The Total Economic Impact™
Of Zebra Reflexis

Cost Savings And Business Benefits
Enabled By Zebra Reflexis

2022
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ABOUT FORRESTER CONSULTING

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Executive Summary

Adapting to the changing needs of retail customers requires the simplification of corporate and in-store processes in order to improve communications, optimize human resources, and reduce the overall costs of doing business. Unstandardized or manual processes are insufficient to support the type of organizational transformation needed for future success in the retail industry.

Zebra Reflexis helps to streamline corporate and in-store processes. This creates greater retail operational efficiencies, increases worker productivity, and improves customer and coworker communications to allow for more time on the sales floor and a greater focus on high-value activities that improve the customer experience.

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

To better understand the benefits, costs, and risks associated with this investment, Forrester interviewed the representative of an organization who has experience using Zebra Reflexis. Forrester used this experience to project a three-year financial analysis.

Prior to using Zebra Reflexis, the interviewee noted the organization’s processes and practices were fully manual with little to no technological adoption that would increase operational efficiencies either within its corporate office or storefronts.

After the investment in Zebra Reflexis, the interviewee’s organization was able to streamline store-level processes; have visibility into daily, store-level operations; and improve communication between various roles both within stores and the corporate office.

KEY FINDINGS

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

- **Cost savings of $41.9 million through greater ease in scheduling.** With Zebra Reflexis, store managers shift from handwriting and taking photos of schedules for district managers to electronically generating and sending schedules with the click of a button. A store manager saves roughly 5 hours per week on schedule creation through Zebra Reflexis.

- **Labor cost savings of $15 million through increased efficiencies with Zebra Reflexis.** The interviewee’s organization optimizes staffing and increases capacity through Zebra Reflexis. Despite headcount reductions, district managers transition from overseeing 15 stores to 25 stores with Zebra Reflexis and regional managers
increase their scope of responsibility from 100 to 200 stores.

- **Cost savings of $1.7 million through decommissioning legacy solutions.** The interviewee’s organization’s investment in Zebra Reflexis allows it to decommission an expensive, antiquated document repository.

- **Cost savings of $289,500 through a reduction in meal break violations.** Zebra Reflexis offers the organization visibility into routine store operations that wasn’t feasible prior to its investment in the solution. The interviewee’s organization reduces expenses associated with meal break violations with the solution’s ability to anticipate when a store associate is close to missing their allotted break time and then intervening.

- **Revenue of $176,200 generated from monetizing vendor access to Zebra Reflexis’ document repository.** The interviewee’s organization captures new revenue by monetizing access to its new document repository. This is where vendors can upload product information, trainings, and new product launch collateral.

**Unquantified benefits.** Benefits that are not quantified for this study include:

- **Greater ease in staying compliant with labor laws.** Before Zebra Reflexis, the interviewee’s organization reported challenges associated with the degree of manual follow-up required to ensure stores completed compliance tasks. With Zebra Reflexis, the corporate office has visibility into the nuances of local labor laws; can easily see which stores are in or out of compliance; and perform follow-ups as needed.

- **Reduction in store associates’ early clock-ins and late clock-outs.** Store associates are not able to clock in more than a few minutes early and store managers receive alerts if employees clock out more than a few minutes late with Zebra Reflexis. The reduction in store associate time violations creates a cost savings for the interviewee’s organization.

- **Reduction in overtime spend.** Reactivity to overtime spend was an organizational pain point the interviewee expressed. The transparency into daily store operations and automated labor scheduling that Zebra Reflexis offers allows the interviewee’s organization to be more proactive in mitigating unnecessary overtime spend.

- **Greater efficiency in handling product recalls.** When a vendor initiates product recalls, the store has a limited window to fully process the recall and submit a request for co-op dollars to the product’s vendor. The Zebra Reflexis store execution and task management solution allows the organization to maximize their vendor co-op dollars by processing recalls more efficiently across stores.

**Costs.** Risk-adjusted PV costs include:

- **Invested $620,000 to deploy Zebra Reflexis.** The one-time implementation fee the interviewee’s organization pays includes all key implementation activities for Zebra Reflexis and initial training.

- **Spent $3.5 million on vendor licensing costs and labor associated with ongoing solution management.** Zebra offers licensing fees for a five-year lock-in period. The interviewee’s organization pays $661,865 in vendor licensing and pays $498,114 in internal ongoing labor costs to maintain the solution.

- **Allocated $9.1 million to internal recurring training.** The interviewees’ organization employs a top-down, train-the-trainer model to internally train and orient new district managers, store managers, and store associates to the Zebra Reflexis solution.
The interview and financial analysis found that the interviewee’s organization experiences benefits of $59.01 million over three years versus costs of $13.16 million, adding up to a net present value (NPV) of $45.85 million and an ROI of 348%. 
EXECUTIVE SUMMARY

**ROI**
348%

**Benefits PV**
$59.01M

**NPV**
$45.85M

**Payback**
<6 months

---

**Benefits (Three-Year)**

- Schedule creation cost savings with Zebra Reflexis: $41.9M
- Labor savings from increased efficiencies with Zebra Reflexis: $15.0M
- Cost savings from decommissioning legacy solutions: $1.8M
- Cost savings through a reduction in meal break violations: $289.5K
- License fees captured through vendor access to document repository: $176.2K
TEI FRAMEWORK AND METHODOLOGY

From the information provided in the interview, Forrester constructed a Total Economic Impact™ framework for those organizations considering an investment in Zebra Reflexis.

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 Zebra Reflexis can have on an organization.

DUE DILIGENCE
Interviewed 4 stakeholders and a Forrester analyst to gather data relative to Zebra Reflexis.

INTERVIEW
Interviewed the representative of an organization using Zebra Reflexis to obtain data with respect to costs, benefits, and risks.

FINANCIAL MODEL FRAMEWORK
Constructed a financial model representative of the interview using the TEI methodology and risk-adjusted the financial model based on issues and concerns of the interviewee.

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 Zebra 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 Zebra Reflexis.

Zebra 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.

Zebra provided the customer name for the interview but did not participate in the interview.
The Zebra Reflexis Customer Journey

Drivers leading to the Zebra Reflexis investment

INTERVIEWEE’S ORGANIZATION
Forrester interviewed the representative of an organization who has experience using Zebra Reflexis. Their organization has the following characteristics:

- Four billion dollars in revenue.
- Four thousand retail stores that have adopted Zebra Reflexis.
- Twenty-two thousand employees.
- Multinational company with headquarters in the US.

KEY CHALLENGES
Before the organization’s investment in Zebra Reflexis, the interviewee noted how their organization struggled with:

- The degree of manual work required to execute core operational processes. The interviewees shared: “We had no automated feedback from the field [like if] we used email to send tasks out to the stores… Everything was done by paper, so they would receive mail every couple of weeks. That’s when new policies would show up and the store managers would have to sign off on paper that they’ve enacted the new policies.” The interviewee continued, “Then there would be an audit or an inspection by a District Manager or someone from loss prevention to check if they’d actually completed the task.”

- Lack of visibility to core operations. The interviewee’s organization had no visibility into what was happening in stores on a daily basis. The interviewee offered, “All information we were able to get was after the fact.”

- Difficulty managing vendor requirements. The interviewee noted: “We had vendors requiring proof that things were being done with their investments. … So, the completion of vendor related projects was key.”

“[Prior to deployment], we couldn’t see schedules. It was difficult to track overtime. We couldn’t control meal breaks and violations.”

Director of technology, beauty supply

“[Prior to deployment], if we wanted to know if something got completed on time, it was like a phone chain. District managers would call all of their stores, get the information, and feed it back up.”

Director of technology, beauty supply
SOLUTION REQUIREMENTS

The interviewee’s organization had an expensive legacy document repository that needed to be fully replaced. That became a limitation for many solution vendors being considered alongside Zebra Reflexis.

Another important factor in the interviewee’s decision to move forward with Zebra Reflexis was the ability to seamlessly integrate Workforce Management, Task Management, and other solutions without needing to toggle between applications or separate sign-ons. The interviewee acknowledged, “There might have been another company that looked better on the surface because it seemed like they had a better task system, but they didn’t have workforce management and vice versa.”

After completing the business case and evaluating multiple vendors, the interviewee’s organization chose Zebra Reflexis and began deployment.

USE CASE DESCRIPTION

The interviewee’s organization has been in live production with Zebra Reflexis for approximately four years.

For this use case, Forrester has modeled benefits and costs over the first three years.

"We considered several top vendors in the space, but Zebra Reflexis was the only one that offered us everything we needed."

— Director of technology, beauty supply
## Analysis Of Benefits

- Quantified benefit data

### 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>Schedule creation cost savings with Zebra Reflexis</td>
<td>$16,828,531</td>
<td>$16,828,531</td>
<td>$16,828,531</td>
<td>$50,485,594</td>
<td>$41,850,066</td>
</tr>
<tr>
<td>Btr</td>
<td>Labor savings from increased efficiencies with Zebra Reflexis</td>
<td>$3,978,000</td>
<td>$6,018,000</td>
<td>$8,568,000</td>
<td>$18,564,000</td>
<td>$15,027,183</td>
</tr>
<tr>
<td>Ctr</td>
<td>Cost savings from decommissioning legacy solutions</td>
<td>$649,988</td>
<td>$680,000</td>
<td>$680,000</td>
<td>$2,009,988</td>
<td>$1,663,776</td>
</tr>
<tr>
<td>Dtr</td>
<td>Cost savings through a reduction in meal break violations</td>
<td>$108,000</td>
<td>$117,000</td>
<td>$126,000</td>
<td>$351,000</td>
<td>$289,542</td>
</tr>
<tr>
<td>Etr</td>
<td>License fees captured through vendor access to document repository</td>
<td>$54,000</td>
<td>$72,000</td>
<td>$90,000</td>
<td>$216,000</td>
<td>$176,213</td>
</tr>
<tr>
<td></td>
<td><strong>Total benefits (risk-adjusted)</strong></td>
<td><strong>$21,618,519</strong></td>
<td><strong>$23,715,531</strong></td>
<td><strong>$26,292,531</strong></td>
<td><strong>$71,626,582</strong></td>
<td><strong>$59,006,780</strong></td>
</tr>
</tbody>
</table>

### SCHEDULE CREATION COST SAVINGS WITH ZEBRA REFLEXIS

**Evidence and data.** Prior to investing in Zebra Reflexis, store managers had to manually create, update, and send, via photograph, store associate schedules to district managers.

With Zebra Reflexis, store managers saved time by digitally creating, updating, and electronically sending schedules to district managers. Store managers could easily produce schedules that were in accordance with local and federal labor laws.

The interviewee said, “Now district managers can look at Zebra Reflexis, see a schedule for a given store, make recommendations for changes, and help store managers through the scheduling process.”

**Modeling and assumptions.** Based on the Zebra Reflexis customer interview, Forrester estimates the following:

- The organization transitions from a fully manual environment, with no technical tool in place, to the digital solution to create operational efficiencies.
- Store managers save five hours per week on scheduling tasks.
- There are four thousand FTE store managers within the US.
- Ninety percent of the productivity realized through scheduling efficiencies is attributed to Zebra Reflexis.
• Store managers are able to recapture 80% of the time savings and invest the time in higher-value activities.

**Risks.** This benefit can vary by organization due to the following factors:

• Store manager hours saved per week or year.

• Number of store managers staffed.

• FTE hourly pay rate for store managers.

**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 $41.9 million.

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### Schedule Creation Cost Savings With Zebra Reflexis

<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>Store manager time spent per week on scheduling before Zebra Reflexis</td>
<td>Interview</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>A2</td>
<td>Store manager time spent per week on scheduling with Zebra Reflexis</td>
<td>Interview</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>A3</td>
<td>Annual number of hours saved per store manager with Zebra Reflexis</td>
<td>(A1-A2)*52</td>
<td>260</td>
<td>260</td>
<td>260</td>
</tr>
<tr>
<td>A4</td>
<td>Number of store managers</td>
<td>Interview</td>
<td>4,000</td>
<td>4,000</td>
<td>4,000</td>
</tr>
<tr>
<td>A5</td>
<td>FTE hourly rate for store managers</td>
<td>TEI standard</td>
<td>$26.44</td>
<td>$26.44</td>
<td>$26.44</td>
</tr>
<tr>
<td>A6</td>
<td>Attribution to Zebra Reflexis</td>
<td>TEI standard</td>
<td>90%</td>
<td>90%</td>
<td>90%</td>
</tr>
<tr>
<td>A7</td>
<td>Productivity recapture</td>
<td>TEI standard</td>
<td>80%</td>
<td>80%</td>
<td>80%</td>
</tr>
<tr>
<td>At</td>
<td>Schedule creation cost savings with Zebra Reflexis</td>
<td>(A3<em>A4)<em>A5</em>A6</em>A7</td>
<td>$19,798,272</td>
<td>$19,798,272</td>
<td>$19,798,272</td>
</tr>
</tbody>
</table>

| Risk adjustment | ↓ 15% |

| Atr | Schedule creation cost savings with Zebra Reflexis (risk-adjusted) | $16,828,531 | $16,828,531 | $16,828,531 |

| Three-year total: $50,485,594 | Three-year present value: $41,850,066 |

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### LABOR SAVINGS FROM INCREASED EFFICIENCIES WITH ZEBRA REFLEXIS

**Evidence and data.** Given the opportunity to automate previously manual, time-consuming tasks and streamline operations, the interviewee’s organization is able to do more with less. The increased productivity realized through adopting the Zebra Reflexis solution led to more efficient use of labor over a three-year period.

• While the organization reduced headcounts for both district and regional managers, their capacities increased. With Zebra Reflexis, district managers increased their store count by 10, growing their capacity from 15 stores to 25 stores. Regional managers increased their store count by 100, shifting from 100 to 200 stores.

• The interviewee reported: “We couldn’t have increased capacity for our district and regional managers without Zebra Reflexis. They [district managers] could be more efficient at 25 stores than they were at 15 stores. [Previously] in order to find out what was happening in all 15 stores, they had to physically go to those stores. Now...
they have a tool that they can [use to] remotely look into all the details.”

- With Zebra Reflexis, both district and regional managers had visibility into their stores to understand where there may be opportunities to complete outstanding tasks. It helped them prioritize their work better.

- Additionally, Zebra Reflexis offered specific guidance for how to approach tasks more efficiently. The interviewee stated, “If the [store manager or the store team had] 100 hours in the week and we’re giving them 110 hours’ worth of tasks, that’s a problem. Prior to Zebra Reflexis, regional and district managers had to manually balance task allocation and figure out how many tasks stores are actually being given each week against how much tasks they should be receiving.”

- The Task Management system allowed the retail organization to understand how much work is allocated across stores and ensured the work is reasonable and balanced as to not interfere with time on the sales floor.

**Modeling and assumptions.** Based on the Zebra Reflexis customer interview, Forrester estimates the following:

- Regional manager headcount reduction of three in Year 1, an additional two in Year 2, and one in Year 3.

- Annual FTE salary is $150,000 for regional managers.

- District manager headcount reduction of 60 in Year 1, an additional 30 in Year 2, and 40 in Year 3.

- Annual FTE salary is $90,000 for district managers.

- Eighty percent of the labor savings realized is directly attributable to Zebra Reflexis.

**Risks.** This benefit can vary by organization due to the following factors:

- Number of regional managers staffed before Zebra Reflexis.

- Number of regional managers staffed with Zebra Reflexis.

- FTE hourly pay rate for regional managers.

- Number of district managers staffed before Zebra Reflexis.

- Number of district managers staffed with Zebra Reflexis.

- FTE hourly pay rate for district managers.

**Results.** To account for these risks, Forrester adjusted this benefit downward by 15%, yielding a three-year, risk-adjusted total PV of about $15 million.
COST SAVINGS FROM DECOMMISSIONING LEGACY SOLUTIONS

Evidence and data. The interviewee’s organization invested in Zebra Reflexis with the intention of replacing an expensive legacy document repository that had been in place for many years.

The organization’s IT team owned the legacy repository. During the decommissioning process, the IT admin for the repository was solely concerned with eliminating the licensing for the old repository. The store operations team was responsible for taking content from the old repository and loading those documents into Zebra Reflexis.

Modeling and assumptions. Based on the Zebra Reflexis customer interview, Forrester estimates the following:

- Legacy system licensing costs are $800,000.
- Three corporate store operations associates are responsible for transitioning documents from the old system to Zebra Reflexis.
- The organization takes three months to roll off the legacy repository.
- The hourly rate of an FTE corporate store operations associate is $43.27.
- A corporate store operations associate spends 160 hours in the first month decommissioning, 80 hours in the second month, and 32 hours in the third month.

Risks. This benefit can vary by organization due to the following factors:

- Legacy system licensing costs.
- Number of systems to be decommissioned.

### Labor Savings from Increased Efficiencies With Zebra Reflexis

<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>Number of regional managers before Zebra Reflexis</td>
<td>Interview</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>B2</td>
<td>Number of regional managers with Zebra Reflexis</td>
<td>Interview</td>
<td>97</td>
<td>95</td>
<td>94</td>
</tr>
<tr>
<td>B3</td>
<td>Annual FTE salary for regional managers</td>
<td>TEI standard</td>
<td>$150,000</td>
<td>$150,000</td>
<td>$150,000</td>
</tr>
<tr>
<td>B4</td>
<td>Subtotal: Labor savings for regional manager role</td>
<td>(B1<em>B3) - (B2</em>B3)</td>
<td>$450,000</td>
<td>$750,000</td>
<td>$900,000</td>
</tr>
<tr>
<td>B5</td>
<td>Number of district managers before Zebra Reflexis</td>
<td>Interview</td>
<td>330</td>
<td>330</td>
<td>330</td>
</tr>
<tr>
<td>B6</td>
<td>Number of district managers with Zebra Reflexis</td>
<td>Interview</td>
<td>270</td>
<td>240</td>
<td>200</td>
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<tr>
<td>B7</td>
<td>Annual FTE salary for district managers</td>
<td>TEI standard</td>
<td>$90,000</td>
<td>$90,000</td>
<td>$90,000</td>
</tr>
<tr>
<td>B8</td>
<td>Subtotal: Labor savings related to district manager role</td>
<td>(B5<em>B7) - (B6</em>B7)</td>
<td>$5,400,000</td>
<td>$8,100,000</td>
<td>$11,700,000</td>
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<tr>
<td>B9</td>
<td>Attribution to Zebra Reflexis</td>
<td>Interview</td>
<td>80%</td>
<td>80%</td>
<td>80%</td>
</tr>
<tr>
<td>Bt</td>
<td>Labor savings from increased efficiencies with Zebra Reflexis</td>
<td>(B4+B8)*B9</td>
<td>$4,680,000</td>
<td>$7,080,000</td>
<td>$10,080,000</td>
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<tr>
<td>Btr</td>
<td>Labor savings from increased efficiencies with Zebra Reflexis (risk-adjusted)</td>
<td>(B4+B8)*B9</td>
<td>$3,978,000</td>
<td>$6,018,000</td>
<td>$8,568,000</td>
</tr>
</tbody>
</table>

**Three-year total:** $18,564,000  
**Three-year present value:** $15,027,183
• Staff role required to decommission legacy infrastructure.
• Number of individuals required to aid the decommissioning process.
• Amount of time needed to decommission the legacy solution.
• Hourly FTE rate for corporate store operations associates.
• Phased rate of decommissioning.

**Results.** To account for these risks, Forrester adjusted this benefit downward by 15%, yielding a three-year, risk-adjusted total PV of about $1.7 million.

### Cost Savings From Decommissioning Legacy Solutions

<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>C1</td>
<td>Licensing costs for legacy solutions that Zebra Reflexis Workforce Management &amp; Task Management replaced</td>
<td>Interview</td>
<td>$800,000</td>
<td>$800,000</td>
<td>$800,000</td>
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<tr>
<td>C2</td>
<td>Number of corporate store operations associates</td>
<td>Interview</td>
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<td>3</td>
<td>3</td>
</tr>
<tr>
<td>C3</td>
<td>Number of hours spent decommissioning</td>
<td>Interview</td>
<td>272</td>
<td>0</td>
<td>0</td>
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<tr>
<td>C4</td>
<td>FTE corporate store operations associate hourly rate</td>
<td>TEI standard</td>
<td>$43.27</td>
<td>$43.27</td>
<td>$43.27</td>
</tr>
<tr>
<td>C5</td>
<td>Subtotal: Labor costs for decommissioning process</td>
<td>C2*(C3*C4)</td>
<td>$35,308</td>
<td>$0</td>
<td>$0</td>
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<tr>
<td>Ct</td>
<td>Cost savings from decommissioning legacy solutions</td>
<td>C1-C5</td>
<td>$764,692</td>
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<tr>
<td>Ctr</td>
<td>Cost savings from decommissioning legacy solutions (risk-adjusted)</td>
<td>↓ 15%</td>
<td>$649,988</td>
<td>$680,000</td>
<td>$680,000</td>
</tr>
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</table>

**Three-year total: $2,009,988**

**Three-year present value: $1,663,776**

### COST SAVINGS THROUGH A REDUCTION IN MEAL BREAK VIOLATIONS

**Evidence and data.** Before Zebra Reflexis, the interviewee’s organization had no visibility into meal break violations. It was more reactive in its response to addressing the violations. Daily operations were fully manual before Zebra Reflexis, there was no warning sent to an associate that they are close to missing their allotted break time. Employees would then often miss their break, resulting in a violation.

Store associates missing their break time resulted in labor law violations and added expenses for the organization. With Zebra Reflexis, the interviewee’s organization experienced a reduction in these violations. There was, however, an added ability for
store associates to waive meal breaks if they prefer not to take their break or change the time of their break. This created more flexibility and visibility throughout the organization.

**Modeling and assumptions.** Based on the Zebra Reflexis customer interview, Forrester estimates the following:

- Without Zebra Reflexis, expected annual fines would be $240,000 in Year 1, $220,000 in Year 2, and $200,000 in Year 3.
- With Zebra Reflexis, the organization’s annual fines were $120,000 in Year 1, $90,000 in Year 2, and $60,000 in Year 3.

**Risks.** This benefit can vary by organization due to the following factors:

- Amount paid in fines prior to Zebra Reflexis.
- Amount paid in fines with Zebra Reflexis.
- Annual savings on meal break violations

**Results.** To account for these risks, Forrester adjusted this benefit downward by 10%, yielding a three-year, risk-adjusted total PV of about $289,500.

### Cost Savings Through a Reduction in Meal Break Violations

<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>Annual fines paid for meal break violations before Zebra Reflexis</td>
<td>Interview</td>
<td>$240,000</td>
<td>$220,000</td>
<td>$200,000</td>
</tr>
<tr>
<td>E2</td>
<td>Annual fines paid for meal break violations with Zebra Reflexis</td>
<td>Interview</td>
<td>$120,000</td>
<td>$90,000</td>
<td>$60,000</td>
</tr>
<tr>
<td>E1-E2</td>
<td>Cost savings through a reduction in meal break violations</td>
<td>E1-E2</td>
<td>$120,000</td>
<td>$130,000</td>
<td>$140,000</td>
</tr>
<tr>
<td></td>
<td>Risk adjustment</td>
<td></td>
<td>↓10%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Etr</td>
<td>Cost savings through a reduction in meal break violations (risk-adjusted)</td>
<td></td>
<td>$108,000</td>
<td>$117,000</td>
<td>$126,000</td>
</tr>
</tbody>
</table>

Three-year total: $351,000

**LICENSE FEES CAPTURED THROUGH VENDOR ACCESS TO DOCUMENT REPOSITORY**

**Evidence and data.** An added capability Zebra Reflexis offered the interviewee’s organization is the ability to monetize their new document repository.

The interviewee shared: “We wanted to be able to give our vendor partners access to the document repository so they could upload their product knowledge, product trainings, and new product launch materials so stores would have self-service access to this information. While it’s not a requirement for vendors to pay to integrate with this repository, it’s a great value to us. We’re a key distributor for these major brands, and exclusive in many cases, so it’s important to have that connection.”

**Modeling and assumptions.** Based on the Zebra Reflexis customer interview, Forrester estimates the following:

- Thirty vendors pay to access the repository in Year 1, 40 vendors in Year 2, and 50 vendors in Year 3.
- It costs $2,000 annually for vendors to access the repository.

**Risks.** This benefit can vary by organization due to the following factors:

- Number of vendors accessing the repository.
• Annual cost vendors must pay to access the repository.

Results. To account for these risks, Forrester adjusted this benefit downward by 10%, yielding a three-year, risk-adjusted total PV of about $176,200.

<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>D1</td>
<td>Number of vendors paying for access to document repository</td>
<td>Interview</td>
<td>30</td>
<td>40</td>
<td>50</td>
</tr>
<tr>
<td>D2</td>
<td>Annual cost for vendors to gain access to document repository</td>
<td>Interview</td>
<td>$2,000</td>
<td>$2,000</td>
<td>$2,000</td>
</tr>
<tr>
<td>Dt</td>
<td>License fees captured through vendor access to document repository</td>
<td>D1*D2</td>
<td>$60,000</td>
<td>$80,000</td>
<td>$100,000</td>
</tr>
<tr>
<td>Dtr</td>
<td>License fees captured through vendor access to document repository (risk-adjusted)</td>
<td>↓10%</td>
<td>$54,000</td>
<td>$72,000</td>
<td>$90,000</td>
</tr>
</tbody>
</table>

Three-year total: $216,000
Three-year present value: $176,213

UNQUANTIFIED BENEFITS

Additional benefits that the customer experienced but was not able to quantify include:

• **Greater ease in staying compliance with labor laws.** Zebra Reflexis allows the interviewee’s organization to manage federal and local labor law compliance more easily. The interviewee offered: “For example, in the state of Oregon, you can’t change an associate’s schedule once it’s posted. With the prior [solution], that was manual and largely paper based. It was very hard to track schedules and track changes. Now, we are able to see all of these intricacies within various states and jurisdictions so that we can manage compliance and payroll much better.”

• **Reduction in store operations associates’ early clock-ins and late clock-outs.** Because of greater visibility into daily store operations, store managers can easily see if employees are clocking in too early or staying late. Before Zebra Reflexis, the interviewee’s organization reported time violations for both early clock-ins and late clock-outs; however, with the solution, store associates aren’t able to clock in more than a few minutes early or clock out more than a few minutes late.

• **Reduction in overtime spend.** In the prior environment, the interviewee’s organization wasn’t able to anticipate overtime spend. The interviewee shared: “It wasn’t until we saw the profit and loss statement that we would [know] what we spent in regular pay and overtime pay. Now, we can see when a store associate is headed toward overtime based off of how many hours they’ve worked so far this week and how many hours they’re scheduled for. We can efficiently ensure that doesn’t happen.”

“Before Zebra Reflexis, we were reactive to overtime spend.”

*Director of technology, beauty supply*
With Zebra Reflexis, the interviewee’s organization is able to be more predictive about overtime spend and ensure it is accounted for. It has the ability to analyze trends on a weekly basis, project where those dollars will be, and adjust payroll spend as needed.

- **Greater efficiency in handling product recalls.** When a vendor initiates a product recall, it provides a short window for the retail store to manage the recall process with little margin for error. With Zebra Reflexis, district managers now have the ability to see which stores have completed the recall and which stores have not. This allows for them to send a follow-up to delinquent stores and urge them to complete the task.

  The interviewee said: “Zebra Reflexis has allowed us to track the product recall timeframe much better across stores. … If we process the product outside of the window of allotted time, we aren’t able to make a submission for co-op dollars. Time is of the essence.”

**FLEXIBILITY**

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

- **Remote workforce management.** The COVID-19 pandemic has had a profound impact on retail store operations. During the height of COVID-19 infection rates, district and regional managers were unable to travel and had to adjust to operating in a fully remote environment. Zebra Reflexis has been a critical tool for district and regional managers to oversee operations without having to physically step foot in a retail store.

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

“*We put in specific virtual tools like a virtual store visit for district managers.*”

*Director of technology, beauty supply*

*Now we are able to maximize our co-op dollars from the vendor.*

*Director of technology, beauty supply*
Analysis Of Costs

Quantified cost data

### 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>F1</td>
<td>Planning and project management</td>
<td>$540,000</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$540,000</td>
<td></td>
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<td>Initial implementation costs</td>
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<td>$0</td>
<td>$0</td>
<td>$0</td>
<td>$540,000</td>
<td></td>
</tr>
<tr>
<td>Ft</td>
<td>Initial implementation costs</td>
<td>$540,000</td>
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<td>$0</td>
<td>$0</td>
<td>$540,000</td>
<td></td>
</tr>
<tr>
<td>Gtr</td>
<td>Ongoing internal management, support</td>
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<td>$1,391,975</td>
<td>$1,391,975</td>
<td>$1,391,975</td>
<td>$4,175,925</td>
<td>$3,461,636</td>
</tr>
<tr>
<td></td>
<td>and licensing costs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Htr</td>
<td>Recurring internal training costs</td>
<td>$0</td>
<td>$3,648,883</td>
<td>$3,648,883</td>
<td>$3,648,883</td>
<td>$10,946,650</td>
<td>$9,074,232</td>
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<tr>
<td>Ttr</td>
<td>Total costs (risk-adjusted)</td>
<td>$621,000</td>
<td>$5,040,858</td>
<td>$5,040,858</td>
<td>$5,040,858</td>
<td>$15,743,575</td>
<td>$13,156,868</td>
</tr>
</tbody>
</table>

### INITIAL IMPLEMENTATION COSTS

**Evidence and data.** The interviewee’s organization paid $540,000 for the initial deployment of the Zebra Reflexis solution. The $540,000 is a one-time fee that encompasses all phases of the implementation, including initial end user training offered by Zebra.

- The organization utilized Zebra Reflexis for the Task Management implementation process. For Workforce Management, the organization utilized one of Zebra Reflexis’ implementation partners.
- The phased rollout of Zebra Reflexis began with a pilot group of stores in the US. After a few weeks, the organization expanded access to the entire region and, finally, all of North America.

**Modeling and assumptions.** Based on the Zebra Reflexis customer interview, Forrester estimates the one-time up front implementation fee is $540,000.

**Risks.** This cost can vary by organization due to the following factors:

- Initial implementation costs.
- Scope of initial implementation, as additional configuration or customization needs may result in higher costs or an extended implementation timeline.

**Results.** To account for these risks, Forrester adjusted this cost upward by 15%, yielding a three-year, risk-adjusted total PV (discounted at 10%) of $621,000.

### Initial Implementation Costs

<table>
<thead>
<tr>
<th>Ref.</th>
<th>Metric</th>
<th>Source</th>
<th>Initial</th>
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<th>Year 2</th>
<th>Year 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>F1</td>
<td>Planning and project management</td>
<td>Interview</td>
<td>$540,000</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>Ft</td>
<td>Initial implementation costs</td>
<td>Interview</td>
<td>$540,000</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td></td>
<td>Risk adjustment</td>
<td>↑ 15%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ttr</td>
<td>Initial implementation costs</td>
<td></td>
<td>$540,000</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td></td>
<td>(risk-adjusted)</td>
<td></td>
<td>$621,000</td>
<td>$0</td>
<td>$0</td>
<td>$0</td>
</tr>
</tbody>
</table>

Three-year total: $621,000

Three-year present value: $621,000
ONGOING MANAGEMENT, SUPPORT, AND LICENSING COSTS

Evidence and data. Zebra Reflexis' generally offers its licensing model through a five-year lock-in period. All solutions combined for the interviewee’s organization cost $661,865.

For the interviewee’s organization, IT admin, corporate content creators, corporate communications managers, and corporate workforce program managers handle ongoing support of Zebra Reflexis.

- The IT admin spent 10% of their time during the year fielding higher-level maintenance and upgrade requests.
- For the Task Manager solution, there are two corporate communications managers that spent 50% of their time throughout the year on Zebra Reflexis. They served as communications specialists.
- In addition to the corporate communications managers, the interviewee’s organization staffed four corporate content creators that spent 20% of their time throughout the year in Task Manager. This is dedicated to creating the content that is ultimately sent to the corporate communications managers to make sure it’s the right fit for the publication.
- For Workforce Manager, two corporate workforce program managers dedicated 100% of their time to Zebra Reflexis.

Modeling and assumptions. Based on the Zebra Reflexis customer interview, Forrester estimates the following:

- Four corporate content creators spend 20% of their time in Task Manager.
- Two corporate communications managers spend 50% of their time in Task Manager.
- Two corporate workforce program managers spend 100% of their time in Workforce Manager.

Results. To account for these risks, Forrester adjusted this cost upward by 20%, yielding a three-year, risk-adjusted total PV of about $3,500,000.

- It costs $661,865 in annual licensing for Zebra Reflexis.
- One IT admin spends 10% of their time on ongoing management of Zebra Reflexis.
## Ongoing Management, Support, And Licensing Costs

<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>G1</td>
<td>Annual Zebra Reflexis licensing costs</td>
<td>Interview</td>
<td>$661,865</td>
<td>$661,865</td>
<td>$661,865</td>
<td></td>
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<tr>
<td>G2</td>
<td>Number of IT admins supporting Zebra Reflexis on an ongoing basis</td>
<td>Interview</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>G3</td>
<td>FTE IT Admin hourly rate</td>
<td>TEI Standard</td>
<td>$61.54</td>
<td>$61.54</td>
<td>$61.54</td>
<td></td>
</tr>
<tr>
<td>G4</td>
<td>Number of hours spent per year supporting Zebra Reflexis (at 10% of FTE hours)</td>
<td>(10%*40)*52</td>
<td>208</td>
<td>208</td>
<td>208</td>
<td></td>
</tr>
<tr>
<td>G5</td>
<td>Subtotal: Annual internal labor costs for IT admin</td>
<td>G2<em>G3</em>G4</td>
<td>$12,800</td>
<td>$12,800</td>
<td>$12,800</td>
<td></td>
</tr>
<tr>
<td>G6</td>
<td>Number of corporate content creators managing Zebra Task Manager</td>
<td>Interview</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>G7</td>
<td>FTE corporate content creator hourly rate</td>
<td>TEI Standard</td>
<td>$51.28</td>
<td>$51.28</td>
<td>$51.28</td>
<td></td>
</tr>
<tr>
<td>G8</td>
<td>Number of hours per year spent on Zebra Reflexis</td>
<td>(20%*40)*52</td>
<td>416</td>
<td>416</td>
<td>416</td>
<td></td>
</tr>
<tr>
<td>G9</td>
<td>Subtotal: Annual internal labor costs for corporate content creators managing Zebra Task Manager</td>
<td>H6<em>H7</em>H8</td>
<td>$85,330</td>
<td>$85,330</td>
<td>$85,330</td>
<td></td>
</tr>
<tr>
<td>G10</td>
<td>Number of corporate communications managers managing Zebra Task Manager</td>
<td>Interview</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>G11</td>
<td>FTE corporate communications manager hourly rate</td>
<td>TEI Standard</td>
<td>$76.92</td>
<td>$76.92</td>
<td>$76.92</td>
<td></td>
</tr>
<tr>
<td>G12</td>
<td>Number of hours per week spent on Zebra Reflexis</td>
<td>(50%*40)*52</td>
<td>1,040</td>
<td>1,040</td>
<td>1,040</td>
<td></td>
</tr>
<tr>
<td>G13</td>
<td>Subtotal: Annual internal labor costs for corporate communications managers managing Zebra Task Manager</td>
<td>G10<em>G11</em>G12</td>
<td>$159,994</td>
<td>$159,994</td>
<td>$159,994</td>
<td></td>
</tr>
<tr>
<td>G14</td>
<td>Number of corporate workforce program managers managing Zebra Workforce Manager</td>
<td>Interview</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>G15</td>
<td>FTE corporate workforce program managers hourly rate</td>
<td>Interview</td>
<td>$57.69</td>
<td>$57.69</td>
<td>$57.69</td>
<td></td>
</tr>
<tr>
<td>G16</td>
<td>Number of hours per week spent on Zebra Task Manager</td>
<td>40*52</td>
<td>2,080</td>
<td>2,080</td>
<td>2,080</td>
<td></td>
</tr>
<tr>
<td>G17</td>
<td>Subtotal: Annual internal labor costs for workforce program managers managing Zebra Task Manager</td>
<td>G14<em>G15</em>G16</td>
<td>$239,990</td>
<td>$239,990</td>
<td>$239,990</td>
<td></td>
</tr>
<tr>
<td>Gt</td>
<td>Ongoing management, support and licensing costs</td>
<td>G1+G5+G9+G13+G17</td>
<td>$0</td>
<td>$1,159,979</td>
<td>$1,159,979</td>
<td>$1,159,979</td>
</tr>
</tbody>
</table>

**Risk adjustment**

↑ 20%

### Three-year total: $4,175,925

### Three-year present value: $3,461,636

---

### RECURRING TRAINING COSTS

**Evidence and data.** The interviewee’s organization adopted a top-down, train-the-trainer model to meet ongoing training needs and account for employee turnover.

- In the organization's train-the-trainer model, the district manager trainers and store manager trainers performed the training. The district manager trainers were responsible for training district managers, the store manager trainers worked to train other store managers, and store managers trained the store associates.
The district manager trainers had the same pay rate as the district managers, but they received a bonus for every district manager they trained. On average, the district manager trainers received a $3,000 annual bonus.

**Modeling and assumptions.** Based on the Zebra Reflexis customer interview, Forrester estimates the following:

- Three district manager trainers spend 2,080 hours training per year.
- The FTE hourly rate for a district manager trainer is $46.15 with an average annual bonus of $3,000.
- Fifty store manager trainers spend 1,664 hours training per year.
- The FTE hourly rate for store manager trainers is $26.
- About 4,000 store managers spend five hours per year training store associates.
- The organization experiences 10% turnover for district managers, 30% turnover for store managers, and 100% turnover for store associates.

**Results.** To account for these risks, Forrester adjusted this cost upward by 20%, yielding a three-year, risk-adjusted total PV of about $9,100,000.
## Internal Recurring Training Costs

<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>Number of district manager trainers training district managers</td>
<td>Interview</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>H2</td>
<td>FTE hourly rate for district manager trainer</td>
<td>TEI standard</td>
<td>$46.15</td>
<td>$46.15</td>
<td>$46.15</td>
<td></td>
</tr>
<tr>
<td>H3</td>
<td>Number of hours spent per year training district managers</td>
<td>Interview</td>
<td>2,080</td>
<td>2,080</td>
<td>2,080</td>
<td></td>
</tr>
<tr>
<td>H4</td>
<td>Average district manager trainer annual bonus</td>
<td>Interview</td>
<td>$3,000</td>
<td>$3,000</td>
<td>$3,000</td>
<td></td>
</tr>
<tr>
<td>H5</td>
<td>Subtotal: Training costs for district managers</td>
<td>H1*(H2*H3)+H4</td>
<td>$290,976</td>
<td>$290,976</td>
<td>$290,976</td>
<td></td>
</tr>
<tr>
<td>H6</td>
<td>Number of store manager trainers</td>
<td>Interview</td>
<td>50</td>
<td>50</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>H7</td>
<td>FTE hourly rate for store manager trainers</td>
<td>TEI standard</td>
<td>$26.44</td>
<td>$26.44</td>
<td>$26.44</td>
<td></td>
</tr>
<tr>
<td>H8</td>
<td>Number of hours spent per year training store managers</td>
<td>Interview</td>
<td>1,664</td>
<td>1,664</td>
<td>1,664</td>
<td></td>
</tr>
<tr>
<td>H9</td>
<td>Subtotal: Training costs for store managers</td>
<td>H6*(H7*H8)</td>
<td>$2,199,808</td>
<td>$2,199,808</td>
<td>$2,199,808</td>
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</tr>
<tr>
<td>H10</td>
<td>Number of store managers training store associates</td>
<td>Interview</td>
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</tr>
<tr>
<td>H11</td>
<td>FTE hourly rate for store manager</td>
<td>TEI standard</td>
<td>$26.44</td>
<td>$26.44</td>
<td>$26.44</td>
<td></td>
</tr>
<tr>
<td>H12</td>
<td>Number of hours spent per year training store associates</td>
<td>Interview</td>
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<td>5</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>H13</td>
<td>Subtotal: Training costs for store associates</td>
<td>H10*(H11*H12)</td>
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<td>$549,952</td>
<td>$549,952</td>
<td></td>
</tr>
<tr>
<td>Ht</td>
<td>Recurring training costs</td>
<td>H5+H9+H13</td>
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<td>$3,040,736</td>
<td>$3,040,736</td>
</tr>
<tr>
<td>Htr</td>
<td>Recurring training costs (risk-adjusted)</td>
<td>↑20%</td>
<td>$0</td>
<td>$3,648,883</td>
<td>$3,648,883</td>
<td>$3,648,883</td>
</tr>
</tbody>
</table>

Three-year total: $10,946,650

Three-year present value: $9,074,232
Financial Summary

CONSOLIDATED THREE-YEAR RISK-ADJUSTED METRICS

Financial Analysis (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 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)

<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>($621,000)</td>
<td>($5,040,858)</td>
<td>($5,040,858)</td>
<td>($5,040,858)</td>
<td>($15,743,575)</td>
<td>($13,156,868)</td>
</tr>
<tr>
<td>Total benefits</td>
<td>$0</td>
<td>$21,618,519</td>
<td>$23,715,531</td>
<td>$26,292,531</td>
<td>$71,626,582</td>
<td>$59,006,780</td>
</tr>
<tr>
<td>Net benefits</td>
<td>($621,000)</td>
<td>$16,577,661</td>
<td>$18,674,673</td>
<td>$21,251,673</td>
<td>$55,883,007</td>
<td>$45,849,912</td>
</tr>
<tr>
<td>ROI</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>348%</td>
</tr>
<tr>
<td>Payback</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>&lt;6 months</td>
</tr>
</tbody>
</table>
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.