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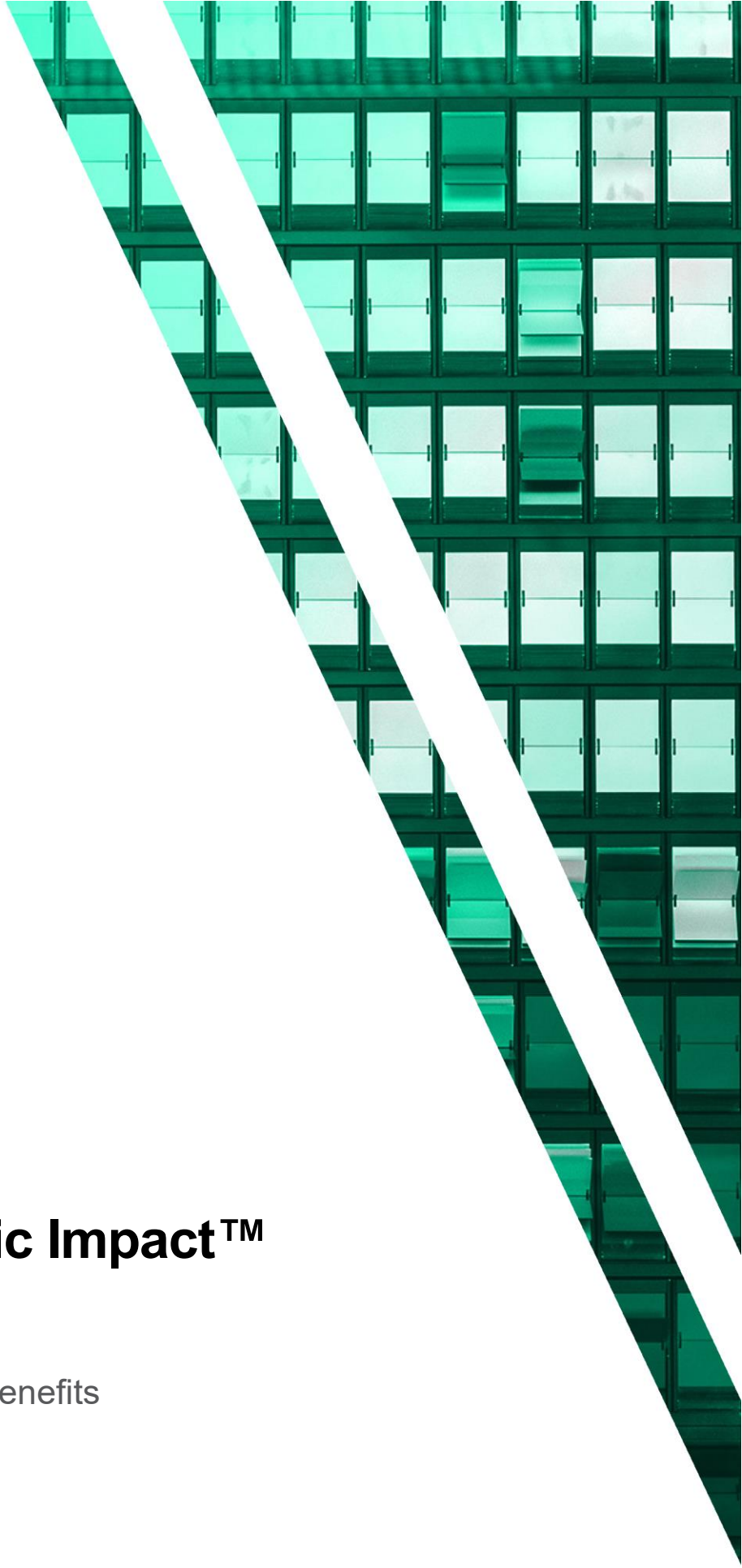

The Total Economic Impact™ Of 1E

Cost Savings And Business Benefits Enabled By 1E

NOVEMBER 2022

Table Of Contents

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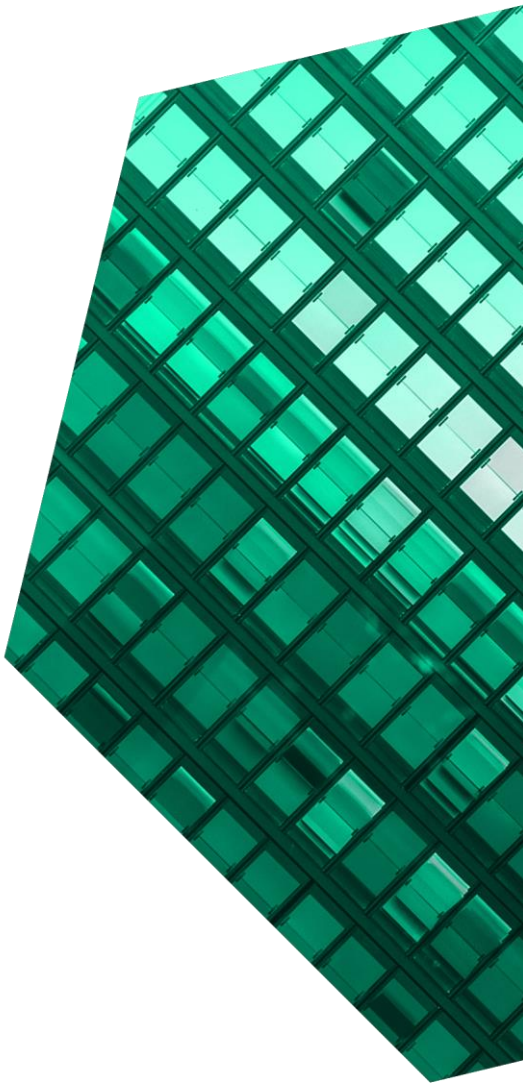


ABOUT FORRESTER CONSULTING

Forrester provides independent and objective research-based consulting to help leaders deliver key transformation outcomes. Fueled by our customer-obsessed research, Forrester's seasoned consultants partner with leaders to execute on their priorities using a unique engagement model that tailors to diverse needs and ensures lasting impact. For more information, visit forrester.com/consulting.

Executive Summary

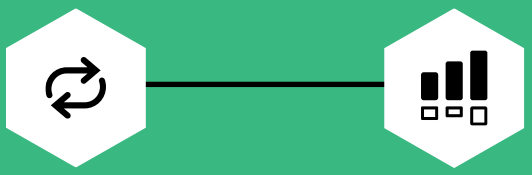
For many employees, their devices are windows into their work. With the move to hybrid working, they have become essential tools. This means that monitoring and ensuring the optimal condition of these endpoints has become an important focus for IT teams. 1E greatly improves the visibility IT teams have into their end-user device fleet and gives them the control to not only fix issues efficiently but also create proactive troubleshooting automations. As a result, employees are more productive and IT teams more efficient.

1E is a real-time digital employee experience management solution that provides IT teams with visibility into and control of their organizations' device fleets to be able to fix endpoint issues quickly, proactively, and autonomously. Not only do IT teams save time and effort, but endpoint users also become more productive and engaged.

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

To better understand the benefits, costs, and risks associated with this investment, Forrester interviewed four representatives with experience using 1E. For the purposes of this study, Forrester aggregated the interviewees' experiences and combined the results into a single composite organization, a global enterprise with 20,000 endpoints and an internal service desk team including 200 engineers.

KEY STATISTICS (for typical 20,000 seat organization)



Return on investment (ROI)
202%

Net present value (NPV)
$5.11M

Prior to using 1E, interviewees noted how their organizations lacked visibility into endpoints. As a result, remediating service desk trouble tickets took a lot of time and their security posture was suboptimal. Poor digital employee experiences, in turn, impacted employee productivity and engagement. Coordination across IT teams also suffered and managing security incidents was time-consuming and costly.

After the investment in 1E, IT teams have a more complete picture of the condition of their endpoints, especially the security status. Service desk engineers can quickly identify endpoint issues and remediate them more efficiently. Proactive automations can be built to fix issues before they impact end users. As a result, employee productivity and engagement improve, and IT teams are much more efficient.

Service desk engineer efficiencies

10% in Year 1
35% in Year 3

KEY FINDINGS

The financial analysis found that the payback period for 1E is less than six months. Furthermore, the tangible cost savings and help desk headcount reallocation benefits in the first year alone more than cover the total costs.

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

- **Service desk headcount reallocation benefits that amount to over $3.5 million.** The biggest benefit for the composite organization is the service desk team's time savings. The team becomes 10% more efficient in Year 1, 20% in Year 2, and 35% in Year 3.
- **Improved employee productivity, resulting in $2.5 million in value.** With fewer trouble tickets and faster remediation, employees at the composite organization spend less time waiting for devices to be fixed. Proactive automations avoid many issues altogether.
- **Legacy tool decommissioning savings worth $182,900.** A number of device configuration and security management tools were no longer needed following the implementation of 1E at the composite organization, resulting in cost savings.
- **IT project efficiencies valued at $274,400.** Large IT projects, such as application upgrades and cloud migrations, can be completed much more efficiently and in less time with 1E. Manual tracking and reporting — using spreadsheets, for instance — is no longer necessary.
- **IT security efficiencies valued at $316,800.** Security and IT operations staff save time not only in general security device monitoring and patch management, but also when dealing with security incidents.
- **Improved employee retention valued at $614,400.** With a better digital experience, employee retention improves for all employees but especially for service desk engineers. They become are much more effective and avoid having to do many repetitive and manual tasks.
- **Hardware cost savings of $200,400.** 1E enables IT staff at the composite organization to better match devices with employee roles and personas. This saves cost in some cases and avoids hardware reconfiguration in others. It can also help extend the end-user hardware lifecycle.

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

- **Improved communications across IT teams.** By improving visibility, IT teams at the composite organization have more and better data to find and fix issues. This enables better coordination and collaboration and avoids confrontation.
- **Improved IT recognition.** IT teams are better appreciated when they can fix user issues quickly and efficiently.

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

- **Licensing costs came to nearly $2.1 million.** Licensing is based on a per endpoint annual fee that increases as additional modules are added.
- **Ongoing costs of $288,000.** This covers one dedicated internal developer and some IT maintenance effort at the composite organization.
- **Planning, implementation, and training costs of $114,000.** This covers the initial planning, implementation, and the annual training time for service desk staff.

The representative interviews and financial analysis found that a composite organization experiences benefits of $7.64 million over three years versus costs of $2.53 million, adding up to a net present value (NPV) of $5.11 million and an ROI of 202%.

ROI
202%

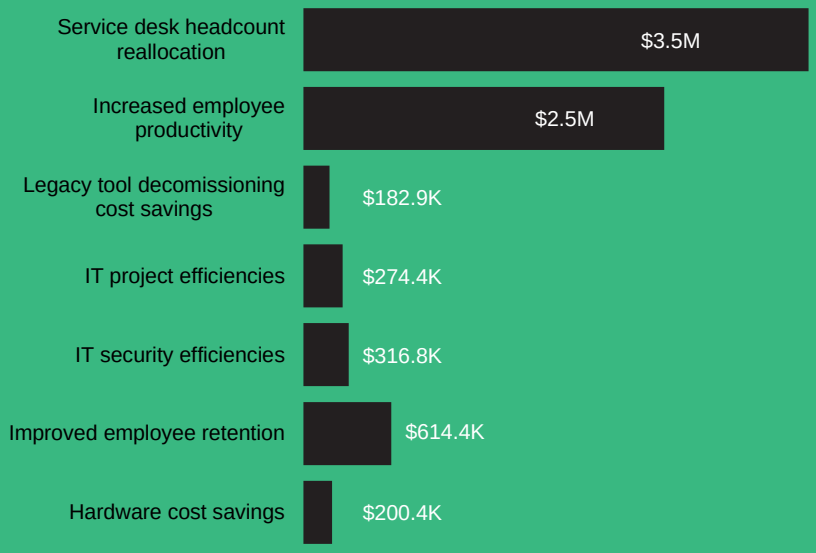
BENEFITS PV
$7.64M

NPV
$5.11M

PAYBACK
<6 months

For a typical 20,000 user organization

Benefits (Three-Year)



“We now have complete endpoint visibility. A thorough device check now takes less than 5 minutes, compared to at least 30 minutes previously. This has had an important impact on experience metrics such as employee retention.”

— Workspace desktop architect, energy and chemicals

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 1E.

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 1E can have on an organization.

DUE DILIGENCE

Interviewed 1E stakeholders and Forrester analysts to gather data relative to 1E.

INTERVIEWS

Interviewed four representatives at organizations using 1E to obtain data with respect to costs, benefits, and risks.

COMPOSITE ORGANIZATION

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

FINANCIAL MODEL FRAMEWORK

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

CASE STUDY

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

The 1E Customer Journey

Drivers leading to the 1E investment

Interviews

Role	Industry	Headquartered in	Number of endpoints
Head of unified endpoint management	Healthcare	Europe	120,000
Technology engineering manager	Financial services	North America	35,000
Workspace desktop architect	Energy and chemicals	Africa	15,000
System administrator, automation	Water industry	North America	1,500

KEY CHALLENGES

The interviewees noted some of the key drivers and challenges behind their investment into 1E:

- **Recognizing the importance of digital employee experience.** An important initial goal for all the interviewees was to ensure an excellent employee experience. For many employees, the PC is their window into their work, so it is essential that it is working optimally. This is not only to improve productivity but also engagement, which impacts important metrics like retention.
- **Lack of endpoint visibility.** Various IT teams, including those responsible for security, applications, and endpoints, did not have a comprehensive view of the endpoint fleet with previous solutions. Even before the pandemic, a significant portion of interviewees' workforces were remote and rarely connected to the VPN. As more organizations have pivoted to a hybrid work mode, this has become a critical issue.
- **Low endpoint security compliance.** Without strong endpoint visibility, security teams had to spend time manually monitoring and patching endpoints. Moreover, if there was a security breach, resources had to be allocated to identify which endpoints needed to be isolated and fix any related issues. One of the interviewees initially implemented 1E as a security incident management tool.

"There was a real lack of PC visibility, and we wanted to better support employees working from home."

System administrator, automation; water industry

"It was initially implemented as a security incident tool to help identify infected clients so we could rapidly deploy mitigation and quickly get back to business."

Head of unified endpoint management, healthcare

COMPOSITE ORGANIZATION

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

Description of composite. A large, global organization with 20,000 employees. There is an internal service desk team comprising of 200 FTEs, including 175 level-one engineers, with an average fully loaded salary of $30,000 and 25 level-two engineers with an average fully loaded salary of $70,000. The average fully loaded salary of all employees, who are globally distributed, is $50,000. A voluntary turnover rate of 25% is an issue in the service desk team because of its challenging environment. The voluntary turnover rate of all employees is 10%.

Key Assumptions

- **20,000 endpoints**
- **200 service desk FTEs**
- **$50,000 average employee salary**

Deployment characteristics. 1E is implemented on a cloud basis that enables rapid deployment and covers all endpoints within two months. The endpoint and client engineering module are the initial implementations; ITSM capability is then added at the beginning of Year 2. Over the three-year period, additional proactive automations are built and added as well as dashboards that integrate with a data analytics platform.

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	Service desk headcount reallocation	$630,000	$1,575,000	$2,205,000	$4,410,000	$3,531,029
Btr	Increased employee productivity	$450,000	$1,125,000	$1,575,000	$3,150,000	$2,522,164
Ctr	Legacy tool decommissioning cost savings	$45,000	$90,000	$90,000	$225,000	$182,908
Dtr	IT project efficiencies	$67,500	$135,000	$135,000	$337,500	$274,361
Etr	IT security efficiencies	$90,000	$202,500	$90,000	$382,500	$316,792
Ftr	Improved employee retention	$42,000	$270,000	$470,000	$782,000	$614,440
Gtr	Hardware cost savings	$0	$0	$266,680	$266,680	$200,361
	Total benefits (risk-adjusted)	$1,324,500	$3,397,500	$4,831,680	$9,553,680	$7,642,055

SERVICE DESK HEADCOUNT REALLOCATION

Evidence and data. All interviewees highlighted significant efficiencies for their service desk, whether internal or outsourced, with some telling Forrester that up to 50% of service desk time could be saved with the solution. Interviewees shared that there were a number of drivers behind these important time savings:

- 1E provided better device visibility that enabled service desk staff to more quickly diagnose and fix device related issues.
- Automations identified and fixed potential device issues up front without any human involvement. Such proactive troubleshooting avoided lost time for both the device user and the service desk staff.
- The solution's integration with IT service management tools meant service desk staff did not need to work through multiple windows and applications, which saved them time.
- Level-one service desk staff were able to complete more complex troubleshooting tasks, reducing the burden on level-two service desk staff.

Modeling and assumptions. Forrester assumes the following to quantify the impact of this benefit:

- The composite has an internal team of 175 level-one and 25 level-two service desk employees.
- The fully loaded salary of level-one service desk staff is $30,000; that of level-two service desk staff is $70,000.

> **"We have seen a 50% improvement in mean time to resolution."**
>
> *Workspace desktop architect, energy and chemicals*

- In Year 1 there is a 10% headcount reallocation, increasing to 25% in Year 2 and 35% in Year 3.

Risks. The impact of this benefit could be lower in some organizations based on the following factors:

- If the service desk function is outsourced these savings could take longer to achieve.
- The skill level, efficiency, and salary of service desk employees.

Results. To account for these risks, Forrester adjusted this benefit downward by 10%, yielding a three-year, risk-adjusted total PV (discounted at 10%) of $3.5 million.

Service Desk Headcount Reallocation

Ref.	Metric	Source	Year 1	Year 2	Year 3
A1	Number of level-one service desk engineers	Composite	175	175	175
A2	Level-one service desk headcount reallocation	Interviews	10%	25%	35%
A3	Level-one service desk fully loaded salary	TEI standard	$30,000	$30,000	$30,000
A4	Number of level-two service desk engineers	Composite	25	25	25
A5	Level-two service desk headcount reallocation	Interviews	10%	25%	35%
A6	Level-two service desk fully loaded salary	TEI standard	$70,000	$70,000	$70,000
At	Service desk headcount reallocation	(A1*A2*A3) + (A4*A5*A6)	$700,000	$1,750,000	$2,450,000
	Risk adjustment	↓10%			
Atr	Service desk headcount reallocation (risk-adjusted)		$630,000	$1,575,000	$2,205,000
	Three-year total: $4,410,000			**Three-year present value: $3,531,029**	

INCREASED EMPLOYEE PRODUCTIVITY

Evidence and data. Interviewees highlighted that employee productivity was a key benefit of implementing 1E as a DEX solution. By increasing device visibility and creating resolution automations, employees experienced fewer issues with their PCs and therefore saved time. There was also a reduction in the need for employees to share screens. Interviewees also highlighted improvements in related employee sentiment surveys.

Modeling and assumptions. It was challenging for interviewees to share any particular metrics. In order to quantify this benefit, Forrester assumes that employees overall save the same amount of time as the service desk engineers, as detailed in the previous benefit, given that this is the time they spend with employees in resolving trouble tickets.

The amount of time saved for the 200 service desk staff is 10% in Year 1, 25% in Year 2, and 35% in Year 3. This equates to 20 employees in Year 1, 50 in Year 2, and 70 in Year 3. It is assumed that the average employee fully loaded salary is $50,000 and that 50% of the productivity savings are put back to productive use.

Risks. It is possible that the productivity impact could be lower, based on the following factors:

- The number of trouble tickets at an organization is already initially low.
- The mean time to resolution of trouble tickets is already low.
- Less of the time saved by employees is put back into productive use.

Results. To account for these risks, Forrester adjusted this benefit downward by 10%, yielding a three-year, risk-adjusted total PV of $2.5 million.

Increased Employee Productivity

Ref.	Metric	Source	Year 1	Year 2	Year 3
B1	Employee productivity improvement (equivalent to service desk efficiency improvement)	(A1*A2) + (A4*A5)	20	50	70
B2	Average salary	TEI standard	$50,000	$50,000	$50,000
B3	Productivity conversion factor	Assumption	50%	50%	50%
Bt	Increased employee productivity	B1*B2*B3	$500,000	$1,250,000	$1,750,000
	Risk adjustment	↓10%			
Btr	Increased employee productivity (risk-adjusted)		$450,000	$1,125,000	$1,575,000
	Three-year total: $3,150,000		**Three-year present value: $2,522,164**		

LEGACY TOOL DECOMMISSIONING COST SAVINGS

Evidence and data. Some of the interviewees told Forrester that 1E replaced some of the legacy tools they had previously implemented, therefore enabling cost savings.

Infrastructure required to support configuration management capabilities, such as patch and security management could be reduced in some cases. One interviewee said they no longer needed an endpoint security tool. A device management platform was no longer needed at another organization, while a communications application could be decommissioned at another.

Modeling and assumptions. Forrester assumes the following to quantify the impact of this benefit:

- One legacy tool is decommissioned at the time of the 1E launch.
- A second legacy tool could be decommissioned from Year 2 onwards.
- Each of these tools cost $50,000 annually.

Risks. In some organizations there could be less scope to decommission legacy tools, or they could be paying less for them.

Results. To account for these risks, Forrester adjusted this benefit downward by 10%, yielding a three-year, risk-adjusted total PV of $182,908.

> **"We coordinated with the security team in decommissioning some legacy tools, resulting in annual savings of $400,000."**
>
> *Technology engineering manager, financial services*

Legacy Tool Decommissioning Cost Savings

Ref.	Metric	Source	Year 1	Year 2	Year 3
C1	Legacy tool costs	Interviews	$50,000	$100,000	$100,000
Ct	Legacy tool decommissioning cost savings	C1	$50,000	$100,000	$100,000
	Risk adjustment	↓10%			
Ctr	Legacy tool decommissioning cost savings (risk-adjusted)		$45,000	$90,000	$90,000
	Three-year total: $225,000		**Three-year present value: $182,908**		

IT PROJECT EFFICIENCIES

Evidence and data. Interviewees highlighted that 1E made completing IT projects easier and faster:

- This was an important use case for one customer for on-premises to cloud migrations.
- For another, performance issues could more quickly be identified and fixed following an important application upgrade, saving time and effort.
- One customer created several dashboards by integrating 1E with a data visualization tool. This could be used by different teams, including IT operations, security, and HR, to save time when gathering data and making decisions.

Modeling and assumptions. Forrester assumes the following to quantify the impact of this benefit:

- In Year 1, Forrester assumes that a full IT operations FTE was saved, increasing to two for Years 2 and 3 as the composite organization uses the tool for more use cases and builds additional dashboards.
- The average fully loaded salary of an IT operation employee is $75,000.

Risks. It is possible that this benefit could have less impact in some organizations, such as:

- Those where IT project management is already very efficient and scope for efficiencies is more limited.
- Those where there are less opportunities to use 1E for IT projects.

> **"The 1E platform helped us with an important cloud migration project, which was delayed and requiring lots of remediation. It really accelerated the success of the project and supported our broader move to the cloud."**
>
> *Head of unified endpoint management, healthcare*

Results. To account for these risks, Forrester adjusted this benefit downward by 10%, yielding a three-year, risk-adjusted total PV of $274,361.

IT Project Efficiencies

Ref.	Metric	Source	Year 1	Year 2	Year 3
D1	Number of IT FTEs saved	Interviews	1	2	2
D2	Average IT fully loaded salary	TEI standard	$75,000	$75,000	$75,000
Dt	IT project efficiencies	D1*D2	$75,000	$150,000	$150,000
	Risk adjustment	↓10%			
Dtr	IT project efficiencies (risk-adjusted)		$67,500	$135,000	$135,000
	Three-year total: $337,500			**Three-year present value: $274,361**	

IT SECURITY EFFICIENCIES

Evidence and data. All the interviewees highlighted the security-related benefits that 1E delivers. It provided visibility of all endpoints, which enabled security professionals to be confident about their security posture. This allowed them to reduce the amount of time required for monitoring PC security and implementing patches. It also made it significantly easier for the IT team to manage a security breach — to very quickly see which devices need to be isolated and then build a fix and implement it across all infected devices.

One interviewee shared, “We went from a 57% device security compliance rate to over 99%, while our app security compliance rate increased from 18% to over 97%.”

Modeling and assumptions. Forrester assumes the following to quantify the impact of this benefit:

- A team of 10 IT operations staff saves 20% of the time it previously used managing device security. This team is comprised of both security specialists and IT operational staff.
- There is a security breach in Year 2, and this team was able to save 25% of its time dealing with this important issue much more efficiently. This might include overtime savings, given the urgency of such breaches.
- The fully loaded salary of the IT operations staff is $100,000.
- A productivity conversion factor of 50% is applied, as per standard TEI best practice, to account for the fact that not all time saved necessarily is put back to productive use.

> **“When a security breach compromised a number of computers, with 1E we could very quickly identify which ones and isolate them, saving us a lot of time and avoiding other potential issues.”**
>
> *System administrator - automation, water industry*

Risks. The impact of this benefit could be lower if:

- An organization has a very strong cybersecurity stance and breaches are less frequent.
- The amount of time spent on ensuring device security is initially much lower.

Results. To account for these risks, Forrester adjusted this benefit downward by 10%, yielding a three-year, risk-adjusted total PV of $316,792.

IT Security Efficiencies					
Ref.	**Metric**	**Source**	**Year 1**	**Year 2**	**Year 3**
E1	Number of IT operations FTEs working on device security	Composite	10	10	10
E2	IT operations fully loaded salary	TEI standard	$100,000	$100,000	$100,000
E3	IT security efficiencies (general)	Interviews	20%	20%	20%
E4	IT security efficiencies (event based)	Interviews	0%	25%	0%
E5	Productivity conversion factor	Assumption	50%	50%	50%
Et	IT security efficiencies	E1*E2*(E3+E4) *E5	$100,000	$225,000	$100,000
	Risk adjustment	↓10%			
Etr	IT security efficiencies (risk-adjusted)		$90,000	$202,500	$90,000
	Three-year total: $382,500		**Three-year present value: $316,792**		

IMPROVED EMPLOYEE RETENTION

Evidence and data. Improving the employee experience was a key objective for many of the interviewees Forrester spoke to. By improving the performance of employees' PCs, the key devices through which they access all types of applications and information, they were better able to effectively complete tasks and avoided holdups and frustrations. This has become even more important with the increase in remote working from the pandemic.

Modeling and assumptions. Forrester assumes the following to quantify the impact of this benefit:

- The service desk staff voluntary turnover rate was initially 25%. It falls by 5% in Year 1 and 10% in Years 2 and 3. As a result, three fewer service desk FTEs turnover in Year 1, increasing to five less in Years 2 and 3.
- For all other employees, there is an average 10% voluntary turnover rate, and this falls by 0.5% in Year 2 and 1% in Year 3. As the device management and performance improves over time, so does retention. For the composite organization, this means it avoids 10 employee departures in Year 2, increasing to 20 in Year 3.
- The cost of an employee leaving is equivalent to 50% of their salary. This includes costs related to recruitment, hiring, and onboarding, as well as lost productivity.

> **"We fully believe that the PC is an essential tool. It is our role to make it as frictionless to use as possible for employees, especially given the security constraints in our industry."**
>
> *Technology engineering manager, financial services*

Risks. It is challenging to be able to directly attribute the impact of employee experience and improved retention on a particular tool. Furthermore, the impact can be lower in organizations where there are strong

retention incentives or other factors impacting turnover.

Results. To account for these risks, Forrester adjusted this benefit downward by 20%, yielding a three-year, risk-adjusted total PV of $614,440.

Improved Employee Retention

Ref.	Metric	Source	Year 1	Year 2	Year 3
F1	Baseline service desk voluntary turnover rate	25% of 200 employees (composite)	50	50	50
F2	Improved retention rate	Interviews/ estimate	5%	10%	10%
F3	Service desk employee turnover avoided	F1*F2	3	5	5
F4	Cost of service desk employee turnover	50% of salary (TEI standard)	$17,500	$17,500	$17,500
F5	Improved service desk retention	F3*F4	$52,500	$87,500	$87,500
F6	Baseline employee voluntary turnover rate (excluding service desk)	10% of (20,000-200) employees (composite)	1,980	1,980	1,980
F7	Improved retention rate	Interviews/ estimate	0	0.5%	1.0%
F8	Employee turnover avoided	F6*F7	0.0	10.0	20.0
F9	Cost of employee turnover	50% of salary (assumption)	$25,000	$25,000	$25,000
F10	Improved employee retention (excluding service desk staff)	F8*F9	$0	$250,000	$500,000
Ft	Improved employee retention	F5+F10	$52,500	$337,500	$587,500
	Risk adjustment	↓20%			
Ftr	Improved employee retention (risk-adjusted)		$42,000	$270,000	$470,000
	Three-year total: $782,000		**Three-year present value: $614,440**		

HARDWARE COST SAVINGS

Evidence and data. Most of the interviewees shared that they were better able to manage hardware procurement and ensure that device configuration was optimized for different users with 1E than with their previous solutions.

- IT operations staff were better able to identify devices that needed upgrading and extend the life of other devices.
- IT staff were also better able to match devices to personas. This either decreased the configuration requirements and so reduced costs or ensured sufficient configuration requirements, which avoided the need to reconfigure.

Modeling and assumptions. Forrester assumes the following to quantify the impact of this benefit:

- This use case is implemented in Year 3.
- There is a three-year device lifecycle. In other words, a third of all endpoints are upgraded annually.
- For each endpoint it upgrades, the composite organization realizes savings of $100.

Risks. The impact of this benefit could be lower in other organizations if:

- The device procurement cycle is lower.
- There are already other systems in place able to match devices to personas and identify endpoints needing upgrade and those whose life can be extended.

Results. To account for these risks, Forrester adjusted this benefit downward by 20%, yielding a three-year, risk-adjusted total PV of $200,361.

> **"1E enables us to prioritize devices and better match devices to personas."**
>
> *Technology engineering manager, financial services*

Hardware Cost Savings

Ref.	Metric	Source	Year 1	Year 2	Year 3
G1	Number of endpoints (PCs)	Composite	20,000	20,000	20,000
G2	PC renewals (3-year renewal rate)	G1/3	6,667	6,667	6,667
G3	% of PCs applicable	Assumption	0	0	50%
G4	Cost saving per new PC	Estimate	$0	$0	$100
Gt	Hardware cost savings	G1*G2*G3*G4	$0	$0	$333,350
	Risk adjustment	↓20%			
Gtr	Hardware cost savings (risk-adjusted)		$0	$0	$200,361
	Three-year total: $266,680			**Three-year present value: $200,361**	

UNQUANTIFIED BENEFITS

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

- **Improved communications across IT teams.** All interviewees highlighted that improving visibility into device performance made it much easier for IT staff to agree on issues affecting endpoints. Previously, for instance, security and application IT staff would find it difficult to agree on the source of an issue. Not only does this make it faster to resolve issues but also better decisions are made and confrontations are avoided.
- **Improved IT recognition.** IT teams are better appreciated and recognized as they can fix problems faster, there are fewer problems overall, and they are able to make better, more informed decisions. Integration with data analytics tools enables the creation of dashboards that provide key data that helps decision-making across the organization.

Analysis Of Costs

Quantified cost data as applied to the composite

Total Costs							
Ref.	**Cost**	**Initial**	**Year 1**	**Year 2**	**Year 3**	**Total**	**Present Value**
Htr	Licensing costs	$0	$525,000	$945,000	$1,155,000	$2,625,000	$2,126,033
Itr	Ongoing costs	$0	$115,861	$115,861	$115,861	$347,582	$288,129
Jtr	Planning, training, and implementation costs	$14,928	$40,992	$40,992	$37,260	$134,172	$114,065
	Total costs (risk-adjusted)	$14,928	$681,853	$1,101,853	$1,308,121	$3,106,754	$2,528,227

LICENSING COSTS

Evidence and data. The licensing fees are dependent on the number of endpoints and the number of modules implemented.

Modeling and assumptions. The cost per endpoint for the composite organization increases from $25 in Year 1 to $45 in Year 2 and $55 in Year 3 as additional modules are added, including service desk automation.

Risks. There is a possibility that pricing could be higher for different organizations, or that pricing could increase over the period.

Results. To account for these risks, Forrester adjusted this cost upward by 5%, yielding a three-year, risk-adjusted total PV (discounted at 10%) of $2.1 million.

Licensing Costs						
Ref.	**Metric**	**Source**	**Initial**	**Year 1**	**Year 2**	**Year 3**
H1	Number of endpoints			20,000	20,000	20,000
H2	Cost per endpoint per year			$25	$45	$55
Ht	Licensing costs	H1*H2	$0	$500,000	$900,000	$1,100,000
	Risk adjustment	↑5%				
Htr	Licensing costs (risk-adjusted)		$0	$525,000	$945,000	$1,155,000
	Three-year total: $2,625,000			**Three-year present value: $2,126,033**		

ONGOING COSTS

Evidence and data. Interviewees highlighted ongoing costs when using the 1E platform. These included:

- Internal development costs.
- IT maintenance costs.

Modeling and assumptions. These costs were quantified as follows:

- An organization the size of the composite requires one full-time internal developer. Their role is to create automations for endpoint management and support the build of other use cases and dashboards.
- For an organization of with 20,000 endpoints, Forrester estimates that 12 days per year are required for IT to support and maintain the 1E platform.

Risks. It is possible that these costs are higher in other organizations because salary rates are higher and/or additional time is required for development and maintenance.

Results. To account for these risks, Forrester adjusted this cost upward by 10%, yielding a three-year, risk-adjusted total PV of $288,000.

Ongoing Costs

Ref.	Metric	Source	Initial	Year 1	Year 2	Year 3
I1	Dedicated internal developer FTEs	Interviews		1	1	1
I2	IT maintenance effort (days)	Interviews		12	12	12
I3	Fully loaded salary	TEI standard		$100,000	$100,000	$100,000
I4	Daily rate	I3/45/5		$444	$444	$444
It	Ongoing costs	(I1*I3) + (I2*I4)		$105,328	$105,328	$105,328
	Risk adjustment	↑10%				
Itr	Ongoing costs (risk-adjusted)		$0	$115,861	$115,861	$115,861
	Three-year total: $347,582		**Three-year present value: $288,129**			

PLANNING, TRAINING, AND IMPLEMENTATION COSTS

Evidence and data. In addition to the ongoing costs, interviewees said they experienced a couple of other costs associated with the 1E investment:

- Time and effort required to plan and implement the platform. This includes both the initial implementation as well as additional modules added in Years 1 and 2.
- Training time for service desk staff.

Modeling and assumptions. These costs were quantified by estimating the time and effort required for an organization the size of the composite for planning, implementation, and training:

- The initial planning and implementation effort requires four days for ten FTEs. The subsequent module additions require just two days from five FTEs. It was assumed that level-two service desk staff, or those on equivalent salary level, complete this work.
- Both level-one and level-two service desk staff each require 8 hours of training annually to be able to best use the 1E tools.

Risks. It is possible that the planning, training, and implementation effort could be higher in other organizations. This could be because:

- More time is required for planning due to additional security or other compliance requirements.
- Service desk staff require more training time.
- There are additional change management requirements.

Results. To account for these risks, Forrester adjusted this cost upward by 20%, yielding a three-year, risk-adjusted total PV of $114,000.

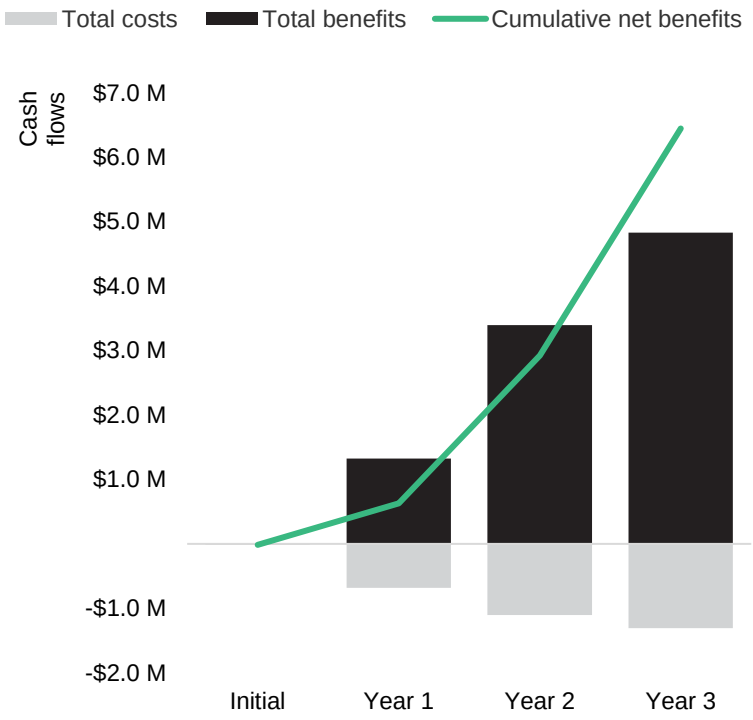
Planning, Training, And Implementation Costs

Ref.	Metric	Source	Initial	Year 1	Year 2	Year 3
J1	Number of internal FTEs for planning & implementation	Interviews	10	2	2	
J2	Number of days for planning & implementation per FTE	Interviews	4	5	5	
J3	Number of service desk personnel (level one)	Composite	0	175	175	175
J4	Number of service desk personnel (level two)	Composite	0	25	25	25
J5	Service desk training time (hours/ FTE)	Interviews	0	8	8	8
J6	Fully loaded salary (for planning, implementation, and level-two service desk engineers)	TEI standard	$70,000	$70,000	$70,000	$70,000
J7	Daily rate (level two)	K6/45/5	$311	$311	$311	$311
J8	Fully loaded salary (for level-one service desk engineers)	TEI standard	$30,000	$30,000	$30,000	$30,000
J9	Daily rate (level one)	K8/45/5	$133	$133	$133	$133
Jt	Planning, training, and implementation costs	(J1*J2*J7) + (J3*J5*J9) + (J4*J5*J7)	$12,440	$34,160	$34,160	$31,050
	Risk adjustment	↑20%				
Jtr	Planning, training, and implementation costs (risk-adjusted)		$14,928	$40,992	$40,992	$37,260
	Three-year total: $134,172		**Three-year present value: $114,065**			

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	($14,928)	($681,853)	($1,101,853)	($1,308,121)	($3,106,754)	($2,528,227)
Total benefits	$0	$1,324,500	$3,397,500	$4,831,680	$9,553,680	$7,642,055
Net benefits	($14,928)	$642,647	$2,295,647	$3,523,559	$6,446,926	$5,113,828
ROI						202%
Payback						<6 months

Appendix A: Total Economic Impact

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

TOTAL ECONOMIC IMPACT APPROACH

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

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

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

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

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: Supplemental Material

Related Forrester Research

“The Forrester Wave: End-User Experience Management, Q3 2022,” Forrester Research, Inc., August 1, 2022.

“The Future Of Endpoint Management,” Forrester Research, Inc., June 6, 2022.

“Role Profile: Digital Workplace Experience Analyst,” Forrester Research, Inc., April 15, 2022.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