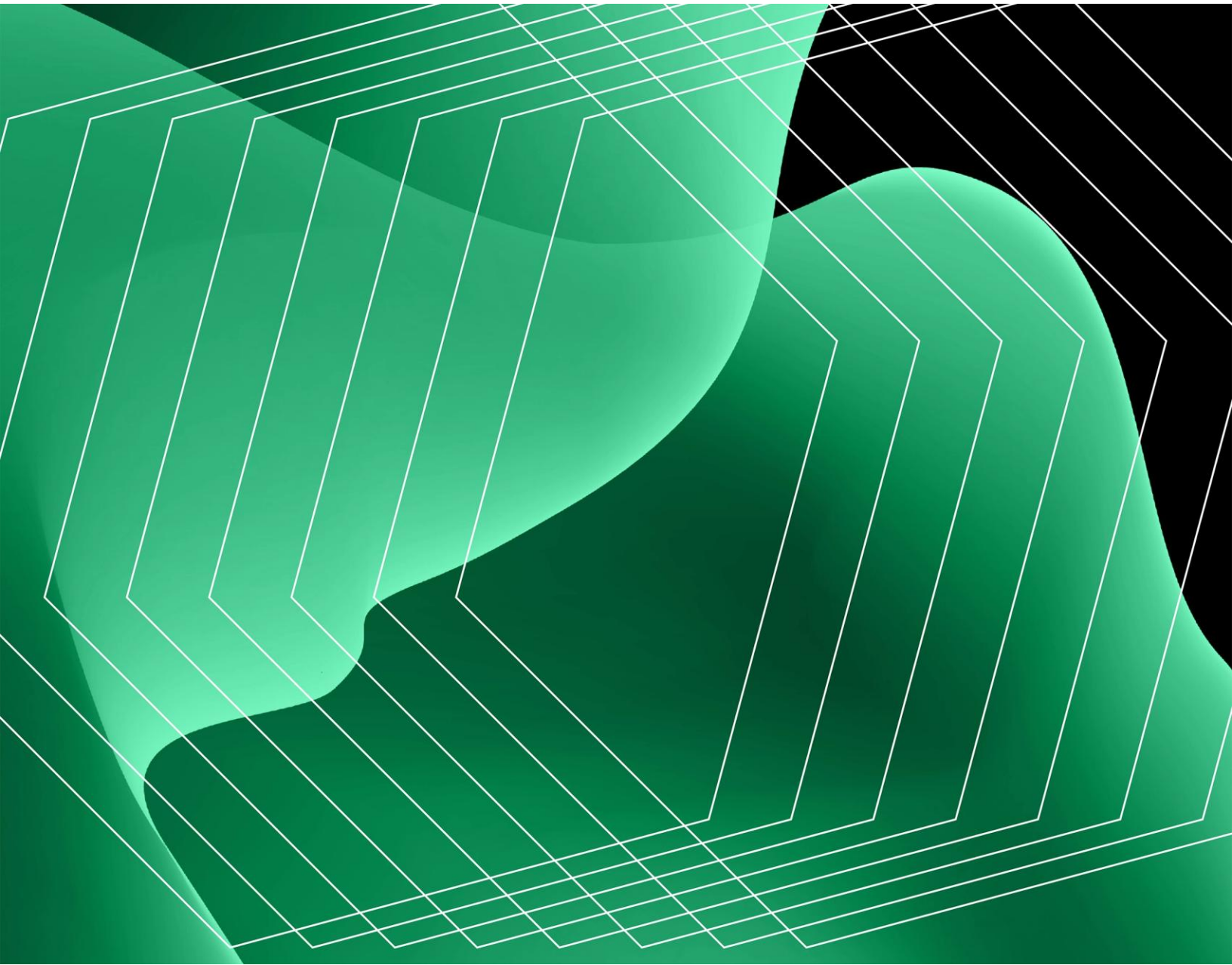
FORRESTER®

The Total Economic Impact™ Of Celonis

Cost Savings And Business Benefits Enabled By Celonis

A FORRESTER TOTAL ECONOMIC IMPACT STUDY
COMMISSIONED BY CELONIS, JUNE 2025



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ABOUT FORRESTER CONSULTING

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

Executive Summary

Process improvements at large enterprises require transparency and collaboration among all teams involved. As process intelligence technologies like process mining and modeling mature, enterprises are increasingly using these technologies to make their processes work. Leaders expect to deliver process improvements at scale through enhanced process transparency, modeling, and orchestration among contributing teams, while also exploring and enabling advanced AI use cases with process intelligence.[1]

Celonis combines process data and business context to help organizations understand their business, optimize operations, and drive value across the top, bottom, and green lines. The platform uses object-centric process mining (OCPM), which overcomes the limitations of traditional process mining techniques and allows organizations to better visualize and analyze the complexity and interconnectedness of modern business operations. Once those operations are understood, Celonis enables organizations to design the processes they want; make sure everyone knows exactly what to do and how to do it; monitor adherence to make sure the change is sticking; and build and orchestrate AI solutions and automations. Celonis works across a broad range of systems (e.g., enterprise resource planning [ERP], supply chain management [SCM], human capital management [HCM]) and is system-agnostic. It also operates an open ecosystem with APIs that feed process intelligence to third-party platforms and tools (AI or otherwise).

Celonis commissioned Forrester Consulting to conduct a Total Economic Impact™ (TEI) study and examine the potential return on investment (ROI) enterprises may realize by deploying Celonis.[2] The purpose of this study is to provide readers with a framework to evaluate the potential financial impact of Celonis on their organizations.

Return on investment (ROI)
383%

Net present value (NPV)
$35.0M

To better understand the benefits, costs, and risks associated with this investment, Forrester interviewed four decision-makers with experience using Celonis. For the purposes of this study, Forrester aggregated the interviewees' experiences and combined the results into a single

composite organization that is a consumer goods manufacturing company with $20 billion in annual revenue and 57,000 employees worldwide.

Interviewees said that prior to using Celonis, their organizations were unable to discover process inefficiencies with existing tools, causing revenue leakage and sales deviation.

After the investment in Celonis, the interviewees' organizations reduced operating costs for the processes that implemented Celonis. Key results from the investment include captured additional revenue from order management, shortened order delivery cycle, reduced redundant inventory, and improved efficiency from invoice automation.

Besides the processes and use cases highlighted in this study, interviewees noted Celonis could be applied to a wide variety of business processes in organizations. The platform could connect to more than 100 systems out of the box and build connectors to any data source.

KEY FINDINGS

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

- **Captured an additional $3.3 million in revenue from removing order blocks.** Before the investment in Celonis, the composite organization automatically rejects orders that do not meet the minimum order quantity (MOQ), resulting in lost sales. Order management process improvements identify and combine these low-quantity orders, capturing revenue that would have otherwise been lost. Over three years — and as the process scale across four regions — the additional revenue captured is worth more than $3.3 million in present value to the composite organization.
- **Shortened delivery cycle with only 14% of deliveries needing human intervention.** Celonis actively identifies unnecessary credit blocks and inventory blocks for the composite organization, which accelerates delivery processing. The percentage of deliveries without any human intervention increases from 33% to 86%, with only 14% of orders needing human direct intervention.
- **Improved inventory management enables cashflow liquidity, a 50% penalty reduction, and a shortened delivery cycle.** Inventory management process improvement leads to shortened delivery cycle, improving the liquidity of cash flow and reducing penalty payment in some regions. Over three years and as the process scales

across four regions, the cost savings reach $24.5 million in present value to the organization.

- **Saved 1% of factory operating costs due to reducing redundant inventory.** The inventory management process improvement also contributes to more streamlined factory operations at the composite organization. It reduces the cost of inventory storage with a clear understanding of materials needed to maintain continuous operations without risking shutting down factory operations. Over two years and as the process scales across four regions, the cost savings reaches $8.9 million in present value for the composite organization.
- **Saved 1% of overall transportation cost from logistics consolidation.** The implementation of the inventory management process leads to improvements in logistics efficiency within the composite organization. It optimizes transportation costs through consolidating shipping lanes, saving fuel cost, and reducing duplicate payments to drivers. Over two years and as the process scales across four regions, the cost savings reaches over $5.7 million in present value for the composite organization.
- **Saved 62 FTEs due to improved invoice processing.** The composite organization benefits from the finance process by removing avoidable and redundant activities for accounts payable (AP) and accounts receivable (AR). Over one year of implementation across four regions, the cost savings from invoice automation reach $1.7 million in present value for the composite organization.

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

- **A set baseline for supply chain emissions tracking.** The composite organization can track the carbon emission baseline for the entire supply chain through the Celonis business app, allowing them to get emission data faster with existing software.
- **Ability to drive change through demonstrating visible benefit.** Celonis allows the composite organization to drive transformation, allowing it to demonstrate worth and put a dollar figure to the change.
- **Optimizing supply chain and carbon emissions.** Using the Celonis sustainability business app to establish the baseline is only the first step. With the baseline data established across the composite organization’s supply chain, it can focus on identifying

opportunities to reduce carbon emissions, such as finding the best mode of transportation and optimizing lanes, with sustainability in mind.

- **Expanding to more use cases within the implemented processes.** The composite organization adopts multiple use cases within order management, inventory management, and finance (including AP and AR) processes. However, there are more use cases to be explored. Within order management process, the composite may identify more use cases across the journey, such as automating order returns and improving fraud detection. In the finance process, it could also further explore use cases in handling uncollectible invoices, late payments, and disputes.
- **Working with Celonis value engineer team to expand to new processes.** Outside of the processes already implemented, the value engineering team of Celonis can further collaborate with the composite organization to explore new potential areas for process automation.
- **Implementing system-agnostic, cross-process workflows to improve efficiency.** The composite organization has started implementing object-centric process mining (OCPM) from Celonis, which allows it to monitor processes across multiple systems, such as CRM, enterprise resource management (ERP), and employee productivity applications.

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

- **Annual subscription costs of $6.8 million over three years.** The cost of Celonis subscription increases as the number of live processes grows at the composite. However, the pricing model varies depending on the specific client industry and complexity of use cases. Celonis offers a wide range of pricing options starting at an entry package of $150,000.
- **Implementation and ongoing maintenance costs of $2.3 million over three years.** These costs include FTEs' salary in the automation center of excellence (COE), implementation costs from a third-party partner, and time investment from business stakeholders to implement new use cases.

The composite organization experiences benefits of $44.1 million over three years versus costs of $9.1 million, adding up to a net present value (NPV) of $35.0 million and an ROI of 383%.

“I’ve never had a vendor with so much focus on ensuring the success of the client. [The Celonis team] constantly helps us understand potential new use cases, boost adoption of existing use cases. … It’s a huge win for us.”

HEAD OF SUPPLY CHAIN COE, CONSUMER GOODS

Return on investment (ROI)

383%

Benefits PV

$44.1M

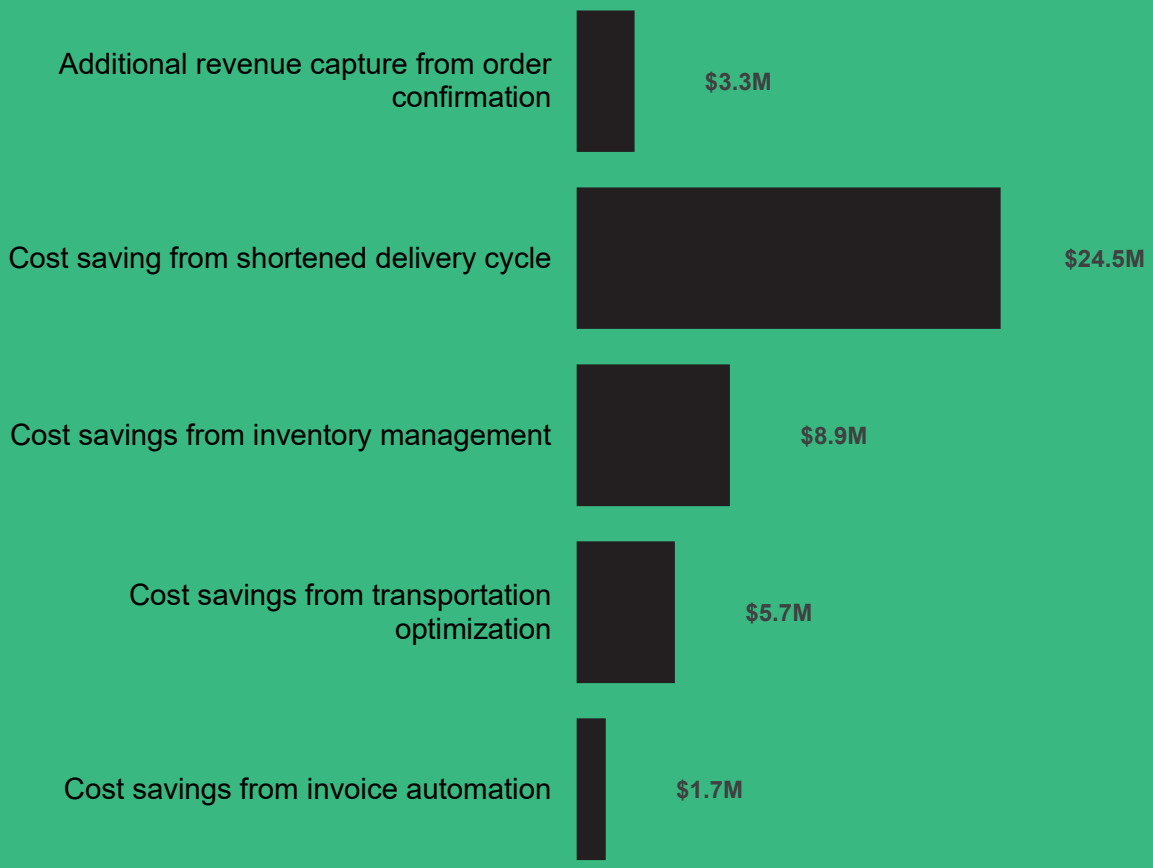
Net present value (NPV)

$35.0M

Payback

<6 months

Benefits (Three-Year)



TEI FRAMEWORK AND METHODOLOGY

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

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 Celonis can have on an organization.

DISCLOSURES
Readers should be aware of the following:

This study is commissioned by Celonis 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 Celonis. For the interactive functionality using Configure Data/Custom Data, the intent is for the questions to solicit inputs specific to a prospect's business. Forrester believes that this analysis is representative of what companies may achieve with Celonis based on the inputs provided and any assumptions made. Forrester does not endorse Celonis or its offerings. Although great care has been taken to ensure the accuracy and completeness of this model, Celonis and Forrester Research are unable to accept any legal responsibility for any actions taken on the basis of the information contained herein. The interactive tool is provided 'AS IS,' and Forrester and Celonis make no warranties of any kind.

Celonis 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.

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

Due Diligence
Interviewed Celonis stakeholders and Forrester analysts to gather data relative to Celonis.

Interviews
Interviewed four people at organizations using Celonis to obtain data about 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 Celonis Customer Journey

Drivers leading to the Celonis investment

Interviews			
Role	**Industry**	**Revenue**	**Year Implemented**
Director of transformation	Pharmaceuticals	$58.5 billion	2022
Head of intelligent automation	Consumer goods	$18.4 billion	2019
Head of supply chain COE	Consumer goods	$20.4 billion	2019
Head of business COE	Oil and gas	$345 billion	2018

KEY CHALLENGES

The interviewees' organizations were large, international organizations with complex processes in the supply chain, finance, and IT departments. The interviewees reported a lack visibility into their supply chain and faced process inefficiencies. The various automation tools in place could not enable decision-makers to fully understand the process reality throughout the workflows.

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

- **Prior solutions (robotic process automation [RPA], data visualization tools) that lacked process intelligence capabilities connecting analysis to execution.** Interviewees noted that while data visualization tools provided insights and RPA automated tasks, these prior solutions did not provide a unified framework to model, implement, and refine process improvements, leaving process gaps and inefficiencies unresolved.
- **Process inefficiencies that caused revenue leakage and sales deviation that could have been avoided.** Without the ability to effectively identify and analyze inefficiencies within business processes, the interviewees' organizations were negatively impacted

financially. Specifically, they experienced revenue leakage throughout order generation, delivery, inventory management, and logistics processes, which also caused sales to fall short of their target.

> "We needed to know information that is more granular than the enterprise-level metrics (e.g., days of order outstanding). Celonis optimized processes and identified leakage at the transaction level."
>
> HEAD OF BUSINESS COE, OIL AND GAS

> "As a big company, we know we could improve on the processes but don't know where the opportunities lie."
>
> DIRECTOR OF TRANSFORMATION, PHARMACEUTICALS

COMPOSITE ORGANIZATION

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

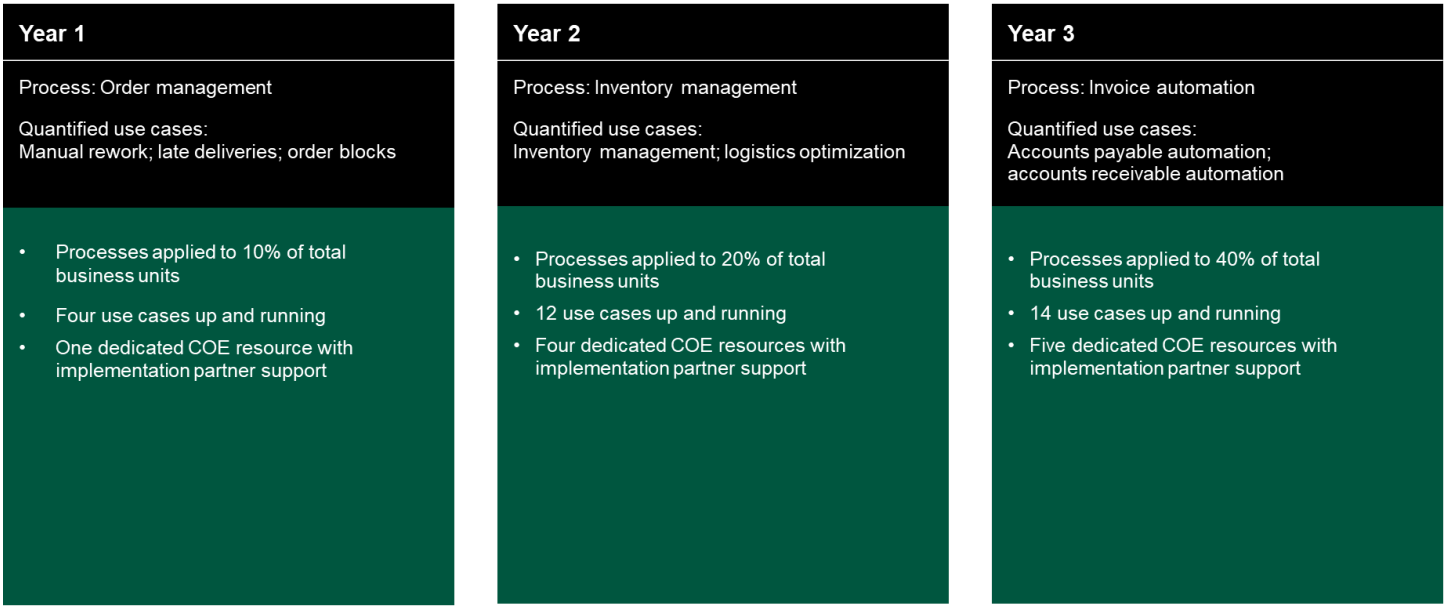
Description of composite. The composite organization is a global consumer goods manufacturing company with $20 billion in annual revenue. The organization has a strong brand and global operations, operating in 10 sales regions (business units). It also has 57,000 employees and an operating cost of $17.6 billion with an operating margin of 12%.

Deployment characteristics. In Year 1, the composite organization starts using the solution in one sales region, implementing four use cases under the order management process. By Year

2, it expands to two sales regions, increasing implementation to another eight use cases under inventory management and logistics optimization processes. In Year 3, the solution is scaled to cover four sales regions, and the composite further expands implementation to two more use cases under invoice automation process (see Figure 1). The processes and use cases Celonis support include but are not limited to the ones that the composite organization experiences. Please refer to the Celonis website for more details.

Figure 1

Composite Three-Year Deployment Plan



Key Assumptions

$20 billion in annual revenue

12% operating margin

10 sales regions (business units) globally

Scaled Celonis adoption from 10% of business units to 40% over three years

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	Additional revenue capture from order confirmation	$648,000	$972,000	$2,592,000	$4,212,000	$3,339,805
Btr	Cost saving from shortened delivery cycle	$4,758,904	$7,138,356	$19,035,617	$30,932,877	$24,527,485
Ctr	Cost savings from inventory management	$0	$3,135,000	$8,360,000	$11,495,000	$8,871,901
Dtr	Cost savings from transportation optimization	$0	$2,006,400	$5,350,400	$7,356,800	$5,678,017
Etr	Cost savings from invoice automation	$0	$0	$2,232,000	$2,232,000	$1,676,935
	Total benefits (risk-adjusted)	$5,406,904	$13,251,756	$37,570,017	$56,228,677	$44,094,143

ADDITIONAL REVENUE CAPTURE FROM ORDER CONFIRMATION

Evidence and data. Interviewees have shared that Celonis helped their organizations optimize the order management process:

- Before the investment in Celonis, interviewees noted that orders that did not meet the MOQ were automatically rejected, resulting in lost sales. Celonis identified and combined these low-quantity orders, capturing revenue that would have otherwise been lost. Interviewees added that this change led to an increase in revenue by ensuring that 0.3% of orders that were previously rejected were now combined and processed automatically.
- The head of supply chain COE at the consumer goods company said: “We’re automatically alerting the [order] analysts that they can combine orders and showing them what orders to combine. This is a really important change due to the intelligence of Celonis.”

Modeling and assumptions. Based on the interviews, Forrester assumes the following about the composite organization:

- Initially, the composite has one sales region with this order confirmation use case implemented. The sales regions implementing this process expand year over year, reaching 1.5 regions in Year 2 and four regions in Year 3.
- Before Celonis, 0.3% of orders were automatically rejected due to not reaching the MOQ.

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

- The process and threshold of MOQ.
- The annual revenue per region.
- The operating margin, which varies depending on the industry and management.

Results. To account for these risks, Forrester adjusted this benefit downward by 10%, yielding a three-year, risk-adjusted total PV (discounted at 10%) of $3.3 million.

$3.3M

Additional revenue capture in three years

"It shows us not only analytics but also real [business] improvements. It's modern [and] it monitors performance, which is really beneficial for customers."

HEAD OF SUPPLY CHAIN COE, CONSUMER GOODS

Additional Revenue Capture From Order Management					
Ref.	**Metric**	**Source**	**Year 1**	**Year 2**	**Year 3**
A1	Regions with Celonis implemented	Composite	1.0	1.5	4.0
A2	Annual revenue per region	Composite	$2,000,000,000	$2,000,000,000	$2,000,000,000
A3	Percentage of orders previously automatically rejected	Interviews	0.3%	0.3%	0.3%
A4	Operating margin	Composite	12%	12%	12%
At	Additional revenue capture from order management	A1*A2*A3*A4	$720,000	$1,080,000	$2,880,000
	Risk adjustment	↓10%			
Atr	Additional revenue capture from order management (risk-adjusted)		$648,000	$972,000	$2,592,000
	Three-year total: $4,212,000			**Three-year present value: $3,339,805**	

COST SAVING FROM SHORTENED DELIVERY CYCLE

Evidence and data. Interviewees explained that their organizations managed to shorten the delivery cycle for regions with the implemented order management process. The top reasons for this shorter delivery cycle include:

- **Increased automation.** The head of intelligent automation at the consumer goods industry explained that at their organization, orders delivered without any human intervention increased from 33% to 86% (a 53% improvement), with only 14% of orders needing human direct intervention.
- **Removed blocks.** Interviewees stated that Celonis managed to identify unnecessary credit blocks and inventory blocks, which accelerated delivery processing. The head of intelligent automation at the consumer goods industry said, “Celonis removed the blocks, whether it was credit blocks, inventory blocks, warehouse blocks, or approval.”

The interviewees also noted that this shortened delivery cycle contributed to financial impact because it enabled:

- **Improved liquidity of cash flow.** The Celonis implementation led to the automation of manual processes at the interviewees’ organizations. Interviewees noted that their organizations achieved a 30% to 50% reduction in late deliveries as well as savings in late delivery fines.

- **Reduced penalty payments.** The head of intelligent automation at the consumer goods company said: “Due to late delivery, we used to pay much higher fines in certain regions. The simplification of the delivery process helped us in increasing our service level, which converted into improved SLAs and a decrease in fines.”

Modeling and assumptions. Based on the interviews, Forrester assumes the following about the composite organization:

- The composite reduces its delivery cycle time by 10 days with a significant reduction in human intervention in the process.
- The cost of capital percentage is 6%. This is saved due to either early repayment of debt or investment return of the freed-up capital.
- The number of sales orders is 160,000 per region.
- Before Celonis, 5% of orders used to face penalty due to late delivery. With the implementation of the Celonis order management process, this percentage is reduced by 50%.
- The average cost for a five-day late delivery penalty is $500.

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

- The cost of capital, which varies depending on the regions, industries, and investment structure.
- The percentage of orders resulting in penalties.
- The number of penalty orders prior to Celonis implementation and the penalty order reduction.
- The average penalty cost for five-day late delivery.

Results. To account for these risks, Forrester adjusted this benefit downward by 10%, yielding a three-year, risk-adjusted total PV (discounted at 10%) of $24.5 million.

53%

Reduction in deliveries with human intervention

> "Celonis removed the blocks, whether it was credit blocks, inventory blocks, warehouse blocks, or approval blocks, because of process simplification."
>
> HEAD OF INTELLIGENT AUTOMATION, CONSUMER GOODS

Cost Saving From Shortened Delivery Cycle					
Ref.	**Metric**	**Source**	**Year 1**	**Year 2**	**Year 3**
B1	Regions with Celonis implemented	Composite	1.0	1.5	4.0
B2	Annual revenue per region	Composite	$2,000,000,000	$2,000,000,000	$2,000,000,000
B3	Delivery cycle time reduction (days)	Interviews	10	10	10
B4	Percentage of cost of capital	Interviews	6%	6%	6%
B5	**Subtotal: Improved cash flow and liquidity**	**B1*B2*B3/ 365*B4**	**$3,287,671**	**$4,931,507**	**$13,150,685**
B6	Sales orders	Composite	160,000	240,000	640,000
B7	Percentage of orders resulting in penalty	Interviews	5%	5%	5%
B8	Penalty orders prior to Celonis	B6*B7	8,000	12,000	32,000
B9	Penalty order reduction	Composite	50%	50%	50%
B10	Penalty orders avoided with Celonis	B8*B9	4,000	6,000	16,000
B11	Average penalty for five-day late delivery	Composite	$500	$500	$500
B12	**Subtotal: Penalty reduction in applied sales regions**	**B10*B11**	**$2,000,000**	**$3,000,000**	**$8,000,000**
Bt	Cost saving from shortened delivery cycle	B5+B12	$5,287,671	$7,931,507	$21,150,685
	Risk adjustment	↓10%			
Btr	Cost saving from shortened delivery cycle (risk-adjusted)		$4,758,904	$7,138,356	$19,035,617
	Three-year total: $30,932,877			**Three-year present value: $24,527,485**	

COST SAVINGS FROM INVENTORY MANAGEMENT

Evidence and data. Interviewees noted that the cost of shutting down factory operations could be very high. To avoid such risk, most interviewees' manufacturing companies stocked redundant inventory. One interviewee shared that their organization reduced the cost of inventory storage with a clear understanding of materials needed to maintain continuous operations, without risking shutting down factory operations.

The head of intelligent automation at the consumer goods company mentioned: "Previously, we had too much material in stock that was not utilized. We had to bear the high inventory cost to avoid risks of factory shutdown. With Celonis, we were able to optimize our inventory while ensuring our plants are still working 24/7."

Modeling and assumptions. Based on the interviews, Forrester assumes the following about the composite organization:

- Half of the factories in applied regions have implemented the inventory management process.
- The operational cost per factory is $55 million per year.
- The cost savings achieved through reducing material inventory redundancy is 1% per factory.

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

- The operating costs of factories, which depend on the region, size, and nature of business.
- The percentage of savings from reducing redundant inventory.
- The speed of scaling this automation.

Results. To account for these risks, Forrester adjusted this benefit downward by 5%, yielding a three-year, risk-adjusted total PV (discounted at 10%) of $8.9 million.

1%

Percentage of factory operational costs saved from reducing redundant inventory

> "With Celonis, we were able to optimize our inventory while ensuring our plants are still working 24/7."
>
> HEAD OF INTELLIGENT AUTOMATION, CONSUMER GOODS

Cost Savings From Inventory Management					
Ref.	**Metric**	**Source**	**Year 1**	**Year 2**	**Year 3**
C1	Business units with Celonis implemented	Interviews	0.0	1.5	4.0
C2	Factories optimized with Celonis per region	Interviews	4	4	4
C3	Factories optimized with Celonis	C1*C2	0	6	16
C4	Operational cost per factory	Composite	$55,000,000	$55,000,000	$55,000,000
C5	Percentage of savings from reducing redundant inventory	Interviews	1%	1%	1%
Ct	Cost savings from inventory management	C3*C4*C5	$0	$3,300,000	$8,800,000
	Risk adjustment	↓5%			
Ctr	Cost savings from production efficiency improvement (risk-adjusted)		$0	$3,135,000	$8,360,000
	Three-year total: $11,495,000			**Three-year present value: $8,871,901**	

COST SAVINGS FROM TRANSPORTATION OPTIMIZATION

Evidence and data. Interviewees noted that the implementation of Celonis led to improvements in logistics efficiency within their organizations. Transportation optimizations were enabled due to:

- **Consolidated shipping lanes.** The head of supply chain COE at the consumer goods company shared, "We are able to find the most cost-optimized shipping lanes through automations."

- **Fuel cost savings.** The director of transformation in the pharmaceutical industry highlighted that process mining in freight management revealed opportunities for cost savings. Instead of shipping back orders one at a time as they became available, shipments were consolidated and sent as a single shipment within the SLA timeframe. This approach reduced the number of trucks needed, thereby lowering fuel costs.
- **Reduced duplicate payments to drivers.** The head of business COE at the oil and gas company said, "We are able to analyze scheduling in truck delivery and remove duplicate payments if the driver just had two stops."

Modeling and assumptions. Based on the interviews, Forrester assumes the following about the composite organization:

- The composite organization starts implementing the transportation optimization use case in Year 2 in 1.5 regions, growing to four regions in Year 3.
- The annual transportation cost per region is $140.8 million.
- The enhancements result in a 1% reduction in overall transportation costs.

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

- The number of regions that implemented Celonis for transport optimization.
- The annual transportation cost per region.
- The percentage of savings from logistics.

Results. To account for these risks, Forrester adjusted this benefit downward by 5%, yielding a three-year, risk-adjusted total PV (discounted at 10%) of $5.7 million.

1%

Savings from logistics consolidation

> "We are able to find the most cost-optimized lanes through automation [with Celonis], which contributed to the fuel cost savings."
>
> HEAD OF SUPPLY CHAIN COE, CONSUMER GOODS

Cost Savings From Transportation Optimization					
Ref.	**Metric**	**Source**	**Year 1**	**Year 2**	**Year 3**
D1	Regions using Celonis for transportation optimization	Composite	0.0	1.5	4.0
D2	Annual transportation cost per region	Composite	$140,800,000	$140,800,000	$140,800,000
D3	Percentage of savings from logistics	Interviews	1%	1%	1%
Dt	Cost savings from transportation optimization	D1*D2*D3	$0	$2,112,000	$5,632,000
	Risk adjustment	↓5%			
Dtr	Cost savings from transportation optimization (risk-adjusted)		$0	$2,006,400	$5,350,400
	Three-year total: $7,356,800			**Three-year present value: $5,678,017**	

COST SAVINGS FROM INVOICE AUTOMATION

Evidence and data. Interviewees shared that their organizations benefited from removing avoidable and redundant activities to streamline invoice processing, which led to invoice automation. Depending on the organizational structure and sensitivity of data, invoices used to be processed manually either through outsourced employees or the internal finance team. The interviewees reported that their teams had to spend several minutes on each invoice to fix mistakes in pricing or descriptions. Celonis helped the interviewees' organizations completely automate this task.

- The director of transformation at the pharmaceutical company said: "Creating one invoice and sending out manually used to take 4 minutes or so. We have hundreds of thousands of invoices."

- Besides automating the invoice process, interviewees stated that Celonis also helped identify discrepancies between the price and invoiced amount. The platform alerted the sales executives and the customer service team when this occurred.

Modeling and assumptions. Based on the interviews, Forrester assumes the following about the composite organization:

- The invoice automation process is implemented in four sales regions in Year 3.
- The number of invoice processed per region is 320,000, including accounts payable (AP) and accounts receivable (AR).
- Previously, each of these invoices required a manual processing time of 6 minutes.
- The average fully burdened annual salary for an outsourced FTE for invoice processing is $40,000.

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

- The number of invoice varies.
- The manual processing time per invoice, which depends on the complexity of the invoices and pricing.
- The invoice management FTE salary, which varies depending on the location, seniority, and employment status of the staff.

Results. To account for these risks, Forrester adjusted this benefit downward by 10%, yielding a three-year, risk-adjusted total PV (discounted at 10%) of $1.7 million.

Cost Savings From Invoice Automation					
Ref.	**Metric**	**Source**	**Year 1**	**Year 2**	**Year 3**
E1	Regions with invoice automation implemented	Composite	0.0	0.0	4.0
E2	Invoices processed per sales region	Composite	320,000	320,000	320,000
E3	Manual processing time per invoice prior to Celonis (hours)	Interviews	0.10	0.10	0.10
E4	FTEs saved	E1*E2*E3/2,080	0	0	62
E5	Fully burdened annual salary for an outsourced FTE	Composite	$40,000	$40,000	$40,000
Et	Cost savings from invoice automation	E4*E5	$0	$0	$2,480,000
	Risk adjustment	↓ 10%			
Etr	Cost savings from invoice automation (risk-adjusted)		$0	$0	$2,232,000
	Three-year total: $2,232,000			**Three-year present value: $1,676,935**	

UNQUANTIFIED BENEFITS

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

- **A set baseline for supply chain carbon emissions tracking.** Interviewees' organizations were able to track the carbon emission baseline for the entire supply chain with the Celonis business app. This enabled their organizations to get the emission data faster with existing software rather than procure and implement new software. The head of intelligent automation at a consumer good company said, "We were able to reduce CO2 emissions because we could optimize our truckloads to drive the better energy efficiency and reduce carbon footprint."
- **Ability to drive change through demonstrating visible benefit.** With Celonis, interviewees noted their organizations found the impact of change to be clear and quantifiable, making it easy to drive transformation. As the head of business COE at the oil and gas company said: "If we directly ask sales to change the payment terms for customers, the immediate answer would be 'No.' With Celonis, we can demonstrate the actual worth and put a dollar figure to the change."

> "We are using Celonis to calculate the emissions of our shipments across the globe. We gave a goal to become carbon neutral by 2040."
>
> HEAD OF TRANSFORMATION, PHARMACEUTICALS

FLEXIBILITY

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

- **Optimizing supply chain and carbon emissions.** Using Celonis sustainability business app to establish the baseline is only the first step. Interviewees noted that with the baseline data established across their organizations' supply chains, they could focus on identifying opportunities to reduce carbon emissions, such as finding the best mode of transportation and optimizing lanes, with sustainability in mind. The head of supply chain COE at a consumer goods organization said, "We are currently starting to discuss how to use Celonis capabilities to reduce the carbon footprint."
- **Expanding to more use cases within the implemented processes.** The interviewees' organizations adopted multiple use cases within order management, inventory management, and invoice management. However, the interviewees said that more use cases could be explored. For example, within order management, the interviewees' organizations might identify more use cases across the journey, such as automating order returns and improving fraud detection. For invoice management, they could also further explore use cases in handling uncollectible invoices, late payments, and disputes.
- **Working with Celonis value engineer team to expand to new processes.** Outside of the processes already implemented, interviewees noted that their organizations could further collaborate with the value engineering team at Celonis to explore new potential areas for process automation.

- **Implementing system-agnostic, cross-process workflows to improve efficiency.** Some interviewees said their organizations have started implementing object-centric process mining (OCPM) from Celonis. The Celonis Process Intelligence Graph based on OCPM allows their organizations to monitor processes across multiple systems, such as CRM, ERP, and employee productivity applications. The head of business COE at the oil and gas company said, "Classic process mining gives you visibility of a single process … but if we want to understand how the inventory process interacts with maintenance and procurement processes, we were never able to do that."

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

> "OCPM allows you to understand the interactions across three processes instead of having siloed data models for each individual process. We can now bring all the data together in one place and create a digital plan for the whole ecosystem."
>
> HEAD OF BUSINESS COE, OIL AND GAS

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	Celonis annual cost	$0	$1,260,000	$2,100,000	$5,250,000	$8,610,000	$6,825,394
Gtr	Implementation and maintenance costs	$276,000	$305,210	$874,920	$1,357,230	$2,813,360	$2,296,245
	Total costs (risk-adjusted)	$276,000	$1,565,210	$2,974,920	$6,607,230	$11,423,360	$9,121,639

CELONIS ANNUAL COST

Evidence and data. The interviewees reported that the cost of Celonis subscription fee was associated with the complexity and number of processes implemented. Their organizations had varied pricing models depending on their data usage and time of implementation.

Modeling and assumptions. The cost of Celonis subscription increases as the data consumption grows.

- The composite organization implements four use cases in Year 1, expanding to 12 in Year 2 and 14 in Year 3.
- Celonis offers an entry pricing of $150,000 and increases depending on data consumption, organizational complexity, and process complexity. For detailed pricing, please contact Celonis for more information.

Risks. The subscription cost varies depending on:

- Company characteristics, such as operating locations, size, and industry.
- Adoption characteristics, such as data structure complexity, volume, and use case complexity.

Results. To account for these risks, Forrester adjusted this cost upward by 5%, yielding a three-year, risk-adjusted total PV (discounted at 10%) of $6.8 million.

Celonis Annual Cost						
Ref.	**Metric**	**Source**	**Initial**	**Year 1**	**Year 2**	**Year 3**
F1	Use cases implemented	Composite	0	4	12	14
F2	Annual subscription cost of Celonis	Composite	$0	$1,200,000	$2,000,000	$5,000,000
Ft	Celonis annual cost	F2	$0	$1,200,000	$2,000,000	$5,000,000
	Risk adjustment	↑5%				
Ftr	Celonis annual cost (risk-adjusted)		$0	$1,260,000	$2,100,000	$5,250,000
	Three-year total: $8,610,000			**Three-year present value: $6,825,394**		

IMPLEMENTATION AND MAINTENANCE COSTS

Evidence and data. Interviewees reported several categories of implementation and maintenance costs, including:

- FTEs salaries in the automation COE.
- Implementation costs from a third-party partner.
- Time investment from business stakeholders to implement new use cases.

Modeling and assumptions. Based on the interviews, Forrester assumes the following about the composite organization:

- There is one FTE in the COE in Year 1. As the Celonis implementation expands, the number of FTE increases to four in Year 2 and five in Year 3.
- The initial implementation fee is 20% of the contract value in Year 1.
- The ongoing implementation fee is 10% of each year's contract value.
- It requires 40 hours of the time of business stakeholders to validate and test each use case.

Risks. The implementation and maintenance costs vary depending on:

- The implementation partner's quote, which can depend on the size and region of the partner.

- The time of business stakeholder involvement, which may vary depending on the complexity of the use cases.

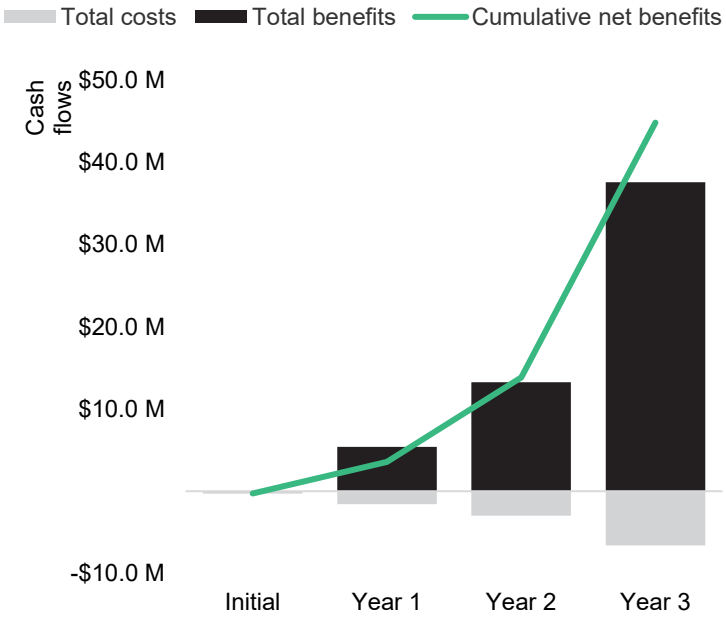
Results. To account for these risks, Forrester adjusted this cost upward by 15%, yielding a three-year, risk-adjusted total PV (discounted at 10%) of $2.3 million.

Implementation And Maintenance Costs						
Ref.	**Metric**	**Source**	**Initial**	**Year 1**	**Year 2**	**Year 3**
G1	Employees in COE	Composite		1	4	5
G2	Fully burdened annual salary for a COE employee	Composite		$135,000	$135,000	$135,000
G3	Outsourcing fee per year	Composite	$240,000	$120,000	$200,000	$500,000
G4	Business stakeholder time required for each new process (hours)	Composite		40	40	40
G5	New use cases per year	Composite		4	8	2
G6	Fully burdened hourly rate for a business stakeholder	Composite		$65	$65	$65
G7	Business stakeholder time investment	G4*G5*G6		$10,400	$20,800	$5,200
Gt	Implementation and maintenance costs	G1*G2*G3+G7	$240,000	$265,400	$760,800	$1,180,200
	Risk adjustment	↑15%				
Gtr	Implementation and maintenance costs (risk-adjusted)		$276,000	$305,210	$874,920	$1,357,230
	Three-year total: $2,813,360			**Three-year present value: $2,296,245**		

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	($276,000)	($1,565,210)	($2,974,920)	($6,607,230)	($11,423,360)	($9,121,639)
Total benefits	$0	$5,406,904	$13,251,756	$37,570,017	$56,228,677	$44,094,143
Net benefits	($276,000)	$3,841,694	$10,276,836	$30,962,787	$44,805,317	$34,972,504
ROI						383%
Payback						<6 months

APPENDIX A: TOTAL ECONOMIC IMPACT

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

Total Economic Impact Approach

Benefits represent the value the solution delivers to the business. The TEI methodology places equal weight on the measure of benefits and costs, allowing for a full examination of the solution's effect on the entire organization.

Costs comprise all expenses necessary to deliver the proposed value, or benefits, of the solution. The methodology captures implementation and 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. The ability to capture that benefit has a PV that can be estimated.

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

PRESENT VALUE (PV)

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

NET PRESENT VALUE (NPV)

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

RETURN ON INVESTMENT (ROI)

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

DISCOUNT RATE

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

PAYBACK PERIOD

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

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.

APPENDIX C: ENDNOTES

[1] Source: The State Of Process Intelligence, 2024, Forrester Research, Inc., January 8, 2025.

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

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