FORRESTER®

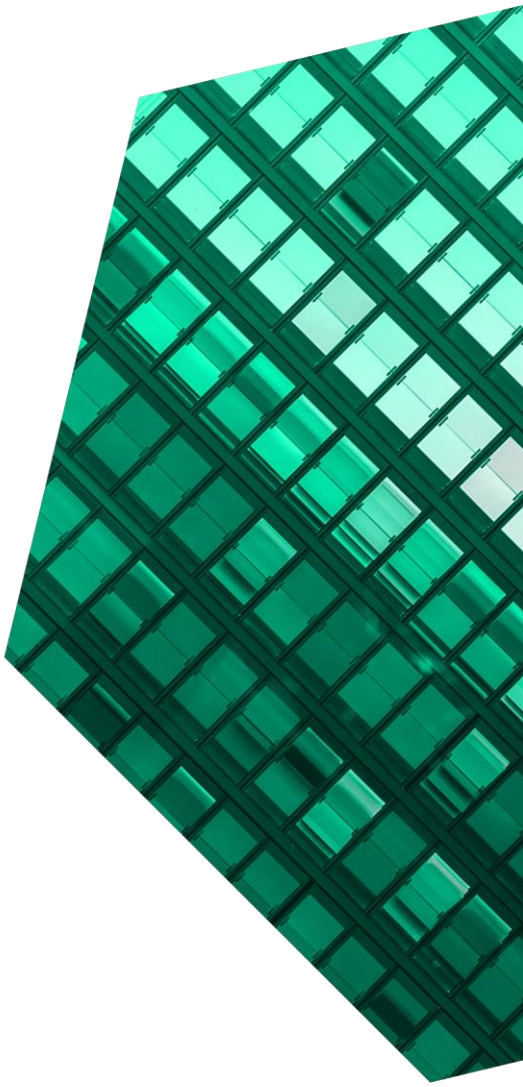
The Total Economic Impact™ Of Cora Project Portfolio Management Software

Cost Savings And Business Benefits Enabled By Cora Project Portfolio Management Software

SEPTEMBER 2023

Table Of Contents

Consulting Team: Mary Beth Kemp
Salma Hamdani



ABOUT FORRESTER CONSULTING

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

Executive Summary

Firms can't understand and master the value they create for themselves and for customers unless they harmonize and systematize their project portfolio management. Once they do, they'll gain visibility to power decisions, improve outcomes, and predict costs and levels of success. Cora's project portfolio management software enables that control.

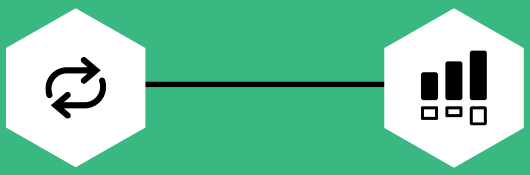
Organizations strive for consistent, successful outcomes, and they hate surprises. Cora gives managers and business leaders control over their projects with consolidated real-time visibility that enables them to make timely decisions to drive better execution practices and realize financial success.

Cora Systems commissioned Forrester Consulting to conduct a Total Economic Impact™ (TEI) study and examine the potential return on investment (ROI) enterprises may realize by deploying Cora project portfolio management (PPM) software.[1] The purpose of this study is to provide readers with a framework to evaluate the potential financial impact of Cora's project portfolio management software on their organizations.

To better understand the benefits, costs, and risks associated with this investment, Forrester interviewed four representatives with experience using Cora project portfolio management software. For the purposes of this study, Forrester aggregated the interviewees' experiences and combined the results into a single composite organization that is a US-based global manufacturing company with annual revenue of $20 billion.

Interviewees noted that prior to using Cora, their organizations managed projects in a fragmented way and often relied on spreadsheets and scheduling tools. There was little or no standardization of project management processes, no reporting, and no common tool set or system. These limitations led to a lack of visibility, lack of consistency, lack of transparency, and lack of control.

KEY STATISTICS



Return on investment (ROI)
187%

Net present value (NPV)
$30.05M

After investing in Cora's project portfolio management software and retooling their project management processes, interviewees' organizations tightened their operations, improved margin management, and saw fewer surprises.

KEY FINDINGS

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

- **Improved operational efficiency.** The use of Cora allows the composite organization to reduce its average project timeline from nine to three months. Business units use the application for an additional six months during the year it's developed. Over three years, the efficiency improvements are worth $25 million to the composite organization.

- **Better project and margin management.** The composite's project managers and their leaders are able to more consistently see, track, manage, and bill changes in project scope to customers, and this allows it to capture 10% additional revenue and generate higher margins. Over three years, the improved project and margin management are worth $7 million to the composite organization.
- **Better visibility and time savings for management reviews and troubleshooting.** The composite transforms its management reviews from rear-view mirror reporting to forward-looking discussions. Using shared data and a single platform cuts the time project and program managers (PMs) need to prepare reports and documents by 6 hours per month. Over three years, the gains linked to management reviews are worth $6.5 million to the composite organization.
- **Time savings for resource management and forecasting.** By liberating information across departments an essentially taking resources and financial data outside of their department silos, the composite organization's line managers save 4 hours per week because they no longer need to chase information. Over three years, the time savings are worth $4.4 million to the composite organization.

Margin lost due to missing project change orders

$7 million

- **Increased investment effectiveness.** Cora enables the composite organization to more effectively manage all of its projects, including its internal R&D, by at least 15%. The gain provides additional resources to internal investment. Over three years, the effectiveness increases are worth $3.1 million in additional investment to the composite organization.

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

- **Having a transparent, single source of business truth.** A VP of global program management at an aerospace and engineering organization said: "I'll know I've succeeded when the first thing you do is … go and … pull up Cora because that's where your work is, right? And we're bringing all of that to you."
- **Enabling the separation of the signal from the noise.** Interviewees said poor program and project management had been hiding other trains. As management improves, problems in other areas of the business (e.g., low-ball estimating, poor contracts, bad design) become apparent.
- **Driving consistency and a common culture, which embeds a single way to do things.** Interviewees called out the ability to formalize expectations and their ways of working. One interviewee said, "There's now one way of doing things."
- **Being usable and intuitive for all.** Having an understandable and accessible user interface and structure helps drive adoption and use, especially among business users.
- **Improving security by making homegrown, programs and tools obsolete.** An interviewee cited business continuity as the most important benefit of moving away from quick fixes and DIY coding.

- **Building a relationship of shared success.** Each interviewee said Cora provides a collaborative way of working to develop or co-create specific functionality to fit a client's use case.

Flexibility. Scenarios in which an organization might implement Cora project portfolio management software and later realize additional uses and business include:

- **Having the ability to actively consult with partners or clients.** Interviewees said Cora provided visibility into projects managed by partners so an experienced team could point out potential problems and recognize and manage potential risks.
- **Becoming a more affordable, reliable partner for clients.** Interviewees said having clear data and a rich reference of what costs are going into projects enables their companies to deploy Cora to better estimate the projects and services they sell to their customers.
- **Being able to plan and manage all resources by integrating data and information from the supply chain.** Interviewees cited having a view of the future with which they could use delivery and production schedules from suppliers to further optimize internal project management.
- **Tapping into the potential for predictive forecasting and management.** Interviewees predicted their organizations' consolidated systems would enable them to become more proactive to improve business and project outcomes in the near future.

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

- **License fees of $6 million over three years.** The composite pays license fees based on the number of Cora users, their roles, and types of access.
- **Internal effort for implementation and ongoing management and support totaling $10 million over three years.** These costs cover the efforts of the composite's business and IT teams to understand and define requirements; build new processes and use cases; manage and support change and adoption; manage, harmonize and transition data; and provide training for business process changes and using Cora. The deployment is progressive and includes four company divisions.

The representative interviews and financial analysis found that a composite organization experiences benefits of $46.1 million over three years versus costs of $16.05 million, adding up to a net present value (NPV) of $30.05 million and an ROI of 187%.

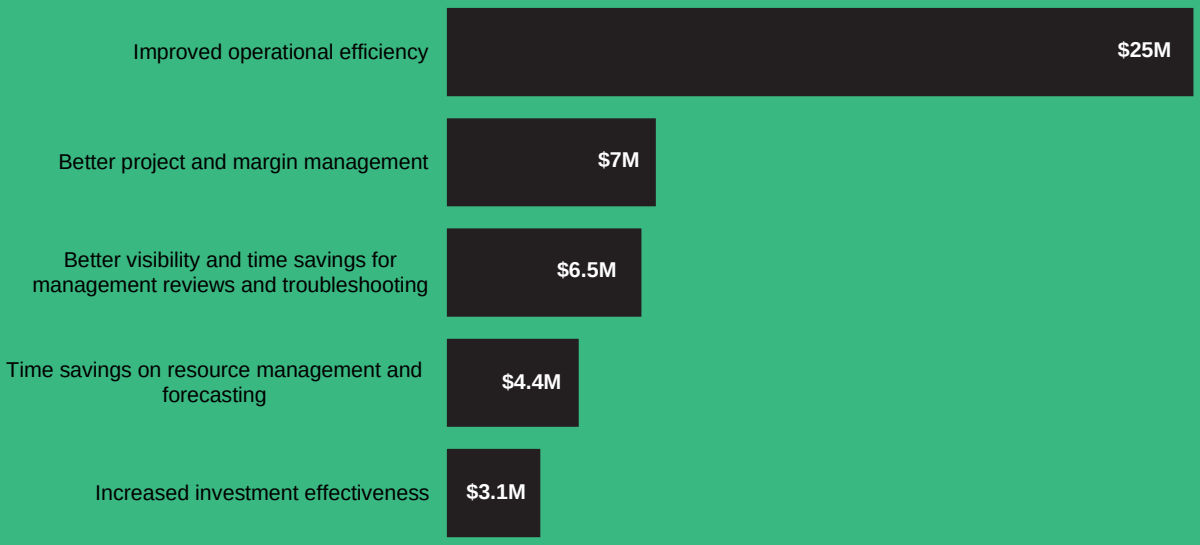
ROI
187%

BENEFITS PV
$46.1M

NPV
$30M

PAYBACK
9 months

Benefits (Three-Year)



“What I’m trying to do is bring the details of the project to people in a way that they can consume them pretty easily. The message [is], ‘Your future success with the company depends on your ability to master this tool.’”

— VP of global program management, aerospace and engineering

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 Cora project portfolio management software.

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 Cora project portfolio management software can have on an organization.

DISCLOSURES

Readers should be aware of the following:

This study is commissioned by Cora Systems 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 Cora project portfolio management software.

Cora Systems 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.

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

DUE DILIGENCE

Interviewed Cora Systems stakeholders and Forrester analysts to gather data relative to Cora project portfolio management software.

INTERVIEWS

Interviewed four representatives at organizations using Cora project portfolio management software to obtain data with respect to costs, benefits, and risks.

COMPOSITE ORGANIZATION

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

FINANCIAL MODEL FRAMEWORK

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

CASE STUDY

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

The Cora Project Portfolio Management Software Customer Journey

Drivers leading to the Cora project portfolio management software investment

Interviews

Role	Industry	Region	Turnover in 2022
Frontline digitization program manager	Healthcare	UK	N/A
Business management director	Aerospace/defense	Use of Cora: US	$36.6B
VP of global program management	Aerospace and engineering	Use of Cora: US	$33B
Director of operations	Building automation	Use of Cora: US	N/A

KEY CHALLENGES

The interviewees noted how their organizations struggled with common challenges, including:

- **Disjointed/disconnected systems.** Critical data and information was siloed and not shared between departments, in particular, it was not shared between finance, business management, and project management. Decision-making was diffused, and reporting was tedious and a time sink. Project managers were often missing financial information they needed to run their projects effectively.
- **Lack of visibility into day-to-day business for managers and executive teams.** Lack of visibility and lack of attention to the work of running profitable projects led to missed financial targets. Lack of visibility meant managers were unable to anticipate or correct problems. This along with a systematic lack of practices like documenting and billing scope changes was a challenge to profitability.
- **Inconsistent project management processes.** Unlike for other competencies or fields of expertise such as engineering or finance, there was no functional center of excellence for project management. So, when project or program managers changed divisions or sometimes projects, they would lose up to a day to relearn processes and tools to adapt to how their new teams worked.
- **Too much time spent on administrative tasks by qualified people with little or no value-add.** Teams were dedicated to blindly copying and pasting information from one system to another. These low-value tasks were eating into resources that could have been deployed to understand and improve project outcomes.

> **"I believe Cora is solving the connection problems. And with the time savings our teams get, they should be improving project outcomes because they're no longer wasting their time."**
>
> *Business management director, aerospace/defense*

- **Transforming to become a more affordable, reliable partner for clients and to win more business.** Interviewees said their organizations wanted to use right-sized pricing for the effort required and for everyone in the company to well-manage project, timing, delivery, and expectations.

"What's the sell for [a] GM or a CFO? What's the message for them? [We can say:] 'This is all the data you need to run your business. … This how in touch you need to be with the business.'"

VP of global program management, aerospace and engineering

SOLUTION REQUIREMENTS/INVESTMENT OBJECTIVES

The interviewees' organizations searched for a solution that would:

- Give project managers an easy-to-use and complete platform to fully manage both the execution and financial success of their projects.
- Provide managers and executives with an intuitive single stop for visibility into and control of their business.

The interviewees' organizations chose Cora's project portfolio management software and began deployment:

- Two of the four interviewees' organizations chose to take a phased approach to deployment and piloted in one or multiple divisions before rolling out into all parts of the organization. A third interviewee said their organization built up functionality over a period of two to three years because some of their organization's required use cases were in development at the time.

  A VP of program management remarked: "We're implementing in releases, and I think this was a very smart approach. We got a lot of value out of [a minimal first release]. … People became more mature and more aware of using the product. We got on the path. We de-risked all of the subsequent releases because now we're on a path, and it's a no-regret move."
- The interviewees' organizations needed significant business process changes.

COMPOSITE ORGANIZATION

The composite organization has the following characteristics:

Description of composite. The composite organization is named Manufacturing and Services Inc. (MASI). It's a global company based in the US that generates $20 billion annually. While it primarily manufactures products, one-third of its revenue comes from projects, services, and solutions, and that share of business is growing. Because of that shift and several projects that had a significant negative financial impact on the company, MASI is executing a transformation to standardize and drive functional excellence in project and program management.

Deployment characteristics. MASI has already been working with Cora for more than three years, and it purchases 33,000 PPM software licenses. Users span IT and business functions in roles and include project, product, and program managers; resource and supply chain managers; business and revenue managers; strategic planners; and executives. More than 20,000 employees will use Cora for reporting time.

MASI's partnership with Cora involves ongoing co-creation to evolve and add functionality to fit its business requirements and use cases. These changes are not treated as customization, but rather as an evolution of the core Cora product. MASI primarily implements Cora Systems with internal resources, and it uses the standard level of support and embedded training for the tool itself. Yet, the transformation team uncovers the most value when developing specific training modules that deeply embed Cora into the upgrades and harmonization of its project management processes and other business process changes. IT and business staff invest time on an ongoing agile release basis to continually optimize usage and to specify and leverage new Cora features as they are introduced.

MASI provides its project managers with full control of their projects, and it requires they forecast in Cora. The organization also expects its project managers to provide more visibility and reporting to business and executive teams. Cora enables employees to do more value-added work by limiting and ultimately eliminating the administrative part of their jobs. To realize these shifts, MASI invests approximately $6 million annually in technology, training, and business change driven through Cora's PPM software.

Key Assumptions

- **$20 billion annual revenue**
- **Global operations**
- **$7B+ worth of projects and initiatives managed through Cora**
- **33,000 licenses of Cora's PPM software**

Analysis Of Benefits

Quantified benefit data as applied to the composite

Total Benefits

Ref.	Benefit	Year 1	Year 2	Year 3	Total	Present Value
Atr	Improved operational efficiency	$2,949,609	$11,440,125	$17,160,188	$31,549,922	$25,028,815
Btr	Better project and margin management	$600,000	$3,000,000	$4,500,000	$8,100,000	$7,005,710
Ctr	Better visibility and time savings for management reviews and troubleshooting	$747,298	$2,989,192	$4,483,787	$8,220,277	$6,518,504
Dtr	Time savings for resource management and forecasting	$529,200	$1,587,600	$3,492,720	$5,609,520	$4,417,289
Etr	Increased investment effectiveness	$540,000	$1,350,000	$2,025,000	$3,915,000	$3,128,024
	Total benefits (risk-adjusted)	$5,366,107	$20,366,917	$31,661,695	$57,394,719	$46,098,342

IMPROVED OPERATIONAL EFFICIENCY

Evidence and data. According to interviewees, Cora enabled their organizations to deliver projects and programs more efficiently.

They said time savings meant the same number of project and program managers could take on additional projects, which delivered additional revenue. One interviewee said, “What we’re targeting is essentially increasing the number of dollars of revenue that an individual program manager and business representative can span control of in their roles.”

For those outside the project management office (PMO), increasing efficiency meant they could direct their efforts to higher-value work such as conducting analysis and improving project outcomes. One interviewee said: “We’re hiring people who have four-year college degrees in finance, data, and analytics who are sitting there and copying and pasting data. Twenty-five percent of their jobs are administrative. We want to completely eliminate the extreme admin.”

“Another good example is intercompany projects: They make up 10% of the projects we execute … [and we’re] taking a couple of [cost percentage points] off those projects.”
Business management director, aerospace/defense

Interviewees cited four primary efficiency gains from using Cora PPM software:

- **Consolidating systems:** Project and program managers no longer needed to rework or transfer information from one system to another.
- **Consolidating PMO practices:** Interviewees’ organizations began consolidating project

management responsibilities. For example, they could staff one product manager for intercompany projects instead of two.

- **Standardizing:** Project and program managers no longer needed to learn new tools and processes when switching projects or divisions.
- **Consolidating data:** Financial managers no longer needed to rework or transfer financial data from one system to another so others in the organization would have access to them.

Modeling and assumptions. To model this benefit for the composite organization, Forrester assumes the following:

- Project and program managers at MASI gain an average of 3 hours per week because they no longer need to manually transfer data. They also gain 2 additional hours per week on administrative tasks and follow up. Twenty-five percent of those savings is attributed to Cora.
- Because MASI is able to streamline the staffing of project managers for intercompany projects, 10% of its projects are intercompany, and project managers spend an estimated 150 hours per project. Streamlining saves 25% of project management time, and 50% of those savings is attributed to Cora.
- Because project and program managers don't have to learn new tools and processes when switching projects or divisions, that onboarding typically takes 4 to 8 hours. On average, PMs switch projects or divisions once per year, and they save 6 hours. Twenty-five percent of those savings is attributed to Cora.
- Because MASI's teams are able to share the same level of financial information, financial managers don't rework or transfer financial data from one system to another to provide access. The efficiency gained from eliminating administrative work and tracking, analyzing, and forecasting in a common platform is 8 hours per week for connected finance team members. Twenty-five percent of those savings is attributed to Cora.
- MASI's productivity capture is 50% for each efficiency gain.

Risks. The impact of this benefit may vary depending on:

- The organization's state of information and data sharing and project and program management.
- The digital maturity of the organization's business processes and teams.
- The extent to which the organization leverages Cora's capabilities.
- The number of programs and projects managed along with their value and complexity.
- The organization's level of employee acceptance and adoption of PPM technology and new business practices.
- The organization's current access to accurate and recent data, especially data related to projects and customers.

Results. To account for these risks, Forrester adjusted this benefit downward by 25%, yielding a three-year, risk-adjusted total PV of $25 million.

Improved Operational Efficiency

Ref.	Metric	Source	Year 1	Year 2	Year 3
A1	Program and project managers	Composite	1,500	6,000	9,000
A2	Weekly time saved on manually transferring data and files (hours)	Composite	3	3	3
A3	Weekly time saved on other administrative tasks and follow up (hours)	Composite	2	2	2
A4	Subtotal: Weekly time savings (hours)		5	5	5
A5	Percentage of time saved attributed to Cora	Interviews	25%	25%	25%
A6	Average burdened hourly salary of a program or project manager	TEI standard	$66	$66	$66
A7	Productivity capture	Assumption	50%	50%	50%
A8	Subtotal: Time savings for program and project managers	A2*A4* 42 weeks *A5*A6*A7	$2,598,750	$10,395,000	$15,592,500
A9	Projects with reduced staffing	Composite	16,500	66,000	99,000
A10	Percent of intercompany projects	Interviews	10%	10%	10%
A11	Average project manager time allocated per project	Assumption	150	150	150
B12	Percentage of project management time saved per project	Interviews	25%	25%	25%
A12	Percentage of annual time saved attributed to Cora	Interviews	50%	50%	50%
A13	Average burdened hourly salary of a project manager	A6	$66	$66	$66
A14	Productivity capture	Assumption	50%	50%	50%
A15	Subtotal: Cost savings	A9*A10**B12*A11 *A12*A13	$1,020,938	$4,083,750	$6,125,625

Improved Operational Efficiency (Continued)

Ref.	Metric	Source	Year 1	Year 2	Year 3
A16	Program and project managers	Composite	1,500	6,000	9,000
A17	Time saved by program and project managers by using same tool and processes when shifting business units (hours)	Interviews	6	6	6
A18	Percentage of time saved attributed to Cora	Assumption	25%	25%	25%
A19	Average burdened hourly salary of a project manager	A6	$66	$66	$66
A20	Productivity capture	Assumption	50%	50%	50%
A21	Subtotal: Cost savings	A16*A17*A19 *A18*A20	$74,250	$297,000	$445,500
A22	Finance team members on platform	Composite	88	175	263
A23	Weekly time saved from eliminating administrative work and tracking, analyzing, and forecasting in a common platform (hours)	Interviews	8	8	8
A24	Percentage of time saved due to Cora	Assumption	25%	25%	25%
A25	Average burdened hourly salary of a finance team member	TEI standard	$65	$65	$65
A26	Productivity capture	Assumption	50%	50%	50%
A27	Subtotal: Cost savings	A22*A23*A24*A25*A26*42 weeks	$238,875	$477,750	$716,625
At	Improved operational efficiency	A8+A15+A21+A27	$3,932,813	$15,253,500	$22,880,250
	Risk adjustment	↓25%			
Atr	Improved operational efficiency (risk-adjusted)		$2,949,609	$11,440,125	$17,160,188
	Three-year total: $31,549,922			**Three-year present value: $25,028,815**	

BETTER PROJECT AND MARGIN MANAGEMENT

Evidence and data. Cora enabled transformers to put their fingers on bad or sloppy project management processes and habits and to standardize organizational and individual behavior. One interviewee said that gave their company the opportunity to capture additional revenue and project margin by systematically executing change orders.

The director of operations at a building automation organization extolled the transparency of quarterly reviews: “Eight years ago, we had a big spotlight on us from up above because there were quite a few projects where we had slippage, and people were trying to figure out what was wrong. It was hard to do because the transparency wasn’t there.”

The interviewee continued: “Now, we do a quarterly review of all of our large projects, which are usually our biggest risks … and we are able to run a nice, colorful report in real time and get everybody on the phone and go through each different large project and look at where our financial status is. … When everyone knows everyone has a clear window into their projects, people concentrate more on making sure they’re run better with money in their budgets and … any risk is escalated up to their bosses.”

Modeling and assumptions. To model this benefit for the composite organization, Forrester assumes the following:

- With Cora PPM, MASI’s project managers and their leaders are able to more consistently see, track, and manage changes to project scope. Where needed, leaders coach PMs to create change orders to reflect additional work, which captures additional revenue and generates higher margins.
- The value of revenue tracked within Cora increases each year as MASI integrates additional divisions and teams onto the platform.
- The share of additional revenue captured is .10%.

Risks. The impact of this benefit may vary depending on:

- The organization’s prior state of project and program management and cost control.
- The extent to which the organization leverages Cora’s capabilities.
- The number of billable programs and projects managed along with their value and complexity.
- The organization’s level of employee and management acceptance and adoption of PPM technology and new business practices.

> **“We use Cora for our business model transformation. Our goal is to reduce our unfavorable EAC [equivalent annual cost] by 50% year on year. … I want us to be seen as the preeminent delivery partner.”**
>
> *VP of global program management, aerospace and engineering*

Results. To account for these risks, Forrester adjusted this benefit downward by 40%, yielding a three-year, risk-adjusted total PV of $7 million.

Better Project And Margin Management					
Ref.	**Metric**	**Source**	**Year 1**	**Year 2**	**Year 3**
B1	Revenue of projects within Cora	Composite	$1,000,000,000	$5,000,000,000	$7,500,000,000
B2	Share of additional revenue captured	Interviews	0.1%	0.1%	0.1%
Bt	Better project and margin management	B1*B2	$1,000,000	$5,000,000	$7,500,000
	Risk adjustment	↓40%			
Btr	Better project and margin management (risk-adjusted)		$600,000	$3,000,000	$4,500,000
	Three-year total: $8,100,000			**Three-year present value: $7,005,710**	

BETTER VISIBILITY AND TIME SAVINGS FOR MANAGEMENT REVIEWS AND TROUBLESHOOTING

Evidence and data. Interviewees said that because Cora improves visibility of project details visible for everyone, their organizations saw a step change in how they ran meetings with management. Instead of merely reporting on the past, reviews became focused on troubleshooting and managing risk and opportunity.

In addition to providing universal visibility, the shared data and single platform saved the time of project and program managers in preparing reports and documents. One interviewee said, “The constant re-creation of dashboards in a [presentation] slide takes about 20% of the month for our project and program managers.”

Modeling and assumptions. To model this benefit for the composite organization, Forrester assumes the following:

- MASI’s program and project managers each save 6 hours per month because they don’t need to create slides and presentations for business review meetings. Instead, these meetings are conducted using dashboards set up in Cora.
- 30% of the time savings is attributed to Cora.
- MASI’s productivity capture is 50% for each efficiency gain.
- Because each manager and executive has real-time visibility into the business, meetings are more focused on planning and shaping future actions.

Risks. The impact of this benefit may vary depending on:

- The organization’s prior state of information and data sharing and project and program management.
- The digital maturity of the organization’s business processes and teams.
- The extent to which the organization leverages Cora’s capabilities.
- The number, value, and complexity of programs and projects the organizations manages.
- The organization’s level of employee acceptance and adoption of PPM technology and new business practices.
- The organization’s access to rich, accurate, and recent data, especially data related to its customers.

Results. To account for these risks, Forrester adjusted this benefit downward by 33%, yielding a three-year, risk-adjusted total PV of $6.5 million.

Better Visibility And Time Savings For Management Reviews And Troubleshooting					
Ref.	**Metric**	**Source**	**Year 1**	**Year 2**	**Year 3**
C1	Project and program managers	Composite	1,500	6,000	9,000
C2	Time saved by not creating dashboard slides each month (hours)	Interviews	6	6	6
C3	Percentage of time saved due to Cora	Interviews	30%	30%	30%
C4	Average burdened hourly salary of a program or project manager	TEI standard	$69	$69	$69
C5	Productivity capture	Assumption	50%	50%	50%
Ct	Better visibility and time savings for management reviews and troubleshooting	C1*C2*C3*C4*C5*12	$1,115,370	$4,461,480	$6,692,220
	Risk adjustment	↓33%			
Ctr	Better visibility and time savings for management reviews and troubleshooting (risk-adjusted)		$747,298	$2,989,192	$4,483,787
	Three-year total: $8,220,277			**Three-year present value: $6,518,504**	

TIME SAVINGS FOR RESOURCE MANAGEMENT AND FORECASTING

Evidence and data. Interviewees' organizations deployed Cora as a business system, but they saw important impact beyond the PMO.

- A xxx from a manufacturing organization said, "We're talking about a significant amount of time saved by doing the business process all in one swoop in Cora, which our tools [currently] cannot do."
- Liberating information across departments and essentially taking resource and financial data outside of departmental silos made line managers more efficient because they no longer needed to chase information.
- The director of operations in the building automation industry saw an opportunity for teams at their organization to spend more time with customers: "We [had] people digging around and doing work in the office [and] trying to collate everything they needed to do, say, a revenue forecast or review. [Cora is] a lot quicker, [and] if it's quicker and more efficient, you're saving time doing the back-office kind of stuff. You're able to spend more time with the customers and be on the job sites."

Modeling and assumptions. To model this benefit for the composite organization, Forrester assumes the following:

- Each of MASI's functional managers saves 4 hours per week by not having to chase information to create and update their financial and resource forecasts.
- 30% of the time savings is attributed to Cora.
- MASI's productivity capture is 50% for each efficiency gain.

Risks. The impact of this benefit may vary depending on:

- The organization's prior state of forecasting and resource management and how they are integrated into project and program management.
- The digital maturity of the organization's business processes and teams.
- The extent to which the organization leverages Cora's capabilities.
- The number, value, and complexity of the programs and projects the organization manages.
- The organization's level of employee acceptance and adoption of PPM technology and new business practices.
- The organization's connection and access to rich, accurate, and recent data, especially data within other critical systems, such as enterprise resource planning (ERP) systems.

Results. To account for these risks, Forrester adjusted this benefit downward by 40%, yielding a three-year, risk-adjusted total PV of $4.4 million.

"With the resource management and financial views of Cora, I can feed both of those downstream systems with Cora data. That is driving a huge amount of efficiency for my functional management team. We can save about 10% of those functional managers' time."

Business management director, aerospace/defense

Time Savings For Resource Management And Forecasting					
Ref.	**Metric**	**Source**	**Year 1**	**Year 2**	**Year 3**
D1	Project managers	Composite	500	1,500	3,300
D2	Weekly time savings in resource management and forecasting (hours)	Interviews	4	4	4
D3	Percentage of time saved due to Cora	Assumption	30%	30%	30%
D4	Average burdened hourly salary of a manufacturing functional manager	Industry	$70	$70	$70
D5	Productivity capture	Assumption	50%	50%	50%
Dt	Time savings for resource management and forecasting	D1*D2*D3*D4*D5*42 weeks	$882,000	$2,646,000	$5,821,200
	Risk adjustment	↓40%			
Dtr	Time savings for resource management and forecasting (risk-adjusted)		$529,200	$1,587,600	$3,492,720
	Three-year total: $5,609,520			**Three-year present value: $4,417,289**	

INCREASED INVESTMENT EFFECTIVENESS

Evidence and data. According to interviewees, Cora enabled their organizations to more effectively manage all projects, including their internal R&D, by at least 15%.

One interviewee explained: “We have limited resources for investment. So, if we can make our investment projects more efficient, we can spend more money on internal research and development [and] on proposing new efforts so we can go after more jobs [and] increase the aperture of work.”

Modeling and assumptions. To model this benefit for the composite organization, Forrester assumes the following:

- MASI invests 1.5% of its annual revenue to research and development.
- Each of the 4 divisions at MASI have independent investment programs and a growing share of these programs are integrated into Cora as each division deploys the software and business process changes.
- MASI’s lift in effectiveness is 15%, and because these are internal programs, the lift is expressed as additional resources made available to invest back into R&D.

Risks. The impact of this benefit may vary depending on:

- The organization’s prior state of project and program management, especially for R&D investment.
- The digital maturity of the organization’s business processes and teams.
- The extent to which the organization leverages Cora’s capabilities.

- The number of R&D programs and projects the organization manages along with their value and complexity.
- The organization's level of employee acceptance and adoption of PPM technology and new business practices.

Results. To account for these risks, Forrester adjusted this benefit downward by 25%, yielding a three-year, risk-adjusted total PV (discounted at 10%) of $3.1 million.

Increased Investment Effectiveness

Ref.	Metric	Source	Year 1	Year 2	Year 3
E1	Internal investment in R&D based on share of revenue	Composite	$60,000,000	$120,000,000	$150,000,000
E2	Share managed through Cora	Composite	20%	25%	30%
E3	Lift in effectiveness due to better visibility and management	Interviews	15%	15%	15%
E4	Attribution to Cora	Interviews	40%	40%	40%
Et	Increased investment effectiveness	A1*A2*A3*A4	$720,000	$1,800,000	$2,700,000
	Risk adjustment	↓25%			
Etr	Increased investment effectiveness, (risk-adjusted)		$540,000	$1,350,000	$2,025,000
	Three-year total: $3,915,000			**Three-year present value: $3,128,024**	

UNQUANTIFIED BENEFITS

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

- **Having a transparent, single source of business truth.** A VP of global program management at an aerospace and engineering said Cora is packed with essential, up-to-date business data that is central to every businessperson's day.

  The director of operations at a building automation organization said having a source of truth, transparency, and risk mitigation at the corporate level are "the three things I love about Cora." And the frontline digitalization program manager at a healthcare organization cited the potential to leverage a single source of data to build differentiating insights: "It is [about] visibility, [having] everything in one place, and being able to gather unique insights."

- **Enabling the separation of the signal from the noise.** Interviewees said poor program and project management obscured other issues and that as management improved, problems in other areas of the business became apparent. A VP of global program management at an aerospace and engineering organization said:
  "As we deploy Cora, we've taken away a lot of the noise and identified areas of loss or risk. We put corrective action in place for those areas. Now, it's shining a bright light on other aspects of our business outside of program management, like estimating a [bad] contract."

  Another interviewee noted: "[Cora is)] driving a lot of strategic conversations that I think are very healthy about what is important. [For example:] 'We've got one business that has a bunch of small projects. Do we want that? What does it cost us to sustain a project?'"

- **Driving consistency and a common culture, which embeds a single way to do things.** Interviewees called out gaining the ability to formalize expectations and ways of working, and they said that before deploying Cora, regular processes such as the monthly estimate at completion were open to interpretation. The director of operations at a building automation firm said: "There were multiple ways to skin that cat. … For the most part, we had all the processes in place. It was just a matter of establishing that consistency through one way to do it. … This gave us the ability to do it one way or [to] at least [be able to] say, 'Hey, this is the way it needs to be done.' So, that's been very helpful, too. There's now one way of doing things."

- **Being usable and intuitive for all.** Interviewees commented on the importance of Cora's user interface and structure to drive adoption and use — especially among business users. The frontline digitization program manager at a healthcare organization said,
  "The reason we really selected Cora was because the application was more intuitive." They also noted that the simplicity was critical to encouraging compliance among their organization's network partners: "The ease of use [and] just being able to update the data that's there and not having to do the whole spreadsheet thing backwards and forwards … [has] made it easier for [partners] to report."

- **Improving security by making homegrown, programs and tools obsolete.** One interviewee said the benefit of moving away from quick fixes and DIY coding is not cost savings, it's business continuity: "A lot of the homegrown stuff is vulnerable. It's not in the architecture, so there are a lot of modernization benefits as well."

- **Building a relationship of shared success.** Each interviewee said Cora provides a

collaborative way of working to develop or co-create specific functionality to fit a client's use case. The frontline digitization program manager at the healthcare organization said: "The really big [reason we chose Cora] is because of the benefits management module. And the benefits management module within the functionality is something that we've worked really hard with Cora on."

"Can we be a more reliable partner for our customers by being more transparent [and] more predictable? Can we know what our costs are going to be when we propose so we can drive them to be more affordable so we can actually win more business?"

Business management director, aerospace/defense

FLEXIBILITY

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

- **Having the ability to actively consult with partners or clients.** The frontline digitization program manager at a healthcare organization said Cora offered visibility into projects managed by a network of more than 200 partners, which allowed their company to be better equipped to recognize and manage potential risks: "It gives us those insights [so] we can then say, 'Have you thought about this? Have you thought about that?' It allows us to be more fully informed and to be able to point out potential problems. We can manage risks as well as set them on the right path. It's really the key to our role."
- **Becoming a more affordable, reliable partner for clients.** Interviewees said Cora provides clear data and a rich reference point of which costs are going into projects enables their companies to better estimate the costs of the projects and services they sell to their customers. They said this will enable their companies to be more affordable by offering proposals that match the effort required by a service with the right level of margin and without excess contingencies or padding. In turn, that would arm them with the potential to win more business.

  The director of operations at a building automation firm said: "[Previously,] the salespeople probably had to cover their rears and charge the client more to cover what probably should have been done in, say, a third of the time. [Now,] they're able to [give] more accurate estimates to the client, and we win more work. I'm not going to attribute all of our growth to Cora by any stretch. However, we have grown since we implemented — probably 75% on the business. So, [that's] huge, huge growth."
- **Being able to plan and manage all resources by integrating data and information from the supply chain.** Interviewees cited having a view of the future in which their organizations could use delivery and even production schedules from suppliers to further optimize internal project management.

  One interviewee said: "We're able to start directly connecting to other applications that are managing other pieces of the business … [and] that's allowing us to directly integrate our material

requirements planning [MRP] data right from our ERP system. … When we're thinking about, 'Hey, I need to place orders for X, what's the latest lead time for these parts?', I can build that directly into my schedules by having that interface. That's a major value proposition."

- **Tapping into the potential for predictive forecasting and management.** While interviewees most often said their organization is focused on the short-term gains from better running projects, several projected how using a consolidated system could enable their firm to improve business and project outcomes in the near future. One interviewee said: "[With Cora,] you have fewer surprises. You'll get to a point where you can go from reporting the weather to predicting the weather. That's where I want to get."

Analysis Of Costs

Quantified cost data as applied to the composite

Total Costs							
Ref.	**Cost**	**Initial**	**Year 1**	**Year 2**	**Year 3**	**Total**	**Present Value**
Ftr	License fees	$528,000	$1,320,000	$2,200,000	$3,300,000	$7,348,000	$6,025,521
Gtr	Internal effort for implementation and ongoing management and support	$666,747	$2,427,219	$4,794,781	$4,243,931	$12,132,678	$10,024,467
	Total costs (risk-adjusted)	$1,194,747	$3,747,219	$6,994,781	$7,543,931	$19,480,678	$16,049,988

LICENSE FEES

Evidence and data. Cora Systems provided estimated costs for the license fees the composite would pay based on its size, potential, and specified number of users at each stage of development.

Modeling and assumptions. To model this cost for the composite organization, Forrester assumes the following:

- In Year 1, MASI deploys Cora to one division with 5,500 total users. These users include 1,500 program and project managers, 500 executives and business managers, and 3,500 employees with timesheet-only access.
- In Year 2, MASI deploys Cora to three divisions with 16,500 total users. These users include 6,000 program and project managers, 1,500 executives and business managers, and 9,000 employees with timesheet-only access.
- In Year 3, MASI deploys Cora to the entire company, which includes four divisions and 33,000 total users. These users include 9,000 program and project managers, 3,000 executives and business managers, and 20,700 employees with timesheet-only access.

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

- The organization's size, number of users, and potential user base.
- The organization's mix and type of users.
- The organization's speed of adoption and rollout.
- The organization's complexity of deployment, including use cases and desired business processes.
- The organization's industry and fit with Cora's customer profiles and its planned product evolution.

Results. To account for these risks, Forrester adjusted this cost upward by 10%, yielding a three-year, risk-adjusted total PV (discounted at 10%) of $6 million.

License Fees						
Ref.	**Metric**	**Source**	**Initial**	**Year 1**	**Year 2**	**Year 3**
F1	License fees	Composite	$480,000	$1,200,000	$2,000,000	$3,000,000
Ft	License fees		$480,000	$1,200,000	$2,000,000	$3,000,000
	Risk adjustment	↑10%				
Ftr	License fees (risk-adjusted)		$528,000	$1,320,000	$2,200,000	$3,300,000
	Three-year total: $7,348,000			**Three-year present value: $6,025,521**		

INTERNAL EFFORT FOR IMPLEMENTATION AND ONGOING MANAGEMENT AND SUPPORT

Evidence and data. Interviewees said it was essential for their organizations to formally embed Cora into their business and project management processes to realize the value of the platform.

- Two of the four interviewees said their organizations use Cora as the reason or motor for business process changes.
- A third interviewee, the director of automation at a building automation company, said their organization deployed Cora to better embed working habits and processes that had previously been skirted around: “The way we [were] able to [drive adoption] was to put a substantial amount of financial ties — like monthly activity that was required by the businesses and by the field — into Cora, which speaks to Cora’s flexibility. That's when everybody had to get into Cora, and they started using it, and the appreciation grew for it.”
- Interviewees said their organizations invested substantial internal resources into specifying and developing business processes to leverage Cora. These teams included senior business and IT leaders, and they were active before and throughout testing and deployment.

> **“In a big company, you have to have an imperative to make a change in your business process, right? [You need to say: ‘Hey, you have to change because Cora is coming, and if you don’t change, you’re going to be left behind. You’re not going to have a tool.’”**
>
> *Business management director, aerospace/defense*

- Interviewees said the second critical focus was to train teams in the new ways of working and embedding the software and its capabilities into the business process transformation. One interviewee’s organization even implemented an incentive program for project managers to accelerate behavior change.

  A VP of global program management at an aerospace and engineering organization explained: “We’re spending a lot of time on harmonizing the data model across our company, which is extremely challenging, but it’s something

that we're driving to. You migrate your data and you have your organizational change management, and then you get trained. [You do] those three things. They're not serial, but those are the three main thrusts that we have,"

- The internal efforts of the interviewees' organizations spanned four key areas: the time business teams need for specification of processes and use cases; the time IT teams need for company-specific configuration and connection to other business systems; data mapping, harmonization and import; and training for both transformed processes and Cora.
- Training, in particular, was a sizable investment. One interviewee said: "Our plan is to train over 20,000 people in our company on Cora, and if the average training is even 4 hours … we're talking a massive amount of cost. We're targeting to reduce training from an expected 12 hours to something like 4. We're struggling because training is hard because everybody learns differently."

Modeling and assumptions. To model this benefit for the composite organization, Forrester assumes the following:

- MASI formulates and adopts new ways of working and integrates Cora within those new business processes.
- The IT team's time savings for company-specific configuration, API development, integration to other systems, ongoing management, and support is fully attributable to Cora.
- The work required to harmonize, clean, and map data modules and to transition the data is fully attributable to Cora. This work is driven by the chief data officer.
- For project and program managers and business and executive teams, training covers both business process changes and the ways Cora supports the process.
- The many users who only track their time in Cora require a 1-hour training session to learn how to navigate Cora and input information into the platform.
- Training effort is 75% attributable to Cora.

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

- The organization's size, number of current users, mix and type of users, and potential user base.
- The organization's speed of adoption and rollout.
- The complexity of the deployment, including use cases and desired business processes.
- The business process change and level of integration required.
- The number and types of business areas involved.
- The level of digital maturity of both the organization's users and potential users.
- The organization's industry and fit with Cora's customer profiles and its current capabilities and planned product evolution.

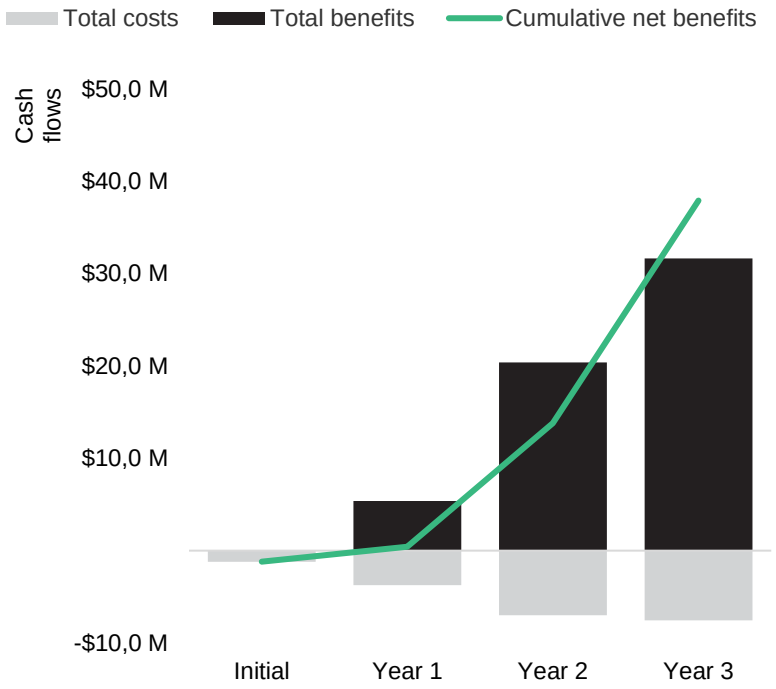
Results. To account for these risks, Forrester adjusted this cost upward by 15%, yielding a three-year, risk-adjusted total PV of $10 million.

Internal Effort For Implementation And Ongoing Management And Support						
Ref.	**Metric**	**Source**	**Initial**	**Year 1**	**Year 2**	**Year 3**
G1	Combined total time from director of portfolio and project management, VPs, project managers, subject-matter experts, and other business staff requirements for business specification, transformation, implementation and ongoing management and support (hours)	Interviews	1,800	5,500	11,000	7,200
G2	Blended fully burdened hourly compensation for a director of portfolio and project management, VP, project manager, subject-matter expert, or other business staff member	TEI standard	90	70	70	70
G3	Effort attributed to Cora	Interviews	75%	75%	75%	75%
G4	Subtotal: Business staff effort	Composite	$162,000	$288,750	$577,500	$378,000
G5	Combined total time of IT staff required for initial configuration, connection to other systems, and ongoing management and support (hours)	Composite	1,800	5,000	11,000	7,200
G6	Blended fully burdened hourly compensation for an IT staff member	TEI standard	$90	$70	$70	$70
G7	Subtotal: IT staff effort	Composite	$162,000	$350,000	$770,000	$504,000
G8	Combined total time for mapping, harmonizing, and testing data models (hours)	Interviews	2,088	6,000	6,000	5,000
G9	Burdened hourly salary of an IT staff member	TEI standard	70	66	66	66
G10	Subtotal: Data harmonization	Composite	$146,160	$396,000	$396,000	$330,000
G11	Combined total time for creating business process and tool training, refine and run (hours)	Interviews	2,088	3,350	3,350	4,350
G12	Burdened salary per hour	TEI standard	$70	$70	$70	$70
G13	Effort attributed to Cora implementation	Assumption	75%	75%	75%	75%
G14	Combined total time for user training on process and tool (hours)	Interviews	0	20,000	50,000	50,000
G15	Blended, burdened hourly salary	TEI standard	$0	$60	$60	$60
G16	Effort attributed to Cora	Composite	0%	75%	75%	75%
G17	Subtotal: Training		109,620	1,075,875	2,425,875	2,478,375
Gt	Internal effort for implementation and ongoing management and support	G1+G3+G7+G8+G11	$579,780	$2,110,625	$4,169,375	$3,690,375
G18	Risk adjustment	↑15%				
Gtr	Internal effort for implementation and ongoing management and support (risk-adjusted)		$666,747	$2,427,219	$4,794,781	$4,243,931

Financial Summary

CONSOLIDATED THREE-YEAR RISK-ADJUSTED METRICS

Cash Flow Chart (Risk-Adjusted)



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

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

Cash Flow Analysis (Risk-Adjusted Estimates)

	Initial	Year 1	Year 2	Year 3	Total	Present Value
Total costs	($1 194 747)	($3 747 219)	($6 994 781)	($7 543 931)	($19 480 678)	($16 049 988)
Total benefits	$0	$5 366 107	$20 366 917	$31 661 695	$57 394 719	$46 098 342
Net benefits	($1 194 747)	$1 618 889	$13 372 135	$24 117 764	$37 914 041	$30 048 354
ROI						187%
Payback						9 months

Appendix A: Total Economic Impact

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

TOTAL ECONOMIC IMPACT APPROACH

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

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

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

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

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

PRESENT VALUE (PV)

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

NET PRESENT VALUE (NPV)

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

RETURN ON INVESTMENT (ROI)

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

DISCOUNT RATE

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

PAYBACK PERIOD

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

Appendix C: 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 initiative s to both senior management and other key business stakeholders.


FORRESTER®