The Total Economic Impact™ Of Kyndryl Digital Workplace Services

Cost Savings And Business Benefits Enabled By Digital Workplace Services

APRIL 2023
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ABOUT FORRESTER CONSULTING

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Executive Summary

Delivering an improved digital employee experience (DEX) is a key goal for most enterprise IT teams, and the goal is both more challenging and more critical in a hybrid work environment. One way for organizations to make significant gains in this area is to consolidate digital workplace activities with a service provider who specializes in delivering a uniform, reliable global experience that empowers the organization’s workforce by the most efficient means possible.

Kyndryl provides Digital Workplace services, including device management, IT support, desktop virtualization, contact center as a service (CCaaS), collaboration, and consulting. Customers can deploy any or all of these services to create a continuously optimized digital workplace that enables employee collaboration and productivity while enhancing business outcomes.

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

Prior to working with Kyndryl, these interviewees noted how their organizations’ Information Technology (IT) teams often worked in geographic and subsidiary siloes, leading to duplication of effort and physical resources such as laptops, mobile phones, and other devices. For most of the interviewees’ organizations, hybrid work environments created additional support needs to be delivered by teams of the same size and scope. They found it increasingly difficult and expensive to provide users with a digital experience that supported productivity, collaboration, and job satisfaction.

After the investment in Kyndryl’s Digital Workplace solutions, the interviewees reported both improved IT operating measures and enhanced DEX at their organizations, resulting in increased end user productivity. Key results from the investment include availability of 24/7 IT support, often in users’ native languages, faster ticket resolution, fewer device and application issues—including blue screens—and greater predictability for budgeting and planning.

To better understand the benefits, costs, and risks associated with this investment, Forrester interviewed four representatives with experience using Kyndryl Digital Workplace services. For the purposes of this study, Forrester aggregated the interviewees’ experiences and combined the results into a single composite organization, a $10 billion financial services provider called ProsperPoint.

**KEY FINDINGS**

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

![KEY STATISTICS](image)

- **Return on investment (ROI):** 219%
- **Net present value (NPV):** $30.9M
EXECUTIVE SUMMARY

- **Improved digital employee experience (DEX) delivers $11.4 million.** Employees at ProsperPoint are more productive thanks to faster ticket resolution, a reduction in IT incidents and less time waiting for software licensing requests to be fulfilled.

- **Increased device and application stability saves $8.2 million.** Device and application outages at ProsperPoint cost more than lost productivity; they can be the cause of lost sales and lost customers, and even cost lives in the case of healthcare or transit systems. It avoids these costs with significantly fewer IT incidents using Kyndryl.

- **Consolidated shadow IT results in $16.8 million of savings.** ProsperPoint eliminates duplication of software licenses, devices, and other hardware by centralizing control. The company also rationalizes day-to-day service provision by re-badging and redeploying personnel while maintaining appropriate staffing for complex, strategic problem-solving.

- **Reduced device costs mean $7.6 million in avoided expense.** Kyndryl’s industry knowledge and buying power help ProsperPoint restructure its hardware purchase and management policies.

- **Enhanced security avoids over $1 million in projected security costs.** Kyndryl brings ProsperPoint modern security infrastructure and standards to support its growing global business. It also reduces the risk of unauthorized access by centralizing and rationalizing access.

**Unquantified benefits.** Benefits that provide value but are not quantified in the study include:

- **Enhanced predictability of IT costs for business leaders.** Because Kyndryl’s fees are tied to actual technology usage (e.g., per licensee, or per device), ProsperPoint business leaders do not need to predict or account for large periodic capital expenditures associated with maintaining a modern work environment.

- **Flexible, customer-centric partnership.** ProsperPoint’s IT team appreciates Kyndryl’s broad experience base with multiple technology providers and its unbiased approach to solving the company’s challenges.

- **Willingness to co-innovate and share the benefits.** Over the three-year period of the analysis, Kyndryl brings ProsperPoint several opportunities to deliver services more efficiently, resulting in shared investment recapture for both companies.

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

- **Kyndryl’s fees amount to $9.9 million.** ProsperPoint pays on a per-licensee or per-device basis for IT support, device management, and virtualization services.

- **Internal costs related to scoping and planning total $776,000.** Several senior leaders from the IT and business sides of the business spend several months selecting a partner, negotiating the deal and planning rollout at a high level.

- **Implementation and ongoing administration involves $3.5 million in internal costs.** A broader multi-functional team spends six months piloting and fine-tuning systems, as well as preparing the organization for the new procedures and policies involved.
The representative interviews and financial analysis found that ProsperPoint experiences benefits of $45 million over three years versus costs of $14.1 million, adding up to a net present value (NPV) of $30.9 million and an ROI of 219%.
**EXECUTIVE SUMMARY**

“During the pandemic, people who had spouses working at home for other companies told me they realized how much better the experience was at [our company].”

*Associate director, client compute services, manufacturing*

<table>
<thead>
<tr>
<th>Benefits (Three-Year)</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improved digital employee experience</td>
<td>$11.4M</td>
</tr>
<tr>
<td>Increased device and application stability</td>
<td>$8.2M</td>
</tr>
<tr>
<td>Consolidated Shadow IT</td>
<td>$16.8M</td>
</tr>
<tr>
<td>Reduced device costs</td>
<td>$7.6M</td>
</tr>
<tr>
<td>Enhanced security maturity</td>
<td>$1.1M</td>
</tr>
</tbody>
</table>

**ROI** 219%

**BENEFITS PV** $45.0 million

**COSTS PV** $14.1 million

**NPV** $30.9 million
EXECUTIVE SUMMARY

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 Digital Workplace solutions.

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 Kyndryl’s Digital Workplace solutions can have on an organization.

Certain calculations in Benefit Table E use data from Forrester Consulting’s Q4 2020 Cost Of A Security Breach study. The survey was fielded to 351 cybersecurity leaders at global enterprises in the US, the UK, Canada, Germany, and Australia. Survey participants included managers, directors, VPs, and C-level executives who are responsible for cybersecurity decision-making, operations, and reporting. Questions provided to the participants sought to evaluate leaders’ cybersecurity strategies and any breaches that have occurred within their organizations. Respondents opted into the survey via a third-party research panel, which fielded the survey on behalf of Forrester in November 2020.

DUE DILIGENCE
Interviewed Kyndryl stakeholders and Forrester analysts to gather data relative to Digital Workplace services.

INTERVIEWS
Interviewed four representatives at organizations using Digital Workplace services 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.

DISCLOSURES
Readers should be aware of the following:

This study is commissioned by Kyndryl and delivered by Forrester Consulting. It is not meant to be used as a competitive analysis.

Forrester makes no assumptions as to the potential ROI that other organizations will receive. Forrester strongly advises that readers use their own estimates within the framework provided in the study to determine the appropriateness of an investment in Kyndryl’s Digital Workplace services.

Kyndryl reviewed and provided feedback to Forrester, but Forrester maintains editorial control over the study and its findings and does not accept changes to the study that contradict Forrester’s findings or obscure the meaning of the study.

Kyndryl provided the customer names for the interviews but did not participate in the interviews.
The Kyndryl Digital Workplace Services Customer Journey

Drivers leading to the Digital Workplace Services investment

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### Interviews

<table>
<thead>
<tr>
<th>Role</th>
<th>Industry</th>
<th>Region</th>
<th>Company Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Associate director, client compute services</td>
<td>Manufacturing</td>
<td>Global, US HQ</td>
<td>$55 billion, 35,000+ employees</td>
</tr>
<tr>
<td>Director, employee support services</td>
<td>Infrastructure Consulting</td>
<td>Global, US HQ</td>
<td>$13 billion, 45,000+ employees</td>
</tr>
<tr>
<td>Chief information security officer (CISO)</td>
<td>Construction</td>
<td>Global, US HQ</td>
<td>$14 billion, 40,000+ employees</td>
</tr>
<tr>
<td>End-user computing (EUC) services lead</td>
<td>Transportation</td>
<td>Global, APAC HQ</td>
<td>$11 billion, 25,000+ employees</td>
</tr>
</tbody>
</table>

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### KEY CHALLENGES

Before engaging with Kyndryl, interviewees' organizations were handling their digital workplace management in-house. The interviewees noted how their organizations struggled with common challenges, including:

- **Lack of visibility into technology estate, especially after COVID-19 scale-up.** In the rush to provide secure remote access during the pandemic, the interviewees’ organizations rapidly built out new infrastructure, often without their usual careful upfront strategy, assessment, planning and testing.

- **Lack of organization and standardization across the organization.** The interviewees worked at large, global organizations and described situations where decision-making and technology control were often decentralized. The resulting patchwork of policies, controls, equipment and processes made preventing and responding to outages and security incidents difficult if not impossible.

- **Higher costs than necessary.** The organizations’ siloed operations had a direct impact on costs. Their dispersed decision-making about asset acquisition and staffing, as well as their tendency to conduct negotiations at the geographic or departmental level rather than the corporate level, resulted in less favorable pricing than they might have achieved otherwise. As the CISO of a construction company stated, “there was no strategy recognizing that we were heading a global business. We had regional departments spending money [when] we could actually align our services and get better bang for our buck.”

“When I joined there were 1,000 people, and we went to 90,000 via acquisitions. So we needed to standardize processes and tools for efficiencies—and also because it just makes sense to do the same thing across the globe where possible.”

*CISO, construction*
SOLUTION REQUIREMENTS/INVESTMENT OBJECTIVES
The interviewees’ organizations searched for a solution that could help them with some or all of the following objectives:

- Modernize their overall infrastructure, often including a move to private and/or public cloud.
- Provide a superior employee experience, maximizing productivity and job satisfaction.
- Standardize and rationalize technology platforms and policies, improving security and lowering costs to purchase and manage hardware.

“Kyndryl has always been more willing to be on the hook for higher SLAs than their competitors. And that is a strategic differentiator for us.”

CISO, construction

After a request for proposal (RFP) and business case process evaluating multiple vendors, the interviewees’ organizations chose either to work with Kyndryl as their new provider or to move their contract to Kyndryl after its spin-off as an independent company.

- Several task forces worked with Kyndryl before implementation to map out current state and identify opportunities for improvement.
- Organizations generally spent three to six months piloting and optimizing systems, as well as preparing employees for the policy changes to come before rolling out the changes systemwide.

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.

Description of composite. ProsperPoint is a $5 billion financial services organization with retail and online banking, credit, and investment operations in North America, Europe and Asia. Its 20,000 employees interact with customers 24/7 in person and online. The organization relies on technology to provide a high degree of security (subject to numerous geographic- and industry-specific regulations) for customers’ funds and personal data.

Key Assumptions
- Financial services
- $10 billion revenue
- 20,000 employees
- Global operations
### Analysis Of Benefits

Quantified benefit data as applied to the composite

#### Total Benefits

<table>
<thead>
<tr>
<th>Ref.</th>
<th>Benefit</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Total</th>
<th>Present Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atr</td>
<td>Improved digital employee experience (DEX)</td>
<td>$4,272,950</td>
<td>$4,571,300</td>
<td>$4,938,500</td>
<td>$13,782,750</td>
<td>$11,372,802</td>
</tr>
<tr>
<td>Btr</td>
<td>Increased device and application stability</td>
<td>$860,625</td>
<td>$2,754,000</td>
<td>$6,885,000</td>
<td>$10,499,625</td>
<td>$8,231,222</td>
</tr>
<tr>
<td>Ctr</td>
<td>Consolidated shadow IT</td>
<td>$4,428,000</td>
<td>$8,100,000</td>
<td>$8,100,000</td>
<td>$20,628,000</td>
<td>$16,805,319</td>
</tr>
<tr>
<td>Dtr</td>
<td>Reduced hardware costs</td>
<td>$1,576,750</td>
<td>$3,153,500</td>
<td>$4,730,250</td>
<td>$9,460,500</td>
<td>$7,593,514</td>
</tr>
<tr>
<td>Etr</td>
<td>Enhanced security</td>
<td>$426,335</td>
<td>$426,335</td>
<td>$426,335</td>
<td>$1,279,005</td>
<td>$1,060,233</td>
</tr>
<tr>
<td></td>
<td>Total benefits (risk-adjusted)</td>
<td>$11,564,660</td>
<td>$20,386,385</td>
<td>$27,842,585</td>
<td>$59,793,630</td>
<td>$45,063,090</td>
</tr>
</tbody>
</table>

#### IMPROVED DIGITAL EMPLOYEE EXPERIENCE

**Evidence and data.** The technology leaders Forrester interviewed for this study were increasingly invested in enabling and measuring a first class digital experience for their organizations' employees. A number of them scrambled to put the right equipment and architecture in place so employees could work remotely during the COVID-19 pandemic. Now they are consolidating and optimizing that infrastructure to provide an even more seamless and more secure experience that lets employees work productively wherever they would like.

Interviewees described how they worked with Kyndryl Digital Workplace’s Help Desk Support, Virtualization, and Device Management services and leveraged Kyndryl's deep global expertise to provide employees with the most productive work environment, wherever that may be.

The director of employee support services at a global engineering firm reported, "[Before], we never had a single ITSM [IT service management] platform in every region, so we weren’t able to look at combinations of tickets in different offices and sites to see if there was a bigger problem. We did everything individually and never had this data available before. One of the biggest advantages Kyndryl brought was that we were able to look at this data, identify call drivers and proactively improve service.”

*Associate director, client compute services, manufacturing,*

"It’s a matter of overall system responsiveness, so for anything that interacts with our network, we’re seeing much better performance.”

The associate director of client compute services at a manufacturing company described another way employee experience was improving. "Before, it took one to two weeks to diagnose problems, with many people involved. Now we diagnose them in about 20 minutes.”
The same executive also pointed to another source of improved DEX. “It’s a matter of just overall system responsiveness, so faster network transfer speeds. For anything that interacts with our network, we’re seeing much better performance.”

Modeling and assumptions. In order to model a value for this benefit, Forrester assumes the following for ProsperPoint, the composite organization:

- The organization employs 20,000.
- The organization loses six hours of productivity per employee each year as a result of IT incidents.\(^2\)
- In Year 1, employees submit 25% less IT incident tickets and the organization resolves tickets submitted 35% faster.
- In Year 2, employees submit 35% fewer IT incident tickets and the organization resolves tickets submitted 50% faster.
- In Year 3, employees submit 50% less IT incident tickets and the organization resolves tickets submitted 75% faster.
- The average fully burdened hourly wage of an employee is $36.
- In addition to IT tickets, the organization receives 12,500 software requests each year, primarily from developers.
- Software requests require 40 business hours to fulfill, and it impacts developers productivity by 40% while they wait.
- Self-fulfilling software requests with Kyndryl Digital Workplace services only requires 8 hours.
- The average fully burdened hourly wage of a software developer is $49.

Risks. Other organizations may experience a different value from this benefit based on the following factors:

- Differing average salaries.
- The number of employee productivity hours lost due to IT incidents as well as the reduction in number and time to resolve tickets submitted.
- The number of software requests submitted and the amount of time required to fulfill these requests.

Results. To account for these risks, Forrester adjusted this benefit downward by 15%, yielding a three-year, risk-adjusted total PV (discounted at 10%) of about $11.4 million.
ANALYSIS OF BENEFITS

Improved Digital Employee Experience

<table>
<thead>
<tr>
<th>Ref.</th>
<th>Metric</th>
<th>Source</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1</td>
<td>Number of employees</td>
<td>Composite</td>
<td>20,000</td>
<td>20,000</td>
<td>20,000</td>
</tr>
<tr>
<td>A2</td>
<td>Average hours lost productivity per employee due to IT incidents</td>
<td>Industry research</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>A3</td>
<td>Reduction in IT incident tickets</td>
<td>Interviews</td>
<td>25%</td>
<td>35%</td>
<td>50%</td>
</tr>
<tr>
<td>A4</td>
<td>Average hourly wage across the organization (fully burdened)</td>
<td>TEI standard</td>
<td>$36</td>
<td>$36</td>
<td>$36</td>
</tr>
<tr>
<td>A5</td>
<td>Subtotal: Productivity gain from reduction in IT tickets</td>
<td>A1<em>A2</em>A3*A4</td>
<td>$1,080,000</td>
<td>$1,512,000</td>
<td>$2,160,000</td>
</tr>
<tr>
<td>A6</td>
<td>Lost productivity from remaining tickets</td>
<td>A1<em>A2</em>(1-A3)</td>
<td>90,000</td>
<td>78,000</td>
<td>60,000</td>
</tr>
<tr>
<td>A7</td>
<td>Reduced time to resolve tickets</td>
<td>Interviews</td>
<td>35%</td>
<td>50%</td>
<td>75%</td>
</tr>
<tr>
<td>A8</td>
<td>Hours saved with faster ticket resolution</td>
<td>A6*A7</td>
<td>31,500</td>
<td>39,000</td>
<td>45,000</td>
</tr>
<tr>
<td>A9</td>
<td>Subtotal: Productivity gains from faster ticket resolution</td>
<td>A4*A8</td>
<td>$1,134,000</td>
<td>$1,404,000</td>
<td>$1,620,000</td>
</tr>
<tr>
<td>A10</td>
<td>Software requests per year</td>
<td>Interviews</td>
<td>12,500</td>
<td>12,500</td>
<td>12,500</td>
</tr>
<tr>
<td>A11</td>
<td>Average business hours to fulfill software requests</td>
<td>Interviews</td>
<td>40</td>
<td>40</td>
<td>40</td>
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<tr>
<td>A12</td>
<td>Time to fulfill using self-service</td>
<td>Interviews</td>
<td>8</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>A13</td>
<td>Impact on productivity</td>
<td>Estimate</td>
<td>40%</td>
<td>40%</td>
<td>40%</td>
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<tr>
<td>A14</td>
<td>Average hourly wage of a software developer (fully burdened)</td>
<td>TEI standard</td>
<td>$49</td>
<td>$49</td>
<td>$49</td>
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<tr>
<td>A15</td>
<td>Subtotal: Value of self-service productivity increase</td>
<td>A10*(A11-A12)<em>A13</em>A14</td>
<td>$7,840,000</td>
<td>$7,840,000</td>
<td>$7,840,000</td>
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<tr>
<td>A16</td>
<td>Productivity recapture</td>
<td>TEI standard</td>
<td>50%</td>
<td>50%</td>
<td>50%</td>
</tr>
<tr>
<td>Atr</td>
<td>Improved digital employee experience</td>
<td>(A5+A9+A15)*A16</td>
<td>$5,027,000</td>
<td>$5,378,000</td>
<td>$5,810,000</td>
</tr>
<tr>
<td>Atr</td>
<td>Risk adjustment</td>
<td>↓15%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Atr</td>
<td>Increased end user productivity (risk-adjusted)</td>
<td></td>
<td>$4,272,950</td>
<td>$4,571,300</td>
<td>$4,938,500</td>
</tr>
</tbody>
</table>

Three-year total: $13,782,750
Three-year present value: $11,372,802

IMPROVED DEVICE AND APPLICATION STABILITY

Evidence and data. Interviewees shared that before engaging Kyndryl, their organizations dealt with the effects of varying degrees of instability in their devices and applications. This resulted in an unacceptable amount of downtime and lost productivity for users and also had repercussions across the organizations, including lost revenue from when customers were unable to access e-commerce services and brand reputation damage that could even affect stock prices.

- The associate director of client compute services in manufacturing recalled, “you might have people that are seeing blue screens multiple times a week, in all levels of the organization, all around the world. Somebody could be trying to complete a billion-dollar deal, because our CEO...”
uses the exact same computer that everybody else uses.”

Interviewees were not always able to identify the more systemic issues leading to outages. In fact, sometimes they were not even aware of the extent of the problem.

- The director of employee support services at an infrastructure consulting firm recalled, “we didn’t know where our problems were. We knew there would be local issues, but they would be dealt with by a local L2 [Level 2 technician] going and restarting something. Once we saw the bigger picture, Kyndryl helped us put in standard global Priority 0 through Priority 4 process criteria. And when P1 happens, we can get 24-hour support. So we do see reduced outages and downtime.”

- The associate director of client compute services in manufacturing explained, “We heard from a director in China who said ‘hey, we’re having a bunch of blue screens again.’ In the past, we would do some field research, try to get hold of some people over in China. We’d pull some tickets from the help desk. It’d be like a week or two before we even realized what the problem was. Now, 20 minutes after that email, we knew the exact models affected and we knew the reason why.”

**Modeling and assumptions.** In order to model the value of this benefit, Forrester assumes the following for ProsperPoint:

- The organization experiences 50 hours of downtime per year.\(^3\)
- The hourly cost of downtime is conservatively estimated at $540,000.\(^4\)
- In Year 1, the organization reduces downtime by 15%, of which 25% is attributable to Kyndryl.
- In Year 2, the organization reduces downtime by 30%, of which 40% is attributable to Kyndryl.
- In Year 3, the organization reduces downtime by 50%, of which 60% is attributable to Kyndryl.

**Risks.** Other organizations may experience a different value from this benefit based on the following factors:

- The frequency with which the organization experiences downtime each year.
- The cost of system downtime.
- The reduction in downtime experienced that is attributable to Kyndryl.

**Results.** To account for these risks, Forrester adjusted this benefit downward by 15%, yielding a three-year, risk-adjusted total PV of $8.2 million

**Improved Device and Application Stability**

<table>
<thead>
<tr>
<th>Ref.</th>
<th>Metric</th>
<th>Source</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>B1</td>
<td>Average hours of downtime due to instability</td>
<td>Forrester research</td>
<td>50</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>B2</td>
<td>Hourly cost of downtime</td>
<td>Ponemon</td>
<td>$540,000</td>
<td>$540,000</td>
<td>$540,000</td>
</tr>
<tr>
<td>B3</td>
<td>Reduction in downtime</td>
<td>Interviews</td>
<td>15%</td>
<td>30%</td>
<td>50%</td>
</tr>
<tr>
<td>B4</td>
<td>Portion attributable to Kyndryl</td>
<td>Interviews</td>
<td>25%</td>
<td>40%</td>
<td>60%</td>
</tr>
<tr>
<td>Bt</td>
<td>Improved device and application stability</td>
<td>B1<em>B2</em>B3*B4</td>
<td>$1,012,500</td>
<td>$3,240,000</td>
<td>$8,100,000</td>
</tr>
<tr>
<td>Btr</td>
<td>Improved device and application stability (risk-adjusted)</td>
<td></td>
<td>$860,625</td>
<td>$2,754,000</td>
<td>$6,885,000</td>
</tr>
</tbody>
</table>

**Three-year total:** $10,499,625  
**Three-year present value:** $8,231,222
CONSIDERED SHADOW IT

Evidence and data. In the rush to provide secure remote access during COVID-19, the interviewees’ organizations rapidly built out new infrastructure, often without their usual careful upfront strategy, assessment, planning and testing. Now, organizations have emphasized reviewing, rationalizing and consolidating the capabilities resulting from their hurried decisions. This is in order to ensure they have the right technology to address the right organizational needs for their still-evolving digital workplace.

Beyond their pandemic-related issues, some interviewees described their situation before Kyndryl as decentralized, with few organizational controls. The CISO at a construction firm relayed, “everything was very decentralized. We had 50 different IT groups doing 50 different things.” Interviewees agreed that this often resulted in redundancy in terms of both hardware and staffing.

- The director of employee support services at a global infrastructure consulting firm added, “it used to be that about 80% of our calls were handled by L2 and even L3 technicians. Now we use data to diagnose the top drivers of issues, so more can be addressed by L1 technicians.”

Modeling and assumptions. In order to model the value of this benefit, Forrester assumes the following for ProsperPoint:

- ProsperPoint gradually rebadges and redeploys the equivalent of 82 full-time IT employees over the course of the first year as it works with Kyndryl to consolidate operations.
- In Year 2, it rebadges and redeploys an additional 68 FTEs, and maintains that reduction in Year 3.
- The fully burdened annualy salary of these technicians is $67,500.

Risks. Other organizations may experience a different value from this benefit based on the following factors:

- Average salary of IT staff.
- The number of IT employees redeployed.

Results. To account for these risks, Forrester adjusted this benefit downward by 20%, yielding a three-year, risk-adjusted total PV of $16.8 million.

<table>
<thead>
<tr>
<th>Consoliated Shadow IT</th>
<th>Source</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ref.</td>
<td>Metric</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C1</td>
<td>IT FTEs before deployment</td>
<td>Interviews</td>
<td>300</td>
<td>300</td>
</tr>
<tr>
<td>C2</td>
<td>IT FTEs after deployment</td>
<td>Interviews</td>
<td>218</td>
<td>150</td>
</tr>
<tr>
<td>C3</td>
<td>IT FTEs rebagged, redeployed</td>
<td>C1-C2</td>
<td>82</td>
<td>150</td>
</tr>
<tr>
<td>C4</td>
<td>Blended fully burdened salary of redeployed staff</td>
<td>TEI standard</td>
<td>$67,500</td>
<td>$67,500</td>
</tr>
<tr>
<td>Ct</td>
<td>Consolidated Shadow IT</td>
<td>C3*C4</td>
<td>$5,535,000</td>
<td>$10,125,000</td>
</tr>
<tr>
<td>Ctr</td>
<td>Consolidated Shadow IT (risk-adjusted)</td>
<td>↓20%</td>
<td>$4,428,000</td>
<td>$8,100,000</td>
</tr>
</tbody>
</table>

Three-year total: $20,628,000
Three-year present value: $16,805,319
ANALYSIS OF BENEFITS

REDUCED DEVICE COSTS

Evidence and data. Interviewees identified several ways in which their organizations saved money on their laptop and other device purchases with Kyndryl’s help.

- The change from lease to purchase allowed some organizations to eliminate a middleman company and its profit requirements.
- As owners, the organizations benefitted from the full useful life of the equipment, rather than replacing it every three years.
- Some organizations restructured their fleet to include additional options for performance needs. No longer locked into simply a base and a high-end model, they lowered the average cost of providing employees with the right device for their needs.
- The associate director of client compute services in a manufacturing organization detailed how they were able to leverage Kyndryl’s buying power, industry contacts, and negotiating expertise to lower device costs. As he described it, “[Kyndryl] spends a lot of time leaning on our OEMs to make sure we have a seat at the table.”

Modeling and assumptions. In order to model the value of this benefit, Forrester assumes the following for ProsperPoint:

- Before Kyndryl, ProsperPoint leases computers for each of its 20,000 knowledge workers.
- They pay a blended annual lease cost of $696 for each computer, reflecting a 70/30 mix of devices priced at $1,000 and devices priced at $2,500, at a rate of 4% per month for the lease.
- After engaging Kyndryl, ProsperPoint purchases 5,000 computers per year (keeping them for four years rather than the previous three-year lease).
- The company pays a blended price of $1.300 per computer ($325 per year), reflecting a 75/20/5 mix of devices at $1,000, $2,000, and $3,000 respectively.

Risks. Other organizations may experience a different value based on the following factors:

- The mix of devices and computing power required.
- The competitiveness of the lease pricing negotiated before Kyndryl.

Results. To account for these risks, Forrester adjusted this benefit downward by 15%, yielding a three-year, risk-adjusted total PV of $7.6 million.

“Kyndryl is ensuring that all outreach channels in our new service portal are fully resourced. Before, we had a growing number of helpdesk calls and field engineer costs were set to increase 20-25%. Instead, we had a decline in calls and stable field engineer costs.”

UEC services lead, transportation
ENHANCED SECURITY

Evidence and data. Interviewees told Forrester that their organizations were more secure as a result of their relationship with Kyndryl. Many of the security improvements were the natural effect of more centralized control over IT operations and practices, and more consistency across teams and geographies.

In addition, though, Kyndryl simply brought a more mature approach to security, using their deep experience of regulations and policies in a variety of countries and industry verticals to modernize its customers’ security posture as a way of doing business.

- The CISO of the construction organization told Forrester, “Every industry is starting to face significant cyber security-based regulation. So if you’re a publicly traded company there are the new SEC rules. If you’re not standardized and controlled, you’re going to have a hard time meeting those standards. An organization like Kyndryl can come in and just do that for you.”

Modeling and assumptions. In order to model the value of this benefit, Forrester assumes the following for ProsperPoint:

- ProsperPoint experiences 2.4 breaches a year.\(^5\)
- The average internal and external cost per breach is almost $1.5 million.\(^6\)
- Each breach impacts 4,000 employees.

“After 2020, we started to deploy VDIs and expanded Kyndryl’s contract to include them. They were flexible enough to provide a pricing model where support costs are tied to our scale-up. We’ve been adding 700-800 VDIs per year.”

UEC services lead, transportation
• It takes the organization 8.7 hours to detect and remediate a breach.\(^7\)

• Forrester assumes 50% of productivity is impacted by a data breach.

• The average fully burdened hourly wage is $36.

• Kyndryl reduces exposure to breaches by 10% each year.

**Risks.** Other organizations may experience a different value from this benefit based on the following factors:

• The average salary per employee.

• The number of breaches per year and the number of employees impacted by a breach.

• The average internal and external costs of a breach.

• The number of hours required to remediate a breach.

**Results.** To account for these risks, Forrester adjusted this benefit downward by 15%, yielding a three-year, risk-adjusted total PV of over $1 million.

### Enhanced Security

<table>
<thead>
<tr>
<th>Ref.</th>
<th>Metric</th>
<th>Source</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>E1</td>
<td>Average breaches per year</td>
<td>Forrester study</td>
<td>2.4</td>
<td>2.4</td>
<td>2.4</td>
</tr>
<tr>
<td>E2</td>
<td>Internal and external costs per breach</td>
<td>Forrester study</td>
<td>$1,463,481</td>
<td>$1,463,481</td>
<td>$1,463,481</td>
</tr>
<tr>
<td>E3</td>
<td>Employees impacted per breach</td>
<td>Composite</td>
<td>4,000</td>
<td>4,000</td>
<td>4,000</td>
</tr>
<tr>
<td>E4</td>
<td>Average hours to detect and remediate</td>
<td>Forrester study</td>
<td>8.7</td>
<td>8.7</td>
<td>8.7</td>
</tr>
<tr>
<td>E5</td>
<td>Extent of productivity impact</td>
<td>Composite</td>
<td>50%</td>
<td>50%</td>
<td>50%</td>
</tr>
<tr>
<td>E6</td>
<td>Average fully burdened hourly wage across the organization</td>
<td>A4</td>
<td>$36</td>
<td>$36</td>
<td>$36</td>
</tr>
<tr>
<td>E7</td>
<td>Total projected cost of breaches</td>
<td>E1*(E2+E3<em>E4</em>E5)*E6</td>
<td>$5,015,714</td>
<td>$5,015,714</td>
<td>$5,015,714</td>
</tr>
<tr>
<td>E8</td>
<td>Reduction due to Kyndryl</td>
<td>Interviews</td>
<td>10%</td>
<td>10%</td>
<td>10%</td>
</tr>
<tr>
<td>Et</td>
<td>Enhanced security</td>
<td>E7*E8</td>
<td>$501,571</td>
<td>$501,571</td>
<td>$501,571</td>
</tr>
<tr>
<td></td>
<td>Risk adjustment</td>
<td>(15%)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Etr</td>
<td>Enhanced security maturity(risk-adjusted)</td>
<td>$426,335</td>
<td>$426,335</td>
<td>$426,335</td>
<td></td>
</tr>
</tbody>
</table>

**Three-year total:** $1,279,006  
**Three-year present value:** $1,060,233
UNQUANTIFIED BENEFITS
Interviewees mentioned the following additional benefits that their organizations experienced but were not able to quantify:

- **Enhanced predictability of IT costs for business leaders.** Because Kyndryl’s fees are tied to actual technology usage (e.g., per licensee, or per device), ProsperPoint business leaders do not need to predict or account for large periodic capital expenditures associated with maintaining a modern work environment.

  The CISO in the construction industry pointed out, “Users got more predictable service. [The organization] got predictable charge rates. The average office employee might have some issues with new policies and processes, but business line managers know it is a positive. When we do work for them, we’re able to break down our cost per unit of work.”

  He went on to observe, “I’ve been at other organizations and budgeting is just horrible. It’s inefficient and people either underrun or overrun their projections. That doesn’t happen now because those cost underruns and overruns are absorbed or managed by Kyndryl.”

- **Flexible, customer-centric partnership.** ProsperPoint’s IT team appreciates Kyndryl’s broad experience base with multiple technology providers and its unbiased approach to solving the company’s challenges.

  When the interviewees reported on this benefit, the director of employee support services in the engineering industry stated, “[The team at Kyndryl is] more open, more collaborative. I think they’ve had the red tape removed. They’re willing to come to the table with different ideas and there has been more engagement now that [the organization is] Kyndryl.”

- **Willingness to co-innovate and share the benefits.** Over the three-year period of the analysis, Kyndryl brings ProsperPoint several opportunities to deliver services more efficiently, resulting in shared investment recapture for both.

  “Kyndryl comes in and says, ‘Hey, we got a couple options to do some things a little better. You want to do it and share in the savings?’ So there have been some pretty substantial savings from a cost perspective.”

  *CISO, construction*

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

- **Better preparing for next-generation digital transformation opportunities.** The operating and policy improvements resulting from ProsperPoint’s engagement with Kyndryl puts the organization in a better situation to make the next set of changes more successfully.

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

- Quantified cost data as applied to the composite

### Total Costs

<table>
<thead>
<tr>
<th>Ref.</th>
<th>Cost</th>
<th>Initial</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Total</th>
<th>Present Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ftr</td>
<td>Kyndryl fees</td>
<td>$666,023</td>
<td>$4,480,547</td>
<td>$3,490,124</td>
<td>$2,983,005</td>
<td>$11,619,699</td>
<td>$9,864,824</td>
</tr>
<tr>
<td>Gtr</td>
<td>Scoping and Planning</td>
<td>$776,250</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$776,250</td>
<td>$776,250</td>
</tr>
<tr>
<td>Htr</td>
<td>Implementation</td>
<td>$2,328,750</td>
<td>$465,750</td>
<td>$465,750</td>
<td>$465,750</td>
<td>$3,726,000</td>
<td>$3,487,001</td>
</tr>
<tr>
<td></td>
<td>Total costs (risk-adjusted)</td>
<td>$3,771,023</td>
<td>$4,946,297</td>
<td>$3,955,874</td>
<td>$3,448,755</td>
<td>$16,121,949</td>
<td>$14,128,075</td>
</tr>
</tbody>
</table>

### Kyndryl Fees

**Evidence and data.** Since individual interviewees worked at organizations with different digital workplace requirements, their mix of services varied, as did the fees they paid Kyndryl.

**Modeling and assumptions.** In order to model this cost, Forrester asked Kyndryl to prepare a quote for the composite organization (ProsperPoint) using the details outlined in the Customer Journey section:

- A global organization of 20,000 employees.
- ProsperPoint utilized Kyndryl’s Virtualization, Help Desk, and Device Management services.
- Monthly recurring costs for IT services, in particular, trend downward over three years as a result of increased automation as a modern service desk is implemented.

- Pricing is developed based on individual client needs. Contact Kyndryl for additional details.

**Risks.** This cost may vary depending on the individual needs of the client organization, including:

- Number of employees and devices.
- Geographic locations to be managed.
- Services required.
- Opportunities to find and share efficiency gains.

**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 just under $10 million.
SCOPING AND PLANNING

Evidence and data. Interviewees explained that the pre-work required to successfully engage with Kyndryl included assessment of their organizations’ current state, review of RFP respondents, selection of Kyndryl, and planning the rollout of new systems and processes.

The CISO of a global construction company estimated, “negotiating and scoping involved six to seven people full-time for six months, from the legal, finance, IT and business line teams.”

Modeling and assumptions. In order to model this cost, Forrester assumes the following for ProsperPoint:

- Ten employees dedicate 100% of their time over four months for scoping and planning.
- Average fully burdened monthly salary is $16,875.

Risks. Other organizations may experience a different value from this benefit based on the following factors:

- The duration of time dedicated to scoping and planning.

Results. To account for these risks, Forrester adjusted this cost upward by 15%, yielding a three-year, risk-adjusted total PV of $776,000.

### Kyndryl Fees

<table>
<thead>
<tr>
<th>Ref.</th>
<th>Metric</th>
<th>Source</th>
<th>Initial</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>F1</td>
<td>Virtualization services</td>
<td>Kyndryl</td>
<td>$487,229</td>
<td>$732,000</td>
<td>$732,000</td>
<td>$732,000</td>
</tr>
<tr>
<td>F2</td>
<td>IT support services</td>
<td>Kyndryl</td>
<td>$28,000</td>
<td>$3,214,560</td>
<td>$2,262,262</td>
<td>$1,563,396</td>
</tr>
<tr>
<td>F3</td>
<td>Device management</td>
<td>Kyndryl</td>
<td>$119,079</td>
<td>$320,628</td>
<td>$270,900</td>
<td>$247,733</td>
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<tr>
<td>Ft</td>
<td>Kyndryl fees</td>
<td>F1+F2+F3</td>
<td>$634,308</td>
<td>$4,267,188</td>
<td>$3,323,928</td>
<td>$2,840,957</td>
</tr>
</tbody>
</table>

' Risk adjustment 5%

| Ftr  | Kyndryl fees (risk-adjusted) | $666,023 | $4,480,547 | $3,490,124 | $2,983,005 |

Three-year total: $11,619,700

Three-year present value: $9,864,824
Implementing Kyndryl digital workplace services involves both costs and benefits. To assess these, Forrester conducted an analysis of costs. The costs are primarily from the implementation phase and ongoing administration. The analysis includes costs for the following: employee time, salaries, and other resources.

### Implementation

**Evidence and data.** Once the interviewees’ organizations decided to work with Kyndryl, internal teams worked to adjust to the change and integrate its services into their processes.

- The CISO of a construction company told Forrester, “implementation was longer and bumpier than the planning phase. People resist change.”

- The director of employee support services at an engineering consulting firm recalled, “we implemented with a number of soft launches, because we were much less systematized than we or Kyndryl thought at the beginning.”

- In terms of ongoing administration, the associate director of client compute services at a manufacturer explained the need for leaders within their organization to stay involved.

**Modeling and assumptions.** In order to model this cost, Forrester assumes the following for ProsperPoint:

- Sixty employees dedicate 50% of their time over six months to implementation.

- On an ongoing basis, three full-time employees serve as liaisons to Kyndryl (one in each of the areas of Virtualization, Service Desk, and Device Management) in order to ensure smooth operations and communications between the two organizations.

- The average monthly salary per employee is $8,438.

**Risks.** The size of this cost may vary depending on:

- The average salary per employee.

- The number of employees dedicated to implementation and percent of time burdened.

- The duration of time dedicated to implementation.

**Results.** To account for these risks, Forrester adjusted this cost upward by 15%, yielding a three-year, risk-adjusted total PV of almost $3.5 million.
# Implementation

<table>
<thead>
<tr>
<th>Ref.</th>
<th>Metric</th>
<th>Source</th>
<th>Initial</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>People involved</td>
<td>Interviews</td>
<td>60</td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>H2</td>
<td>Portion of workday dedicated</td>
<td>Interviews</td>
<td>50%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>H3</td>
<td>Months of work on Kyndryl implementation</td>
<td>Interviews</td>
<td>6</td>
<td>12</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>H4</td>
<td>Average fully burdened monthly salary</td>
<td>TEI standard</td>
<td>$11,250</td>
<td>$11,250</td>
<td>$11,250</td>
<td>$11,250</td>
</tr>
<tr>
<td>Ht</td>
<td>Implementation and ongoing administration</td>
<td>H1<em>H2</em>H3*H4</td>
<td>$2,025,000</td>
<td>$405,000</td>
<td>$405,000</td>
<td>$405,000</td>
</tr>
<tr>
<td>Htr</td>
<td>Implementation (risk-adjusted)</td>
<td></td>
<td>$2,328,750</td>
<td>$465,750</td>
<td>$465,750</td>
<td>$465,750</td>
</tr>
</tbody>
</table>

|                  | Three-year total: $3,726,000               | Three-year present value: $3,487,001 |
### Financial Summary

**CONSOLIDATED THREE-YEAR RISK-ADJUSTED METRICS**

#### Cash Flow Chart (Risk-Adjusted)

<table>
<thead>
<tr>
<th>Year</th>
<th>Total costs</th>
<th>Total benefits</th>
<th>Cumulative net benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial</td>
<td>($3,771,023)</td>
<td>0</td>
<td>-$3,771,023</td>
</tr>
<tr>
<td>Year 1</td>
<td>($4,946,297)</td>
<td>$11,564,660</td>
<td>$7,798,363</td>
</tr>
<tr>
<td>Year 2</td>
<td>($3,955,874)</td>
<td>$19,005,135</td>
<td>$15,049,261</td>
</tr>
<tr>
<td>Year 3</td>
<td>($3,448,755)</td>
<td>$25,080,085</td>
<td>$21,631,331</td>
</tr>
<tr>
<td>Total</td>
<td>($16,121,950)</td>
<td>$55,649,881</td>
<td>$39,527,931</td>
</tr>
</tbody>
</table>

#### Cash Flow Analysis (Risk-Adjusted Estimates)

<table>
<thead>
<tr>
<th></th>
<th>Initial</th>
<th>Year 1</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Total</th>
<th>Present Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total costs</td>
<td>($3,771,023)</td>
<td>($4,946,297)</td>
<td>($3,955,874)</td>
<td>($3,448,755)</td>
<td>($16,121,950)</td>
<td>($14,128,075)</td>
</tr>
<tr>
<td>Total benefits</td>
<td>0</td>
<td>$11,564,660</td>
<td>$19,005,135</td>
<td>$25,080,085</td>
<td>$55,649,881</td>
<td>$45,063,090</td>
</tr>
<tr>
<td>Net benefits</td>
<td>($3,771,023)</td>
<td>$6,618,363</td>
<td>$15,049,261</td>
<td>$21,631,331</td>
<td>$39,527,931</td>
<td>$30,935,015</td>
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<tr>
<td>ROI</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>219%</td>
</tr>
<tr>
<td>Payback period (months)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>7.0</td>
</tr>
</tbody>
</table>

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.
Appendix A: Total Economic Impact

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

TOTAL ECONOMIC IMPACT APPROACH

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

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

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

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

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

**PRESENT VALUE (PV)**

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

**NET PRESENT VALUE (NPV)**

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

**RETURN ON INVESTMENT (ROI)**

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

**DISCOUNT RATE**

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

**PAYBACK PERIOD**

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

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

2 Kallio, Sami, “80% of the Employee Lost Productivity Caused by IT Support Comes From Just 12.6% of Tickets,” The Service Desk & IT Support Show, October 31, 2022.


4 “The Real Costs of Planned and Unplanned Downtime,” Forrester Consulting, August 2019


6 Ibid.

7 Ibid.