

FORRESTER®

# The Total Economic Impact™ Of WSO2 Identity Server

Business Benefits And Cost Savings  
Enabled By Improved Customer Identity And Access  
Management

APRIL 2021

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## ABOUT FORRESTER CONSULTING

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## Executive Summary

Forrester's analysis of four current WSO2 Identity Server customers found that Identity Server enabled these organizations to consolidate their customer identity and access management capabilities while keeping costs consistent despite growth, saving developer time, accelerating market offerings, and fostering a frictionless customer experience. The analysis demonstrates benefits of \$4.51 million over three years versus costs of \$1.04 million, adding up to a NPV of 3.46 million and an ROI of 332%.

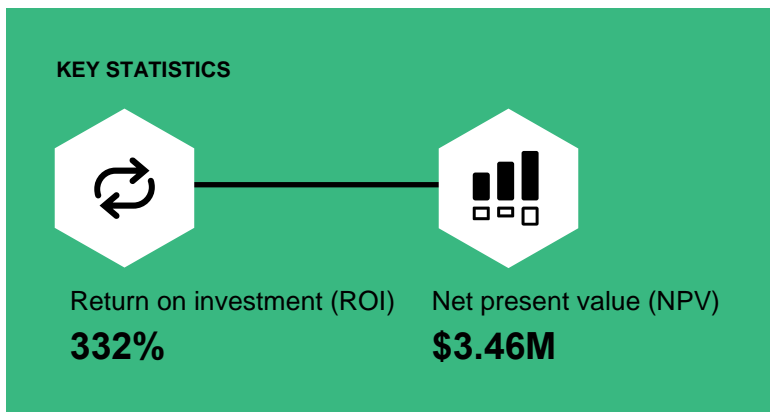
Well executed customer identity and access management (CIAM) governs users' access to sensitive applications and data — as cost effectively as possible — without inhibiting business agility, compromising the digital experience for either employees or customers, or violating compliance requirements.<sup>1</sup>

WSO2 commissioned Forrester Consulting to conduct a Total Economic Impact™ (TEI) study and examine the potential return on investment (ROI) enterprises may realize by deploying WSO2's [Identity Server](#).<sup>2</sup> The purpose of this study is to provide readers with a framework to evaluate the potential financial impact of Identity Server on their organizations.

To better understand the benefits, costs, and risks associated with this investment, Forrester interviewed four customers with experience using WSO2 Identity Server. For the purposes of this study, Forrester aggregated the experiences of the interviewed customers and combined the results into a single [composite organization](#).

Prior to using WSO2 Identity Server, the customers managed customer identity at the application level. This promoted an inconsistent customer experience, placed an inordinate burden on developers/staff tasked with login functionality or integrations, and exposed the organization and its customers to security risks.

After the investment in WSO2 Identity Server, the interviewed organizations were able to modernize

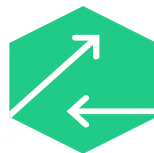


and consolidate their customer identity and access management capabilities, saving developer time, accelerating market offerings, and fostering a frictionless customer experience. Additionally, they were able to keep their level of spend flat while growing from 500,000 to 2,000,000 customer identities under management.



**Accelerated time-to-market**

**12 weeks per project**



**Development and staff savings**

**Over \$3.6 million**



**Developer productivity savings around custom integrations**

**60%**

“ We needed a single point of truth for our customer identities that was also compliant with the standards we needed. And that’s where WSO2 came in.”

— Chief global architect, healthcare technology

### KEY FINDINGS

**Quantified benefits.** Risk-adjusted present value (PV) quantified benefits include:

- **Reduced identity management and support tasks for \$3.0 million in staff productivity savings.** By implementing centralized identity and access management capabilities, the composite organization saved an average 20% on development effort for applications requiring login functionality. The added capability of customer self-service also reduced the burden on staff who historically supported customers with registration, onboarding, and/or password resets.
- **Increased identity functionality uptime beyond 99.9%.** By centralizing identity functionality on the WSO2 Identity Server, the composite organization moves identity functionality away from applications and increases uptime beyond baseline, resulting in reduced lost revenue and an improved customer experience.
- **Accelerated time-to-market for new offerings by 12 weeks.** By removing the development or integration of identity management from newly developed products, services, or functionality, organizations accelerated their development cycles by up to 12 weeks; this also accelerated the revenue associated with these offerings.

- **Reduced developer effort around integrations by 60%.** By providing developers with the tools to forge prebuilt integrations, developer effort is avoided and repurposed toward other value-adding tasks.
- **Consistent support costs to WSO2 despite quadrupling customer base.** Customers noted that despite growth of their customer identities under management with WSO2, support fees remained flat as additional identities are onboarded. Based on the interviews, the composite organization’s fees to WSO2 remained consistent despite scaling from 500,000 to 2,000,000 customer identities under management.

**Unquantified benefits.** Benefits that are not quantified for this study include:

- **Improved security posture.** Interviewees consistently cited an improvement to their own security postures and that of their customers, as a result of centralizing customer identity and access on the WSO2 Identity Server.
- **Superior customer support.** A consistent theme among the interviews conducted for this report was the level of personalized support that WSO2 provided.

- **Customer experience.** Inherent to fostering a seamless login experience, WSO2 Identity Server allowed organizations to promote a frictionless customer experience. Several interviewees noted that implementing WSO2 and overhauling their identity and access management capabilities were part of a larger customer experience transformation, of which nearly invisible login was paramount.
- **Additional scalability.** Interviewees cited the ease in which additional customer identities, regions, or other integrations could be added to WSO2 in the future.
- **Implementation and ongoing management personnel costs of \$728,000.** The composite organization noted personnel costs commensurate with the level of internal effort required by IT and developer personnel to make their WSO2 Identity Server deployment a success.

The customer interviews and financial analysis found that a composite organization experiences benefits of \$4.51M over three years versus costs of \$1.04M, adding up to a net present value (NPV) of \$3.46M and an ROI of 332%.

**Costs.** Risk-adjusted PV costs include:

- **Fees paid to WSO2.** The composite organization paid fees to WSO2 for implementation support, ongoing support, and any required customization support. Fees remained constant over the three-year model despite scaling from 500,000 to 2,000,000 customer identities under management. The composite organization pays an average \$110,000 annually.

“ With an open source [WSO2], our developers have been very successful [in] writing custom extensions. ”

— Solutions architect, insurance



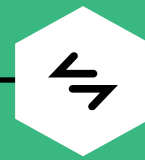
ROI  
**332%**



BENEFITS PV  
**\$4.51M**

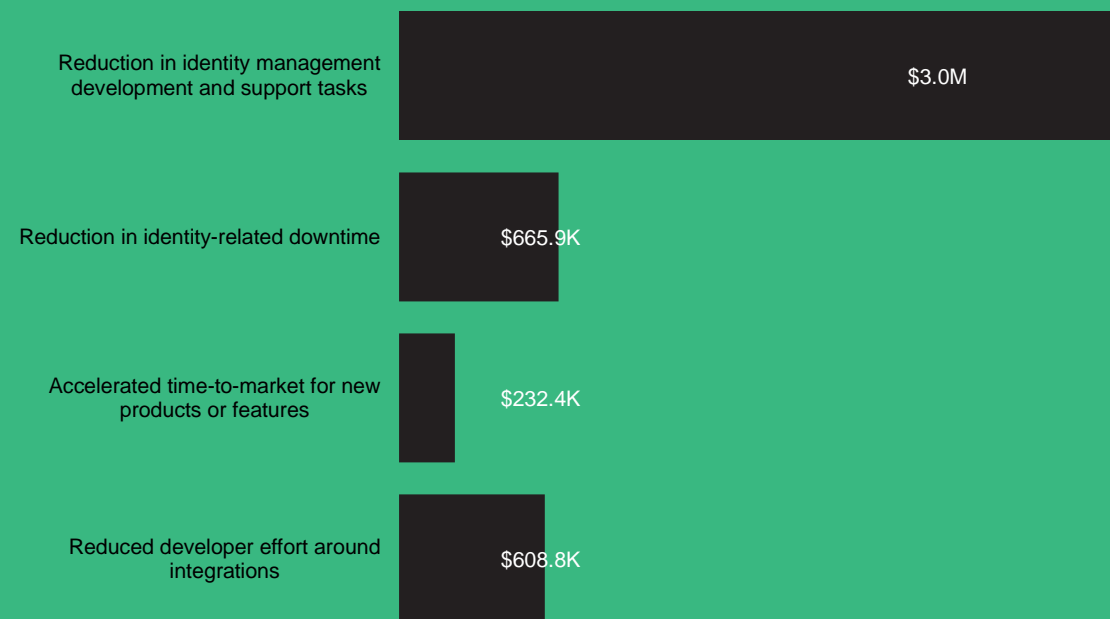


NPV  
**\$3.46M**



PAYBACK  
**<12 months**

### Benefits (Three-Year)





## TEI FRAMEWORK AND METHODOLOGY

From the information provided in the interviews, Forrester constructed a Total Economic Impact™ framework for those organizations considering an investment in WSO2 Identity Server.

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 WSO2 Identity Server can have on an organization.

### DISCLOSURES

Readers should be aware of the following:

This study is commissioned by WSO2 and delivered by Forrester Consulting. It is not meant to be used as a competitive analysis.

Forrester makes no assumptions as to the potential ROI that other organizations will receive. Forrester strongly advises that readers use their own estimates within the framework provided in the study to determine the appropriateness of an investment in WSO2 Identity Server.

WSO2 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.

WSO2 provided the customer names for the interviews but did not participate in the interviews.



### DUE DILIGENCE

Interviewed WSO2 stakeholders and Forrester analysts to gather data relative to WSO2 Identity Server.



### CUSTOMER INTERVIEWS

Interviewed four decision-makers at organizations using Identity Server to obtain data with respect to costs, benefits, and risks.



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

# The WSO2 Identity Server Customer Journey

■ Drivers leading to the WSO2 Identity Server investment

Interviewed Organizations		
Industry	Region	Interviewee
Automotive	Global	Delivery manager
Healthcare technology	North America	Chief global architect
Healthcare manufacturing	North America	Senior manager, engineering
Insurance	North America	Solutions architect

## KEY CHALLENGES

Before investing in WSO2 and Identity Manager, the interviewed organizations described challenges stemming from their disparate, homegrown customer identity solutions:

- **Applications did not share identity functionality.** Without centralized customer identity functionality, the organizations' developers often included login functionality at the application level. This increased development times and fostered a suboptimal customer experience. Furthermore, with custom-developed identity functionality, developer attrition posed a risk for organizations as specialized knowledge could leave the organization.
- **Customer-centricity took a backseat.** Customers were often required to relog into different applications, products, or services from the same company, resulting from discrete user stores necessitated by legacy CIAM functionality. Customer self-service was largely absent. The healthcare manufacturing interviewee explained: "Many of our applications had their own identity and access management that was developed. Some of them were customer-focused, some of them were not. Customer experience was and continues to be a focus of our organization, but it doesn't happen like this."

**"Our homegrown identity solutions couldn't do any of the stuff that we needed given the rise of identities [under management]. We had potential security issues. This all disappeared with an identity provider like WSO2."**

*Solutions architect, insurance*

- **Limitations to "opening-up" the organization.** Interviewees noted security challenges around opening the organizational boundaries without centralized identity and access capabilities. Potential sources of revenue or competitive advantages such as opening an organization's APIs may be limited, noted one of the interviewees, "[We] can't open [our] APIs without robust and centralized security, identity, and access management in place."
- **Inconsistent security introduces additional risk.** With disparate and varying customer identity functionality among applications, the interviewed organizations and their customers were open to additional potential attack surfaces. The insurance interviewee spoke to one of these risks, noting: "Our brand name is what we're trying to protect the most. We need to make sure our members' logins or data is *never* compromised."



## KEY RESULTS

The interviewed organizations highlighted the following key results from the WSO2 Identity Server investment:

- **Centralized identity functionality.** By centralizing customer identity and access management on WSO2, the interviewed organizations reported development savings for applications that required customer login functionality, decreased time-to-market, facilitated new offerings through easier integrations, and improved the customer experience.
- **New growth and scalability opportunities.** Interviewees noted that centralized identity management increased their organizations' ability to develop new products, services, or offerings by reducing the necessity of custom integration work while facilitating an appropriate level of security. The healthcare technology interviewee told Forrester: "The gains we've achieved with WSO2 allows us to bring more products to market. Three years ago [before we started with WSO2] we just had one product line. With WSO2 and the newfound ability to converge our customer identities, we've now got another six product lines. WSO2 has certainly helped accelerate our growth into other areas." Interviewees also noted the current and future cost savings of scaling their total customer identities under management with WSO2 while keeping support fees flat.
- **Improved customer experience.** By facilitating customer login, self-service, single sign-on, and other friction-reducing capabilities on WSO2, interviewees highlighted their ability to deliver an improved, seamless, and self-service customer experience.

## COMPOSITE ORGANIZATION

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

**Description of composite.** The composite organization is a \$3 billion-dollar company with 20,000 employees that provides services and support to its customer base primarily through its webinar, partner website, and mobile applications. The composite organization has a strong brand, global operations, and customer base of around 500,000 customers, all of which have a unique online identity. By Year 3 of the analysis, the composite organization has scaled to 2,000,000 customer identities under management without paying additional support fees.

**Deployment characteristics.** The composite organization previously managed customer identity and access at the application level, fostering a disconnected customer experience, redundant developer effort, challenging integrations, and difficulty adhering to security and compliance standards. The composite organization standardizes customer identity and access management on WSO2 Identity Server for all of their offerings across the customer base.

### Key assumptions

- **\$3 billion**
- **20,000 employees**
- **500,000 customer identities in Year 1, scaling to 2M by Year 3**

# 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	Reduction in identity management development and support tasks	\$597,054	\$1,247,835	\$1,898,617	\$3,743,506	\$3,000,504
Btr	Reduction in identity-related downtime	\$243,000	\$270,000	\$297,000	\$810,000	\$667,190
Ctr	Accelerated time-to-market for new products or features	\$93,458	\$93,458	\$93,458	\$280,373	\$232,416
Dtr	Reduced developer effort around integrations	\$244,800	\$244,800	\$244,800	\$734,400	\$608,781
	Total benefits (risk-adjusted)	\$1,178,312	\$1,856,093	\$2,533,874	\$5,568,280	\$4,508,891

## REDUCTION IN IDENTITY MANAGEMENT DEVELOPMENT AND SUPPORT TASKS

**Evidence and data.** By centralizing customer identity functionality on WSO2, the interviewees shared efficiency savings realized by their staff around application-level identity development, customer onboarding, and customer support:

- The solutions architect from the insurance organization noted that they were able to modernize their customer self-service experience, saving support personnel hours for password reset, registrations, and other account-related activities. They explained: “98% or 99% of our customers reset their own passwords now. We don’t have to do anything other than just host [the functionality] for them.” In addition, the insurance organization saved an estimated “hundreds of hours” in manual coding of identity functionality at the application level.
- The delivery manager from the automotive industry spoke to the ease of onboarding customers on WSO2 given the range of identity provisioning functionality, notably linking several user accounts to a single user: “If we’re onboarding a customer, whether from social

**“WSO2 has support for OpenID Connect and OAuth 2.0, the types of standards that set us up internally to consolidate development approaches. Single sign-on, federated login through social, and other functions, that’s what WSO2 enables us to do now.”**

*Chief global architect, healthcare technology*

media interaction or another profile, it’s standardized on WSO2. Our developers save a lot of work on the back end this way.”

- By avoiding redundant development of customer identity and access management functionality at the application level, the chief global architect at the healthcare technology organization estimated a 30% productivity savings for developers through avoided development. As with the other interviewed organizations, the same interviewee also noted that adding customer self-service capabilities saved the efforts of up to three support staff previously tasked with assisting customers on these tasks.

- The senior manager of engineering at the healthcare manufacturing organization noted that beyond avoided development, WSO2 Identity Server also makes it easier for their organization to roll out improved identity management capabilities to different geographies while also ensuring compliance to regional regulatory requirements.

**“WSO2 [Identity Server] has clearly been built from open source best practices. Our developers and engineers are familiar with an open standard, so it’s very easy for them to get our customer identities onboarded quickly and efficiently.”**

*Senior manager, engineering, healthcare manufacturing*

**Modeling and assumptions.** For the composite organization, Forrester makes the following assumptions:

- A development team of eight developers work on applications that require customer login functionality. Based on the interviews, these developers save 20% development effort once WSO2 Identity Server is implemented.
- Five percent of the composite organization’s customer identities under management require a password reset each year. On average, 5% of this customer base requires registration assistance each year.
- On average, it takes the composite organization’s staff 15 minutes to assist with a password reset and 20 minutes to provide registration support.
- The annual salary for developers is \$120,000.
- The burdened hourly rate for customer support personnel is \$35.

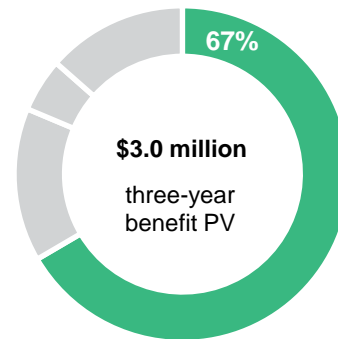
**“WSO2 [Identity Server] gave our staff their support time back. As an organization, this freedom allows us to be flexible with plans in the future for upgrades.”**

*Solutions architect, insurance*

**Risks.** This benefit will vary among organizations based on:

- The number of applications requiring customer login functionality developed by an organization annually.
- The sophistication of incumbent customer identity and access management solutions as it relates to customer self-service.
- The skill and capacity of an organization’s developer and support personnel.

To account for these risks, Forrester adjusted this benefit downward by 15%, yielding a three-year, risk-adjusted total PV (discounted at 10%) of \$3.0 million.



### Reduction In Identity Management Development And Support Tasks

Ref.	Metric	Calculation	Year 1	Year 2	Year 3
A1	Developers working on applications requiring customer logins	Composite	8	8	8
A2	Efficiency gains on WSO2	Interviews	20%	20%	20%
A3	FTE average annual rate	Assumption	\$120,000	\$120,000	\$120,000
A4	<b>Avoided customer identity and access internal development</b>	<b>A1*A2*A3</b>	<b>\$192,000</b>	<b>\$192,000</b>	<b>\$192,000</b>
A5	Customer identities under management	Growing	500,000	1,250,000	2,000,000
A6	Percentage of customers who utilize automated password reset annually	Composite	5%	5%	5%
A7	Time required to manually reset password	15 minutes	0.25	0.25	0.25
A8	Manual support personnel hourly rate	Assumption	\$35	\$35	\$35
A9	<b>Reduction in customer identity support costs</b>	<b>A5*A6*A7*A8</b>	<b>\$218,750</b>	<b>\$546,875</b>	<b>\$875,000</b>
A10	Customers requiring registration support annually	Composite	5%	5%	5%
A11	Time required for manual customer registration support	20 minutes	0.33	0.33	0.33
A12	<b>Reduction in customer registration support costs</b>	<b>(A5*A8*A10)/3</b>	<b>\$291,667</b>	<b>\$729,167</b>	<b>\$1,166,667</b>
At	Reduction in identity management development and support tasks	A4+A9+A12	\$702,417	\$1,468,042	\$2,233,667
	Risk adjustment	↓15%			
Atr	Reduction in identity management development and support tasks (risk-adjusted)		\$597,054	\$1,247,835	\$1,898,617
<b>Three-year total: \$3,743,506</b>			<b>Three-year present value: \$3,000,504</b>		

### REDUCTION IN IDENTITY-RELATED DOWNTIME

**Evidence and data.** Previous identity functionality managed at the application level was subject to downtime, resulting in an inconsistent experience for customers. By centralizing on the WSO2 Identity Server, customers reported benefits associated with higher identity and access uptime.

- The solutions architect from the insurance organization noted that across all applications and identity functionality, prior to implementing the WSO2 Identity Server, their average availability was 95%.

- After implementing the WSO2 Identity Server, in the interviewee’s words, “We’ve experienced nearly 100% uptime for years.”
- Beyond the customer experience implications associated with downtime, the interviewee cited increased uptime as a benefit to payment collection.

**Modeling and assumptions.** For the composite organization, Forrester makes the following assumptions:

- A 99.9% login functionality uptime prior to WSO2 Identity Server, improving by between 18% to

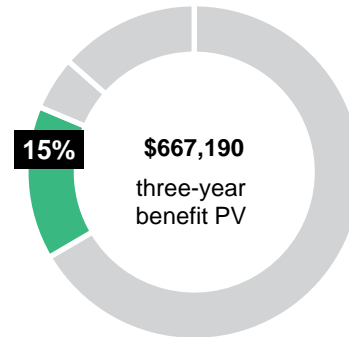
22% per year once WSO2 Identity Server is implemented.

- Fifty percent of the composite organization’s customer-facing services are affected by downtime.
- An hourly downtime impact of \$171,233 to the composite organization.

**Risks.** This benefit will vary among organizations based on:

- The sophistication of incumbent customer identity and access management solutions as it relates to downtime.
- The extent to which downtime affects logins to revenue-generating services.
- The skill and capacity of an organization’s staff as it relates to uptime improvement once the WSO2 Identity Server is implemented.

To account for these risks, Forrester adjusted this benefit downward by 10%, yielding a three-year, risk-adjusted total PV of \$667,000.



### Reduction In Identity-Related Downtime

Ref.	Metric	Calculation	Year 1	Year 2	Year 3
B1	Identity management solution uptime (before WSO2)	Interviews	99.9%	99.9%	99.9%
B2	Percentage of services impacted by identity	Composite	50%	50%	50%
B3	Hourly downtime impact	$(\$3B/8,760) \times B2$	\$171,233	\$171,233	\$171,233
B4	WSO2 Identity Server uptime	Interviews	18.0%	20.0%	22.0%
Bt	Reduction in identity-related downtime	$8,760 \times (1-B1) \times B3 \times B4$	\$270,000	\$300,000	\$330,000
	Risk adjustment	↓10%			
Btr	Reduction in identity-related downtime (risk-adjusted)		\$243,000	\$270,000	\$297,000

**Three-year total: \$810,000**

**Three-year present value: \$667,190**

## ACCELERATED TIME-TO-MARKET FOR NEW PRODUCTS OR FEATURES

**Evidence and data.** The interviewed organizations spoke to their ability to accelerate the development of additional products, services, and functionality once the WSO2 Identity Server was implemented by reducing the burden on developer staff to create identity management functionality or integration with other services. By reducing this burden, interviewees noted an increase in time-to-market by several weeks or months, accelerating revenue.

- The chief global architect for the healthcare technology organization largely attributed their ability to successfully launch five new offerings over three years to their gains in identity management functionality from WSO2. They explained, “We’ve been able to add self-service scheduling and management, remote monitoring stuff, and other services.”
- By reducing the burden on developers with respect to integrations between their services and third-party applications, the delivery manager from the automotive organization described their ability to iterate on their services: “Whatever the integration is, [WSO2] has a plugin for it. It really makes our developers’ lives easier.” With the rise of connected vehicles, the interviewee stressed the importance of these developer synergies on their ability to deliver new and exciting services (that are becoming either table stakes or points of differentiation) to their near four million customers.
- Interviewees also noted that the security enabled by the WSO2 Identity Server made some previously less secure revenue opportunities, such as opening APIs, more attractive.

**Modeling and assumptions.** For the composite organization, Forrester makes the following assumptions:

- Three revenue-generating products, services, or features are accelerated each year as a result of backend development or integration synergies with the WSO2 Identity Server.
- Each product, service, or feature is accelerated by 12 weeks to market; this is a conservative estimate based on the interviews.
- Each product, service, new functionality is worth nearly \$20,000 to the composite organization per week; this estimate is based on the interviews and the composite organization’s characteristics.
- A 15% operating margin, as Forrester measures this benefit with profit.

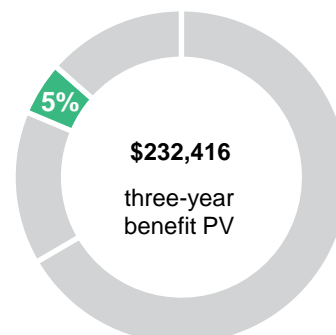


**Accelerated time-to-market**  
**12 weeks per project**

**Risks.** This benefit will vary among organizations based on:

- The number of products, services, or functionality upgrades impacted by customer identity that an organization launches per year.
- The average development cycle for an organization’s new products, services, or functionality as it affects time-to-market.
- An organization’s revenue associated with accelerated products, services, or functionality.

To account for these risks, Forrester adjusted this benefit downward by 10%, yielding a three-year, risk-adjusted total PV of over \$230,000.





**Accelerated Time-To-Market For New Products Or Features**

Ref.	Metric	Calculation	Year 1	Year 2	Year 3
C1	Improved time-to-market for new products or features, in weeks	Interviews	12	12	12
C2	New products or features per year	Composite	3	3	3
C3	Weekly revenue per product or feature	Composite	\$19,230	\$19,230	\$19,230
C4	Operating margin	Assumption	15%	15%	15%
Ct	Accelerated time-to-market for new products or features	$C1 * C2 * C3 * C4$	\$103,842	\$103,842	\$103,842
	Risk adjustment	↓10%			
Ctrl	Accelerated time-to-market for new products or features (risk-adjusted)		\$93,458	\$93,458	\$93,458
<b>Three-year total: \$280,373</b>			<b>Three-year present value: \$232,416</b>		

**REDUCED DEVELOPER EFFORT AROUND INTEGRATIONS**

**Evidence and data.** Interviewees spoke to the effort required by their organization’s developers to create integrations around identity between their product or services and third-party applications or partners. By centralizing identity management, the interviewed organizations have access to plug-ins that can quickly forge integrations which support a vast range of providers or protocols. This saves additional time for developers that is related to custom creation of their organizations’ integrations.

- The delivery manager of the automotive organization estimated that significant developer effort would be required around integrations, given their offerings with connected vehicles at over six FTEs.
- Another interviewee noted that given WSO2’s open source model, they expect WSO2 to remain on the forefront of integration capabilities, greatly increasing the confidence that their organization will continue to receive value from WSO2 in this area over the years.

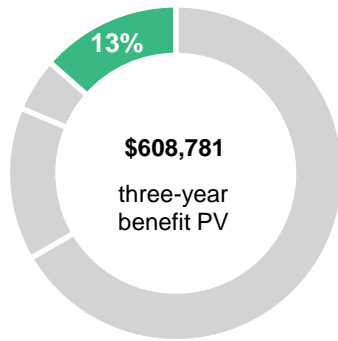
**Modeling and assumptions.** For the composite organization, Forrester makes the following assumptions:

- Four developers tasked with integration development and maintenance save 60% of this effort once the WSO2 Identity Server is implemented.
- The average annual salary for a developer is \$120,000.
- Developers use their reclaimed time on other value-added development activities, saving the composite organization hires in the future.

**Risks.** This benefit will vary among organizations based on:

- The complexity of an organization’s integration development and maintenance requirements.
- The skill and capacity of an organization’s developers tasked with integration development and maintenance.

To account for these risks, Forrester adjusted this benefit downward by 15%, yielding a three-year, risk-adjusted total PV of over \$600,000.



**“Our in-house developer team has saved a ton of time [that was] typically used extending and modifying our own homegrown [CIAM] solution. Now, they can be working on something else that makes us more competitive. WSO2 now just gives us the out-of-the-box, compatible, and extensible solution that we’re good to go with.”**

*Chief global architect, healthcare technology*

### Reduced Developer Effort Around Integrations

Ref.	Metric	Calculation	Year 1	Year 2	Year 3
D1	Total affected developers working on custom-built integrations	Composite	4	4	4
D2	Reduction in required customer integration work with WSO2	Interviews	60%	60%	60%
D3	Developer average annual rate	Assumption	\$120,000	\$120,000	\$120,000
Dt	Reduced developer effort around integrations	$D1 \cdot D2 \cdot D3$	\$288,000	\$288,000	\$288,000
	Risk adjustment	↓15%			
Dtr	Reduced developer effort around integrations (risk-adjusted)		\$244,800	\$244,800	\$244,800
<b>Three-year total: \$734,400</b>			<b>Three-year present value: \$608,781</b>		

### UNQUANTIFIED BENEFITS

Additional benefits that customers experienced but were not able to quantify include:

**Improved security posture.** As a result of centralizing customer identity and access of the WSO2 Identity Server, interviewees consistently cited their own and their customers’ improved security posture.

- The solutions architect from the insurance organization explained to Forrester that they feel much more confident in their ability to protect their customers’ credentials and sensitive information with WSO2 Identity Server. This protection allows organizations to avoid potential

compliance fines or brand damage that is associated with a data breach.

- Given the ever-increasing amount of customer data entrusted to organizations, the delivery manager from the automotive organization stressed the importance of strong centralized identity management with the WSO2 Identity Server: “Customers are becoming more willing to share personally identifiable information [given the evolution of our offerings], and that’s all the more reason to make sure that it is secure. We have everything from our customers’ financial information to their car-specific data. Customers need to be secured. We need our customers to be secure.”

- The chief global architect from the healthcare technology organization highlighted the security benefits of role management: “Our role management can be a lot more granular around what one customer can do and what another cannot. From our customers’ perspective, we gain that aspect of trust, but for us, [we gain] the security peace of mind that we have strong authentication in place.” The same interviewee noted that WSO2 Identity Server allows them an audit trail, which greatly simplifies monitoring and audit processes and efforts.

**Superior customer support.** A consistent theme among the interviewees was the level of personalized support they received from WSO2.

- The chief global architect from the healthcare technology organization highlighted the depth to which WSO2 is able to assist their staff: “WSO2 comes through every time that we’ve had a very technical question. We’ve pushed them a little bit, and they’ve been extremely receptive of our questions and engaging with our staff. It’s not just a first-line support. They’ll pull in an engineer and work the problem. They’re very good from that angle. That’s what you get with organizations of their size — that more personal contact, which is excellent.”
- The delivery manager of the automotive organization also cited the level of support as being outstanding: “Anytime we’ve reached out to them where we’ve had an issue, [at] any time of

**“WSO2 provides a very personal kind of support. We did an upgrade project where we bit off a bit more than we could take on, and [WSO2] flew a support person out from Sri Lanka to stay with us until we got through it.”**

*Delivery manager, automotive*

the day, they’ve supported us. In some cases, [they’ve been with us] for over a day on the phone until the issue was resolved. WSO2 supports us like champs.”

**Customer experience.** Inherent to fostering a seamless login experience, the WSO2 Identity Server allows organizations to promote a frictionless customer experience.

- Several interviewees noted that implementing WSO2, and overhauling their identity and access management capabilities, were part of a larger customer experience transformation, of which nearly invisible login was paramount.

**“WSO2 provides a scalable modern architecture, which means that while we might not be sticking millions and millions of customers on it from day one, it’s setting us up for that kind of scale that we eventually aspire to.”**

*Chief global architect, healthcare technology*

## FLEXIBILITY

The value of flexibility is unique to each customer. There are multiple scenarios in which a customer might implement WSO2 Identity Server and later realize additional uses and business opportunities, including:

- **Additional scalability.** Beyond the benefits of flat support costs despite growing customer bases, interviewees cited the ease in which additional customer identities, regions, or other integrations could be added to WSO2. One interviewee noted that they had scaled from 20,000 to 250,000 customer identities while on WSO2, “[WSO2] can probably get into the hundreds of millions without too much noticing it.”

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

# Analysis Of Costs

■ Quantified cost data as applied to the composite

Total Costs							
Ref.	Cost	Initial	Year 1	Year 2	Year 3	Total	Present Value
Etr	Fees paid to WSO2	\$0	\$126,500	\$126,500	\$126,500	\$379,500	\$314,587
Ftr	Implementation and ongoing management personnel costs	\$110,400	\$248,400	\$248,400	\$248,400	\$855,600	\$728,134
	Total costs (risk-adjusted)	\$110,400	\$374,900	\$374,900	\$374,900	\$1,235,100	\$1,042,721

## FEES PAID TO WSO2

**Evidence and data.** The interviewed organizations described to Forrester how the fees paid to WSO2 were based on customer identities under management, and they required compute, implementation support, ongoing support, and customization support. Customers are not required to increase their level of spend with WSO2 as their customer base grows. Based on the interviews, the composite organization scales from 500,000 to 2,000,000 customer identities under management while spend with WSO2 remains flat.

**Modeling and assumptions.** For the composite organization, Forrester makes the following assumptions:

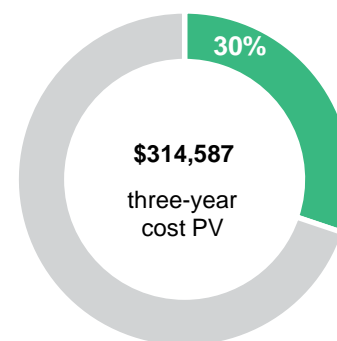
- A \$110,000 average annual fee is based on the original number of customer identities under management and the level of support contracted for. Within this range of customer identities under management, pricing varies from \$88,000 to

\$130,000 annually, based on either having four or six required CPU cores, respectively.

**Risks.** This cost will vary among organizations based on:

- Factors of scope such as customer identities under management, regional coverage, etc.
- The level of customization, implementation, or other support.

To account for these risks, Forrester adjusted this cost upward by 15%, yielding a three-year, risk-adjusted total PV (discounted at 10%) of nearly \$315,000.



Fees Paid To WSO2						
Ref.	Metric	Calculation	Initial	Year 1	Year 2	Year 3
E1	Annual subscription fee with WSO2			\$110,000	\$110,000	\$110,000
Et	Fees paid to WSO2		\$0	\$110,000	\$110,000	\$110,000
	Risk adjustment	↑15%				
Etr	Fees paid to WSO2 (risk-adjusted)		\$0	\$126,500	\$126,500	\$126,500
<b>Three-year total: \$379,500</b>			<b>Three-year present value: \$314,587</b>			

**IMPLEMENTATION AND ONGOING MANAGEMENT PERSONNEL COSTS**

**Evidence and data.** The interviewees detailed to Forrester the level of internal effort required by their organization’s IT and developer personnel to make their WSO2 Identity Server deployment a success.

- Interviewees spoke about a moderate internal effort in conjunction with personnel support from WSO2.
- The insurance organization opted for implementation support from WSO2. Two personnel resources were sent to assist with the month-long implementation.
- The healthcare technology interviewee noted that they were up and running within a week on the WSO2 Identity Server, who worked with them in the subsequent weeks to ensure a smooth transition from legacy applications.

**Modeling and assumptions.** For the composite organization, Forrester makes the following assumptions:

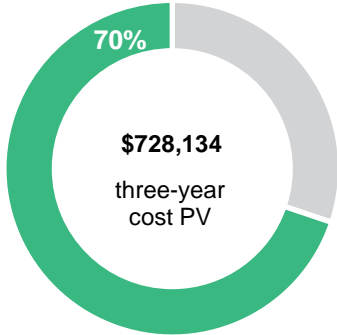
- The implementation period took one month, and it involved 12 FTEs from across IT and the business.

- Eighty percent of the developer’s working time is spent on implementation-related tasks.
- Once deployed, three FTEs spend 60% of their time supporting the composite organization’s WSO2 Identity Server deployment and carrying out related tasks.
- An average annual rate of \$120,000 for implementing and supporting personnel.

**Risks.** This cost will vary among organizations based on:

- The scope and complexity of an organization’s WSO2 Identity Server deployment as it relates to required initial and ongoing internal support.
- The frequency of updates.

To account for these risks, Forrester adjusted this cost upward by 15%, yielding a three-year, risk-adjusted total PV of \$728,000.



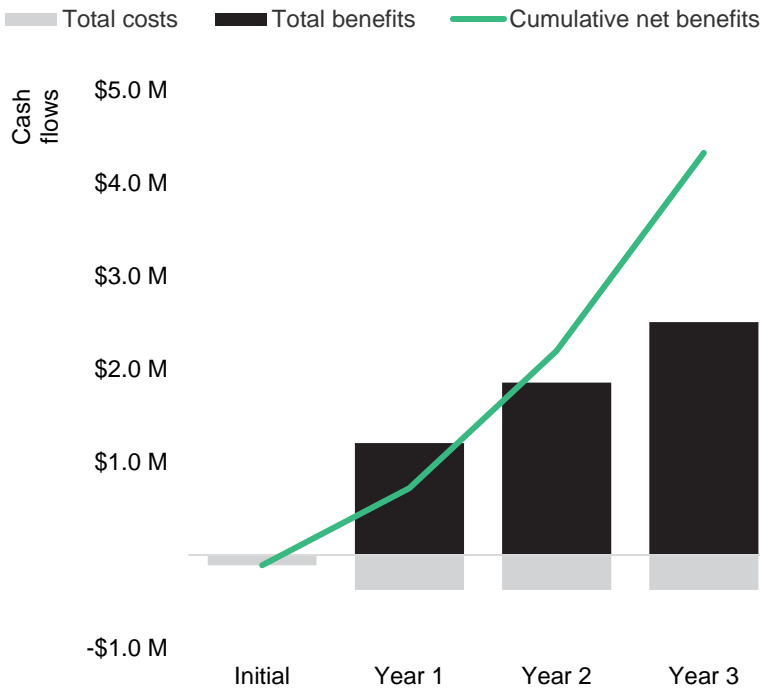
Implementation And Ongoing Management Personnel Costs						
Ref.	Metric	Calculation	Initial	Year 1	Year 2	Year 3
F1	Initial deployment: FTE involvement		12			
F2	Percentage of working hours on deployment-related tasks (per FTE)		80%			
F3	Implementation duration (months)		1			
F4	Average FTE monthly rate (rounded)		\$10,000			
F5	Initial deployment: personnel costs	$F1 * F2 * F3 * F4$	\$96,000			
F6	Ongoing FTE support requirements on WSO2			3	3	3
F7	Percentage of time spent supporting WSO2 Identity Server			60%	60%	60%
F8	Average annual salary			\$120,000	\$120,000	\$120,000
F9	Ongoing support: personnel costs	$F6 * F7 * F8$		\$216,000	\$216,000	\$216,000
Ft	Implementation and ongoing management personnel costs	$F5 + F9$	\$96,000	\$216,000	\$216,000	\$216,000
	Risk adjustment	↑15%				
Ftr	Implementation and ongoing management personnel costs (risk-adjusted)		\$110,400	\$248,400	\$248,400	\$248,400
<b>Three-year total: \$855,600</b>			<b>Three-year present value: \$728,134</b>			



# Financial Summary

## CONSOLIDATED THREE-YEAR RISK-ADJUSTED METRICS

### Cash Flow Chart (Risk-Adjusted)



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

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

### Cash Flow Analysis (Risk-Adjusted Estimates)

	Initial	Year 1	Year 2	Year 3	Total	Present Value
Total costs	(\$110,400)	(\$374,900)	(\$374,900)	(\$374,900)	(\$1,235,100)	(\$1,042,721)
Total benefits	\$0	\$1,178,312	\$1,856,093	\$2,533,874	\$5,568,280	\$4,508,891
Net benefits	(\$110,400)	\$803,412	\$1,481,193	\$2,158,974	\$4,333,180	\$3,466,170
ROI						332%
Payback period						Less than 12 months

## Appendix A: Total Economic Impact

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

### TOTAL ECONOMIC IMPACT APPROACH

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

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

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

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

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



### PRESENT VALUE (PV)

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



### NET PRESENT VALUE (NPV)

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



### RETURN ON INVESTMENT (ROI)

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



### DISCOUNT RATE

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



### PAYBACK PERIOD

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

## Appendix B: Supplemental Material

### *Related Forrester Research*

“Making The Business Case For Identity And Access Management,” Forrester Research, Inc., December 4, 2020.

## Appendix C: Endnotes

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<sup>1</sup> Source: “Making The Business Case For Identity And Access Management,” Forrester Research, Inc., December 4, 2020.

<sup>2</sup> 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.

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