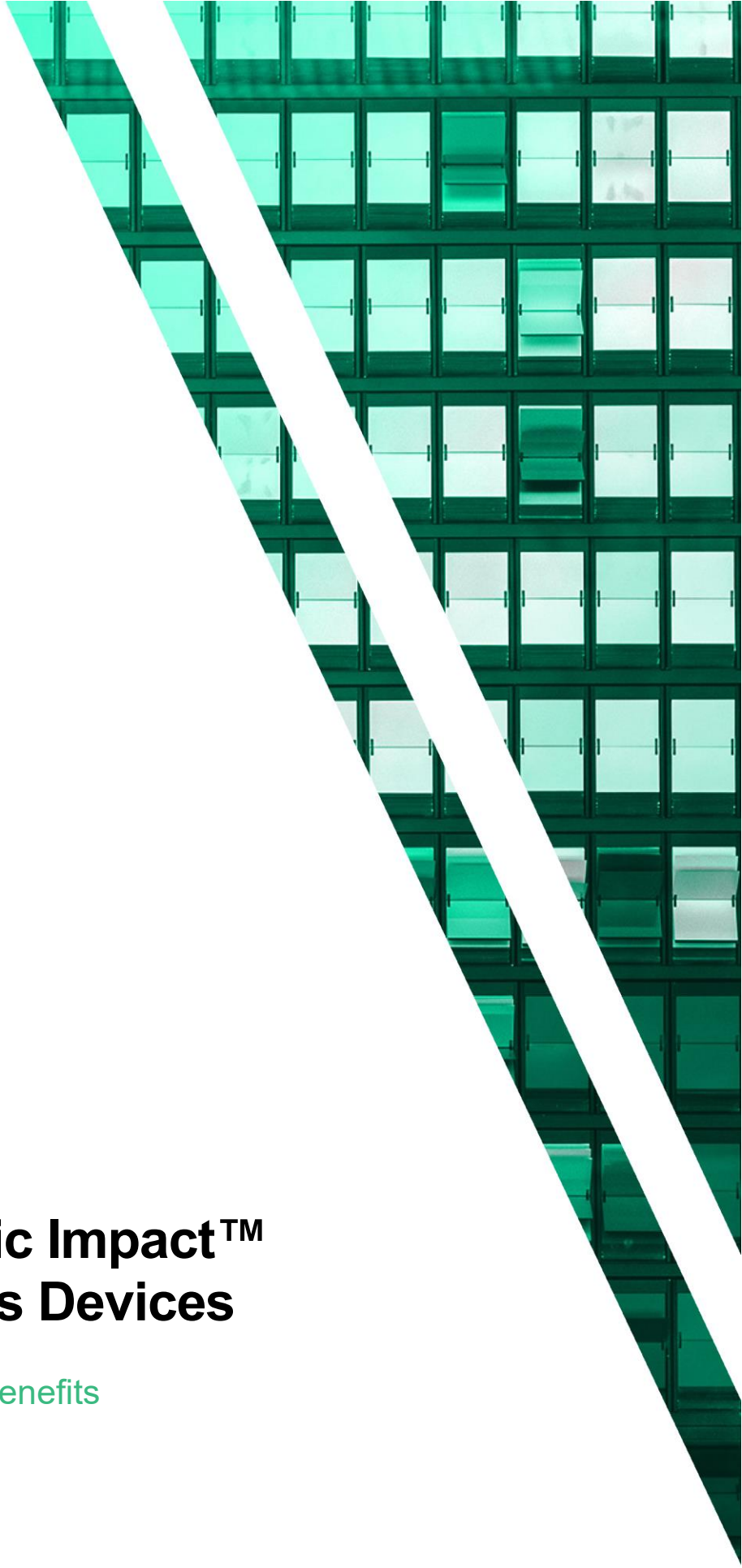

The Total Economic Impact™ Of Microsoft Teams Devices

Cost Savings And Business Benefits Enabled By Teams Devices

JANUARY 2021

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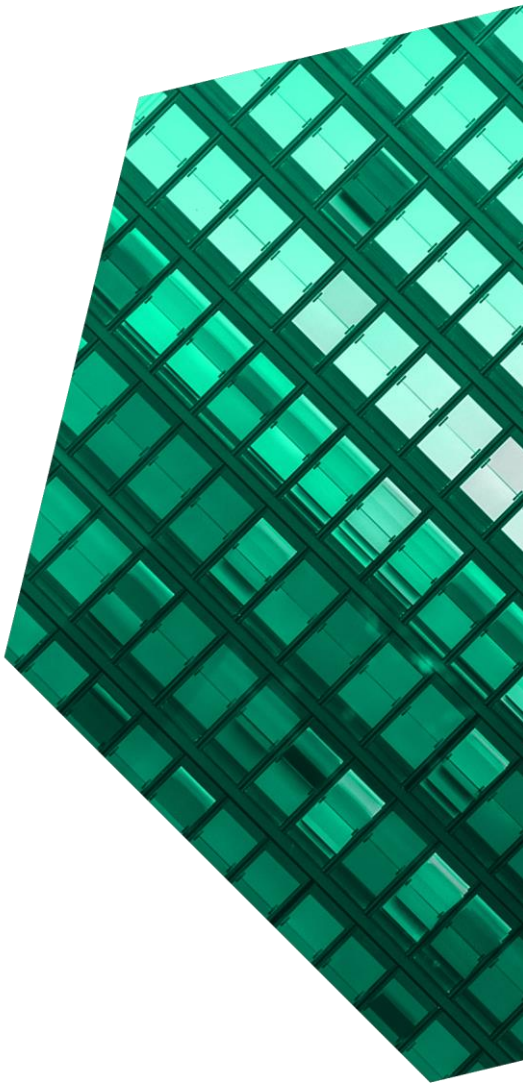


Executive Summary

Productive collaboration has always been critical to achieving business goals, and the global pandemic has forced organizations to rethink how teammates work together. Microsoft Teams enables interpersonal productivity, and Teams-certified devices maximize the platform's ability to facilitate effective collaboration by allowing participants to interact with each other naturally and seamlessly no matter where they are working.

Microsoft commissioned Forrester Consulting to conduct a Total Economic Impact™ (TEI) study and examine the potential return on investment (ROI) enterprises may realize by deploying Teams devices. The purpose of this study is to provide readers with a framework to evaluate the potential financial impact of Teams devices on their organizations. Both Teams-certified personal devices and shared space devices improve the experience of meetings and other remote collaboration activities for participants, making them more productive and unlocking the full power of the Teams platform.

To better understand the benefits, costs, and risks associated with this investment, Forrester interviewed seven customers with experience using Teams devices. For the purposes of this study, Forrester aggregated the experiences of the interviewed customers and combined the results into a single composite organization.

Prior to using Teams devices, the customers generally used a variety of different collaboration software, along with a range of devices to connect participants to each other in meetings. Some offices or departments had invested in headsets, laptops with cameras, remote cameras, and speakers for employees. Other parts of the organization had outfitted their internal meeting rooms with collaboration devices, but they expected remote users to supply their own devices. There were often several different meeting room solutions, which could vary by office location, as well as intended room use

KEY STATISTICS

Return on investment (ROI)
273%

Net present value (NPV)
$12.4M

(e.g., the boardroom versus a small huddle room for brainstorming). In addition, meeting participants, whether employees or customers, were increasingly using their mobile phones to participate remotely in meetings. As a result, participants found that the vast majority of meetings started with 5 to 10 (or more) minutes of delays as remote attendees tried to connect, or as those in the meeting room called audiovisual (AV) technicians to help with the equipment. Frequent lags, glitches, and audio issues throughout the meetings made true collaboration extremely difficult. While many of these problems had been greatly reduced when the organizations rolled out Teams across their offices, many connectivity and meeting quality issues remained as a result of the interface between hardware and software.

After their investment in Teams devices, the customers found that meetings were noticeably more productive. Not only did sessions start smoothly and on time, but participants felt much more integrated

> **"These devices really help productivity. People feel much more a part of [meetings]. You can see how other people are reacting."**
>
> — Managing director, consulting

into meetings. They could share their thoughts without talking over each other, see the other participants more clearly, and interact with collaboration tools such as whiteboards and shared documents more easily. This enhanced meeting experience was available to them whether they were in a huddle room in another office, on their home computer, or even on their mobile phone. Key results from the investment include improved meeting productivity, reduced need for meeting travel, lower demand for AV support, and cost savings from vendor consolidation. Additionally, organizations found that the improved meeting experience, which the devices provided, drove additional adoption of Teams for collaboration throughout the organization. It also resulted in more participants being able to be engaged in the work of the meeting, thereby making the results of said meeting more effective.

KEY FINDINGS

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

- **Improved meeting connectivity freed up over $10 million in productive employee time.** Teams devices virtually eliminated connectivity-related delays and disruptions in remote meetings, whether participants joined from satellite offices, home offices, or mobile devices. Similarly, in-room presentations and handoffs were made simple by the one-touch operation feature of the meeting room devices.
- **Eliminated on-campus travel time saved an additional $3.2 million in unproductive time.** Meeting quality and the experience of remote participants was so dramatically improved that interviewed organizations told Forrester a growing number of employees began attending onsite meetings from their desks. As a result, these participants were saved the wasted (and often stressful) journey from one meeting room to another multiple times a day.
- **Avoided travel expenses totaled $2.7 million.** Interviewees explained that the improvement in the meeting experience made it possible to conduct meetings remotely, thereby avoiding the need to travel to conduct the meeting in person. This saved interviewed organizations both the

T&E expenses and the employee travel time for those meetings.

- **Reduced IT support accounted for savings of almost $428,000.** The executives who Forrester spoke with reported an immediate drop in the level of support required to properly deploy in-room AV equipment and maintain collaboration software.
- **Lowered calling plan costs saved over $264,000.** By consolidating employees worldwide on Teams Voice, interviewed organizations were able to avoid maintenance and support costs from multiple providers and to benefit from a higher volume discount on their calling plans.
- **Retired legacy meeting licenses offset $185,000 in new license costs.** Once the Teams meeting room devices had been installed in all meeting rooms, with affected employees also being outfitted with personal devices, the interviewed organizations retired one or more competitive collaboration licenses.

Unquantified benefits. While quite important to the organizations interviewed, some benefits were difficult to quantify. These include:

- **Accelerated Teams adoption.** Customers using Teams devices told Forrester that the ease of using the hardware and the positive experience it enabled encouraged employees across the organization to use Teams in both meeting and non-meeting settings. This accelerated familiarity with other Teams features and drove uptake of Teams globally as organizations' official collaboration tool.
- **Increased meeting participant engagement.** Using Teams-certified devices made interactions in meetings more natural and spontaneous. This encouraged participants to actively take part no matter where they were located. Meeting participants were more likely to join via video and feel integrated into the meeting.

Costs. Risk-adjusted PV costs include:

- **Additional license costs of $116,500 for meeting rooms.** Interviewed organizations needed to purchase licenses only for their meeting rooms, as their enterprise licenses already allowed licensed users to join remotely. Each meeting room was treated as an additional licensee.
- **Personal devices representing a $2.9 million investment.** The bulk of the cost of deploying Teams devices across the interviewed organizations was in providing the devices for employees. Costs varied by individual, depending on the range and type of devices they needed to do their job properly.

Personal devices: cost per employee

$300 (average)

- **Meeting room hardware purchased and installed for $1.1 million.** This cost also varied by room, with large, formal meeting rooms requiring higher end equipment and, perhaps, third-party installation. Huddle rooms and home offices, on the other hand, required less hardware, and they could be deployed with internal resources.
- **End-user training costs of $464,751.** Training on the devices themselves was minimal, as users were already familiar with Teams, and many of the devices involve one-touch operation.

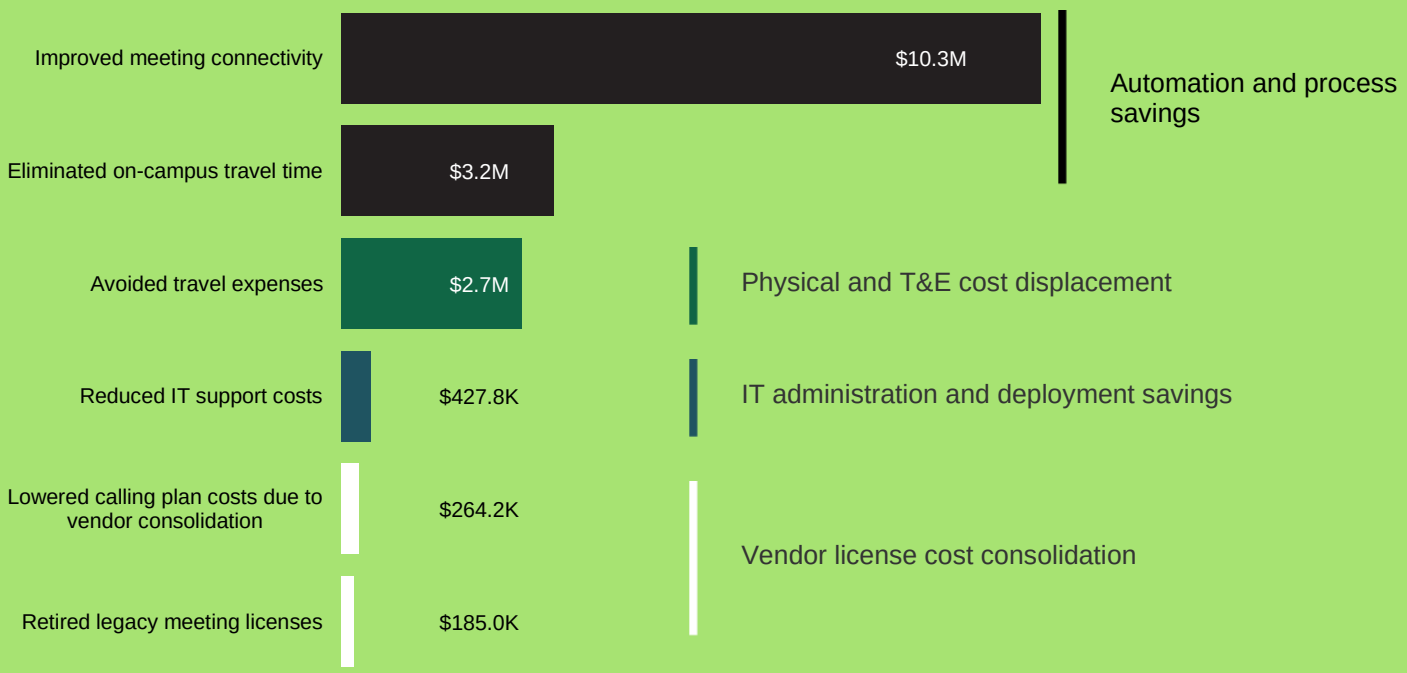
The customer interviews and financial analysis found that a composite organization experiences benefits of $17.0M over three years versus costs of $4.6M, adding up to a net present value (NPV) of $12.4M and an ROI of 273%.

ROI
273%

BENEFITS PV
$17.0M

NPV
$12.4M

Benefits (Three-Year)



TEI FRAMEWORK AND METHODOLOGY

From the information provided in the interviews, Forrester constructed a Total Economic Impact™ framework for those organizations considering an investment in Teams 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 Teams devices can have on an organization.

DUE DILIGENCE

Interviewed Microsoft stakeholders and Forrester analysts to gather data relative to Teams devices.

CUSTOMER INTERVIEWS

Interviewed seven decision-makers at organizations using Teams 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 investment impact: benefits, costs, flexibility, and risks. Given the increasing sophistication of ROI analyses related to IT investments, Forrester's TEI methodology provides a complete picture of the total economic impact of purchase decisions. Please see Appendix A for additional information on the TEI methodology.

The Microsoft Teams Devices Customer Journey

Drivers leading to the Teams devices investment

Interviewed Organizations

Industry	Region	Interviewee	Teams usage (pre-pandemic)
Retailer	North American HQ, global operations	VP field services and collaboration	38K users, very few remote
Professional services	North American HQ, global operations	Managing director	500K users, mostly remote
Technology integration	Primarily US	Chief technology officer (CTO)	138K users, some remote
Personal care	Primarily US	Chief information officer (CIO)	100 users, few remote
Manufacturing	North American HQ, global operations	• Collaboration architect • Senior analyst	45K users, some remote
Global business services	UK HQ, global operations	VP infrastructure and operations	13K users, some remote
Manufacturing solutions	USA HQ, global operations	• Senior IT manager • IT program manager	170K users, some remote

KEY CHALLENGES

Before deploying Teams devices, the interviewed organizations generally used multiple solutions for remote collaboration. Local offices, especially those in different countries or those that had been acquired, selected their own providers with no attempt to create a single corporate solution. As meeting rooms were added or changed, the organizations may have changed meeting software, but they continued using expensive hardware that was still functional. IT teams had developed workarounds to integrate a patchwork of software and hardware that had never been intended to seamlessly work together.

The interviewed organizations struggled with common challenges, including:

- **Frequent delays in starting meetings, resulting in wasted time and less effective teamwork.** For many people in these organizations, meetings are a daily if not hourly occurrence. They spend much of their time and get much of their work done in meetings both large and small, internal and external. Interviewees described a near-constant level of irritation when trying to connect remote attendees to meetings.

  Often, either one person or several people had trouble getting into the meeting, forcing everyone else to wait. Presenters could not get their slides to show up on-screen in the room, or on remote devices, forcing everyone to wait while IT was called to make it work. Finally, participants often dropped off while trying to transfer to a different device or share their screens.

> **"I can't tell you how many times we got on a conference [call] and someone couldn't download the app, or their system wouldn't allow them to install it, or they couldn't log in, or whatever."**
>
> *CIO, personal care*

- Aside from wasting time, this kind of disruption allowed attendees to become distracted with other work while they waited. This would interrupt otherwise fruitful discussion, and it would discourage employees from taking meeting start times seriously. In this way, remote meeting problems also impacted the timely and effective conduct of in-person meetings over time.

- **Lack of flexibility in conducting business during disruptive events.** A number of organizations in this study began or accelerated their deployment of Teams devices as a result of the COVID-19 pandemic. In a situation where the majority of employees were unable to be in a shared space, they just could not operate effectively using the existing patchwork of meeting software and devices.

  While this particular event is unprecedented, every interviewee expected it to have lasting ramifications in terms of how many people will continue working remotely, at least part of the time, going forward. Furthermore, they acknowledged that they often experienced smaller business disruptions due to bad weather, wildfires, civil unrest, or other adverse events. The pandemic had simply highlighted their need for better remote collaboration.

- **High travel costs, both in terms of expenses and employee satisfaction.** The interviewed organizations told Forrester that, despite their investment to date, video meetings had not lived up to their potential. While there had been some decline in travel in favor of remote meetings, the experience was not considered good enough to routinely take the place of in-person interactions.

COMPOSITE ORGANIZATION

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

Description of composite. The composite organization is a global, multibillion-dollar company that provides business services to enterprise- and medium-sized companies. The composite organization has 10,000 employees who use Teams to communicate and collaborate. Prior to the COVID-19 pandemic, approximately 10% of employees routinely worked remotely. While management does expect to reopen offices once it is safe for employees to return, they project that as many as 50% of employees may be working remotely at least part of the time going forward.

Deployment characteristics. While the composite organization is headquartered in North America, it has global operations, including offices in some countries which came to it through acquisition. Management made the decision within the past few years to transfer all business processes in global offices to the cloud, and they chose to do so with Microsoft 365.

The firm has since evaluated the business case for activating a number of included Microsoft 365 solutions in place of other systems in use in its various offices. As part of this process, the organization recently decided to meet its communication and collaboration needs with Microsoft Teams.

Key assumptions

- **10,000 employees**
- **Microsoft 365 enabled**
- **10% worked remotely before COVID-19**
- **Projected to increase dramatically**

Analysis Of Benefits

Quantified benefit data as applied to the composite

Total Benefits

Ref.	Benefit	Year 1	Year 2	Year 3	Total	Present Value
Atr	Improved meeting connectivity	$4,137,120	$4,137,120	$4,137,120	$12,411,360	$10,288,405
Btr	Eliminated on-campus travel time	$572,832	$1,145.664	$2,291,328	$4,009,824	$3,189,095
Ctr	Avoided travel expenses	$598,400	$1,196,800	$1,496,000	$3,291,200	$2,657,058
Dtr	Reduced IT support costs	$99,008	$183,872	$254,592	$537,472	$433,246
Etr	Lowered calling plan costs due to vendor consolidation	$106,250	$106,250	$106,250	$318,750	$264,228
Ftr	Retired legacy meeting licenses	$74,375	$74,375	$74,375	$223,125	$184,960
	Total benefits (risk-adjusted)	$5,587,985	$6,844,081	$8,359,665	$20,791,731	$17,016,992

IMPROVED MEETING CONNECTIVITY

Evidence and data. Every interviewed executive, when asked about the benefits of Teams devices, immediately pointed to the improved connection they provided. Prior to switching to Teams devices, the organizations used a mix of various brands of speakerphones, video devices, and screen-sharing technologies at different locations and in employee home offices. It was a constant struggle to get all the participants connected and to keep them connected.

> **"I would say more than 80% of the time there's some kind of issue. We've all been there – it's just painful. If everyone has a Teams-certified device, then we just don't see any issues at all."**
>
> *CTO, technology*

In contrast, interviewees universally reported that startup delays were virtually eliminated due to both the *one-touch* feature of Teams devices and the seamless transitions it enabled between devices.

Modeling and assumptions. To model the value of the organization's benefits, Forrester assumes:

- The average office/knowledge worker attends six meetings per week. Those meetings average 1 hour and include six participants.
- Sixty percent of meetings include at least one remote participant.
- Before investing in Teams devices, 70% of those meetings involved connectivity issues, resulting in an average delay of 8 minutes per meeting.
- After deploying Teams devices, the meetings with connectivity delays drop to 5%.
- Forrester also assumes that participants are paid a fully burdened salary of $100,000 and that 50% of the time saved is productively redeployed.

Risks. There are a number of factors that could impact other organizations' ability to recognize the same benefits as the composite, including:

- The frequency and size of meetings at the organization.
- The proportion of meetings with remote participants.
- The degree of meeting disruption caused by connectivity issues.
- The average salary of meeting participants.

To account for these risks, Forrester adjusted this benefit downward by 15%, yielding a three-year, risk-adjusted total PV (discounted at 10%) of $10,288,405.

Improved Meeting Connectivity

Ref.	Metric	Calculation	Year 1	Year 2	Year 3
A1	Number of office/knowledge workers		10,000	10,000	10,000
A2	Meetings per week per office/knowledge worker	6 per week*48	288	288	288
A3	Average people per meeting		6	6	6
A4	Total meetings per year	A1*A2/A3	480,000	480,000	480,000
A5	Percent with remote participants		60%	60%	60%
A6	Percent with connectivity delays before Teams devices		70%	70%	70%
A7	Percent with connectivity delays after Teams devices		5%	5%	5%
A8	Reduction in meetings with connectivity delays		187,200	187,200	187,200
A9	Average person-hours lost to connectivity issues per meeting	8 minutes/60 minutes*6 participants	0.80	0.80	0.80
A10	Average hourly salary of participants	$100,000+35% benefits/2,080	$65	$65	$65
A11	Annual savings from improved connectivity	A8*A9*A10	9,734,400	9,734,400	9,734,400
A12	Percent of time recaptured		50%	50%	50%
At	Improved meeting connectivity	A11*A12	$4,867,200	$4,867,200	$4,867,200
	Risk adjustment	↓15%			
Atr	Improved meeting connectivity (risk-adjusted)		$4,137,120	$4,137,120	$4,137,120
	Three-year total: $12,411,360		**Three-year present value: $10,288,405**		

ELIMINATED ON-CAMPUS TRAVEL TIME

Evidence and data. Interviewed executives told Forrester that employees attending on-site meetings spent quite a bit of time simply travelling around the office going from one meeting to the next. A number of the interviewed firms had one or more sprawling campuses or locations scattered around town which required that employees walk 10 to 15 minutes between buildings, or even get their cars from the parking lot and drive to another building for the next

> **Our headquarters is rather sprawling, and it can take 15 minutes to walk from one end of the facility to another.**
>
> — Senior analyst, diversified manufacturing

meeting. Even meetings within the same building could require waiting for an elevator, running up and down stairs, and searching for a room.

As Teams devices delivered an improved remote meeting experience, employees became more willing to participate in meetings from their desks, particularly when the room was distant or unfamiliar. The result was less time spent travelling to and from meetings, allowing participants to continue working right up to the start of the meeting and get back to their projects quickly. It had the added benefit of allowing more meetings to start on time, since joining the meeting took only seconds.

Modeling and assumptions. The model for this benefit assumes:

- Eighty percent of meetings take place with one or more participants on-site in a meeting space.
- An average of six participants travel from their desks or another room to attend each meeting, a journey that takes approximately 10 minutes.
- After deploying Teams personal devices, fewer employees travelled to meetings, choosing instead to participate from their desks or offices.
- This tendency increases over time as employees experienced the improved ease of meeting and collaborating remotely. As a result, the organization redeploys 50% of the time saved.

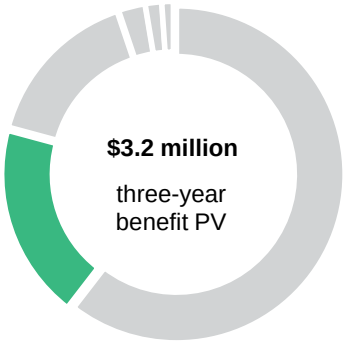
“As we got the ability to conference from our desks, that’s what people started to gravitate toward. The use of the conference rooms started to fall off.”

Senior analyst, diversified manufacturing

Risks. Among the risks that could potentially affect the value of the benefits to other organizations are:

- The size and layout of an organization's facilities, which would impact the time required to travel between meetings.
- The frequency and size of meetings.
- The average salary of meeting attendees.

To account for these risks, Forrester adjusted this benefit downward by 10%, yielding a three-year, risk-adjusted total PV of $3,189,095.



Eliminated on-campus travel time
19% of total benefits

Eliminated On-Campus Travel Time

Ref.	Metric	Calculation	Year 1	Year 2	Year 3
B1	In-person meetings per year	A4*80%	384,000	384,000	384,000
B2	Percent in-person attendance avoided due to Teams devices		5%	10%	20%
B3	In-person meetings avoided	B1*B2	19,200	38,400	76,800
B4	Hours to travel to average meeting	10 minutes	0.17	0.17	0.17
B5	Average people per meeting	A3	6	6	6
B6	Average hourly salary per meeting participant	A10	$65	$65	$65
B7	Savings from on-campus travel time	B3*B4*B5*B6	$1,272,960	$2,545,920	$5,091,840
B8	Percent of time recaptured		50%	50%	50%
Bt	Eliminated on-campus travel time	B7*B8	$636,480	$1,272,960	$2,545,920
	Risk adjustment	↓10%			
Btr	Eliminated on-campus travel time (risk-adjusted)		$572,832	$1,145.664	$2,291,328
	Three-year total: $4,009,824		**Three-year present value: $3,189,095**		

AVOIDED TRAVEL EXPENSES

Evidence and data. While all the executives Forrester spoke with agreed that travel is a necessary part of doing business, they also acknowledged that it is a significant expense and can easily become a grind for employees. They stated that travel had declined since the advent of videoconferencing, but that it had accelerated in their organizations since the deployment of Teams and Teams-certified devices.

- The managing director of professional services stated: "We have measured travel savings with tele-presence, and the data clearly showed that avoidance happened. People have learned — and it's been reinforced with COVID-19 — that

you can still sell projects, design solutions, and do business without travel."

- The senior IT manager of manufacturing solutions claimed: "We've seen a travel reduction of 10% [to] 15% since deploying Teams devices, particularly in the longer distance, overnight travel such as to Asia."

> **"Where it's really cut down on our travel is in supplier engagements. I used to visit suppliers once a month, but now it's more like once a year, and the rest of the time we just jump on a Teams call and do video."**
>
> *VP infrastructure and operations, business services*

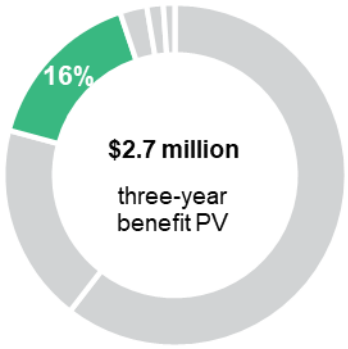
Modeling and assumptions. In constructing the financial model, Forrester assumes that:

- The average office/knowledge worker makes two business trips annually. Of course, it is likely that some employees take many more trips than that, while others take virtually none at all.
- The average business trip involves approximately $1,500 in expenses and requires 4 hours of employee travel time to and from the office.
- The improved meeting experience delivered by Teams devices encourages employees to reduce their reliance on in-person meetings such that the organization's travel is cut by 2% in Year 1, 4% in Year 2, and 5% in Year 3.

Risks. There are several factors that could affect the financial gains accruing to a given organization as a result of this benefit:

- The frequency of business travel within the organization for the purpose of attending in-person meetings.
- The average time spent travelling to these meetings.
- The organization's average cost for business trips. Some firms may be located in more remote areas and so pay more for flights than firms near a hub airport. Others may be more likely to travel to less expensive destinations, or they may be less generous with their expense policies.

To account for these risks, Forrester adjusted this benefit downward by 15%, yielding a three-year, risk-adjusted total PV of $2,657,058.



Avoided travel expenses
16% of total benefits

Avoided Travel Expenses					
Ref.	**Metric**	**Calculation**	**Year 1**	**Year 2**	**Year 3**
C1	Average trips per year per office/knowledge worker		2.0	2.0	2.0
C2	Average cost per trip		$1,500	1,500	1,500
C3	Average travel expenditures	A1*C1*C2	$30,000,000	$30,000,000	$30,000,000
C4	Reduced meeting travel due to devices		2%	4%	5%
C5	Savings in travel expenses	C3*C4	$600,000	$1,200,000	$1,500,000
C6	Hours travel to meeting site	A1*C1*4 hours	80,000	80,000	80,000
C7	Average hourly salary of office/knowledge worker	A10	$65	$65	$65
C8	Cost of time spent travelling	C6*C7	$5,200,000	$5,200,000	$5,200,000
C9	Savings in meeting travel time	C8*C4	$104,000	$208,000	$260,000
Ct	Avoided travel expenses	C5+C9	$704,000	$1,408,000	$1,760,000
	Risk adjustment	↓15%			
Ctr	Avoided travel expenses (risk-adjusted)		$598,400	$1,196,800	$1,496,000
	Three-year total: $3,291,200			**Three-year present value: $2,657,058**	

REDUCED IT SUPPORT COSTS

Evidence and data. The ease of joining and participating in meetings with Teams devices resulted in a reduction in audiovisual support needs for the interviewed organizations. Before deploying Teams devices, these firms either employed or contracted technicians who spent much of their day helping get meetings up and running, checking equipment daily, and providing operational support.

- The VP of infrastructure operations for a business services organization said: “With other room systems, the experience was always slightly nuanced. Some of our engineers had to continuously get involved helping people to join meetings because some guy can’t join because he’s using a client that looks and feels totally different for that one time he’s on the road.”
- The senior analyst for diversified manufacturing said: “In the past we had specialists in the different systems, so those people kind of got stuck on an island. Now they’ve been consolidated into the larger IT team. That means more flexibility for the company and a more well-rounded job for them.”

After deploying Teams devices, the organizations were able to reduce both the size of their audiovisual support team and its seniority. The familiarity of the Teams platform combined with the devices’ ease of use in connection with it virtually eliminated the need for in-room connection support.

Modeling and assumptions. The model for this benefit assumes that the composite organization uses contractors for audiovisual support.

- Based on the number of in-person meetings already cited and a room utilization rate of 60%, the composite organization has 320 dedicated meeting rooms of various sizes.
- Using an industry standard of one technician for 50 rooms, who spends 50% of their time on audiovisual needs, the composite organization uses 6,656 hours of audiovisual contract labor per year before Teams devices.
- The composite organization was able to reduce its need for these services by 35% in Year 1, increasing to 65% in Year 2 and 90% in Year 3.
- Contractors are paid $50 per hour.

Risks. The impact of this benefit would vary to the extent that an organization deviates from industry norms in the following:

- The utilization rate of its conference rooms.
- The initial level of audiovisual services required per meeting room.
- The contract rate of the technicians used.

To account for these risks, Forrester adjusted this benefit downward by 15%, yielding a three-year, risk-adjusted total PV of $433,246.

"It's impossible to train your help desk on 80 models. The first year we saw an 8% to 10% reduction in support costs; our savings over three years now equate to about 35% to 40%, although we have repurposed those people."

CTO, technology

Reduced IT Support Costs

Ref.	Metric	Calculation	Year 1	Year 2	Year 3
D1	Number of meeting rooms (rounded)	B1/250 days per year/8 hours per day/ 60% usage rate	320	320	320
D2	IT support FTE devoted to connectivity (rounded)	D1/50*1,040 hours	6,656	6,656	6,656
D3	Average hourly contract rate	Industry sources	$50	$50	$50
D4	Reduction in support needs with Teams devices		35%	65%	90%
Dt	Reduced IT support costs	D2*D3*D4	$116,480	$216,320	$299,520
	Risk adjustment	↓15%			
Dtr	Reduced IT support costs (risk-adjusted)		$99,008	$183,872	$254,592
	Three-year total: $537,472		**Three-year present value: $433,246**		

LOWERED CALLING PLAN COSTS DUE TO VENDOR CONSOLIDATION

Evidence and data. Several of the interviewed organizations experienced lower telephony costs by consolidating a number of vendors into their Teams voice plan. They were able to eliminate ongoing maintenance contracts with those providers, and also negotiate better calling plan pricing (whether from Microsoft or another provider) because they represented a larger volume of calling minutes.

- The VP of infrastructure operations for a business services organization stated: "We are embarking now on enabling the soft phone and dial out capabilities from Teams. We are consolidating colleagues in four countries who are currently using three platforms, and we expect a net cost avoidance of £435,000 [$579,000]. Teams will allow us to decommission those and easily migrate colleagues to the Teams platform that they already know."

Modeling and assumptions. The composite organization:

- Consolidates approximately 2,500 employees onto Teams Voice from other voice over IP (VoIP) suppliers.
- Saves $50 per employee annually by rationalizing contracts and leveraging consolidated call volumes for lower usage costs.

> **"We have three phone systems in three different regions. Each comes with its own maintenance activities, and costs for third-party support. We've been able to bundle all those usage mutes together to gain a stronger negotiating position on per minute costs."**
>
> *VP infrastructure operations, business services*

Risks. Impact risks include:

- The number of alternate voice plans in place in the organization.
- The maintenance contract costs associated with those plans, as well as their per-minute calling charges.
- The percentage of employees on those alternate plans.

To account for these risks, Forrester adjusted this benefit downward by 15%, yielding a three-year, risk-adjusted total PV of $264,228

Lowered Calling Plan Costs Due To Vendor Consolidation

Ref.	Metric	Calculation	Year 1	Year 2	Year 3
E1	Users consolidated onto Teams Voice plan		2,500	2,500	2,500
E2	Annual consolidation savings per user due to Teams devices	Interviews	$50	$50	$50
Et	Lowered calling plan costs due to vendor consolidation	E1*E2	$125,000	$125,000	$125,000
	Risk adjustment	↓15%			
Etr	Lowered calling plan costs due to vendor consolidation (risk-adjusted)		$106,250	$106,250	$106,250
	Three-year total: $318,750		**Three-year present value: $264,228**		

RETIRED LEGACY MEETING LICENSES

Evidence and data. Most interviewed organizations had invested significantly in at least one other collaboration tool before launching Teams and its certified devices. Since key goals of the Teams device investment were to eliminate the connectivity issues associated with managing multiple platforms, and to save money by consolidating vendor contracts, these organizations chose to retire their non-Teams systems. They estimated that 25% to 50% of their ability to do so was attributable to their investment in Teams devices specifically.

Modeling and assumptions. For the purposes of the model, Forrester assumes:

- The composite organization retires one collaboration tool after deploying Teams devices.
- Management attributes 35% of the value from Teams to Teams-certified devices.

Risks. The impact of the benefit to other organizations may vary as a result of:

- The number and cost of software in place.
- The composite organization's assessment of how much Teams devices contributed to their ability to sunset other software.

To account for these risks, Forrester adjusted this benefit downward by 15%, yielding a three-year, risk-adjusted total PV of $184,960.

Retired Legacy Meeting Licenses

Ref.	Metric	Calculation	Year 1	Year 2	Year 3
F1	Annual license fees for legacy meeting system(s)		$250,000	$250,000	$250,000
F2	Percent attributable to devices		35%	35%	35%
Ft	Retired legacy meeting licenses	F1*F2	$87,500	$87,500	$87,500
	Risk adjustment	↓15%			
Ftr	Retired legacy meeting licenses (risk-adjusted)		$74,375	$74,375	$74,375
	Three-year total: $223,125		**Three-year present value: $184,960**		

UNQUANTIFIED BENEFITS

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

Accelerated Teams adoption. Teams is a communication and collaboration tool with multiple powerful capabilities. It can take time, exposure, and training for users to become fully aware and familiar with all the different capabilities. The interviewed organizations found that using Teams devices encouraged more frequent use of Teams for meetings, and that led to broader usage of a wider variety of tools. As a result, the organizations saw more rapid adoption of Teams and a faster return on their investment in the Microsoft 365 environment.

- The collaboration architect for diversified manufacturing said: "Using Teams just for texting is a waste of the capabilities of the tool. We made sure people had the right equipment to have a great collaboration experience and that really helped drive adoption of Teams throughout the organization. And that put us in a strong position when we had to respond to COVID-19. Our transition to remote working was almost seamless."

Increased meeting participant engagement. Remote meetings can be difficult to run and to take part in, because one can't always tell whether people are listening and contributing or multitasking. If participants are not on high quality video, presenters will not be able to read the room, so to speak, and see when attendees are confused or tuning out.

The executives Forrester interviewed universally agreed that Teams devices made people feel more like part of the meeting, they put everyone on an equal footing, and encouraged productive interaction.

- The managing director of a professional services organization explained: "We rarely have meetings where everyone is in the room. They may be at a client's office or offshore. Teams devices really help productivity because people feel much more a part of the meeting. Having the camera on lets you see that others are paying attention and how they're reacting."

FLEXIBILITY

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

For instance, in even the largest customers that Forrester interviewed, executives noted that their organizations had become more agile as a result of the ability to "jump on Teams" from a variety of different devices that all worked seamlessly. This enabled customers to react more quickly to developing problems and make the most of emerging opportunities. The interviewed executives believed it had helped to institutionalize a more proactive way of working together that went well beyond making remote meetings easier and more effective.

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

> **"Using Teams devices helps draw people out and leads to higher engagement in the meeting."**
>
> — Collaboration architect, manufacturing

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**
Gtr	Additional license costs	$0	$45,360	$47,628	$48,384	$141,372	$116,950
Htr	Cost of personal devices	$0	$1,650,000	$1,650,000	$0	$3,300,000	$2,863,636
Itr	Cost of meeting room devices	$0	$1,188,000	$39,600	$13,200	$1,240,800	$1,122,645
Jtr	Cost of end-user training	$0	$415,044	$55,419	$55,419	$525,882	$464,751
	Total costs (risk-adjusted)	$0	$3,298,404	$1,792,647	$117,003	$5,208,054	$4,567,982

ADDITIONAL LICENSE COSTS

Evidence and data. The organizations interviewed for this study were already Microsoft 365 enterprise licensees. As a result, the only additional licenses they needed to purchase in order to use Teams devices were for the meeting rooms themselves. These licenses cost $15 per month per room and allowed the meeting room devices to be connected to Teams. Access to Teams for personal devices, desk phones, and displays was included in their E5 license.

Modeling and assumptions. The model for incremental licensing costs assumes:

- The composite organization holds Office 365 E5 licenses for all its employees.
- The composite organization begins by outfitting and purchasing licenses for 75% of its existing conference rooms in Year 1.
- As it continues outfitting and licensing rooms, the composite organization finds it needs fewer and smaller rooms due to the increase in remote attendance enabled by its investment in personal devices.

Risks. The impact of this cost may vary based on:

- The composite organization's Office 365 license in place at the time of the Teams devices investment.
- The extent of the initial investment in outfitting conference rooms.

To account for these risks, Forrester adjusted this cost upward by 5%, yielding a three-year, risk-adjusted total PV (discounted at 10%) of $116,950.

Additional License Costs						
Ref.	**Metric**	**Calculation**	**Initial**	**Year 1**	**Year 2**	**Year 3**
G1	Number of meeting room licenses			240	252	256
G2	Annual cost of meeting room licenses	$15 per month* 12 months		$180	$180	$180
Gt	Additional license costs	G1*G2	$0	$43,200	$45,360	$46,080
	Risk adjustment	↑5%				
Gtr	Additional license costs (risk-adjusted)		$0	$45,360	$47,628	$48,384
	Three-year total: $141,372			**Three-year present value: $116,950**		

COST OF PERSONAL DEVICES

Evidence and data. The executives told Forrester that the personal devices represented the largest single part of the overall investment. Their cost varied depending on how the organization decided to distribute them. Some companies acquired a range of devices and quickly upgraded employees. Other companies took a slower approach of purchasing devices only for those employees who had none and then upgrading them through natural replacement.

The range of personal devices includes headsets, earbuds, desk phones, speakerphones, web cameras, and collaboration bars.

"We want our consultants to have the latest technology, so we quickly outfitted all of them with Teams-certified headsets, puck speakers, and HD cameras."

Managing director, professional services

Modeling and assumptions. In modeling the cost of personal devices, Forrester assumes:

- The composite organization's goal is to provide personal devices that will allow all employees to participate appropriately in remote meetings.
- The initial purchase does not replace functioning equipment already in use by some employees.
- The composite spends an average of $300 per employee to enable remote participation. This includes a mixture of Teams-certified headsets, speakers, cameras, and desk phones.
- The organization meets its goal of enabling all employees to participate remotely during Year 2.

Risks. The cost of personal devices may vary due to:

- The number and type of devices required at a given organization to enable each employee to collaborate remotely.
- The proportion of employees engaged in functions that require frequent or heavy participation in meetings — and thus, need a more elaborate set of devices for their remote office).

To account for these risks, Forrester adjusted this cost upward by 10%, yielding a three-year, risk-adjusted total PV of $2,863,636.

Cost Of Personal Devices						
Ref.	**Metric**	**Calculation**	**Initial**	**Year 1**	**Year 2**	**Year 3**
H1	Employees outfitted			5,000	5,000	
H2	Cost for personal devices			$300	$300	
Ht	Cost of personal devices	H1*H2	$0	$1,500,000	$1,500,000	$0
	Risk adjustment	↑10%				
Htr	Cost of personal devices (risk-adjusted)		$0	$1,650,000	$1,650,000	$0
	Three-year total: $3,300,000			**Three-year present value: $2,863,636**		

COST OF MEETING ROOM DEVICES

Evidence and data. While it is generally more expensive to outfit a meeting room than it is to provide personal devices for an employee, the overall investment in meeting room devices was smaller for the interviewed organizations because there are fewer rooms than employees.

Executives told Forrester that outfitting a small huddle room could involve a few pieces of plug-and-play equipment, which would cost between $2,000 to $3,000, while equipment for large conference rooms might cost more than $5,000 and require professional installation.

Most of the customers Forrester interviewed took a phased approach to converting their meeting spaces, often beginning with small-to-medium-size rooms.

> **"We haven't really had to add a lot of room devices in recent years because of the mindset shift and the capability of just doing it from your desk."**
>
> *Collaboration architect, manufacturing*

Larger conference rooms had often been outfitted with an expensive dedicated system and declared off-limits by management until they experienced the Teams meeting rooms.

Modeling and assumptions. Forrester has assumed that the composite organization outfitted its meeting rooms as follows:

- It outfitted 75% of its meeting rooms in Year 1.
- The initial investment involves the greatest proportion of large meeting rooms, resulting in a higher cost per room than later years.
- Smaller rooms continue to be converted in Years 2 and 3, but the composite organization realizes a need for approximately 15% fewer rooms by the end of the period.
- Smaller rooms require less than $3,000 of equipment, easily installed by on-site employees.
- Larger rooms involve a more elaborate setup, which includes a higher investment in devices as well as third-party installation.

Risks. Other organizations' costs may vary based on number and mix of meeting rooms, and speed of deployment. To account for these risks, Forrester adjusted this cost upward by 10%, yielding a three-year, risk-adjusted total PV of $1,122,645.

Cost Of Meeting Room Devices						
Ref.	**Metric**	**Calculation**	**Initial**	**Year 1**	**Year 2**	**Year 3**
I1	Incremental meeting rooms outfitted			240	12	4
I2	Cost per meeting room			$4,500	$3,000	$3,000
It	Cost of meeting room devices	I1*I2	$0	$1,080,000	$36,000	$12,000
	Risk adjustment	↑10%				
Itr	Cost of meeting room devices (risk-adjusted)		$0	$1,188,000	$39,600	$13,200
	Three-year total: $1,240,800			**Three-year present value: $1,122,645**		

COST OF END-USER TRAINING

Evidence and data. Training costs and effort were minimal for the customers that Forrester interviewed. The vast majority of employees were already familiar with Teams and the basic functionality of a Teams meeting. In addition, the devices are all designed specifically to make it easy to join and participate in a Teams meeting.

Executives related that they employed a mixture of professionally developed video-training programs, along with ongoing informal learning opportunities such as lunch-and-learn meetings and each-one-teach-one programs.

Modeling and assumptions. In modeling the cost of end-user training, Forrester assumes:

- Professional services are retained to provide initial training in the use of Teams-certified devices.
- The training averages 30 minutes per employee.
- A training administrator spends 25% of their time managing an ongoing program of short online training videos.
- Turnover of 10% per year requires new employees to spend 30 minutes participating in the initial training.

Risks. The cost of end-user training may vary based on the following factors:

- The proportion of employees requiring more training because they have a more elaborate remote setup.
- The composite organization's use of third-party training services.

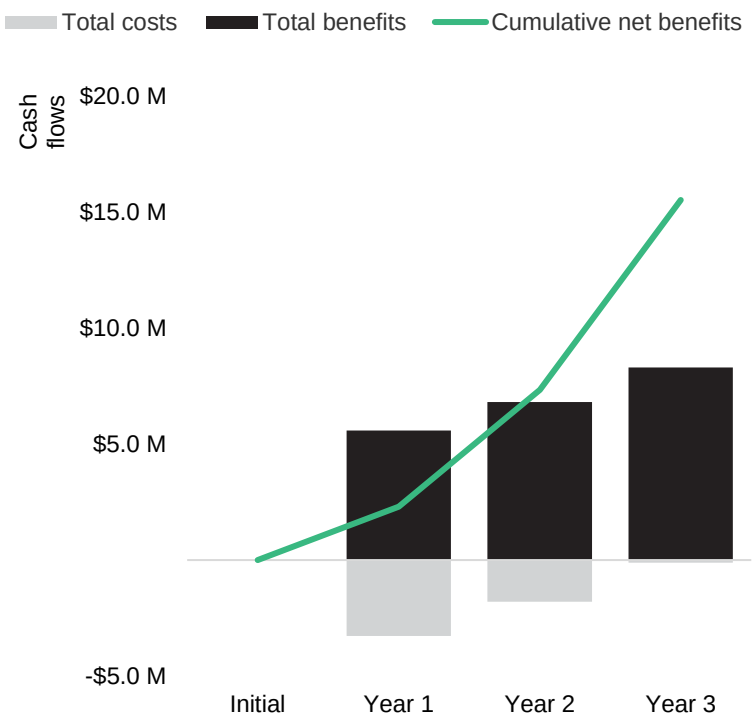
To account for these risks, Forrester adjusted this cost upward by 5%, yielding a three-year, risk-adjusted total PV of $464,751.

Cost Of End-User Training

Ref.	Metric	Calculation	Initial	Year 1	Year 2	Year 3
J1	Number of end users to train			10,000	1,000	1,000
J2	Hours of training per end user			0.5	0.5	0.5
J3	Hourly salary of end users	A10		$65	$65	$65
J4	Professional end user training services	$5/end user		$50,000		
J5	Training administrator hours	1/4 FTE		520	520	520
J6	Training administrator hourly salary	$60,000+35% benefits/2,080 hours per year		$39	$39	$39
Jt	Cost of end user training	(J1*J2*J3)+J4+(J5*J6)		$395,280	$52,780	$52,780
	Risk adjustment	↑5%				
Jtr	Cost of end user training (risk-adjusted)			$415,044	$55,419	$55,419
	Three-year total: $525,882			**Three-year present value: $464,751**		

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 and NPV for the composite organization's investment. Forrester assumes a yearly discount rate of 10% for this analysis.

These risk-adjusted ROI and NPV 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	$0	($3,298,404)	($1,792,647)	($117,003)	($5,208,054)	($4,567,982)
Total benefits	$0	$5,587,985	$6,844,081	$8,359,665	$20,791,731	$17,016,992
Net benefits	$0	$2,289,581	$5,051,434	$8,242,662	$15,583,677	$12,449,010
ROI						273%

Appendix A: Total Economic Impact

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

TOTAL ECONOMIC IMPACT APPROACH

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

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

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

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

PRESENT VALUE (PV)

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

NET PRESENT VALUE (NPV)

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

RETURN ON INVESTMENT (ROI)

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

DISCOUNT RATE

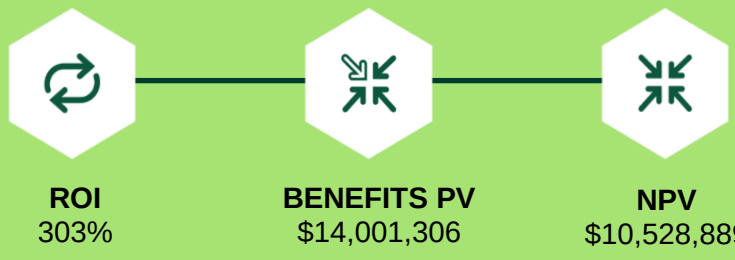
The interest rate used in cash flow analysis to take into account the time value of money. Organizations typically use discount rates between 8% and 16%.

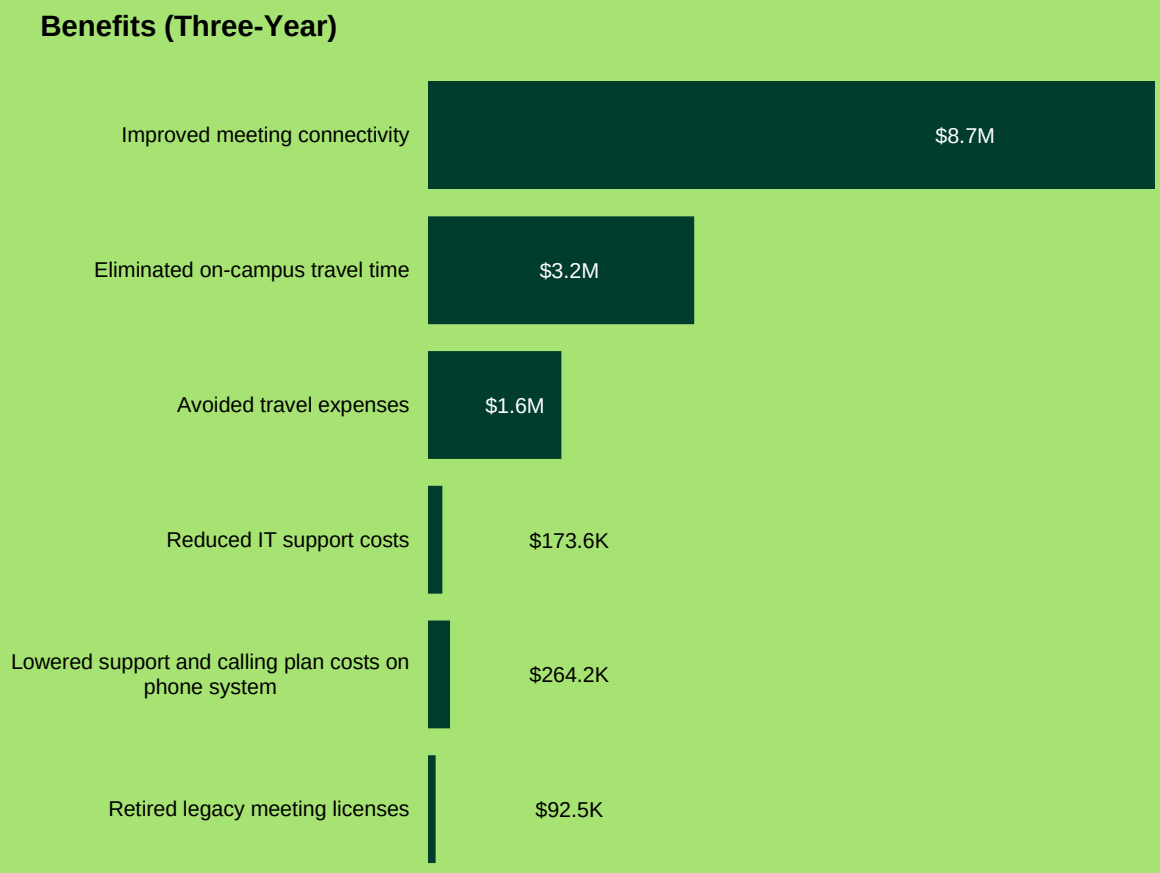
PAYBACK PERIOD

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

Appendix B: Personal Devices Only

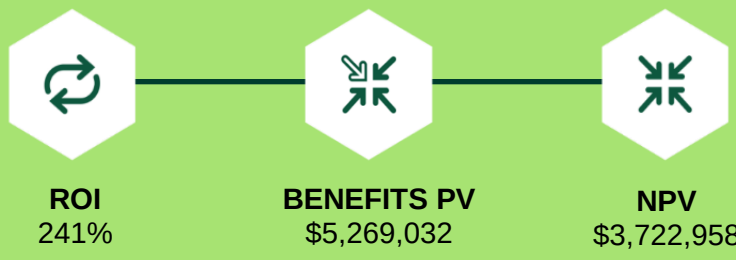
Deploying only personal devices while continuing to use legacy room systems avoids some of the costs involved in the original model in this study. Since the use of Teams certified personal devices enables all of the benefits, at least to some degree, the overall ROI for this option is higher than the original ROI, and also higher than the option of investing only in shared devices.



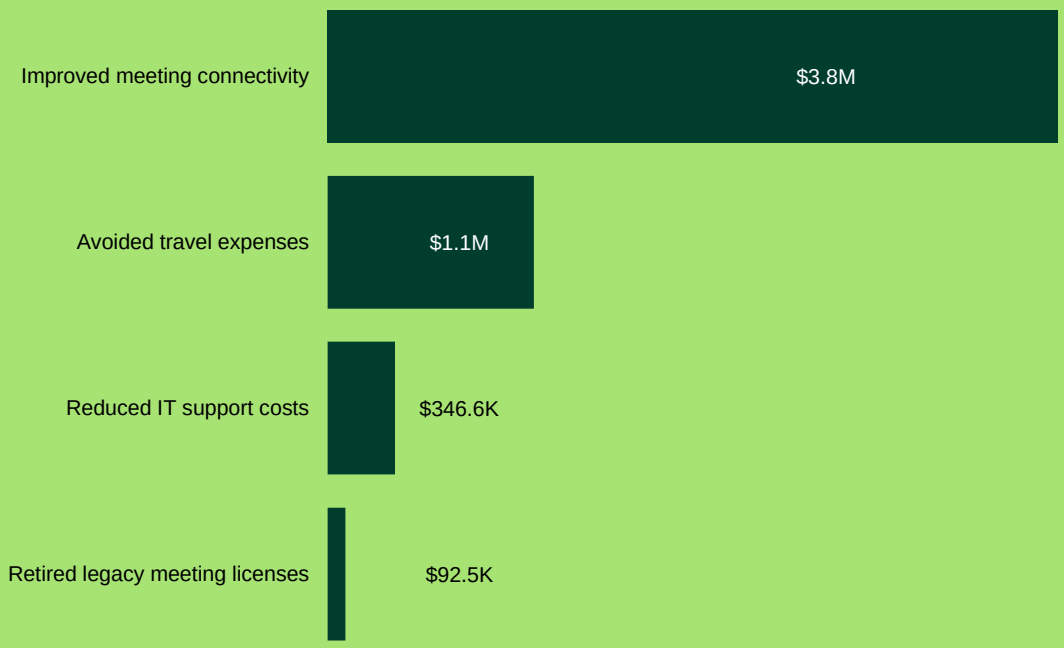


Appendix B: Meeting Room Devices Only

Deploying shared, and not personal, devices results in a slightly lower return, although the total investment is significantly less. The lower return is the result of the fact that certain benefits are eliminated or curtailed without the contribution of the personal devices. In particular, the on-campus travel benefit is eliminated since most meetings will still take place in rooms.



Benefits (Three-Year)

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