A Forrester Total Economic Impact™
Study Commissioned By ServiceNow
December 2018

Driving Digital Transformation And Business Value With ServiceNow

Transforming Your Operational Productivity Using The Now Platform

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ABOUT FORRESTER CONSULTING

Forrester Consulting provides independent and objective research-based consulting to help leaders succeed in their organizations. Ranging in scope from a short strategy session to custom projects, Forrester's Consulting services connect you directly with research analysts who apply expert insight to your specific business challenges. For more information, visit forrester.com/consulting.

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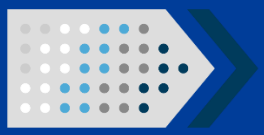
Key Benefits And Value Drivers



Get new enterprise apps to market in ½ the time

2.5x
Faster application updates

Repurpose 15% of IT service staff to higher-value work

Executive Summary

Digital transformation has become the main catalyst and business goal for organizational processes initiatives. Increasingly empowered customers and threats from disruptive competitors are heightening this trend. According to Forrester's Q1 2018 Digital Process Automation Survey, 32% of business and technology decision makers say that accelerating digital business transformation is their top driver for their process improvement initiatives.[1]

The cloud-based ServiceNow Now Platform helps customers automate, predict, digitize, and optimize business processes to fuel digital transformation. ServiceNow commissioned Forrester Consulting to conduct a Total Economic Impact™ (TEI) study and examine the potential business benefits enterprises may realize by deploying ServiceNow to catalyze digital business transformation.

Forrester developed a composite organization representative of four customer interviews and aggregated data from six previous studies and interviews with 20 additional executives and practitioners to highlight the benefits realized from catalyzing and expediting their digital business transformation using ServiceNow. By using ServiceNow for digital transformation, interviewees achieved the following outcomes that have been applied to the composite organization:

- **Got new enterprise apps to market in half the time.** ServiceNow helped the composite organization bring a new service to market in half the time and at one-third the cost of alternative solutions, generating nearly $1.6 million in high-margin annual revenues per customer.
- **Achieved 2.5x faster application updates.** The organization accelerated innovation velocity by fast-tracking the new feature, product release, and continuous delivery process using ServiceNow for 35% of its top developers.
- **Repurposed 15% of IT service staff to higher-value work.** The composite organization repurposed and upskilled over 6 FTEs to higher-value work, equating to approximately 15% of its service desk and access management staff.
- **Doubled developer satisfaction scores, helping to retain talent.** By making developers' jobs easier and improving their employee experience, the composite organization improved retention driving savings of $1.36 million per year.
- **Achieved faster and more cost-effective delivery of business solutions via citizen developers.** Using low-code development, the composite organization built business applications using citizen developers closer to the business processes it was transforming, reducing the time to deliver new business applications by as much as 80%.

Key Findings

Transform your operational productivity. Customers leveraged the Now Platform to build innovative solutions for complex business challenges, to transform business processes through automation, and to manage demand and resources better.

The following risk-adjusted present value (PV) quantified benefits are representative of those experienced by the interviewed companies:

Incremental Benefits Of ServiceNow*

Three-Year Benefits PV $17.26 million

Average Annual Benefit (PV) $5.75 million

*In addition to the benefits found in the study, "The Total Economic Impact™ Of ServiceNow For IT, HR, Customer Service, And Security Operations"

> "With the ability to build out custom applications, reports, and workflows out of the box, ServiceNow is the solution we use to create, manage, and deliver the full life cycle of our managed services."
>
> *Ralph Velasco, director, IT transformation, EY*

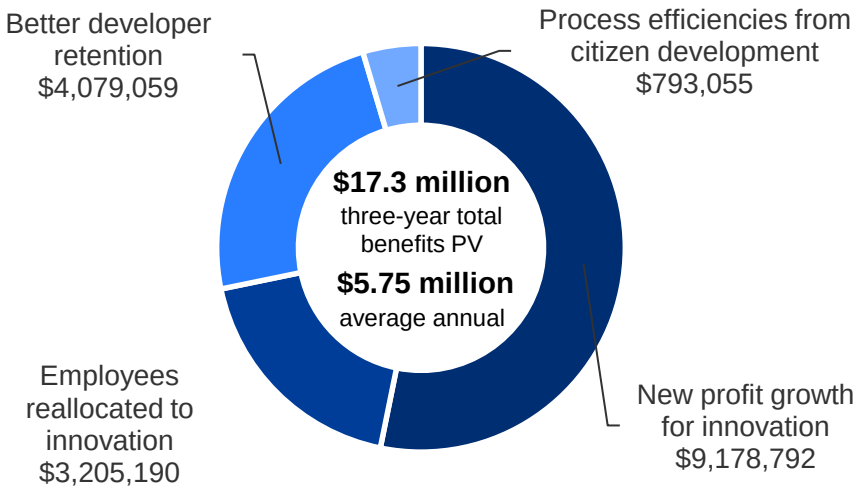
> "Now our employees can focus on the things that matter. I think for a long time those teams haven't had the time to investigate those new technologies or do some of that work because they've been buried in work and reacting to acute IT issues."
>
> *Manager, solution engineering, transportation and logistics*

- **Brought new enterprise apps to market in half the time.** The composite organization leveraged the ServiceNow Customer Service Management (CSM) solution to support the organization's shift to a variable-pricing business model by rapidly building a cloud solution to automate high volumes of complex compliance workflows in 50% the time and at 33% the cost of the next-best alternative. Using ServiceNow, the organization demonstrated near-immediate customer value, enabling it to win a competitive tender. Lastly, the organization fully automated 95% of these compliance transactions, bolstering profitability and ensuring service scalability.
- **Repurposed 15% of IT service staff to higher-value work.** By automating manual, unstructured, and error-prone application access management, provisioning, and service desk tasks, the organization upskilled and repurposed 6 full-time equivalent (FTE) employees, or approximately 15% of its service desk and access management staff, to higher-value work, growing the business and improving profitability.

Elevate your employee experience. Building on the Now Platform, customers can enable employees with self-service and rapidly deliver new business applications and services to the employees, customers, and partners, growing their businesses and boosting operational efficiency and effectiveness.

The following risk-adjusted present value (PV) quantified benefits are representative of those experienced by the interviewed companies:

- **Doubled developer satisfaction scores, helping to retain talent.** The composite organization's developer experience scores skyrocketed from 1.5 out of 5 to 3.5 out of 5 through a number of business and technology innovations that made developers' jobs easier, including self-service tools, improved incident management, automated testing, and streamlined feature release processes.
- **Achieved faster and more cost-effective delivery of business solutions via citizen developers.** Using low-code development on the Now Platform, the organization could deliver applications and digital solutions to the business units faster, using citizen developers closer to the business processes it was transforming. For more complex applications, a multidisciplined team consisting of a developer and a business analyst could reduce the time to deliver new business applications by as much as 80%.



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Additional benefits. Our interviews revealed several additional benefits that could not be financially quantified as part of this analysis, as interviewees didn't have quantifying metrics at the time of the interviews. The composite organization realized the following additional benefits that were not quantified as part of the benefit calculation in the study:

- **Achieved 2.5 times faster application updates.** The organization accelerated innovation velocity by fast-tracking the new feature and product release and continuous delivery process using ServiceNow for 35% of its top developers. This grouping of elite developers could push out an average of 25 product updates, changes, and feature releases to market each month versus just 10 per month for developers outside of the fast-lane program. While this inevitably makes organizations more competitive and bolsters the customer experience, interviewees could to provide specific quantifying metrics at the time of the interviews, such as downloads, monthly active users, conversion rates, or app store reviews.
- **Accelerated cloud transformation.** One interviewee leveraged ServiceNow to accelerate its move of 15% of its server fleet to the cloud, saving the organization $3 million annually. Since the exact increase in speed to the cloud could not be determined at the time of the interview, this benefit was not included in the calculations for this study.

Forrester's interviews and subsequent financial analysis found that an organization based on these customers experienced risk- and present value-adjusted benefits of $17.26 million over three years, or $5.75 million in average annual business benefits. These digital transformation business benefits are incremental to the $82.5 million in benefits discussed in the Forrester case study, "The Total Economic Impact™ Of ServiceNow For IT, HR, Customer Service, And Security Operations", which demonstrates a 256% return on investment (ROI), net present value (NPV) of $59.3 million, and a 10-month payback period for organizations that invest in ServiceNow for IT, HR, customer service, and security operations. Readers should use these studies in conjunction to understand the full business impact of digital transformation using ServiceNow on their own organizations.

Defining Digital Transformation

*Net Promoter and NPS are registered service marks, and Net Promoter Score is a service mark, of Bain & Company, Inc., Satmetrix Systems, Inc., and Fred Reichheld.

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TEI Framework And Methodology

From the information provided in the interviews, Forrester has constructed a Total Economic Impact™ (TEI) framework for those organizations considering implementing ServiceNow for their digital transformation.

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 ServiceNow can have on an organization. These findings have been amalgamated with the analyses from existing Forrester case studies on ServiceNow solutions and presented in a broader overview.

The TEI methodology helps companies demonstrate, justify, and realize the tangible value of IT initiatives to both senior management and other key business stakeholders.

DUE DILIGENCE
Interviewed ServiceNow stakeholders and Forrester analysts to gather data relative to ServiceNow.

CUSTOMER INTERVIEWS
Interviewed four organizations using ServiceNow products as part of their digital transformation, to obtain data with respect to costs, benefits, and risks. Data from 20 previously interviewed ServiceNow customers was also utilized for our analysis.

COMPOSITE ORGANIZATION
Designed a composite organization based on characteristics of the interviewed 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 interviewed organizations.

CASE STUDY
Employed the fundamental elements of TEI in modeling the impact of ServiceNow: benefits, costs, flexibility, and risks. Given the increasing sophistication that enterprises have regarding business case analyses related to IT investments, Forrester's TEI methodology serves to provide a complete picture of the total economic impact of purchase decisions. Please see Appendix A for additional information on the TEI methodology.

DISCLOSURES

Readers should be aware of the following:

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

Forrester makes no assumptions as to the potential business benefits that other organizations will receive. Forrester strongly advises that readers use their own estimates within the framework provided in the report to determine the appropriateness of an investment in ServiceNow.

ServiceNow 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.

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

Digital Transformation With ServiceNow

Before And After The Investment In ServiceNow

Interviewed Organizations

For this study, Forrester conducted four interviews with customers with transformative use cases for ServiceNow. Interviewed customers had the following characteristics:

INDUSTRY	REGION	INTERVIEWEE	SERVICENOW DEPLOYMENT CHARACTERISTICS
Professional services	EMEA	Senior manager, IT transformation	Customer Service Management, Now Platform
Professional services	EMEA	Managing director, experience	ITSM, HR Service Delivery, Now Platform
Transportation and logistics	North America	Manager, solution engineering	ITSM, Performance Analytics, ITOM, HR Service Delivery, Now Platform
Financial services	North America	Director, global platform and infrastructure	ITSM, Asset Management, ITBM, Performance Analytics, Now Platform

Key Business Challenges And Objectives

Interviewees shared several key business challenges and objectives that collectively persuaded leadership to explore a modern platform to catalyze their digital business transformation efforts.

- **Flexibility to rapidly transform business models to be more competitive and meet emerging customer business needs.** Customers challenged professional service interviewees to become more embedded in the success of the business processes they were being asked to optimize. As such, the professional service interviewees needed a solution that could help them evolve their business and pricing models away from one-off projects to ongoing managed services.
- **Challenges acquiring and retaining talent in a hypercompetitive environment.** The ability to acquire, retain, and grow key talent is top of mind for C-level executives across virtually every industry. This is for good reason: Replacement costs for highly trained positions can be as high as 213% of an employee's annual salary, and an organization can lose up to 20% of new talent in the first 45 days of employment.[2]
- **High costs, process inefficiencies, and poor governance caused by the proliferation of competing point solutions.** Business units had a hodgepodge of disparate, unconnected systems, often competing against each other for the same business processes and objectives. This proliferation of redundant systems resulted in high costs and made it impossible to work cross-functionally across the business with a shared language and set of processes.

"Our client needed a provider who could charge per transaction, which is a departure from our fixed-fee model. We needed a flexible platform that could foster automation, that we could stand up as quickly as possible and get it to work."

Ralph Velasco, director, IT transformation, EY

"I think the value [of ServiceNow] for our business is to increase innovation velocity and make decisions faster. I think this platform has allowed us to be even more competitive in the marketplace."

Director, global platform and infrastructure, financial services

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- **Lack of tools to disrupt the business**. From a strategic standpoint, interviewees indicated that their legacy technologies were inhibitors of digital transformation. One interviewee said: "We didn't have the tools to disrupt to the business. We can't disrupt the business with tools that are hard to upgrade, that don't have an architecture that allows flexibility, that take a really long time to implement and don't show well." As such, a modern, flexible platform that would grow with their businesses was key to supporting successful transformation initiatives.
- **Workflow inefficiencies and business continuity risks caused by inconsistent, error-prone manual processes.** Common business processes across business units varied drastically, while highly manual workflows resulted in errors and rework. Senior management lacked visibility across business-critical workflows, which often hid the insidious costs of these disparate systems — both in terms of operational costs and user inefficiencies. All of this created significant business continuity risks, as the workflows and governance that underlie these unstructured business processes could be completely disrupted by key employees leaving the business, throwing entire business units into disarray.

"We had a lot of proliferation of one-off solutions. . . . We had a lot of department-specific applications. We even had redundant, overlapping solutions competing against each other in the company. This was very costly."

Managing director, experience, professional services

Solution Requirements

The interviewed organizations searched for a solution with these characteristics:

- **Architecture and scalability to disrupt the entire business.** Interviewees looked for solutions that could be equally disruptive across IT, finance, marketing, legal, media, facilities, and other areas of the business. One interviewee leveraged ServiceNow in 120 business groups outside of IT. A solution that didn't have wide-ranging capabilities was a nonstarter.
- **Automated, cost-effective, and easy to implement.** Interviewees looked for a cloud-based solution that could be quickly implemented and scaled beyond IT.
- **Ability to facilitate business model transformation.** At the time of the interviews, the traditional business models of several ServiceNow customers were being disrupted, forcing them to adopt new business models, create new value-added services, and adapt to the reality that becoming a software company would be critical for maintaining competitive advantage going forward**.**

"To adopt a variable pricing model, where we would be getting paid based on transactions, we needed a flexible, efficient platform to automate these processes and maximize profit from each of those transactions."

Ralph Velasco, director, IT transformation, EY

Key Results

Our interviews with customers using ServiceNow solutions and capabilities to fuel their digital business transformation efforts revealed the following key results and outcomes:

- **Increased focus on digital transformation.** As the impact of ServiceNow quickly spread beyond IT to the lines of business, even the most sacrosanct legacy technologies and business processes were challenged and disrupted. With the Now Platform, citizen developers helped business units rapidly digitize and replace their manual, inefficient, and costly legacy technologies and processes, and employees were repurposed to projects that improved the experiences of employees and customers.

- **Rapid delivery of new offerings and business services.** Interviewees leveraged multiple ServiceNow solutions to rapidly build and deploy new revenue-generating customer offerings and employee-facing business services. One organization used ServiceNow as the backbone of its growing managed services portfolio, supporting millions of dollars in high-margin revenue streams for the business. Productivity-enhancing business services delivered through ServiceNow streamlined business workflows and freed up human capital to focus on disrupting and transforming the business.
- **Faster time-to-market and reduced development and operating costs.** Interviewees leveraged the ServiceNow cloud-based CSM solution to rapidly prototype and develop new offerings and business services, bringing new services to market in a fraction of the time and cost of custom or alternative solutions. Rather than spending weeks standing up infrastructure and months building greenfield applications, organizations configured automated business workflows, analytics, and reports out of the box, demonstrating near-immediate value to customers and internal stakeholders alike.
- **Faster innovation.** One organization created a fast-track process for its top developers using ServiceNow, enabling them to push 2.5 times as many application updates and feature releases to market than they did before. The interviewee indicated that this process protected its competitive advantage and differentiation in the marketplace.
- **Transformation of the employee experience.** Several interviewees used ServiceNow to transform the experiences of their employees, while positioning their brands as digital leaders to attract highly prized millennial talent. One organization rolled out a number of streamlined developer workflows and technologies in parallel with HR improvements that enhanced the employee experience, doubling the average employee satisfaction score reported by its employees. These improvements save organizations considerable time and money from better retention of employees.

"From a strategic perspective, we were looking beyond ITSM to find a platform that was flexible, that could grow with us as a business."

Managing director, experience, professional services

"Employee experience became a concept that was lit on fire by ServiceNow in our system of experience strategy."

Managing director, experience, professional services

Composite Organization

Based on interviews with four ServiceNow customers and data aggregated from six ServiceNow Total Economic Impact studies, Forrester constructed a composite organization to highlight the financial benefits from implementing multiple ServiceNow solutions as part of a broader digital transformation. The organization:

- Is based in the U.S. with 17,500 FTEs and 4,000 developers (including contractors).
- Has $4 billion in annual revenue.
- Employs 500 IT FTEs, including 40 service desk and application access management employees.
- Has multiple ServiceNow solutions employed, including ITSM, ITOM, Performance Analytics, Customer Service Management, ITBM, and the Now Platform.

ServiceNow Solutions

ITSM
ITOM
Performance Analytics
Customer Service Management
ITBM
Now Platform

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	Bring new enterprise apps to market in half the time	$439,020	$3,608,573	$7,716,328	$11,763,921	$9,178,792
Btr	IT staff repurposed for higher-value work	$923,400	$1,323,540	$1,692,900	$3,939,840	$3,205,190
Ctr	Better developer retention from improved employee experience	$1,640,250	$1,640,250	$1,640,250	$4,920,750	$4,079,059
Dtr	Process efficiencies from citizen development	$292,015	$313,719	$357,127	$962,861	$793,055
	Total benefits (risk-adjusted)	$3,294,685	$6,886,082	$11,406,605	$21,587,372	$17,256,096

Bring New Enterprise Apps To Market In Half The Time

Several interviewees identified the ability to rapidly build new applications, products, and business services to meet new customer and market challenges as a key element of the Now Platform's value. At the time of the interviews, the traditional business models of several ServiceNow customers were being disrupted, forcing them to adopt new business models and create new value-added services.

ServiceNow played a critical role in enabling a professional service provider to meet the increasingly complex compliance challenges of its customers. The massive and growing volume of its customer's network data that needed to be monitored for compliance violations required a highly automated solution that could be administered on a price-per-transaction, or per-violation-notification, basis. Given the organization's one-off, project-based business model, along with the highly competitive request-for-proposal (RFP) process it was subject to, the organization needed a solution that could be rapidly stood up out of the box and could automate front- and back-end service delivery to deliver this service profitably.

To meet the compliance workflow automation requirements of one client, this organization explored several customer service workflow management and custom .NET application options to build out a new, transaction-based business service and model. The organization did an internal, 30-day proof of concept with several customer service solutions and selected ServiceNow due to the cost effectiveness of its cloud-based model and its analytics capabilities to monitor and price based on transaction volumes.

The table above shows the total of all benefits across the areas listed below, as well as present values (PVs) discounted at 10%. Over three years, the composite organization expects risk-adjusted total benefits to be a PV of nearly $17.3 million.

Get new enterprise apps to market in ½ the time

The professional service provider noted that the use of ServiceNow helped it demonstrate value to the client within two weeks, enabling it to win a highly competitive RFP. Furthermore, the organization was able to begin billing for its new service within just six months, approximately half the time it would have taken to implement, train, and set up IT operations using alternative customer service workflow solutions. Lastly, the organization indicated that the operational costs for implementing the new, ServiceNow-based managed compliance service offering was one-third the cost of alternative solutions.

In modeling the impact of ServiceNow in driving new solution revenue and profit growth for the composite organization, Forrester assumes from our research:

- The number of customers the organization serves with its compliance service grew from a single client in Year 1 to five clients in Year 3.
- The organization processes between 7,500 and 12,500 compliance transaction per day over the three-year analysis (row A2 in table below). The organization charges each customer 50 cents per transaction.
- The organization grows the percentage of fully automated compliance transactions from 92% of all transactions in Year 1 to 95% of all transactions in Year 3.
- Automated transactions bring a conservatively estimated 80% gross margins, while nonautomated transactions bring a loss of 8 cents (rounded) per transaction, equating to a gross margin of -16%.
- The organization delivers an average annual gross run-rate of nearly $1.6 million per customer, yielding overall offering gross margins growing from 72% in Year 1 to 75% in Year 3 due to better process automation.

New product and service revenues and gross margins will vary widely based on solution area, pricing model, and the degree of automation embedded in service delivery. To account for these risks, Forrester adjusted this benefit downward by 10%, yielding a three-year risk-adjusted total PV of nearly $9.2 million.

66%

Reduction in new service research and development costs

Gross margin by year

Year 1: 72%

Year 2: 73%

Year 3: 75%

Impact risk is the risk that the business or technology needs of the organization may not be met by the investment, resulting in lower overall total benefits. The greater the uncertainty, the wider the potential range of outcomes for benefit estimates.

Bring New Enterprise Apps To Market In Half The Time: Calculation Table					
REF.	**METRIC**	**CALC.**	**YEAR 1**	**YEAR 2**	**YEAR 3**
A1	Number of customers		1	3	5
A2	Average number of transactions per client, per day	Growing YoY	7,500	10,000	12,500
A3	Number of revenue-generating days per year	6 mos. implementation in Y1	180	365	365
A4	Price per transaction		$0.50	$0.50	$0.50
A5	Automated transactions	A1*A2*A3*% of transactions automated†	1,242,000	10,183,500	21,671,875
A6	Nonautomated transactions	A1*A2*A3*% non-automated‡	108,000	766,500	1,140,625
A7	Gross margin automated		80%	80%	80%
A8	Gross margin nonautomated		-16%	-16%	-16%
At	Bring new enterprise apps to market in half the time	(A5*A4*A7)+((A6*(A4-(35/60) cents))	$487,800	$4,009,525	$8,573,698
	Risk adjustment	↓10%			
Atr	Bring new enterprise apps to market in half time (risk-adjusted)		$439,020	$3,608,573	$7,716,328

† The percentage of transactions automated ranges from 92% in Year 1 to 95% in Year 3

‡ The percentage of nonautomated transactions ranges from 8% in Year 1 to 5% in Year 3

IT Staff Repurposed For Higher-Value Work

Prior to adopting ServiceNow, all interviewees expressed frustration with the inefficiencies, high costs, and governance challenges of using disparate, legacy technologies and business processes. These businesses indicated that resources were overutilized and additional hires were needed to handle growing workloads, while business critical workflows were error-prone and severely delayed, causing customer dissatisfaction. Customers saw ServiceNow as means to accelerate their digital business transformation, driving consistency and efficiencies into business processes across the organization, and unburying employees to focus on value-added activities that improve their customers' experiences.

Interviewees automated a variety of IT and line-of-business workflows that freed up FTEs to be upskilled and refocused on a variety of higher-value work areas, including the deployment of web-filtering solutions, user experience improvements to business-to-employee (B2E) applications, and the exploration of use cases and deployment scenarios for new emerging authentication and security solutions. One interviewee was able to fully repurpose 6 FTEs, equivalent to 15% of its global access management and service desk team, to higher-value work following its use of ServiceNow. Furthermore, as new business workflows were automated and innovative business services were rolled out to accelerate line-of-business activities, the organization saved the equivalent of an additional 2.6 FTEs in the second year of ServiceNow use.

15%

IT service staff repurposed for higher-value work

For the composite organization, Forrester assumes that:

- The equivalent of 6 FTEs are fully repurposed to higher-value work in Year 1, with 2.6 and 2.4 additional FTEs being repurposed in years 2 and 3 of the analysis, respectively.
- Average fully loaded salaries for repurposed employees are $162,000 over the three-year analysis. While employee salaries are used as a proxy for innovation activities, Forrester notes that the actual business gains from these activities are likely a multiple of each employee's actual salary.

Each organization's ability to repurpose employees will vary significantly based on the existing level of IT and business unit process automation in place and the degree to which employee time savings are redirected to value-added business activities and initiatives. To account for these risks, Forrester adjusted this benefit downward by 5%, yielding a three-year risk-adjusted total PV of $3.2 million.

> "Now our employees can focus on the things that matter. I think for a long time those teams haven't had the time to investigate those new technologies or do some of that work because they've been buried in manual work and reacting to acute IT issues."
>
> *Manager, solution engineering, transportation and logistics*

IT Staff Repurposed For Higher-Value Work: Calculation Table

REF.	METRIC	CALC.	YEAR 1	YEAR 2	YEAR 3
B1	Number of FTEs repurposed for higher-value work		6.0	8.6	11.0
B2	Fully burdened annual salary	$120K*(1+35%)	$162,000	$162,000	$162,000
Bt	IT staff repurposed for higher-value work	B1*B2	$972,000	$1,393,200	$1,782,000
	Risk adjustment	↓5%			
Btr	IT staff repurposed for higher-value work (risk-adjusted)		$923,400	$1,323,540	$1,692,900

Better Developer Retention From Improved Employee Experience

Interviewees indicated that ServiceNow was an essential component of the process innovations that supported their "experience revolution" for their customers and employees alike. In a hypercompetitive talent acquisition landscape, particularly for top-notch developer and software engineering talent, employees are increasingly looking for brands they deem to be digital leaders.

Employee satisfaction grew from 1.5/5 to 3.5/5

Organizations leveraged the Now Platform to transform, standardize, structure, and streamline a variety of employee workflows, including onboarding, absence reporting, travel and expense management, leave of absence requests, employee satisfaction and engagement measurement, and performance review processes. Furthermore, the capabilities of the Now Platform, including proactive incident management and analytics, automated testing, and ability to support continuous deployment and automation, improved overall developer satisfaction with their jobs. One interviewee built a custom solution on the Now Platform to streamline the new application feature release and update process for its top 35% of developers, boosting developer morale by empowering them to get code in front of customers faster.

With all of these employee experience benefits, several organizations

revealed significant employee satisfaction score improvements. One organization indicated that its average developer experience score skyrocketed from 1.5 out of 5 to 3.5 out of 5 as a result of innovations that made their jobs easier, including self-service tools and improved incident management, automated testing, and streamlined feature release processes.

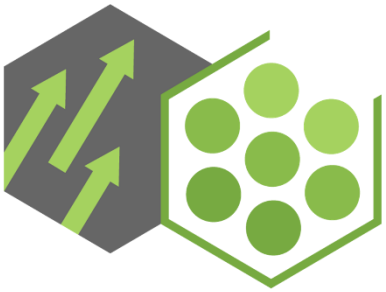
Regression analysis based on Forrester Analytics' Global Business Technographics® Workforce Benchmark Survey, 2017, of 818 software and application development professionals found that a 1% increase in employee satisfaction leads to a 0.5% increase in employee retention.[3] This relationship between developer satisfaction and retention means that organizations can retain critical talent and dramatically reduce talent acquisition and onboarding costs by delivering stellar employee experiences.

Forrester assumes that:

- The composite organization has 4,000 developers and a baseline average annual overall developer turnover rate of 15%, which is the median according to the Society For Human Resources Human Capital Benchmarking Report.[4]
- The composite organization's developer satisfaction score grows two points on a scale of five, a 133% increase, following its implementation of ServiceNow. This translates to a 67% increase in retention from improved developer satisfaction according to Forrester Analytics' Global Business Technographics Workforce Benchmark Survey, 2017, data.
- Ten percent of the uplift in retention is attributed to ServiceNow. As such, ServiceNow accounts for a 1% improvement in developer retention as seen in row C6 in the table below.
- Average talent acquisition and onboarding costs for replacement hires are a conservatively estimated 25% of average fully loaded annual developer salary costs, or $45,563. Replacement costs could be higher than two times the annual salary for key employees.

"Our developers now have one place to come for management — to voice their concerns. Using a single solution for development, testing, and incident management has had a huge impact on developer satisfaction. That's one improvement we have seen because of ServiceNow."

Director, global platform infrastructure, financial services



A 1% increase in employee satisfaction leads to a 0.5% increase in employee retention.

Source: Forrester Analytics' Global Business Technographics Workforce Benchmark Survey, 2017

Average voluntary and involuntary turnover rates and hiring costs vary significantly across industries and regions, so Forrester advises that readers apply metrics relevant to their specific circumstances. To account for these variables, Forrester adjusted this benefit downward by 10%, yielding a three-year risk-adjusted total PV of over $4 million.

Better Developer Retention From Improved Employee Experience: Calculation Table			
REF.	**METRIC**	**CALC.**	**ANNUAL SAVINGS**
C1	Number of developers		4,000
C2	Percentage improvement in score	Interview	133%
C3	Average developer turnover before ServiceNow	SHRM benchmark	15%
C4	Improvement in turnover	C2*0.5	67%
C5	Attribution rate		10%
C6	Percentage improvement in turnover	C3*C4*C5	1.0%
C7	Number of developers retained	C1*C6	40
C8	Average developer hiring and onboarding costs	25% of salary	$45,562.50
Ct	Better developer retention from improved employee experience	C7*C8	$1,822,500
	Risk adjustment	↓10%	
Ctr	Better developer retention from improved employee experience (risk-adjusted)		$1,640,250

Process Efficiencies From Citizen Development

Interviewees, several of whom were long resistant to citizen development, or the idea of end users within the business units building new business applications using low-code development tools, indicated that the Now Platform catalyzed them to pilot several citizen-led business application initiatives. Organizations that leveraged citizen developers found that they were able to increase application throughput, reduce costs, improve user experiences, and, in some instances, increase speed-to-market.

Beyond these time and costs savings, organizations that piloted citizen development with the Now Platform indicated that these solutions in many cases performed better, since they were built by individuals actually fulfilling the business processes they were transforming. For more complex applications, a multidisciplined team consisting of a developer and a business analyst could reduce the delivery times for new business services by as much as 80% in some instances.

In modeling the impact of citizen development for the composite organization, Forrester assumes:

- The organization rolls out 12 basic business applications per year. These are built primarily by a business analyst with some senior developer review prior to being deployed to production, with the result being lower development costs due to reduced resource expenses. Development times are similar to developer-led business application initiatives, due to the amount of time it would take for developers to gain an understanding of the business context for the solution.

> "Citizen developers have really created some pretty amazing stuff, even to the point that the solutions that they are building perform better, because the person who actually fulfills the request or who is closer to that work is actually building these solutions."
>
> *Manager, solution engineering, transportation and logistics*

- The organization delivers five new complex business applications per year using the Now Platform. These initiatives leverage a multidisciplinary team consisting of one developer and one business analyst. Our interviews revealed that such a team can build these more complex applications within one month versus five months or more using more traditional development approaches.

Business application development time and cost savings will depend on the exact use cases and technical requirements, as well as actual developer and business analyst salaries, which vary across regions and industries. To account for these risks, Forrester adjusted this benefit downward by 5%, yielding a three-year risk-adjusted total PV of $793,055.

Process Efficiencies From Citizen Development: Calculation Table

REF.	METRIC	CALC.	YEAR 1	YEAR 2	YEAR 3
D1	Number of new basic applications		12	16	24
D2	Number of new complex applications		5	5	5
D3	Cost per specialized senior developer	$135K*1.35X benefits	$182,250	$182,250	$182,250
D4	Cost per business analyst	$80K*1.35X benefits	$108,000	$108,000	$108,000
D5	Number of weeks for basic app	Finding	4	4	4
D6	Number of weeks for complex app: before	Finding	20	20	20
D7	Number of weeks for complex app: after	Finding	4	4	4
D8	Cost delta: basic	D1*((D3-D4)/52))*D5	$68,538	$91,385	$137,077
D9	Cost delta: complex	(D2*(D3/52)*D6)-(D2*((D3+D4)/52)*D7)	$238,846	$238,846	$238,846
Dt	Process efficiencies from citizen development	D8+D9	$307,384	$330,231	$375,923
	Risk adjustment	↓5%			
Dtr	Process efficiencies from citizen development (risk-adjusted)		$292,015	$313,719	$357,127

ServiceNow: Overview

The following information is provided by ServiceNow. Forrester has not validated any claims and does not endorse ServiceNow or its offerings.

ServiceNow makes work, work better for people.

ServiceNow makes work better across the enterprise. Getting simple stuff done at work can be easy, and getting complex multistep tasks completed can be painless. ServiceNow applications automate, predict, digitize, and optimize business processes and tasks, across IT, customer service, security operations, and HR service delivery, creating a better experience for your employees and customers while transforming your enterprise.

Modernize IT service management

Get to value fast, simplify the IT experience, and make smarter decisions.

IT is leading the charge toward digital transformation, but complex legacy tools act as barriers along the way. With ServiceNow, your new service desk is up and running fast with built-in proven practices. An easy-to-use service portal makes submitting requests and delivering services painless. You'll work smarter with Agent Intelligence to automatically categorize and assign tasks and gain control with complete IT service visibility — no infrastructure required.

Eliminate service outages

Identify current and future service issues, pinpoint disruptions, and automate remediation.

Business service outages negatively impact customers, partners, and employees — resulting in financial losses and damage to company reputation. Eliminate outages with a service-aware approach, ingesting operational information, enabling IT to predict and prevent issues, and quickly respond to incidents.

Digitize your business with intelligent apps

Automate processes, modernize experiences, and connect your enterprise.

Traditional application development and delivery can't meet the requirements of today's fast-moving digital businesses. ServiceNow provides a comprehensive platform — the Now Platform — empowering citizen to professional developers, and an application store so that everyone can quickly build or deliver Intelligent Apps to accelerate your digital transformation.

Run IT like a business

Gain complete portfolio and financial visibility, align better with the business, and accelerate service delivery.

Centralize all business and operational demand. Get full visibility on planned and unplanned work. Prioritize applications, projects, and demand all within the context of what matters to the business. Manage and coordinate development and project activities to ensure technology is delivered faster.

Resolve security incidents and vulnerabilities fast

Prioritize and resolve threats based on business impact.

Bring incident and vulnerability data from your security tools into a structured response engine that uses intelligent workflows, automation, and a deep connection with IT to prioritize and resolve threats quickly based on the impact they pose to your organization.

Consumerize the employee service experience

Increase HR efficiency while making it easy for employees to get service across the enterprise.
Today's workforce expects consumer-grade service experiences. With ServiceNow, you can make it easy for employees to be employees by providing fast, personalized, and ever-improving levels of service, even for processes like onboarding that span beyond HR. Employee productivity and satisfaction will rise, and so will HR's reputation.

Increase customer satisfaction by solving issues faster

Deliver an effortless customer experience, connect teams to fix issues, and proactively prevent calls.
Digitally transform customer service by connecting departments, workflows, and systems to proactively resolve customer issues. Provide a personalized experience for customers while automating and reducing case volume for agents.

Inspire Executive Advisory Program

The ServiceNow Inspire™ program works with leaders ready for significant business transformation. ServiceNow helps Global 2000 CXOs reimagine their service management strategies and road maps — from first insight to final implementation. ServiceNow and its team of industry strategists, former customers, architects, and designers have improved corporate results, brand, and valuation for some of the world's largest companies.

Appendix A: Total Economic Impact

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

Total Economic Impact Approach

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

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

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

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

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

Present value (PV)

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

Net present value (NPV)

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

Return on investment (ROI)

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

Discount rate

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

Payback period

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

Appendix B: Endnotes

[1] Source: “The Growing Importance Of Process To Digital Transformation,” Forrester Research, Inc., May 8, 2018.
[2] Source: “Engaging And Retaining Talent With Effective Onboarding,” Forrester Research, Inc., March 17, 2017.
[3] Source: Forrester Analytics’ Global Business Technographics® Workforce Benchmark Survey, 2017.
[4] Source: “2016 Human Capital Benchmarking Report,” Society For Human Resource Management, November 1, 2016 (https://www.shrm.org/hr-today/trends-and-forecasting/research-and-surveys/pages/2016-human-capital-report.aspx).