The Total Economic Impact™ Of Developing Business Applications On The Now Platform™

Cost Savings And Business Benefits Enabled By ServiceNow

FORRESTER®

Table Of Contents

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.

FORRESTER®

ROI
264%

Benefits PV
$24.7 million

NPV
$17.9 million

Payback
6 months

Executive Summary

ServiceNow provides a cloud-based low-code development platform that helps its customers accelerate application and digitalized process development for the purpose of generating greater business outcomes. ServiceNow commissioned Forrester Consulting to conduct a Total Economic Impact™ (TEI) study and examine the potential return on investment (ROI) enterprises may realize by deploying the Now Platform™. The purpose of this study is to provide readers with a framework to evaluate the potential financial impact of the Now Platform on their organizations.

To better understand the benefits, costs, and risks associated with this investment, Forrester interviewed several customers and conducted a global survey of customers with years of experience using the Now Platform, ServiceNow's platform-as-a-service (PaaS). Forrester found that faster application delivery was a key element for organizations that desired to improve business velocity and agility, which is consistent with our existing findings for organizations that have strategized around digital transformation.

Prior to using the Now Platform, the customers navigated the application development and delivery process at a slow pace, as it often required native-level language development. Scaling was also difficult, as it required the addition of specialized and hard-to-retain developers fluent in native-level code. In an era where IT and the associated pieces were consolidating and limited by budget, business resources to effectively compete were severely limited. Productivity enhancements in the form of modernized applications and business processes were at the mercy of dev teams that were logjammed with requests from their business counterparts.

The customers interviewed and surveyed realized the limitations of their previous software development capabilities, where efforts were marginalized by extensive hard-coded applications in native languages that required extensive coding, testing, and debugging. In finding and implementing ServiceNow's Now Platform, organizations realized improved efficiencies in utilizing prebuilt APIs, reusable code, and accelerated low-code development. Likewise, business users also benefited from faster development capabilities, functionality, and process delivery — leading to efficiencies throughout their organizations.

FORRESTER®

Benefits And Costs

Time-to-value gains on end user productivity:
$20,122,307

Cost reduction in shifting outsourced development projects to internal resources:
$2,209,767

Now Platform license costs:
$4,623,291

Key Findings

Quantified benefits. The following risk-adjusted quantified benefits are representative of those experienced by the companies interviewed and surveyed:

› **Development efforts were accelerated by 290%, allowing benefit delivery nearly six months sooner.** Organizations had reported that development efforts were often a combination of both simple and complex development projects. Development with the Now Platform was accelerated, delivering projects at four times the speed of existing development efforts for simple projects. On projects that are more complex, meaning those that require multiple APIs or serve multiple lines of business (LOBs), those application development efforts are accelerated by 1.8x. The cumulative 2.9x improvement in delivery speed brought about delivery of applications in one third of the time, producing end user productivity months earlier. Total time-to-value productivity gains by end users amounted to over $20 million over three years.

› **Development efforts were shifted from outsourced efforts to internal resources, due to the newfound ease of development.** Following the implementation and ramp-up of developers on the Now Platform, organizations were able to bring a larger percentage of development projects in house, rather than outsourcing them. The primary driver enabling this shifting of project allocation was from the ease of development on the Now Platform. In our composite organization analysis, the organization saved a total of $2.2 million over three years by internalizing development efforts.

› **Low-code development enabled the use of more junior-level developers while reallocating more senior developers to value-add complex projects requiring native code.** With less native coding required and the liberal abundance of reusable code and APIs, the composite organization was able to leverage more junior-level developers to deliver projects, especially the projects more simplistic in nature. A savings of $716,000 was realized over three years with this reallocation of resources.

› **Existing on-premises solutions were retired, providing savings in solution-related costs of usage and upkeep.** Following the introduction of the cloud-based Now Platform, the organization retired multiple legacy solutions that included hardware and the ongoing maintenance, support, and provisioning of virtual instances. In total, these retired legacy solutions saved the composite $648,000 per year, or $1.6 million in risk-adjusted present value figures.

Unquantified benefits. The interviewed organizations experienced the following benefits, which are not quantified for this study:

› **Organizations that accelerated their development efforts of apps and digital business processes improved their Net Promoter Score (NPS) by 29% and Customer Satisfaction Score (CSAT) by 25%.**[i] Organizations interviewed and surveyed revealed that, on average, they had realized a substantial gain in customer satisfaction as a result of their app development and process improvements. While the effect of the improved customer experience scores has not been translated into quantified bottom-line results in this study, Forrester's existing research has indicated a high correlation between a better customer experience and greater revenue growth.[ii]
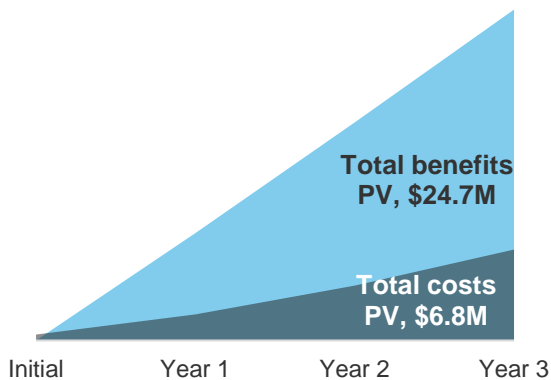
FORRESTER®

› **Employee experience also improved with the addition of apps and processes developed on the Now Platform.** A common theme across all interviewed organizations was the improved employee satisfaction and experience of becoming empowered with applications built with the Now Platform. Employees across the enterprise, including those who are not business users, were enabled to access resources such as HR and knowledgebases. While this benefit category has not been quantified, it is plausible that better employee experiences and higher satisfaction can lead to improved retention and related cost savings

Costs. The interviewed organizations experienced the following risk-adjusted costs:

› **Now Platform license costs.** The licensing costs of the Now Platform are based upon the number of users using applications and processes built on the Now Platform. With an increasing user base over three years, the licensing costs amounted to $4.6 million.

› **Implementation and training costs associated with ramping up.** These include costs of professional services for implementation and initial vendor training. Additionally, the costs of internal training for developers and, separately, end users for application usage, totaled $2.2 million over three years.

Forrester's interviews with three existing customers and 135 customer respondents yielded a subsequent financial analysis finding that a composite organization based on these organizations experienced benefits of over $24.7 million over three years versus costs of roughly $6.8 million, adding up to a net present value (NPV) of $17,882,936 and an ROI of 264%.

Financial Summary
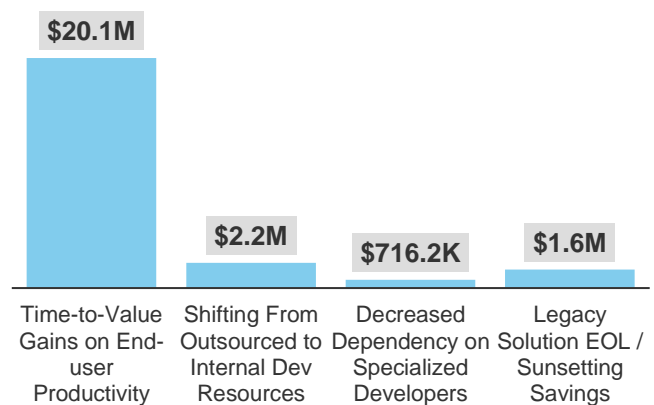
Total benefits
PV, $24.7M

Total costs
PV, $6.8M

Initial | Year 1 | Year 2 | Year 3

Benefits (Three-Year)

| $20.1M | $2.2M | $716.2K | $1.6M |

Time-to-Value Gains on End-user Productivity | Shifting From Outsourced to Internal Dev Resources | Decreased Dependency on Specialized Developers | Legacy Solution EOL / Sunsetting Savings

FORRESTER®

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 the ServiceNow Now Platform.

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's Now Platform can have on an organization:

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

CUSTOMER INTERVIEWS
Interviewed three organizations using the Now Platform to obtain data with respect to costs, benefits, and risks. Data points and metrics were additionally acquired from a global survey to Now Platform customers.

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 four fundamental elements of TEI in modeling the ServiceNow Now Platform's impact: benefits, costs, flexibility, and risks. Given the increasing sophistication that enterprises have regarding ROI 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 ROI 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 the ServiceNow Now Platform.

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.

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

FORRESTER®

The Now Platform Customer Journey

BEFORE AND AFTER THE NOW PLATFORM INVESTMENT

Interviewed Organizations

For this study, Forrester conducted in depth interviews with three ServiceNow Now Platform customers. Interviewed customers include the following:

INDUSTRY	REGION	PRIMARY USE CASE	USER DEMOGRAPHICS
Automotive services	Global organization headquartered in the US	Field inventory management, HR, business support management	14,000 office workers and over 10,000 field employees who rely on Now Platform apps/processes
Financial services	North America	HR applications, complaint management, various LOB applications	Over 40,000 employees, most of whom are business users on Now Platform apps
Industrial aviation	Global organization headquartered in the US	Ticketing management, flight scheduling, SOX compliance management	5,000 employees, with field and office employees alike using Now Platform apps

In addition, Forrester fielded a global survey to current ServiceNow Now Platform customers, asking them of their experience and how multiple financially impactful levers were moved with their use of the Now Platform PaaS solution. The 135 survey respondents represented managers, directors, and leaders in business and IT, covering a wide assortment of verticals. While some topline results varied among these organizations, this study specifically showcases universal benefits that are applicable to organizations of all industry segments.
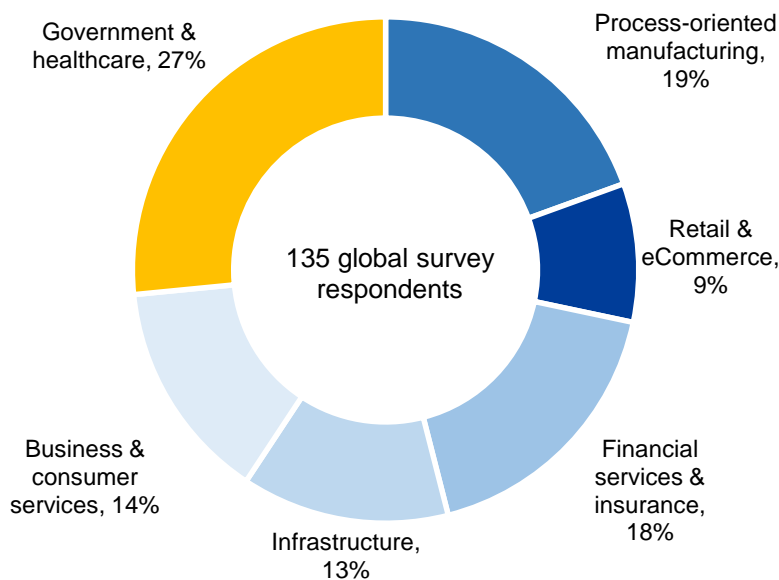
> "Having produced over 1,780 new functionalities and improvements in 2016 with [the Now] Platform compared with just 200 in the years past, I'd definitely say that we've delivered to improve end user productivity."
>
> *Director, automotive services organization*

Government & healthcare, 27%

Process-oriented manufacturing, 19%

Retail & eCommerce, 9%

135 global survey respondents

Financial services & insurance, 18%

Business & consumer services, 14%

Infrastructure, 13%

FORRESTER®

Key Challenges

Interviews and survey respondents identified several common themes in their challenges prior to implementing the Now Platform. The recurring theme was that there was no quick way to scale IT and development operations to be able to support business-level initiatives, which held back the overall digital transformation movement. More specifically, the organizations identified the following challenges:

› **The organizations had significant backlogs of applications and business processes to be modernized, which they could not reasonably deliver with existing internal resources.** Organizations noted that expanding their development staff was a difficult task. Finding talented resources to build native-level code required senior developers, who not only bear high costs but are also a scarcity in the current market. Resorting to external development partners was one solution, but major scope creep and budget overruns were commonplace, as outsourced development did not always align with specific LOB needs. Ultimately, the pace of development was a bottleneck, preventing organizations from doing more, working faster, and producing improved bottom-line results.

› **The organizations had messy application stacks, some of which were obtained in mergers and acquisitions, resulting in extensive maintenance and support measures.** Organizations desired to simplify, consolidate, and then develop for consistency across the enterprise. To rip and replace existing disparate apps found in different business units required a huge undertaking to produce custom APIs that would enable new apps. These organizations quickly identified the need for a collaborative PaaS solution that enabled reusable code and APIs so that delivery of a new consolidated set of applications could be deployed for overall enterprise alignment.

› **Aging on-premises systems such as Lotus Notes were no longer meeting the requirements of business users and were costly to maintain.** The need to service, manage, and support these solutions was expensive. With a move to a cloud-based PaaS, organizations had hoped to continue their journey for digital transformation while reducing operational costs. Operators previously working to manage this infrastructure can then be re-tasked to value-add functions. Many organizations had indicated that IT should and can be a value creation partner, rather than merely a cost center.

> "Having a robust development platform with ServiceNow provides a way for applications to be developed quickly while using less senior developers. What's more, there is the added bonus of needing far less coordination across IT groups like the infrastructure group or DBAs."
>
> *Leader in digital transformation*

> "ServiceNow is a real enterprise platform where we can develop nearly anything cheaper and faster than traditional methods."
>
> *Leader in IT*

Top Surveyed Motivations For Adoption Of The Now Platform

Improve our IT / developer efficiency	44%
Improve our business agility and scalability	43%
Improve time-to-delivery of apps, forms, or business processes	25%
Consolidate disparate custom-built application stack	24%
Reduce legacy infrastructure footprint	19%
Execute digital transformation strategy more quickly	17%

FORRESTER®
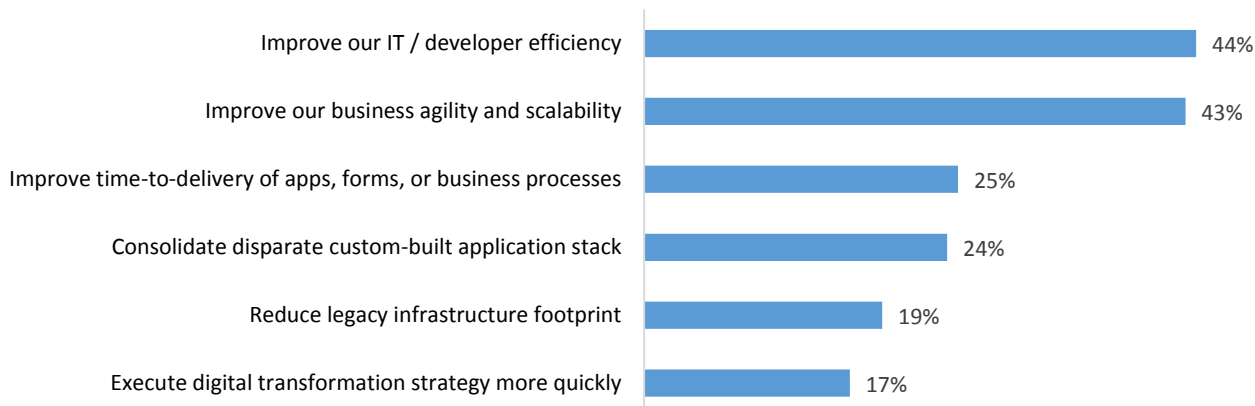
Solution Requirements

The interviewed organizations searched for a solution that could:

› Provide an out-of-the-box low-code development platform with low capex costs.

› Better manage opex and reduce infrastructure management; therefore, a cloud-based solution was preferred.

› Contain application sprawl and delivery consistency through all company apps.

› Consolidate/retire existing platforms used for centralized business application development, ticketing, and custom HR applications.

› Improve IT efficiency in resolving issues on a consolidated platform.

› Have low-code/reusable code capability for an accelerated software delivery life cycle (SDLC).

› Easily scale with existing development and IT resources.

Key Results

The interviews revealed that key results from the Now Platform investment. We found that the platform:

› **Established a more efficient development group.** Our analysis suggests that simple applications and digital business process development can be accelerated by as much 400%, from soup to nuts. Said one IT manager, "ServiceNow has reduced our application delivery time by as much as 80%, giving our business stakeholders value that much sooner." For IT managers and directors, their teams for once are no longer the bottleneck to business value realization.

› **Met the needs of business stakeholders and their various LOBs.** Prior to the Now Platform, prioritization for new development efforts was nearly a moot point, as the existing backlogs were months out, if not years. Business leaders became disenfranchised when their needs were not met. Shortly after the implementation of the Now Platform, business needs were immediately tackled and resolved by development teams, often within one or two months.

› **Improved the efficiency of business users.** Business users who had paper-based and antiquated legacy processes were slow to get acclimated to their workflows. Application functionality and usability were missing, too. Newly developed business processes and apps freed up an average of 33 minutes per day following the Now Platform implementation.

› **Contained application sprawl and related effort to maintain the disparate application stacks.** Due to various acquisitions that interviewed organizations had made, consolidating the IT program and managing these disparate applications had become a time-consuming and costly affair, especially when hardware and support calls were considered. Redeveloping a consistent set of apps that integrated company data heavily reduced the labor required to maintain business continuity.

> "Our growth led to a need in new systems of engagement for team members to work effectively. But how could we do this with an already stretched-thin IT group? That's when we introduced [the Now] Platform, and we're now better equipped to respond to and address business needs as a result."
>
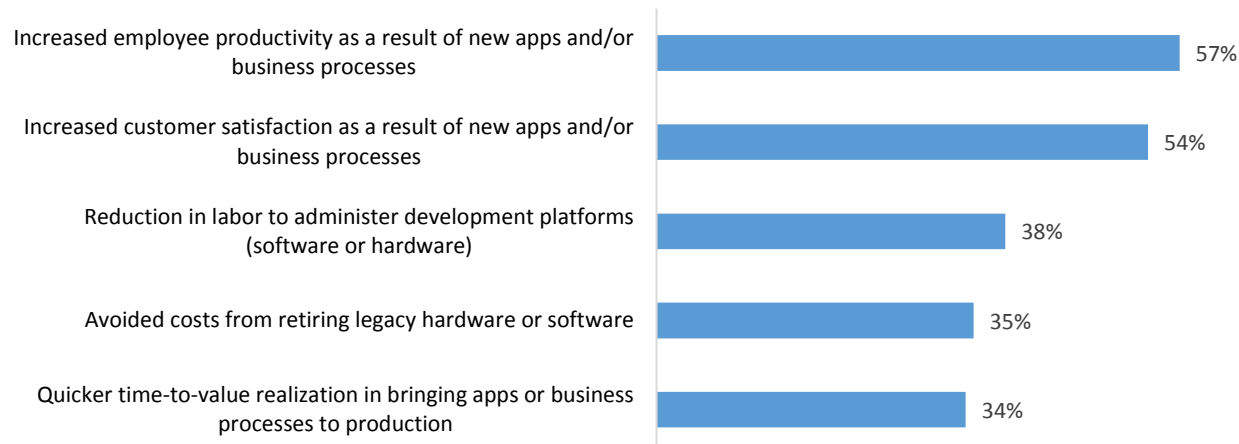> *Director, automotive services organization*

Surveyed organizations stated a 39% reduction in time to maintain and provision infrastructure with the Now Platform.

75% of surveyed organizations received value by being able to leverage junior-level developers rather than specialized senior developers.

FORRESTER®

Top High-Level Benefits Indicated By Survey Respondents

Benefit	Percentage
Increased employee productivity as a result of new apps and/or business processes	57%
Increased customer satisfaction as a result of new apps and/or business processes	54%
Reduction in labor to administer development platforms (software or hardware)	38%
Avoided costs from retiring legacy hardware or software	35%
Quicker time-to-value realization in bringing apps or business processes to production	34%

Composite Organization

Based on the interviews and survey, Forrester constructed a TEI framework, a composite company, and an associated ROI analysis that illustrates the areas financially affected. The composite organization is representative of the aggregate data collected through interviews and surveys. This data set is used to present the aggregate financial analysis in the next section. The composite organization that Forrester synthesized from the customer interviews has the following characteristics:

Description of composite. The composite organization is a multibillion-dollar global company with over 18,000 employees spread across the world. Internally, it has 10 dedicated developers who previously specialized in native code development. With acquisitions and consolidations occurring at a regular pace, the organization also relied heavily on external development partners to quicken the pace of its digital transformation initiative.

During the evaluation period for low-code development platforms, the organization determined that it had 14,000 users who could potentially benefit from new or redone applications and processes. There was no plan at the time to develop external-facing applications, as the existing pipeline for overdue internal projects was already beyond what the organization could conceivably address within the span of a year. Road-mapped applications were determined to be a mixture of both complex and simple projects.

Deployment characteristics. Having made the decision to deploy the Now Platform after an extensive selection process and business case analysis, the organization centralized its developer resources and managed from a single point online. Collaboration continued, and a consistent theme was rolled out through all new enterprise applications — first to 4,000 business users, and then to an additional 4,000 users yearly

Key assumptions
-$3 billion annual revenue
-18,000 total FTEs
-14,000 business users
-10 dedicated developers
-Apps developed are both internal and external facing
-Apps projects are a blend of simple and complex projects

Financial Summary

CONSOLIDATED THREE-YEAR RISK-ADJUSTED METRICS

Cash Flow Chart (Risk-Adjusted)

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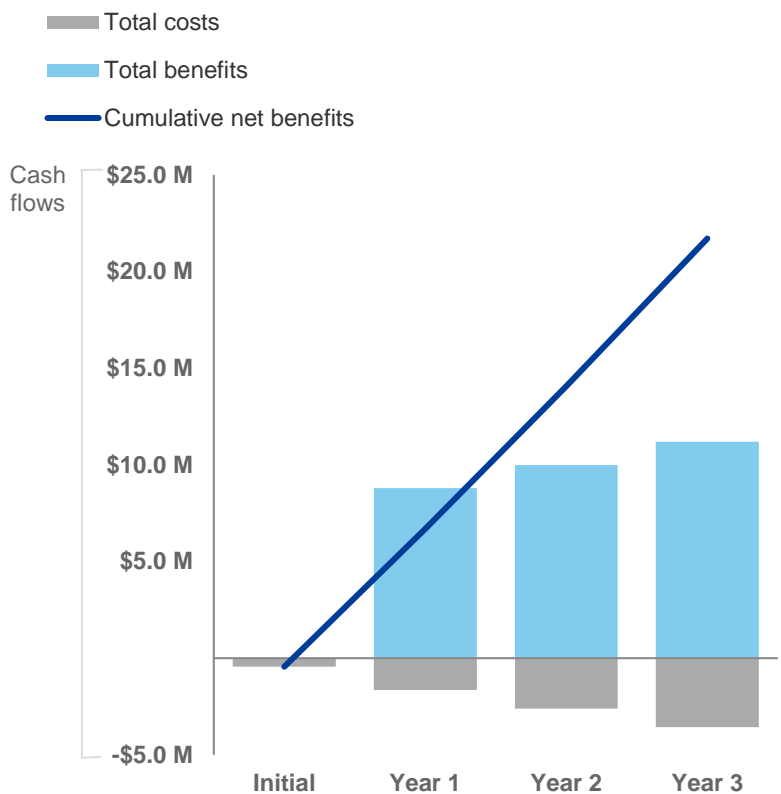
The financial results calculated in the Benefits and Costs sections can be used to determine the ROI, NPV, and payback period for the composite organization's investment. Forrester assumes a yearly discount rate of 10% for this analysis.

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 Table (Risk-Adjusted)

	INITIAL	YEAR 1	YEAR 2	YEAR 3	TOTAL	PRESENT VALUE
Total costs	($440,000)	($1,649,040)	($2,609,040)	($3,569,040)	($8,267,120)	($6,776,831)
Total benefits	$0	$8,792,640	$9,992,160	$11,191,680	$29,976,480	$24,659,767
Net benefits	($440,000)	$7,143,600	$7,383,120	$7,622,640	$21,709,360	$17,882,936
ROI						264%

FORRESTER®

Flexibility

The value of flexibility is unique to each customer, and the measure of its value varies from organization to organization. There are multiple scenarios in which a customer might choose to implement Now Platform and later realize additional uses and business opportunities, including:

› **An acceleration of effort for external, consumer-facing applications.** These apps are the evolutionary next step for organizations committed to producing bottom-line results. Not only are there gains for internal users, but respondents indicated they are also building applications for external-facing consumers. Given the current imperatives that most organizations face to serve their customers at the next level, external applications can gain a significant acceleration in deployment times with the low-code capabilities of the Now Platform.

› **Easy integration with additional ServiceNow ecosystem products.** Organizations that simplify and rationalize their application and data stack can reap gains in the speed of application and data delivery to their internal- and external-facing users. Systems of engagement can be more easily connected to the central ServiceNow CMDB database and knowledgebases that improve user experience and visibility, through a tighter-knit integration between a common stack.

Flexibility can be quantified when evaluated as part of a specific project by taking into consideration the factors listed above (described in more detail in Appendix A).

> Flexibility, as defined by TEI, represents an investment in additional capacity or capability that could be turned into business benefit for a future additional investment. This provides an organization with the "right" or the ability to engage in future initiatives but not the obligation to do so.

Analysis Summary

The holistic analysis of those customers interviewed and surveyed imparts that these organizations have attained value in multiple areas of the organization, from reduced costs to increased productivity and business-level outputs. On a higher level, the implementation of the Now Platform positions organizations to be strategy enablers. Business processes and applications are delivered quicker, by a margin of 290% for applications of mixed complexity, as calculated for the composite organization. Business users and external consumers of services are empowered to do more with higher levels of engagement with modernized application tools in an accelerated timeframe. As organizational strategies continue to evolve, one imperative remains a constant — and that is the need to continually better serve not only external customers but also internal users. The Now Platform is a solution that can help to achieve this imperative.

FORRESTER®

Financial Analysis

QUANTIFIED BENEFIT AND COST DATA AS APPLIED TO THE COMPOSITE

Total Benefits

REF.	BENEFIT	YEAR 1	YEAR 2	YEAR 3	TOTAL	PRESENT VALUE
Atr	Time-to-value gains on end user productivity	$7,136,640	$8,156,160	$9,175,680	$24,468,480	$20,122,307
Btr	Cost reduction in shifting of outsourced development projects to internal resources	$720,000	$900,000	$1,080,000	$2,700,000	$2,209,767
Ctr	Decreased dependency on specialized developers	$288,000	$288,000	$288,000	$864,000	$716,213
Dtr	Legacy solution EOL/sunsetting savings	$648,000	$648,000	$648,000	$1,944,000	$1,611,480
	Total benefits (risk-adjusted)	**$8,792,640**	**$9,992,160**	**$11,191,680**	**$29,976,480**	**$24,659,767**

Time-to-Value Gains On End User Productivity

Following the deployment of the Now Platform, nearly all organizations indicated a significant acceleration in development speed and, as a result, increased business velocity. Existing development efforts with native language, hard coding were time consuming and provided very little carry-forward reusable code. With the Now Platform, the ease of low-code development and reusable code bases form the base of what one customer described as "an easy-to-use, scalable solution that supports our overall business agility." From the interviews and survey conducted with customer organizations of the Now Platform, Forrester has been able to determine the following:

› Simpler development projects, like those normally taking six months to hard code, experienced gains of approximately 400%. Effectively, simple applications produced on the Now Platform are now finished in approximately six to seven weeks.

› More complex projects that previously required nearly nine months are now finished with the Now Platform in under five months.

› Forrester has made the assumption that the composite organization develops a mixture of both simple and complex development projects.

› Applications deployed by interviewed and surveyed organizations varied depending on industry and LOB demands. Some common use cases that were prevalent across many firms include HR services, compliance management, sales support, and operations management. In aggregate, these additive and newly formed systems of engagement enable users to work more effectively.

> 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 more than $24.6 million.

Accelerated development resulted not only in improved business agility, but also an earlier realization of productivity value from end users.

FORRESTER®

- Faster development velocity translates further into quicker realization of end user productivity. For organizations that had already developed multiple applications, the end users of the applications had gained an average of 33 minutes per day, which can ultimately be captured as added productivity. The model assumes that the composite organization realized similar benefits and has been captured with the following assumptions.

- End users gained 33 minutes per day, which translates into a 7% productivity improvement. The level of productivity incrementally climbs in ensuing years as additional applications are deployed, but of lower value than first-year projects.

- End users' usage of developed apps increased linearly across three years, at a rate of 4,000 additional users per year.

- The total benefit for the productivity is not reflected; rather, only productivity gained from the period of time between early deployment and traditional deployment is captured as a time-to-value improvement.

- Employee productivity is not always captured and returned to the organization as "productivity." Our research indicates that newfound time is often used by employees as coffee breaks, non-value-add office conversations, or web browsing. The model reflects a 60% capture rate of the productivity newly created by applications and processes.

While we believe the productivity gains achieved from newly developed applications and business processes are undeniable, readers should be aware of the potential impact risk of lower development acceleration, due to some organizations having a different mix of simple and complex applications than that of the composite organization. Considerations for this risk should include the progress of an organization's digital transformation as well as the types of applications on the organizational road map.

To account for this risks, Forrester adjusted this benefit downward by 10%, yielding a three-year risk-adjusted total PV of $20,122,307.

Readers should also be aware that business outcomes such as increased topline revenue or greater customer retention have not been incorporated into this benefit category. Further information on business outcomes not included in this category can be found in the Unquantified Benefits section of this study.

> "The delivery of our applications has been accelerated by 6x to 10x compared to our traditional format of developing in Java and .NET."
>
> *Development manager, financial services organization*

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.

Time-To-Value Gains On End User Productivity					
REF.	METRIC	CALC.	YEAR 1	YEAR 2	YEAR 3
A1	Simple development project time acceleration, with Now Platform		400%	400%	400%
A2	Complex development project time acceleration, with Now Platform		180%	180%	180%
A3	Average time acceleration for all projects	(A1+A2)/2	290%	290%	290%
A4	Average duration for mixed project completion, before Now Platform, in months		9	9	9
A5	Average time for mixed project completion, on Now Platform, in months	A4/A3	3.1	3.1	3.1
A6	Delta in project completion time	A4-A5	5.9	5.9	5.9
A7	Percentage improvement in productivity per end user	Survey and interviews	7%	8%	9%
A8	Annual cost of average business end user, fully loaded		$96,000	$96,000	$96,000
A9	Now Platform application/business processes users added		4,000	4,000	4,000
A10	End user productivity capture		60%	60%	60%
At	Time-to-value gains on end user productivity	(A6/12)*(A7*A8* A9*A10)	$7,929,600	$9,062,400	$10,195,200
	Risk adjustment	↓10%			
Atr	**Time-to-value gains on end user productivity (risk-adjusted)**		**$7,136,640**	**$8,156,160**	**$9,175,680**

Shifting From Outsourced To Internal Dev Resources

Prior to the introduction of the Now Platform, the composite organization faced a tremendous amount of projects supporting business initiatives. To satisfy these business needs, the organization often outsourced its development projects, with as much as 45% of total projects being outsourced to external vendors and providers, amounting to $2.4 million annually. Following the deployment of the Now Platform, the composite recognized both a significant gain in development velocity as well as an improvement in the ease of development. As the organization worked through the existing backlog of projects, the percentage of internalized projects grew year over year. Projects that were shifted to internal resources ranged in complexity from low-code projects on the Now Platform to custom native-code projects. A key driver of this shift was the enablement of junior-level developers to produce on the Now Platform, freeing senior-level developers to engage specialized projects in native code. See the next benefit section for more detail.

Over the course of three years, the composite organization would save a total PV of $2,209,767.

9%

$2.2 million

three-year benefit PV
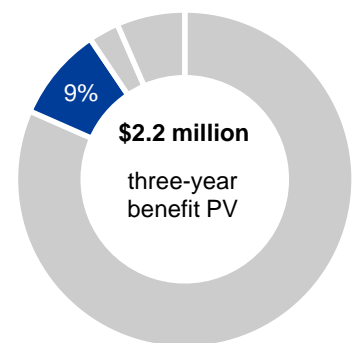
Organizations found the Now Platform easier and quicker to develop on, reducing the need to outsource dev projects.

FORRESTER®

Shifting From Outsourced To Internal Dev Resources					
REF.	METRIC	CALC.	YEAR 1	YEAR 2	YEAR 3
B1	Outsourced development project spend, annually	Baseline: 45% of total dev projects outsourced	$2,400,000	$2,400,000	$2,400,000
B2	Shift to internal developer resources with Now Platform		60%	75%	90%
B3	Cost savings of using internal versus outsourced developer resources		50%	50%	50%
Bt	Shifting from outsourced to internal dev resources	B1*B2*B3	$720,000	$900,000	$1,080,000
	Risk adjustment	0%			
Btr	**Shifting from outsourced to internal dev resources (risk-adjusted)**		**$720,000**	**$900,000**	**$1,080,000**

Decreased Dependency On Specialized Developers

With a more user-friendly low-code development platform, development teams were able to leverage more existing code and already built APIs, paving the way for more junior, nonspecialized developers to produce applications and business processes, rather than resorting to native language coders. Through the first year of usage, the composite was able to reallocate 60% of the senior developer workforce to projects that specifically required certain languages. To replace the senior developer workforce, junior-level developers were introduced and displayed similar development velocity as their more senior counterparts on the Now Platform. Forrester believes that hard-coding will never disappear altogether, but it can be greatly reduced with tools like the Now Platform.

With a significant difference in compensation between the junior and senior developers, the composite was able to capture arbitrage benefits in reallocating its developer workforce. Following the reallocation of six senior-level developers, who were each compensated a $48,000 premium over junior developers, the composite gained an annual benefit of $288,000. The total three-year gains of this benefit category in PV were $716,213.

$716,213 saved by leveraging six junior-level developers rather than specialized senior developers

FORRESTER®

Decreased Dependency On Specialized Developers					
REF.	METRIC	CALC.	YEAR 1	YEAR 2	YEAR 3
C1	Cost per specialized sr. developer resource, annually fully loaded		$144,000	$144,000	$144,000
C2	Cost per jr.-level developer, annually fully loaded		$96,000	$96,000	$96,000
C3	Cost delta per developer		$48,000	$48,000	$48,000
C4	Shift in utilization of jr. developer full-time equivalents (FTEs) from sr. developers		6	6	6
Ct	Decreased dependency on specialized developers	C3*C4	$288,000	$288,000	$288,000
	Risk adjustment	↓0%			
Ctr	**Decreased dependency on specialized developers (risk-adjusted)**		**$288,000**	**$288,000**	**$288,000**

Legacy Solution EOL/Sun-Setting Savings

In replacing existing solutions with the Now Platform, the composite retired its existing on-premises solution for business automation and knowledge sharing. Aside from feeding antiquated processes and applets, the solution was incurring ongoing costs in the ways listed below. Additionally, instance and resource provisioning were dramatically reduced due to the migration to a cloud PaaS.

› Hardware required for the existing solution was retired, although at a depreciated level due to its age.

› Hardware management, maintenance, and support were also stopped, enabling IT personnel to support other functions within the business.

› Software support and disparate app debugging were reduced once applications had been built on the Now Platform in a centralized state.

› External vendor support and maintenance support were eliminated.

It is assumed that prior licenses were in perpetuity, and hence accrued no additional yearly costs. Combining the factors listed above, the composite organization reaped the benefit of $600,000 annually from internal resources, and $120,000 for external resources, for a total of $720,000 per year. In using conservative estimates, the gain after three years of legacy hardware and software retirement amounted to $1,790,533.

Recognizing that not all organizations may have had such an extensive system of engagement in the past, we have assigned a risk adjustment to this benefit category, resulting in a downward adjustment of 10%, yielding a PV of $1,611,480 over three years.

Savings of retiring existing system:

- Existing infrastructure maintenance and management

- Support of existing disparate applications

- External maintenance contracts

FORRESTER®

Legacy Solution EOL / Sun-Setting Savings

REF.	METRIC	CALC.	YEAR 1	YEAR 2	YEAR 3
D1	Existing solution hardware and software annual internal support and administration costs		$600,000	$600,000	$600,000
D2	Existing solution external support/maintenance costs		$120,000	$120,000	$120,000
Dt	Legacy solution EOL/sunsetting savings	D1+D2	$720,000	$720,000	$720,000
	Risk adjustment	↓10%			
Dtr	**Legacy solution EOL/sunsetting savings (risk-adjusted)**		**$648,000**	**$648,000**	**$648,000**

FORRESTER®

Unquantified Benefits

In addition to the quantitative benefits listed above, our research revealed benefits that some customers were able to attain. While these benefits are not quantified at this time, they are nevertheless important gains that potential adopters might experience:

› **Incremental revenue growth from improving customer experience from newly built Now Platform apps and processes.** Forrester research has shown that leaders in customer experience have dramatically different growth rates than the laggards of customer experience within the same sector. For instance, two financial services firms that were assessed over a five-year period revealed a compounded annual growth rate (CAGR) difference of 6.2%, while another pair of financial services firms showed a CAGR disparity of 9.1%. While products offered by firms will obviously have differences, some of which have high switching costs, the attainment of a better customer experience should always be an imperative for those organizations setting long-run strategic decisions.
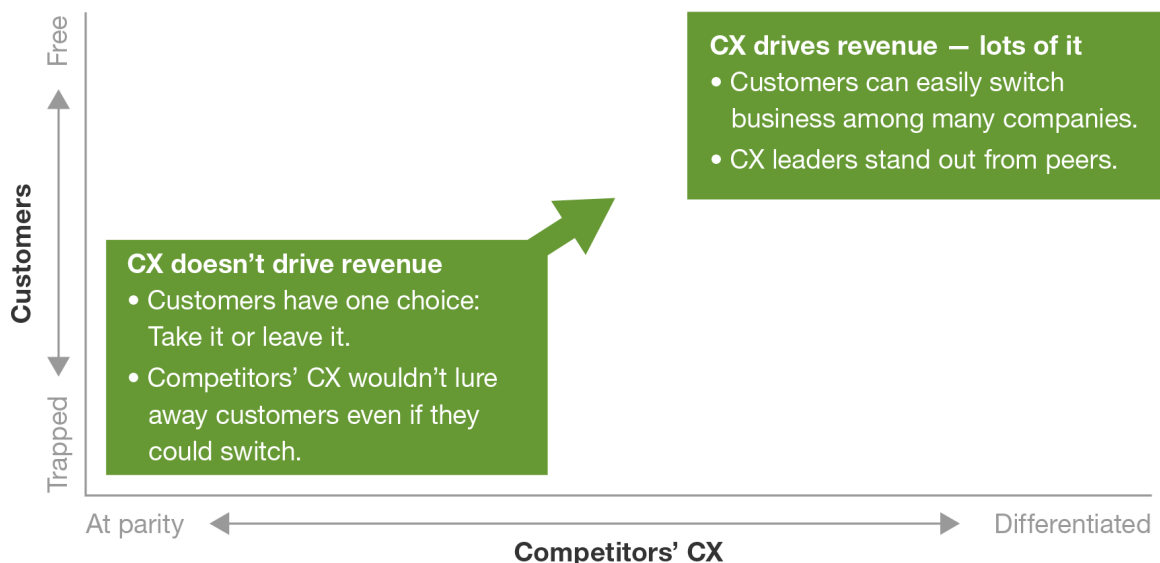
41% and growing: number of organizations that use the Now Platform to develop external consumer-facing apps to more quickly and better address the expectations and needs of today's consumer.

FORRESTER RESEARCH | CUSTOMER EXPERIENCE PROFESSIONALS

The CX/Revenue Growth Equation

Customer Experience Drives Revenue Growth, 2016

CX drives revenue — lots of it
• Customers can easily switch business among many companies.
• CX leaders stand out from peers.

CX doesn't drive revenue
• Customers have one choice: Take it or leave it.
• Competitors' CX wouldn't lure away customers even if they could switch.

Customers — Free / Trapped

At parity — Competitors' CX — Differentiated

125102   Source: Forrester Research, Inc. Unauthorized reproduction, citation, or distribution prohibited.

FORRESTER®

› **Improved internal employee experience.** Newly minted applications and processes from the Now Platform can also deliver a better employee experience sooner. Automation and improved app accessibility significantly raise employee satisfaction, which was cited by multiple customers. Said one director, "Our accelerated functionality delivery with [Now] Platform has absolutely removed user friction, making their jobs that much easier."

"Where GMs came to us in the past saying that they had no time to do more, we are hearing the same managers tell us now that our new apps have empowered them to gain better visibility and optimize group workflows as a result."

Director of safety, automotive services organization

FORRESTER®

Total Costs

REF.	COST	INITIAL	YEAR 1	YEAR 2	YEAR 3	TOTAL	PRESENT VALUE
Etr	Now Platform license costs	$0	$960,000	$1,920,000	$2,880,000	$5,760,000	$4,623,291
Ftr	Training and implementation	$440,000	$689,040	$689,040	$689,040	$2,507,120	$2,153,540
	Total costs (risk-adjusted)	**$440,000**	**$1,649,040**	**$2,609,040**	**$3,569,040**	**$8,267,120**	**$6,776,831**

Now Platform License Costs

Organizations with the Now Platform incurred a monthly service charge related to the number of applications/processes deployed and the number of users of which. For organizations that have more expansive strategic digital transformation initiatives, a separate new plan exists for unlimited applications, but it is still user-count dependent. All pricing reflected in this study is based on list pricing.

With the Now Platform, many interviewed and surveyed organizations found that development efforts had accelerated so much that the "low-hanging fruit" goals were quickly achieved and IT resources were no longer the bottleneck. Instead, budgeting for new app licenses became the new logjam. Utilizing the newer unlimited application/process pricing model, organizations will realize lower license costs as the development of apps increase. Readers are encouraged to explore pricing options with ServiceNow or a ServiceNow partner to determine an optimized license plan.

The composite organization started with an initial user base of 4,000 users, anticipating that a moderate increase in the production rate of applications and processes would eventually extend across the organization, resulting in added users in years 2 and 3. Taking advantage of the unlimited app licensing, the composite paid an approximate $960,000 for Now Platform licensed users in the first year, increasing to $1,920,000 and $2,888,000 in the second and third years, respectively, as app users increased. Application production also increased yearly, as shown in the table in Appendix B.

The three-year licensing cost for the composite accounts for a total PV of $4,623,291.

The table above shows the total of all costs across the areas listed below, as well as present values (PVs) discounted at 10%. Over three years, the composite organization expects risk-adjusted total costs to be a PV of more than $6.77 million.

ServiceNow offers multiple pricing options for the Now Platform, one of which is a pricing model that allows unlimited applications, which should be leveraged by organizations on the digital transformation fast-track.

$2.2 million

three-year cost PV
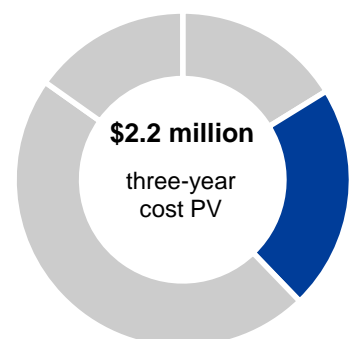
Training And Implementation

Multiple customers of the Now Platform conveyed that professional services were key to their quick implementation and ramp-up period. Data metrics corroborated the messaging, as clients who had undertaken little outside help were less successful than those who pursued professional services — both in terms of reaching full development acceleration and meeting the needs of the business users. Organizations that were extremely successful with the Now Platform utilized professional services to learn how to best leverage the Now Platform and jump-start development. Internally, additional knowledge sharing continued with training programs to fully ramp the development team.

Over the initial period of implementation, the composite organization incurred a professional services cost of $250,000. In addition, the organization invested an additional allotment of 1.5 months for its 10 developers to become truly proficient on the Now Platform. Knowledge gained and lessons learned were documented for future training sessions, greatly reducing the cost of future hires and resulting in ongoing conformity to best practices. At a rate of $120,000 fully loaded per developer annually, or $10,000 per month, the initial developer ramp-up period of 1.5 months costs the organization a total of $150,000.

In addition to developer training, the organization trained business end users who migrated to new apps and processes, at a rate of 3 hours per year. This cost of this training totaled $600,000 yearly. Total three-year costs of training and initial implementation amounted to $1,957,764, inclusive of internal and external costs.

Training is often a variable for organizations depending on their IT maturity and capability. Since organizations may have different starting points and variability in uptake speed of different developers, we have assigned an impact risk to this cost category by adjusting this cost category upward by 10%. This results in a risk-adjusted PV cost of $2,153,540 over three years.

Training, ramp-up, and implementation costs: **22%** of total costs

Developer ramp-up: With professional services and customer success programs, developers were fully acclimated to the Now Platform in 1.5 months.

Implementation risk is the risk that a proposed investment may deviate from the original or expected requirements, resulting in higher costs than anticipated. The greater the uncertainty, the wider the potential range of outcomes for cost estimates.

FORRESTER®

ServiceNow Now Platform: Overview

The following information is provided by ServiceNow. Forrester has not validated any claims and does not endorse ServiceNow or its offerings.
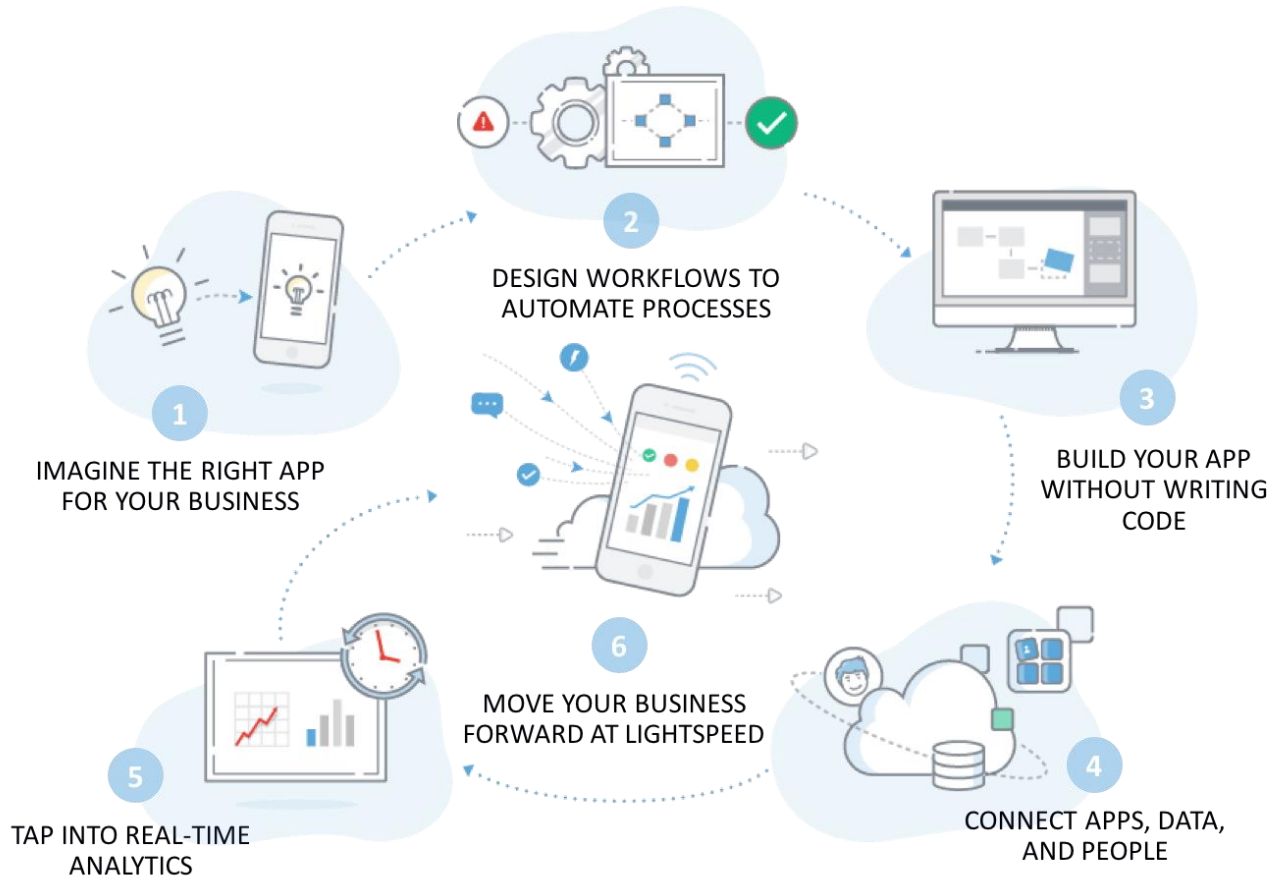
The Now Platform allows you to automate your enterprise with the applications you need on a platform built for faster custom development. The platform breaks down data silos across the enterprise using a single data model so that the right information can be shared and reused by other applications. Having a complete understanding of all related data makes it easier to build contextual workflows that intelligently automate processes across the enterprise.

The Now Platform allows organizations to create their own custom applications quickly by never having to start from scratch. The platform provides out-of-the-box components and services that become reusable in other applications you create. Simplified integration uses autogenerated and scripted APIs that are also reusable. Developers also save valuable development time by being able to focus on business logic instead of implementing and configuring technical details around infrastructure and security. This eliminates upfront infrastructure build time costs by offering a "development ready" service instance that can also reduce ongoing maintenance for upgrades and versioning.

There is no learning curve, and minimal training is required because you use standard languages and libraries such as JavaScript, HTML5, and Angular. And, a single integrated environment allows diverse teams of no-code, low-code, and pro-code developers to collaborate effectively on any project. Anyone, from the business user to the professional developer, can easily build scalable, integrated applications using drag-and-drop or professional developer tools.

FORRESTER®

Highlighted features include:

› Delegated Development enables provisioning of development resources to the entire enterprise while maintaining granular control and governance over developer privileges, production deployments, and application data, API, and resource access.

› Service Portal Designer allows you to deliver an engaging user interface based on modular, flexible designs with the ability to develop a user experience free of any dependencies on the business logic of the app.

› Applications can deliver broad integrations via extensive REST and SOAP APIs, API frameworks to create new APIs, and interfaces for data import/export with other software-as-a-service (SaaS) applications, on-premises applications, and data sources.

› The CMDB provides a single data set enabling easy integration of data across diverse applications so that every table, view, and application built on the ServiceNow platform leverages a consolidated, single system of record.

› Studio IDE integrated with Git and the scoped app repository gives you a powerful means of implementing a modern Agile development process within and across teams.

FORRESTER®

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.

FORRESTER®

Appendix B: Detailed Cost Structure Tables

Training And Implementation Costs

REF.	METRIC	CALC.	INITIAL	YEAR 1	YEAR 2	YEAR 3
F1	Dedicated Platform developers		10	10	10	10
F2	Application users on Platform apps and business processes			4000	8000	12000
F3	External professional services, implementation		$250,000			
F4	Internal ramp-up training	10 developers * $120,000/yr @ 1.5 months	$150,000			
F5	Ongoing developer training	1 week annually. $120,000/50 weeks*11 training sessions		$26,400	$26,400	$26,400
F6	End-user application training	3 hours, per new app user		$600,000	$600,000	$600,000
Ft	Training and implementation	F3+F4+F5+F6	$400,000	$626,400	$626,400	$626,400
	Risk adjustment	↑10%				
Ftr	**Training and implementation (risk-adjusted)**		**$440,000**	**$689,040**	**$689,040**	**$689,040**

Now Platform License Costs

REF.	METRIC	CALC.	INITIAL	YEAR 1	YEAR 2	YEAR 3
E1	Application users on Now Platform apps and business processes			4,000	8,000	12,000
E2	Total live Platform applications / business processes			20	40	60
Et	Now Platform license costs		$0	$960,000	$1,920,000	$2,880,000
	Risk adjustment	0%				
Etr	**Now Platform license costs (risk-adjusted)**		**$0**	**$960,000**	**$1,920,000**	**$2,880,000**

FORRESTER®

Appendix C: Supplemental Material

Related Forrester Research

"Vendor Landscape: The Fractured, Fertile Terrain Of Low-Code application Platforms," Forrester Research, Inc., January 15, 2016

"Use A Light Touch To Govern Low-Code Development Platforms," Forrester Research, Inc., February 13, 2017

"The Forrester Wave: Low-Code Development Platforms, Q2 2016," Forrester Research, Inc., April 14, 2016

"Customer Experience Drives Revenue Growth, 2016," Forrester Research, Inc., June 21, 2016

Appendix D: Endnotes

[i] 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.

[ii] Source: " Customer Experience Drives Revenue Growth, 2016," Forrester Research, Inc., June 21, 2016.

FORRESTER®