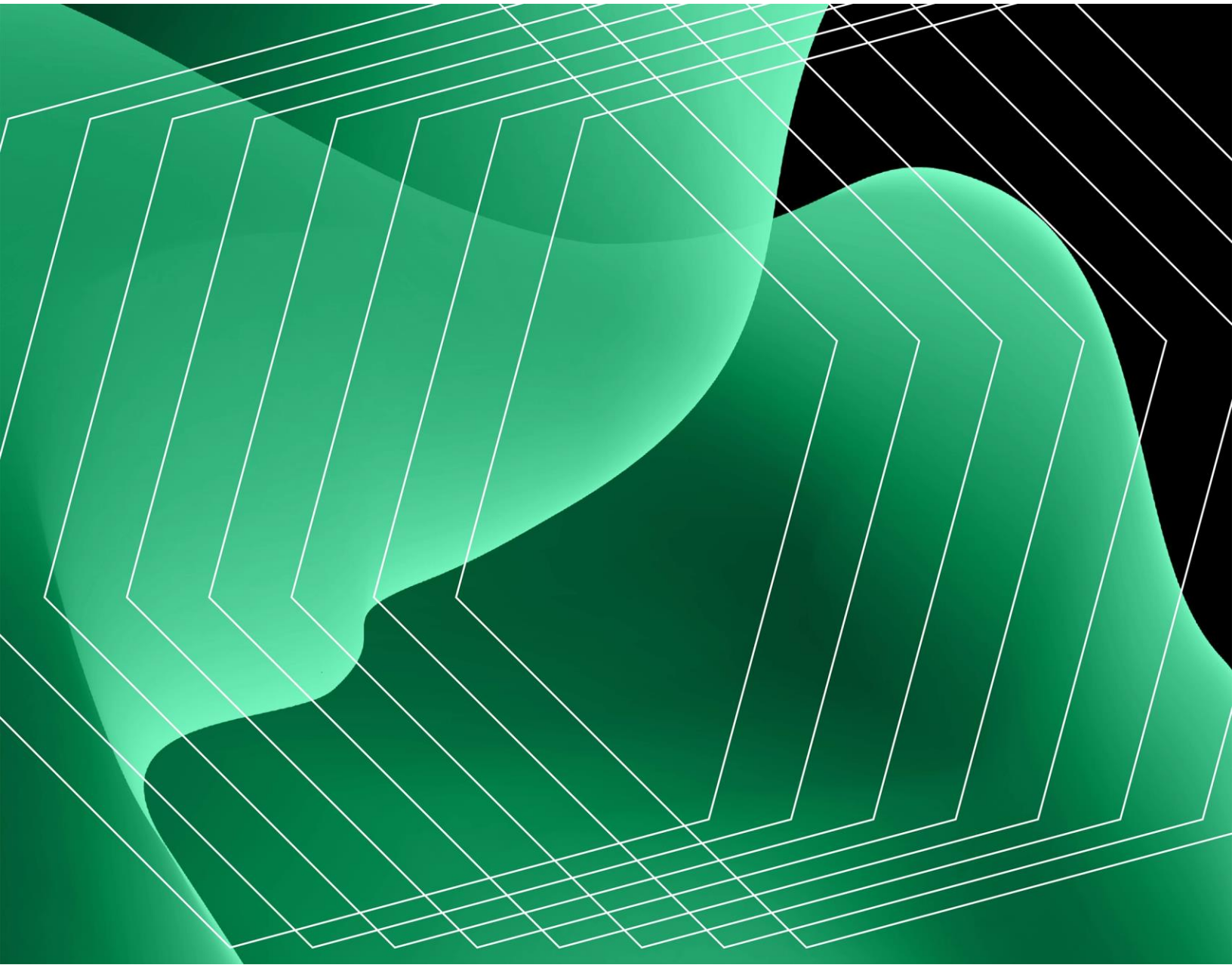
FORRESTER®

The Total Economic Impact™ Of Microsoft Dynamics 365 Field Service

Cost Savings And Business Benefits Enabled By Dynamics 365 Field Service

A Forrester Total Economic Impact™ Study
Commissioned By Microsoft, December 2023



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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

Field Service is a critical element in customer relationship management, and software that helps an organization improve its field service delivery can improve financial performance in two ways. First, it can improve customer retention and expansion by exceeding service expectations; second, it can save the organization money by increasing productivity. Microsoft Dynamics 365 Field Service is part of the unified suite of Dynamics 365 Business Applications, sharing the same data and processes as other applications in the suite, and it is used to deliver better results for the organization and its customers.

Microsoft Dynamics 365 Field Service helps organizations deliver onsite service to customer locations. The application includes work order automation, scheduling algorithms, asset servicing, mobility, Microsoft 365 integration, and infusion of generative AI through Copilot to set up frontline workers for success when they are onsite providing service for customers. It is part of the larger Dynamics 365 portfolio of applications designed to work together to deliver efficiency and improve customer experience.

Microsoft commissioned Forrester Consulting to conduct a Total Economic Impact™ (TEI) study and examine the potential return on investment (ROI) enterprises may realize by deploying Dynamics 365 Field Service.[1] The purpose of this study is to provide readers with a framework to evaluate the potential financial impact of Dynamics 365 Field Service on their organizations.

To better understand the benefits, costs, and risks associated with this investment, Forrester interviewed 11 representatives from seven organizations with experience using Dynamics 365 Field Service. For the purposes of this study, Forrester aggregated the interviewees' experiences and combined the results into a single composite organization, a $2 billion company with a field service team comprising 1,000 technicians, 50 dispatchers, and 150 managers.

Interviewees said that prior to using Dynamics 365 Field Service, their organizations used a combination of manual tools (e.g., whiteboards, paper work orders) and legacy hardware and software to manage their field service

operations. These approaches left communication gaps and made it difficult for managers to pull together all the information required to track their teams' day-to-day progress against goals. As a result, it was clear that field service was not operating as efficiently as possible, but it was difficult to know how bad the situation was or what to do about it.

After the investment in Dynamics 365 Field Service, the interviewees agreed that not only had their field service teams become more efficient and productive, but they also now had the tools to better manage their work and their employees, with more visibility into employee actions and utilization. Key results from the investment include the ability to get more work done each week without additional hiring, improved first-time fix rates, faster invoicing, and increased customer and employee satisfaction.

KEY STATISTICS

Return on investment (ROI):
346%

Net present value (NPV):
$33.10M

Payback:
<6 months

Benefits PV:
$42.65M

KEY FINDINGS

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

- **Increased first-time fix rate and avoided 12% of second-visit truck rolls.** Technicians can quickly locate equipment to be serviced, ensure that they have the appropriate parts inventory on their truck, understand the history and problems with the equipment, and tap into institutional

knowledge to fix customer problems on the first visit, avoiding the need to send additional technicians to complete the call.

- **Increased field technician productivity by up to 14% once fully implemented.** Several functions allow technicians to increase their productivity on every work order. The application automates administrative tasks, ensures the right technician is assigned to each job, and gives technicians access to institutional knowledge (which will be enhanced with access to mixed reality applications such as Dynamics 365 Remote Assist).

> "Our technicians are now much better prepared because everything is system-driven. They are clear what their schedule is, they know they have the tools and parts they need, and their customers are alerted that they are on the way."
>
> SENIOR PRODUCT MANAGER, TELECOMMUNICATIONS

- **Eliminated standard time-to-invoice delays, resulting in $2.8 million savings in interest on accounts receivable.** Dynamics 365 Field Service automates the handoff between work order completion/approval and customer invoicing, cutting days from the time to receive payment for work.
- **Avoided travel time, saving the organization $2.1 million over three years.** Routing algorithms and traffic updates create the most efficient schedule for each technician and accommodate the organization's need for last-minute changes.

- **Improved dispatcher productivity by 40%.** Automated scheduling and rescheduling, as well as the ability to match the best available or closest technician to incoming work orders, allow the organization to redeploy schedulers and dispatchers, saving $1.6 million.
- **Enhanced management productivity by 100 hours per year.** As processes are automated with Dynamics 365 Field Service, the time managers need to spend putting out fires and handling administrative tasks is greatly reduced, freeing them to spend more time supporting technicians. They can now work on more strategic tasks, such as coaching, learning, and upskilling their workforce, activities that elevate the strategic importance of the service organization.
- **Retired legacy solutions.** Before deploying Dynamics 365 Field Service, the composite organization used a combination of email, calendar apps, spreadsheets, and some dedicated or purpose-built tools to attempt to manage the field service function. Since implementation, the organization saves on the cost of licensing (or maintaining, in the case of tools built in-house) these tools that were not fully meeting their needs.

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

- **Improved customer experience.** Increased efficiency and first-time fix rates not only save the composite organization money, but they also significantly improve customer experience and satisfaction with the organization. Dynamics 365 Field Service provides customers with accurate information and updates about when technicians will arrive and when the work has been completed. Since maintenance and repairs are completed quickly and accurately, customers can get back to their normal business routines, which has a positive financial impact for them, too. Finally, the application provides technicians with a fuller understanding of a customer’s history and its assets, allowing them to build upon the established relationship.
- **Enhanced employee experience.** Field technicians in the organization have a handy, familiar tool — a mobile phone — to check their schedules,

get assistance with complex jobs, report issues, and complete work orders. They spend more of their day doing the work they enjoy and making use of their skills and less of it managing multiple input platforms or completing paperwork after-hours. In a tight labor market for skilled technicians, these factors can reduce attrition.

- **Opportunity to incorporate AI.** Organizations have projects in the works to bring AI into their field service operations. They plan to make use of Copilot capabilities in the application, and also to create custom functions and processes that employ their customer, equipment, and historical work order data to further improve service delivery speed and quality.
- **Included access to mixed reality applications.** In December 2023, Microsoft announced that full-time employee licenses for Dynamics 365 Field Service will also include complementary access to mixed reality applications Dynamics 365 Remote Assist and Dynamics 365 Guides, which usually carry a $65 per person per month license fee.

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

- **License fees for the field service organization totaling $3.4 million.** Dynamics 365 Field Service licenses are $95 per user per month for the organization's employees and $50 for contractors. As of December 2023, the full-time employee license also includes access to Copilot capabilities for field service and Microsoft's mixed reality applications Dynamics 365 Remote Assist and Dynamics 365 Guides ($65 per user license if purchased separately).
- **Implementation costs of $3.9 million, including both third-party and internal stakeholder time.** The composite organization hires a Microsoft partner to assist with the implementation and also pays internally for the cost of IT, line-of-business, and change management team members to customize, test, and roll out the solution.
- **Ongoing maintenance costs of $1.5 million.** These include ongoing system administration, change management, and training for new employees.

- **Training costs of $700,000.** These include the cost of upfront training for the 1,200 field service team members as well as ongoing training for new employees in Year 2 and Year 3.

The representative interviews and financial analysis found that a composite organization experiences benefits of $42.65 million over three years versus costs of $9.55 million, adding up to a net present value (NPV) of $33.10 million and an ROI of 346%.

> “The platform has paid for itself 10 times over. And now we have a system we feel is flexible to take on additional work, so it will support our plans to expand into servicing adjacent equipment at our customers’ locations.”
>
> ENTERPRISE INFRASTRUCTURE DIRECTOR, BEVERAGE DISTRIBUTION

Return on investment (ROI):

346%

Benefits PV:

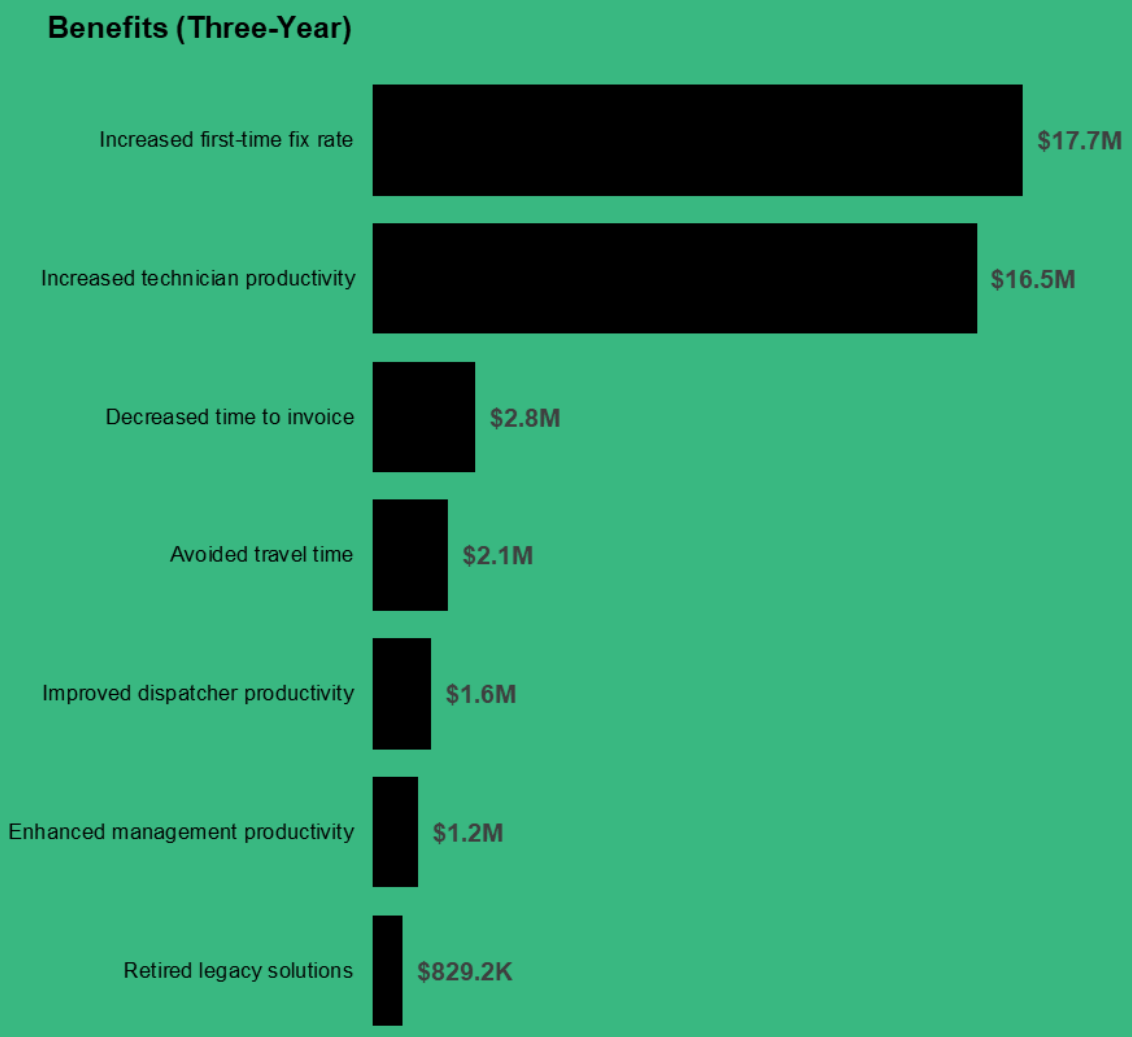
$42.65M

Net present value (NPV):

$33.10M

Payback:

<6 months



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 Dynamics 365 Field Service.

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 Dynamics 365 Field Service can have on an organization.

DISCLOSURES
Readers should be aware of the following:

This study is commissioned by Microsoft 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 Dynamics 365 Field Service.

Microsoft 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.

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

Due Diligence
Interviewed Microsoft stakeholders and Forrester analysts to gather data relative to Dynamics 365 Field Service.

Interviews
Interviewed 11 representatives at seven organizations using Dynamics 365 Field Service 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 Microsoft Dynamics 365 Field Service Customer Journey

Drivers leading to the Dynamics 365 Field Service investment

Interviews			
Role	**Industry**	**Region**	**Field Technicians**
Senior product manager	Telecommunications	EMEA	300
Enterprise infrastructure director	Beverage distribution	USA	80
IT director of business applications for EMEA	Industrial equipment manufacturing	Global, EMEA HQ	440
Technology consultant	Technical equipment sales and service	US	50
· Director, digital solutions and IT · Project manager · Product owner	Vehicle manufacturing	APAC	2,000
· VP, information technology · Senior director, software engineering · Director, marketing and strategy	Facilities solutions	North America	225
Senior director, workflow automation	Building infrastructure	Global, EMEA HQ	10,000

Key Challenges

Interviewees described a number of field service management strategies in place before they adopted the Dynamics 365 Field Service solution. The enterprise infrastructure director at a beverage distributor recalled, “Our existing solution was a 20-plus-year-old virtual machine that we were limping along with for the longest time, and our field service techs were using old handhelds that they had to put in a dock to sync.” The IT director of business applications for EMEA at an

industrial equipment manufacturer told Forrester that many of their offices, particularly in developing countries, were using pen and paper. Several interviewees said that their scheduling and work order tracking were done via email and calendar applications.

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

- **Lack of visibility into field service status**. With much of the knowledge about the daily schedule in the heads of technicians, managers and schedulers struggled with a lack of information that would help them appropriately distribute the workload and efficiently manage the team.
    - Information on who had what parts inventory on their truck impeded attempts to get parts to technicians who needed them on-site.
    - The same lack of information created security concerns regarding the disposition of expensive parts and tools.
    - Field service managers had limited information about where their technicians were and what progress they had made on their jobs.
    - It was difficult to respond to emergencies and last-minute changes to customer schedules because it was not always clear which technicians were where and whether they had time available.

> “When you talk about field service, there are hundreds of resources on the ground. You need clear visibility on their work, into what’s happening on the ground. Without that visibility, efficiency suffers, and it is difficult to meet SLAs.”
>
> SENIOR PRODUCT MANAGER, TELECOMMUNICATIONS

- **Communication issues among management, sales, and service teams**. Without an integrated application automating their field service processes, interviewees described situations where:
    - Work orders and their history were lost when a technician left the company.
    - Work could not be completed as scheduled because customers were unaware and unavailable.
    - Technicians had to repeatedly follow up with sales teams to get appointments rescheduled.
- **Technicians' inability to complete work orders in a timely fashion**. Interviewees described several reasons why a technician might not be able to complete a job through no fault of their own. Many of these situations could be avoided by providing the technician with better or different information about the work order.
    - The enterprise infrastructure director at a beverage company pointed to the difficulty of finding the one broken vending machine or cooler at a state fair or on a college campus.
    - The IT director at an equipment manufacturer mentioned that jobs were often "assigned" by a technician raising their hand to take it. If they were not the most skilled on that particular machine or issue, they might need to call in a second technician who would have been a better choice for the assignment in the first place.
    - When facing a complex problem, technicians often had little or no information about the history of the equipment to guide them or provide insight into what the issue might be.

Investment Objectives

All of the interviewees agreed that their primary goal in investing in Dynamics 365 Field Service was to improve the productivity and efficiency of their field service teams. They expected this to lead to savings on their end and customer retention and profitability. Different interviewees, however, planned different ways

to use the solution to accomplish these goals. For instance, the manager of service for a building infrastructure company relayed: “[We] wanted to be able to outsource and coordinate work items with subcontractors. Now we have a tool-based interaction where we can hand out certain task types to subcontractors and make sure we deliver them as cost-effectively as possible while still maintaining an operational overview and delivering the customer value on time.”

> “Our primary goal was to improve our productivity and the efficiency of the routing to be able to add one more job per week for each technician.”
>
> VP INFORMATION TECHNOLOGY, FACILITIES SOLUTIONS

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 seven participating 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 representative organization upon which this financial model is based is a $2 billion company that employs 1,000 field service technicians to install, perform preventative maintenance, troubleshoot problems, and perform repairs on equipment installed at customer locations. The company uses contract technicians to provide flexibility in its workforce, so 800 of these technicians are full-time employees and 200 are contractors. There are 150 field service managers and 50 dispatchers/schedulers supporting the field technicians.

The work the technicians perform may be covered under warranty or may be part of a service agreement between the company and its customers, and different pricing and invoicing rules apply to these different job types. Each technician spends approximately 6 hours of their day on-site at customer locations and 2 hours traveling between jobs. On average, they can complete three service calls per day, although this can vary widely depending on the work to be done. As a result, the organization completes approximately 750,000 service calls per year at the start of the time period being modeled, and this number grows as the organization expands over the three-year period of the model.

Key Assumptions

$2 billion revenue
1,000 field technicians (20% contractors)
50 field service dispatchers
150 field service managers

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	Increased first-time fix rate	$3,494,400	$7,268,352	$11,338,629	$22,101,381	$17,702,509
Btr	Increased technician productivity	$4,209,920	$6,995,789	$9,106,899	$20,312,608	$16,450,992
Ctr	Decreased time to invoice	$726,568	$1,322,354	$1,375,249	$3,424,171	$2,786,616
Dtr	Avoided travel time	$486,200	$1,011,296	$1,051,748	$2,549,244	$2,067,976
Etr	Improved dispatcher productivity	$216,000	$734,400	$1,036,800	$1,987,200	$1,582,269
Ftr	Enhanced management productivity	$264,807	$550,800	$716,040	$1,531,647	$1,233,912
Gtr	Retired legacy solutions	$204,000	$408,000	$408,000	$1,020,000	$829,181
	Total benefits (risk-adjusted)	$9,115,695	$18,290,991	$25,033,365	$52,926,251	$42,653,455

Increased First-Time Fix Rate

Evidence and data. Sending a truck out to a customer site with a technician and a full complement of parts and tools is a very expensive proposition for most organizations that have a field service function. While it is at the core of the service they are delivering, field service managers are always on the lookout for ways to reduce truck rolls.

Interviewees told Forrester that Dynamics 365 Field Service reduced the need for truck rolls in many of their organizations. This was primarily the result of improved first-time fix rates enabled by the application in several ways.

- The application's scheduling function assigned the best technician for the job based on rules created by the organization. In situations involving complex problems or specialized equipment, sending a technician with the right experience in the first place meant not having to send them out later when the first technician was unable to complete the job.

- The application provided technicians with more detail about their work orders than they had previously had, including suggestions for required parts and tools so they arrived prepared to complete the work.
- If technicians ran into problems during the maintenance or repair process, the application gave them access to historical information about the machine and previous repairs that could help resolve the issue.
- Dynamics 365 Field Service now also includes access to mixed reality apps Dynamics 365 Guides and Dynamics 365 Remote Assist, allowing technicians at customer sites to consult with experts back at the office without rolling a truck to send those experts to the customer site.

12%
Reduction in second visits

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

- The organization completes, on average, three work orders per day per technician over the course of a normal 260-day work year.
- Fourteen percent of those jobs require a visit from another technician, either to assist the first technician with a difficult problem or to follow up on an issue that was not fixed on the first call.
- On average, it costs the organization $1,000 to roll a truck.[2]
- With Dynamics 365 Field Service, 4% of these additional calls are avoided because the right technician was dispatched to the job with the right tools and information the first time. This increases to 8% of calls avoided in Year 2 and 12% in Year 3 as the application is installed across the organization and as more of the field service team uses it more regularly.

Risks. The likelihood that an organization will experience a different magnitude of value from this benefit is related to:

- The organization's first-time fix rate before implementing Dynamics 365 Field Service.
- The organization's cost to roll a truck.

Results. To account for these risks, Forrester adjusted this benefit downward by 20%, yielding a three-year, risk-adjusted total PV (discounted at 10%) of $17.7 million.

Increased First-Time Fix Rate					
Ref.	**Metric**	**Source**	**Year 1**	**Year 2**	**Year 3**
A1	Average visits per technician per day	Interviews	3	3	3
A2	Workdays per technician	Composite	260	260	260
A3	Average service calls per year	B1*A1*A2	780,000	811,200	843,648
A4	Percentage requiring revisit	Interviews	14%	14%	14%
A5	Revisit calls avoided with Dynamics 365 Field Service	Interviews	4%	8%	12%
A6	Average cost to roll truck	Technology & Services Industry Association (TSIA)	$1,000	$1,000	$1,000
At	Increased first-time fix rate	A3*A4*A5*A6	$4,368,000	$9,085,440	$14,173,296
	Risk adjustment	↓20%			
Atr	Increased first-time fix rate (risk-adjusted)		$3,494,400	$7,268,352	$11,338,629
	Three-year total: $22,101,381		**Three-year present value: $17,702,509**		

Increased Technician Productivity

Evidence and data. Interviewees cited many of the same functions discussed in the previous benefit as enabling improved technician productivity on virtually every work order.

- First, the application removes many of the administrative tasks that technicians had previously been burdened with, creating more time in their day to do the skilled work for which they were hired. The product owner at a vehicle manufacturer recalled technicians' frustration with the multiple platforms they used before Dynamics 365 Field Service. They said: "What they experienced was that they needed to share the same data and information again and again using the different tools. But now, everything is integrated from end to end, and they can do their work and only have to enter it once. The information is then shared with everyone who needs it."
- The application also improves day-to-day productivity by assigning the best available technician for the job, finding the most efficient routing, alerting customers when the technician is on the way so they can prepare, ensuring that the right parts and tools for the day's work orders are on the truck, and giving technicians historical information on the equipment to be serviced.
- Access to Dynamics 365 Remote Assist also increases productivity by allowing technicians to take advantage of institutional knowledge on the spot, rather than spending time trying to find documentation or peers who can guide them through difficult or complex jobs.
- Finally, we know that "what's measured gets managed." The application gathers the data to report (both for technicians and their managers) on productivity by technician and team. A senior product manager in telecommunications explained: "Our technicians are more productive because everything is system-driven now. We measure efficiency for each technician, and we have been able to plan more work orders because we have seen the increase in technician utilization."

> “A lot of the service techs can build their own views of their own productivity. Their insight into the business and management is much greater than it ever was.”
>
> TECHNOLOGY CONSULTANT, TECHNICAL EQUIPMENT SALES AND SERVICE

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

- The composite organization employs 1,000 field technicians, including both full-time employees and contractors. This number increases over the course of the period modeled as the organization’s business grows.
- Technicians work 260 days per calendar year.
- Each technician saves 30 minutes per day on administrative tasks that used to be handled manually. This increases to 45 minutes in Year 2 and 1 hour in Year 3 as the technicians use the platform more consistently and for more tasks.
- Technicians are on-site approximately 6 hours per workday, and their productivity on-site increases by 7% in Year 1, rising to 12% in Year 2 and 14% in Year 3 as the application is fully implemented. This is the result of having the right technicians assigned to each job and ensuring that they have the parts, tools, and information they need.
- The average blended, fully burdened hourly wage for field technicians (including both FTEs and contractors) is $44.
- The composite organization recaptures 50% of the time saved due to these improvements to field technician productivity.

Risks. The likelihood that an organization will experience a different magnitude of value from this benefit is related to:

- The number of field service technicians.
- Their rate of pay.
- The efficiency of the workforce before deploying Dynamics 365 Field Service.
- The amount of support provided by the Dynamics 365 Remote Assist and Dynamics 365 Guides applications, based on the organization's investment in making those tools useful.

Results. To account for these risks, Forrester adjusted this benefit downward by 20%, yielding a three-year, risk-adjusted total PV (discounted at 10%) of $16.5 million.

Increased Technician Productivity					
Ref.	**Metric**	**Source**	**Year 1**	**Year 2**	**Year 3**
B1	Technicians	Composite	1,000	1,040	1,082
B2	Hours saved per day on administrative tasks	Interviews	0.50	0.75	1.00
B3	Average daily hours technicians are on-site for service	Composite	6	6	6
B4	Percentage improvement in service productivity due to Dynamics 365 Field Service and Dynamics 365 Remote Assist license	Interviews	7%	12%	14%
B5	Average blended, fully burdened hourly wage for a field technician	TEI standard	$44	$44	$44
B6	Annual value of productivity improvement	(B1*B2*B5)+(B1 *B3*B4*B5)*A2	$10,524,800	$17,489,472	$22,767,247
B7	Productivity recapture rate	TEI standard	50%	50%	50%
Bt	Increased technician productivity	B6*B7	$5,262,400	$8,744,736	$11,383,624
	Risk adjustment	↓20%			
Btr	Increased technician productivity (risk-adjusted)		$4,209,920	$6,995,789	$9,106,899
	Three-year total: $20,312,608		**Three-year present value: $16,450,992**		

Decreased Time To Invoice

Evidence and data. For many of the interviewees' organizations, especially those with global operations, the time delay between when technicians completed the work and when the paperwork reached the billing department was significant. In some cases, this was the result of the inability to integrate the field service application with other key business applications such as those in finance and human resources. In other cases, it was an issue of infrastructure and telecommunications problems in the country where the work was performed. Whatever the cause, the result was that payment could be significantly delayed, damaging the organization's financial performance.

The IT director of business applications for EMEA at an industrial equipment manufacturer explained: "In the past, using pen, paper and calendars, it took about a week to invoice a service call after it was closed out. In some countries, it could take up to a month. Now, the technician completes their work order and gets the signature. The email of the work order goes directly to the customer, and they get invoiced that night."

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

- Before implementing Dynamics 365 Field Service, the average time from work order completion to invoicing was four days. While this lag time could vary widely depending on the communications infrastructure and level of pen-and-paper work order management at each location, the average across the composite is four days.
- After implementing Dynamics 365 Field Service, that lag time virtually disappears, beginning with a two-day savings in Year 1 that drops to a half a day in Year 2. Technicians use mobile devices to close out and gain customer signatures at the time of job completion, and the information is automatically available to generate an invoice within a day.

- The organization completes 780,000 service calls in Year 1 (1,000 technicians make three calls per day for 260 working days), and that total rises as the number of technicians grows.
- The average charge for a service call is $2,000.
- Using a 10% cost of capital, the organization saves 0.27% per day by invoicing and receiving payment more quickly.

Risks. The likelihood that an organization will experience a different magnitude of value from this benefit is related to:

- The length of the delay in invoicing before implementation of Dynamics 365 Field Service.
- The cost of capital for the organization.
- The number of service calls per year.
- The average charge for a service call.

Results. To account for these risks, Forrester adjusted this benefit downward by 15%, yielding a three-year, risk-adjusted total PV (discounted at 10%) of $2.8 million.

Decreased Time To Invoice					
Ref.	**Metric**	**Source**	**Year 1**	**Year 2**	**Year 3**
C1	Average days to invoice before Dynamics 365 Field Service	Interviews	4	4	4
C2	Average days to invoice after Dynamics 365 Field Service	Interviews	2.0	0.5	0.5
C3	Service calls per year	A3	780,000	811,200	843,648
C4	Average service call charge	A6*2	$2,000	$2,000	$2,000
Ct	Decreased time to invoice	(C1-C2)*C3*C4*(10%/365)	$854,568	$1,555,711	$1,617,940
	Risk adjustment	↓15%			
Ctr	Decreased time to invoice (risk-adjusted)		$726,568	$1,322,354	$1,375,249
	Three-year total: $3,424,171			**Three-year present value: $2,786,616**	

Avoided Travel Time

Evidence and data. Interviewees told Forrester that technicians could lose significant time in their workday due to traffic delays (either expected or unexpected) or inefficient routing of their jobs in general, requiring them to backtrack or go out of their way to get to a customer. The routing functionality of Dynamics 365 Field Service ensured that jobs were planned with the most economical route possible, and that routing was updated continuously to minimize the impact of changing traffic patterns.

In addition to minimizing travel time for technicians, the included access to mixed reality apps also minimized the need for internal subject-matter experts (SMEs) to travel to customer sites. While the savings from rolling those trucks is discussed in the first benefit, the organization also saves the labor cost involved in those SMEs' travel time to customer sites.

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

- Field technicians spend approximately 2 hours per workday (260 workdays per year) travelling between customer sites and jobs.
- More efficient routing and scheduling saves the field technicians time during their workday. On average, they see a 5% reduction in travel time to customer sites in Year 1, increasing to 10% in Year 2 and Year 3.
- The fully burdened hourly wage of field technicians is $44.
- The organization recaptures 50% of these savings for productive work.

Risks. The likelihood that an organization will experience a different magnitude of value from this benefit is related to:

- The routing efficiency schedulers achieve before deployment of Dynamics 365 Field Service.
- The rate of pay of the field technicians.

Results. To account for these risks, Forrester adjusted this benefit downward by 15%, yielding a three-year, risk-adjusted total PV (discounted at 10%) of $2.1 million.

Avoided Travel Time					
Ref.	**Metric**	**Source**	**Year 1**	**Year 2**	**Year 3**
D1	Technicians	B1	1,000	1,040	1,082
D2	Average technician travel time per day (hours)	Composite	2	2	2
D3	Percentage reduction in travel time with Dynamics 365 Field Service scheduling	Interviews	5%	10%	10%
D4	Average technician fully burdened hourly wage	TEI standard	$44	$44	$44
D5	**Subtotal: Technician travel time savings per year**	**D1*D2*D3*D4*A2**	**$1,144,000**	**$2,379,520**	**$2,474,701**
D6	Productivity recapture rate	TEI standard	50%	50%	50%
Dt	Avoided travel time	D5*D6	$572,000	$1,189,760	$1,237,351
	Risk adjustment	↓15%			
Dtr	Avoided travel time (risk-adjusted)		$486,200	$1,011,296	$1,051,748
	Three-year total: $2,459,244			**Three-year present value: $2,067,976**	

Improved Dispatcher Productivity

Evidence and data. Interviewees described a highly manual process for assigning technicians to jobs and making the inevitable daily changes to those assignments. Recording and updating assignments were often done on a whiteboard or via spreadsheets and calendar apps, leaving them open to being mistakenly deleted. This also meant that when there was a change to the schedule, dispatchers spent time searching through digital or physical spreadsheets and calendars to find replacement technicians or reschedule other work orders.

- A technical consultant at a technical equipment sales and service organization related: “The dispatchers are managing better, and that’s a combination of the scheduling capability, the work order management

capability, and the [Microsoft] Power BI function that they now use. Power BI integration with service and sales has been very valuable."

- The project manager at a vehicle manufacturing company told Forrester: "We have much better calendar visibility for schedulers, which we customized. Everything is in one place, and with each status update, you can visualize the different statuses and vehicles. This helps schedulers to understand job progress and also seamlessly includes everyone in the workflow, so they're able to communicate better."

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

- The organization employs 50 people to work on scheduling technicians for work orders and creating efficient routing to make the most of technicians' time each day. This group is planned to expand as the number of technicians grows.
- Dispatchers earn a fully burdened annual salary of $54,000.
- Using the scheduling and routing automation features of Dynamics 365 Field Service, the organization redeploys 10% of its schedulers to alternative positions in Year 1, increasing to 40% by Year 3.
- In addition, the composite avoids planned hiring for additional dispatchers despite the increase in technicians and work orders.

Risks. The likelihood that an organization will experience a different magnitude of value from this benefit is related to:

- The degree to which scheduling and routing work was completed manually before the adoption of Dynamics 365 Field Service. The less automation in place before implementation of the new solution, the higher the impact and savings will be on dispatcher productivity.
- The pay rate of dispatchers.

Results. To account for these risks, Forrester adjusted this benefit downward by 20%, yielding a three-year, risk-adjusted total PV (discounted at 10%) of $1.6 million.

Improved Dispatcher Productivity					
Ref.	**Metric**	**Source**	**Year 1**	**Year 2**	**Year 3**
E1	Dispatchers without D365 Field Service	Composite	50	52	54
E2	Dispatchers redeployed	Composite	5	15	20
E3	Planned hires avoided	Composite	0	2	4
E4	Average dispatcher fully burdened annual salary	TEI standard	$54,000	$54,000	$54,000
Et	Improved dispatcher productivity	(E2+E3)*E4	$270,000	$918,000	$1,296,000
	Risk adjustment	↓20%			
Etr	Improved dispatcher productivity (risk-adjusted)		$216,000	$734,400	$1,036,800
	Three-year total: $1,987,200			**Three-year present value: $1,582,269**	

> “We need fewer dispatchers per technician since deploying Dynamics 365 Field Service. Before, all the work was on the dispatcher, but now it is more system-driven. They are mostly monitoring and jumping in when needed. We focused on making the scheduling as automated as possible, so we have business rules that guide the scheduling and routing process.”
>
> **SENIOR PRODUCT MANAGER, TELECOMMUNICATIONS**

Enhanced Management Productivity

Evidence and data. Interviewees described how Dynamics 365 Field Service enhanced management productivity and even improved their capabilities. Several participants reported that their field service managers spent quite a bit of time making up for the inadequacies of their legacy systems. They unraveled technicians' scheduling issues, followed up on incomplete jobs, tracked down missing parts inventory, and facilitated integration with other departments. With the application automating most of these activities, managers had more time to devote to supporting and managing their teams.

Several interviewees took this benefit one step further and explained that the application gave managers information they never could access before. Since all of the team's activity was captured in the application, managers could easily access new reports — or even create their own — to give them a clearer picture of technician productivity, work order status, inventory, and other critical metrics.

The project manager at a vehicle manufacturer explained: "We did some customized reports with targets and actuals as well as the orders and the opportunities with different statuses. It gives us a snapshot of where we are so that managers know what the probability is that they are going to meet this month's target, where they need to focus, etc. Since we now have all the information, we can build that kind of report for the workshop manager to review on a daily basis and focus on the priorities."

> "Now our service managers focus on service and service techs. They're not doing scheduling and things like that. So we took a workload off of them and made them more efficient."
>
> ENTERPRISE INFRASTRUCTURE DIRECTOR, BEVERAGE DISTRIBUTION

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

- The field service team starts out with 150 managers, with additional hires as the number of technicians grows over the three years modeled.
- Each manager works full-time for 2,000 hours per year and earns a fully burdened hourly wage of $52.
- The managers each save 4% of their time in Year 1, primarily because they no longer spend time on administrative tasks that are automated by Dynamics 365 Field Service. Productivity continues to increase over the three years of the model as field service team members use the software more frequently and take advantage of more of its capabilities.
- Forrester assumes that the organization recaptures 50% of the increased manager productivity for productive work.

Risks. The likelihood that an organization will experience a different magnitude of value from this benefit is related to:

- The level of management intervention required in field service scheduling and tasks before the implementation of Dynamics 365 Field Service.
- The speed at which the organization, especially its field technicians and dispatchers, adopts the software and uses it to its full potential.
- The pay rate of field service managers in the organization.

Results. To account for these risks, Forrester adjusted this benefit downward by 15%, yielding a three-year, risk-adjusted total PV (discounted at 10%) of $1.2 million.

Enhanced Management Productivity					
Ref.	**Metric**	**Source**	**Year 1**	**Year 2**	**Year 3**
F1	Number of field service managers	Composite	150	156	162
F2	Hours worked per year	TEI standard	2,000	2,000	2,000
F3	Percentage productivity improvement	Interviews	4%	8%	10%
F4	Average fully burdened annual manager salary	TEI standard	$52	$52	$52
F5	Productivity recapture	TEI standard	50%	50%	50%
Ft	Enhanced management productivity	F1*F2*F3*F4*F5	$311,538	$648,000	$842,400
	Risk adjustment	↓15%			
Ftr	Enhanced management productivity (risk-adjusted)		$264,807	$550,800	$716,040
	Three-year total: $1,531,647			**Three-year present value: $1,233,912**	

Retired Legacy Solutions

Evidence and data. Interviewees reported using a variety of solutions for field service operations before deploying Dynamics 365 Field Service. In addition to using spreadsheets and calendars, a number of organizations were working with outdated software and hardware. Once they got the new solution fully deployed, they were able to retire the defunct hardware and licenses and benefit from those savings.

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

- The organization has invested in field service solutions that currently cost approximately $400 per technician.
- It sunsets these solutions as it deploys Dynamics 365 Field Service during Year 1, saving 50% of the cost.
- In Years 2 and 3, it discontinues those solutions completely and saves 100% of the cost.

Risks. The likelihood that an organization will experience a different magnitude of value from this benefit is related to:

- The overall ongoing cost of the solution(s) deployed before Dynamics 365 Field Service.
- The pay rate at which the organization can sunset them.

Results. To account for these risks, Forrester adjusted this benefit downward by 15%, yielding a three-year, risk-adjusted total PV (discounted at 10%) of $829,000.

Retired Legacy Solutions					
Ref.	**Metric**	**Source**	**Year 1**	**Year 2**	**Year 3**
G1	Annual cost of legacy software	Interviews	480,000	480,000	480,000
G2	Percentage of legacy solutions retired per year	Interviews	50%	100%	100%
Gt	Retired legacy solutions	G1*G2	$240,000	$480,000	$480,000
	Risk adjustment	↓15%			
Gtr	Retired legacy solutions (risk-adjusted)		$204,000	$408,000	$408,000
	Three-year total: $1,020,000			**Three-year present value: $829,181**	

Unquantified Benefits

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

- **Improved customer experience.** Increased efficiency and first-time fix rates do not only save the composite organization money; they also significantly improve customer experience and satisfaction with the organization. Dynamics 365 Field Service provides customers with accurate information and updates about when technicians will arrive and when work is completed. Since maintenance and repairs are completed quickly and accurately, customers benefit from reduced downtime in their operations. The application also improves customer intimacy by providing

technicians with better knowledge of the customer and their assets for targeted, personalized engagement and increased cross-sell/upsell opportunities.

> “We may have dozens of assets in each location. Managing all those assets, exactly where they’re at, and then eliminating the time it takes to hunt them down and repair them is driving customer satisfaction.”
>
> ENTERPRISE INFRASTRUCTURE DIRECTOR, BEVERAGE DISTRIBUTION

- **Enhanced employee experience.** With Dynamics 365 Field Service, field technicians use a handy, familiar tool — a mobile phone — to check their schedules, get assistance with complex jobs, report issues, and complete work orders. They spend more of their day doing the work they enjoy and making use of their skills, and less of it managing multiple input platforms or completing paperwork after-hours.

> "The technicians on the road used to have dinner and then go back to their hotel room to complete paperwork and send it to their office. That doesn't happen anymore. So it's really helped work-life balance."
>
> IT DIRECTOR OF BUSINESS APPLICATIONS FOR EMEA, INDUSTRIAL MANUFACTURING

- **Increased opportunity to integrate AI**. Several interviewees mentioned that their organizations have projects in the works to bring AI into their Dynamics 365 Field Service application. They plan to make use of the application's Copilot capabilities and also to create custom functions and processes that employ their customer, equipment, and historical work order data. According to the project manager at a vehicle manufacturer, "Now what we are looking at as a future opportunity is collecting this data on symptoms and customer inputs to be able to have the system tell the technician what the potential issues are and how to go about fixing them."

  According to the director of marketing and strategy at a facilities solutions provider: "One issue in field service today is the 'silver tsunami' — talented and experienced technicians retiring and taking their knowledge with them.

AI is one way to help younger or less experienced technicians get up to speed more quickly."

The incorporation of AI and the data collected by the Dynamics 365 Field Service application also provides critical insights — case/work order insights, knowledge insights, case/work order summarization –- for proactive engagement with customers.

- **Included access to mixed reality applications**. As of December 2023, Microsoft announced that full-time employee licenses for Dynamics 365 Field Service will also include complementary access to mixed reality applications Dynamics 365 Remote Assist and Dynamics 365 Guides, which usually carry a license fee of $65 per person per month. Several interviewees noted that their organizations were considering or in the process of creating a way for technicians in the field to get assistance from a more experienced or specialized technical resource at the office to improve first-time fix rates or to avoid calling those people out to the job site to assist. Access to Dynamics 365 Remote Assist can enable those projects, resulting in even-greater productivity gains. While access to Dynamics 365 Guides will require some internal planning and design costs, it also has the potential to significantly improve first-time fix rates and day-to-day productivity for field technicians. For more information on the benefits of Microsoft's mixed reality applications, refer to the Total Economic Impact study included in Appendix B.

Flexibility

The value of flexibility is unique to each customer. There are multiple scenarios in which a customer might implement Dynamics 365 Field Service and later realize additional uses and business opportunities, including:

- **Customization to unique business needs.** Several interviewees described work their own developers had done to enhance the value of Dynamics 365 Field Service to their organizations. They all agreed that this

was a relatively simple process once their organization had a little experience with the system in-house.

One company created an additional set of processes to keep track of equipment they took possession of for repair as it went through various departments and locations. Another is using a modification of the application to track environmental health and safety on their production lines. A third, a vehicle manufacturer, made its own customizations to fit its service model, which is more dependent on vehicles coming in for service rather than service technicians traveling out to customer locations.

> "After we got familiar with Dynamics 365 Field Service, we were able to quickly develop new capabilities. We use a lot of out-of-the-box functionality like schedule boards and work orders, but we built custom processes that meet our business needs on top of that. We own the platform; we can manage it and build whatever we want."
>
> ENTERPRISE INFRASTRUCTURE DIRECTOR, BEVERAGE DISTRIBUTION

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

Analysis Of Costs

Quantified cost data as applied to the composite

Total Costs							
Ref.	**Cost**	**Initial**	**Year 1**	**Year 2**	**Year 3**	**Total**	**Present Value**
Htr	Dynamics 365 Field Service licenses	$0	$1,340,955	$1,379,511	$1,426,169	$4,146,635	$3,430,643
Itr	Implementation	$1,285,661	$2,894,804	$0	$0	$4,180,465	$3,917,301
Jtr	Ongoing maintenance	$0	$0	$878,515	$1,037,405	$1,915,920	$1,505,463
Ktr	Training	$364,320	$242,880	$54,344	$93,610	$755,154	$700,363
	Total costs (risk-adjusted)	$1,649,981	$4,478,639	$2,312,371	$2,557,184	$10,998,174	$9,553,770

Dynamics 365 Field Service Licenses

Evidence and data. Licenses for the application fall into two categories: a full-access license for full-time employees, which is priced at $95 per month per user, and a contractor license with slightly more limited access for $50 per month per user.

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

- The organization purchases licenses for all full-time employees in field service at $95 per employee per month. This includes 80% of the technicians as well as managers and dispatchers.
- It also purchases contractor licenses for the remaining 20% of technicians at $50 per contractor per month.

Risks. The risk that another organization may experience different costs than the composite is related to:

- The mix of FTEs and contractors in its workforce.
- The potential for future price increases or decreases.

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 $3.4 million.

Dynamics 365 Field Service Licenses						
Ref.	**Metric**	**Source**	**Initial**	**Year 1**	**Year 2**	**Year 3**
H1	FTE licenses	Composite		1,015	1,043	1,078
H2	Annual fee per FTE license	Microsoft		$1,140	$1,140	$1,140
H3	Contractor licenses	Composite		200	208	216
H4	Annual fee per contractor license	Microsoft		$600	$600	$600
Ht	Dynamics 365 Field Service licenses	H1*H2+H3*H4	$0	$1,277,100	$1,313,820	$1,358,256
	Risk adjustment	↑5%				
Htr	Dynamics 365 Field Service licenses (risk-adjusted)		$0	$1,340,955	$1,379,511	$1,426,169
	Three-year total: $4,146,635		**Three-year present value: $3,430,643**			

Implementation

Evidence and data. Interviewees explained that one of the biggest risks in implementing Dynamics 365 Field Service was employee resistance to change. Even though the application provides many benefits for technicians and schedulers, change can be difficult, especially when it involves learning a new technology. As a result, most of the interviewees put together a change management team and campaign that eased employees into the new processes, providing training and support over an extended period after launch.

A team from the business side of the organization participated in defining the processes and rules for the application to use in automating tasks and in providing feedback on the user interface throughout the upfront implementation process to maximize field service team adoption.

As with most fundamental software changes, a significant number of IT team members took on planning, customizing, and testing the application itself. This required a full-time commitment to the project for most of them. They worked in

tandem with a third-party Microsoft partner during the first six months of the implementation process. Most interviewees' organizations felt it was important to bring on a third party with expertise in deploying Dynamics 365 in the field service environment, especially because the application integrates with other corporate systems (and, of course, with other Dynamics 365 applications such as sales and customer service).

> "If you've been using a global tool with strong governance, then you've already taken a big first step. If you come from a heterogenous landscape with slightly different toolings and processes, you also need to do that process-standardization step, which costs some more effort."
>
> MANAGER OF SERVICE, BUILDING INFRASTRUCTURE

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

- The organization uses a third-party partner to assist in their migration, paying $350,000 for the project.
- Before launch, the organization conducts a planning and testing phase that lasts approximately six months and includes 10 IT team members who spend 100% of their time on the project and eight line-of-business representatives who spend 40% of their time on the project.
- The application is rolled out across the organization during Year 1, involving the same 10 IT team members who work on the rollout full-time for the year. The eight line of business representatives continue to spend 40% of their time on the project during Year 1, and an additional 35 people

participate on a change management team that requires 30% of their time during Year 1.

- IT team members earn a fully burdened monthly salary of $11,034, while line-of-business representatives' monthly salary averages $5,517 and change management team members' monthly salary averages $7,788.
- The organization also provides 6 hours of initial pre-rollout training to field service team members and an additional 6 hours of on-the-job training during Year 1.
- Field service team members earn a blended, fully burdened wage of $44 per hour.

Risks. The risk that another organization will experience a different magnitude of implementation costs is related to:

- The need for a third-party partner to help with migration, driven by the expertise of the organization's IT team and the complexity of the installation.
- The size of the field force and the degree of its resistance to change.
- The pay rates of all the internal IT and line-of-business participants involved in the implementation.

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 $3.9 million.

Implementation						
Ref.	**Metric**	**Source**	**Initial**	**Year 1**	**Year 2**	**Year 3**
I1	Third-party consultant setup fees	Interviews	$350,000			
I2	Project duration (months)	Interviews	6	12		
I3	IT internal costs	10 FTEs @ 100% * $11,034/month	$110,340	$110,340		
I4	Line-of-business internal costs	8 FTEs @ 40% * $5,517/month	$17,654	$17,654		
I5	Change management internal costs	35 FTEs @ 30% * $7,788/month		$81,774		
It	Implementation	I1+I2*(I3+I4+I5)	$1,117,966	$2,517,221	$0	$0
	Risk adjustment	↑15%				
Itr	Implementation (risk-adjusted)		$1,285,661	$2,894,804	$0	$0
	Three-year total: $4,180,465			**Three-year present value: $3,917,301**		

Ongoing Maintenance

Evidence and data. Interviewees agreed that a few ongoing resources were required to maintain the field service application. While these varied by organization, they included technical people to maintain system health and respond to end-user problems, developers, and a product owner/scrum master.

In addition, the change management teams continued their work throughout the first couple of years, and new field service team members needed to be trained as they joined the organizations.

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

- Two full-time resources take over the application in Year 2, after rollout is complete. An additional resource is hired in Year 3.
- On average, the fully burdened annual salary of these IT team members is $132,404.
- Twenty members of the change management team continue to devote 30% of their time to ensuring that adoption and usage is strong.

- Their average fully burdened salary is $93,462.
- New team members receive 6 hours of training when they join the company and another 6 hours of on-the-job training as they use it.
- Their average fully burdened hourly wage is $44.

Risks. The risk that another organization will experience a different magnitude of cost is related to:

- The desire for customizations and integrations, which would impact the number of developers and administrators assigned to the application.
- The employee turnover rate in the field service team, which would impact the number of new employees to be trained each year.
- The degree of resistance to change, which would impact the number and time commitment of people on the change management team. None of the interviewees described any unusual issues in building adoption of the tool among their workforces.
- The pay rates of all the people involved.

Results. To account for these risks, Forrester adjusted this cost upward by 20%, yielding a three-year, risk-adjusted total PV (discounted at 10%) of $1.5 million.

Ongoing Maintenance						
Ref.	**Metric**	**Source**	**Initial**	**Year 1**	**Year 2**	**Year 3**
J1	IT FTEs	Interviews			2	3
J2	IT FTE average fully burdened annual salary	TEI standard			$132,408	$132,408
J3	Change management internal costs	20 FTEs@25% *$7,788/month			$467,280	$467,280
Jt	Ongoing maintenance	J1*J2+J3	$0	$0	$732,096	$864,504
	Risk adjustment	↑20%				
Jtr	Ongoing maintenance (risk-adjusted)		$0	$0	$878,515	$1,037,405
	Three-year total: $1,915,920			**Three-year present value: $1,505,463**		

Training

Evidence and data. Interviewees told Forrester that training, both formal and on-the-job, was a key factor in the successful deployment of Dynamics 365 Field Service. The fact that technicians could access the application on their mobile phones was helpful, as they were familiar with these devices and accustomed to carrying them. Nevertheless, the solution involved quite a few changes in how everyone on the team handled work orders, received their assignments, and accessed data they may not have been able to see before. While several interviewees noted that team members were resistant at first to the change, they agreed that, once frontline service personnel got used to the new application, they greatly preferred it to the old system.

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

- All 1,200 members of the field service team are trained in the application. They receive 6 hours of training upfront as the application is being launched and another 4 hours of training during Year 1.
- New employees hired during Years 2 and 3 receive the same level of training spread over two years.
- The team’s blended fully burdened hourly wage is $44.

Risks. The risk that another organization may experience a different cost for training is related to:

- The size and growth of the workforce.
- Their pay rates.
- Their flexibility in learning and adopting a new set of processes and tools.

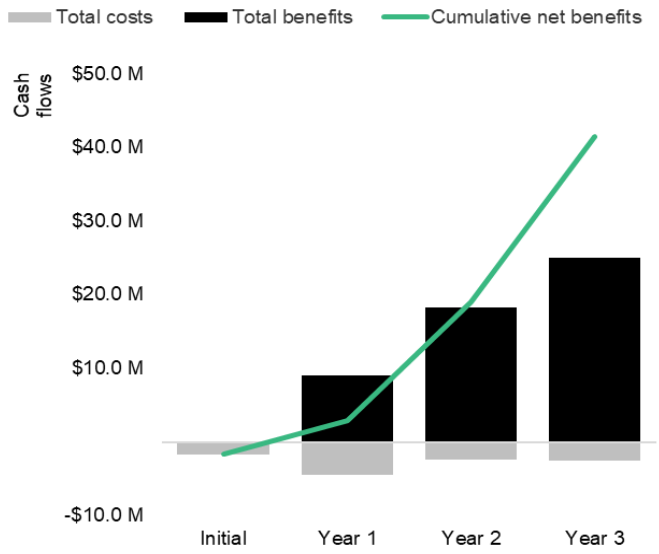
Results. To account for these risks, Forrester adjusted this cost upward by 15%, yielding a three-year, risk-adjusted total PV (discounted at 10%) of $700,000.

Training						
Ref.	**Metric**	**Source**	**Initial**	**Year 1**	**Year 2**	**Year 3**
K1	Field service employees to be trained		1,200	1,200	179	185
K2	Upfront training time (hours)		6	0	6	6
K3	On-the-job learning time (hours)		0	4	0	4
K4	Fully burdened field service team hourly wage	B5	$44	$44	$44	$44
Kt	Training	(K1*K2)+(K1*K3) *K4	$316,800	$211,200	$47,256	$81,400
	Risk adjustment	↑15%				
Ktr	Training (risk-adjusted)		$364,320	$242,880	$54,344	$93,610
	Three-year total: $755,154			**Three-year present value: $700,363**		

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	($1,649,981)	($4,478,639)	($2,312,371)	($2,557,184)	($10,998,174)	($9,553,770)
Total benefits	$0	$9,115,695	$18,290,991	$25,033,365	$52,926,251	$42,653,455
Net benefits	($1,649,981)	$4,637,056	$15,978,621	$22,476,181	$41,928,077	$33,099,685
ROI						346%
Payback						<6 months

Appendix A: Total Economic Impact

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

Total Economic Impact Approach

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

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

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

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

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 B: SUPPLEMENTAL MATERIAL

Related Forrester Research

"How Generative AI Will Transform CRM," Forrester Research, Inc., September 18, 2023

"Customer Relationship Management Market Insights, 2023," Forrester Research, Inc., July 27, 2023

Additional Resources

"The Total Economic Impact Of Microsoft Hololens 2 With Mixed Reality Applications," a commissioned study conducted by Forrester Consulting on behalf of Microsoft, October 2023

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 initiatives to both senior management and other key business stakeholders.

[2] Source: Field Service Benchmarking Study, The Technology & Services Industry Association (TSIA), February, 2012.

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