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HELPING BUSINESS THRIVE ON TECHNOLOGY CHANGE

FORRESTER®

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The Total Economic Impact™ Of The Progress® OpenEdge™ Platform

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Executive Summary

In October 2005, Progress Software Corporation commissioned Forrester Consulting to examine the total economic impact that Progress partners may realize by transforming an application on the Progress® OpenEdge™ platform versus an alternative (non-Progress) platform. The transformation process includes modernizing the architecture, functionality and interfaces to support new technologies and adding new features to the application. This study illustrates the financial impact across the application development life cycle for a Progress partner transforming an application on the Progress OpenEdge platform.

In conducting in-depth interviews with six Progress partners, Forrester found that partners were able to develop, deploy, and manage the application at significantly lower cost on the Progress OpenEdge platform (hereafter referred to as the Progress platform) than on an alternative platform.

This study found that the estimated cost of transforming an application on the Progress platform and bringing it to market was 40% less expensive than an alternative platform.

Purpose

The purpose of this study is to provide a framework to evaluate the potential financial impact of transforming an application on the Progress platform. Forrester's aim is to clearly show all calculations and assumptions used in the analysis. Readers should use this study to better understand and communicate a business case for transforming applications on the Progress platform.

Methodology

Progress Software selected Forrester for this project because of its industry expertise in application development solutions and Forrester's Total Economic Impact™ (TEI) methodology. TEI not only measures costs and cost reduction (areas that are typically accounted for within IT) but also weighs the enabling value of a technology in increasing the effectiveness of overall business processes.

Approach

Forrester used a four-step approach for this study.

1. Forrester interviewed Progress Software product development and technology experts as well as marketing and sales executives to fully understand the potential (or intended) value proposition of the Progress platform.

2. Forrester conducted a series of in-depth interviews with six partners currently using the Progress platform and alternative platforms.

3. Forrester constructed a financial model representative of the interviews. This model can be found in the "Financial Framework" section.

4. Forrester created a composite organization based on the interviews and populated the framework using data from the interviews as applied to the composite organization.

Key Findings

Across the business application life cycle, Forrester finds three areas of significant cost variance between the Progress platform and an alternative (non-Progress) platform: the cost of development, the cost of the deployment (specifically, the cost of the redistribution or royalty payment), and the cost of ongoing management. The specific cost savings for the transformation of an application by the composite organization are described below.

- **42% lower cost of development on the Progress platform.** Interviewed partners identified a significant difference in the amount of time required to develop on the Progress platform versus the time required to develop on an alternative platform. The key drivers for this, according to the interviewees, are the Progress OpenEdge infrastructure (promotes code reuse, supports multiple user interface technologies, supports integration functionality, has a business orientation, and incorporates industry standards), partnering approach, and programs (provide business and technology transformation planning guidance).

- **37% lower cost of deployment on the Progress platform.** Partners indicated that the Progress redistribution arrangement (payment from partner back to Progress or alternative platform vendor) is the most closely aligned with how the ISV does business and, as a result, is often the most cost-effective licensing arrangement.

- **48% lower cost of ongoing management on the Progress platform.** Interviewed partners noted that fewer support technicians are required on the Progress platform due to the ability to reuse existing business logic and code and high application reliability. The ability to reuse business logic allows Progress partners to deploy common code across multiple implementations reducing the need for different platform specialists to manage each implementation. High application reliability results from Progress framework code which eliminates the need to write low-level system code and is more reliable and consistent than hand-crafted code.

Table 1 presents the total risk-adjusted cost savings ($4,062,806) associated with the composite organization transforming an application on the Progress platform versus an alternative platform. The total cost savings is the result of the composite organization's ability to develop, deploy, and manage the transformed application at a 40% lower cost overall on the Progress platform.

Table 1: Cost Savings For Composite Organization, Risk Adjusted

Category	Cost of Progress	Cost of alternative	Cost savings on Progress	Risk-adjusted cost savings on Progress	Risk-adjusted cost savings on Progress as a percent of alternative
Development	$2,982,795	$5,481,893	$2,499,098	$2,290,840	42%
Deployment	$2,368,344	$4,263,020	$1,894,675	$1,578,896	37%
Ongoing management	$203,231	$406,461	$203,231	$193,069	48%
Total	$5,554,370	$10,151,374	$4,597,004	$4,062,806	40%

Source: Forrester Research, Inc.

Forrester found that greater cost savings were associated with partners that were facing market demands for service orientation and diverse integration points. Partners with strong domain expertise that were developing agile and flexible applications also enjoyed greater cost savings. Lower cost savings were associated with partners that were homogenized or uniquely standardized on an alterative platform.

Partner approach and programs. Interviewed partners have taken advantage of a wide range of programs from individual sessions on business planning, market planning, and market research to a co-marketing program offered to Elite Partners. One interviewee indicated that working with Progress through Business Empowerment allowed his organization to develop a business plan to enter into a new geographic region at a much lower cost than if the organization had hired an external consultant. Overall, partners noted that the expertise level of the Progress consultants is consistently very high.

Disclosures

The reader should be aware of the following:

- The study is commissioned by Progress Software and delivered by the Forrester Consulting group.
- Progress Software reviewed and provided feedback to Forrester, but Forrester maintained editorial control over the study and its findings and did not accept changes to the study that contradict Forrester's findings or obscure the meaning of the study.
- The partner names for the interviews were provided by Progress Software.
- Forrester makes no assumptions as to the potential cost savings that other organizations will receive. Forrester strongly advises that readers should use their own estimates within the framework provided in the study to determine the appropriateness of an investment in the Progress OpenEdge platform.
- This study is not meant to be used as a competitive product analysis.

Progress OpenEdge Business Application Platform: Overview

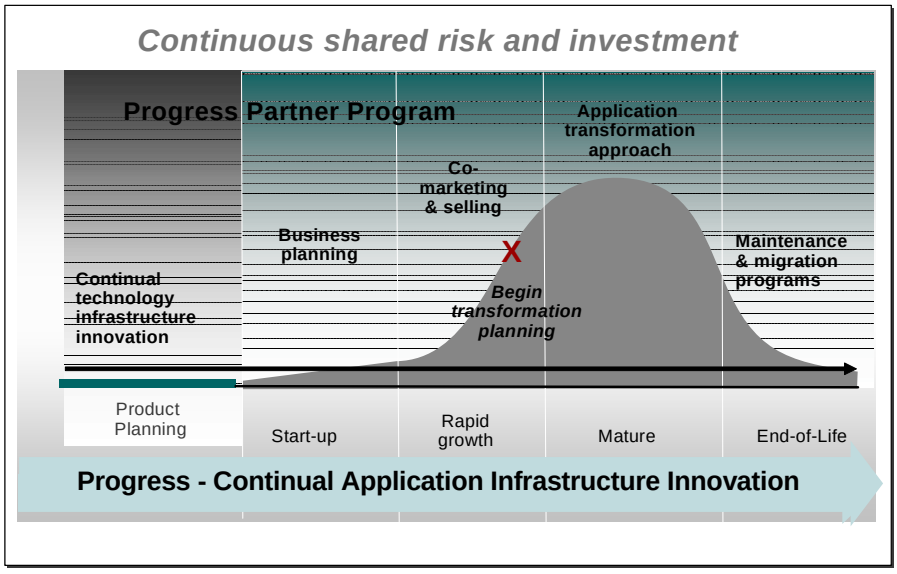
According to Progress Software, a service-oriented architecture (SOA) built on the OpenEdge business application platform delivers flexibility to application developers so that they can leverage existing technology and quickly adapt to new technology and changes in market and business requirements. The OpenEdge platform includes the OpenEdge Reference Architecture, a structured model focused on building modern competitive applications, a set of tools, and infrastructure. Because the OpenEdge Reference Architecture is cleanly separated into four layers (business services, data access, presentation, and integration), technology platforms, operating systems, data stores, integration technologies, and user interfaces can vary without requiring redesign at other layers. The reference architecture fosters reuse of business logic and components because logic is cleanly separated from other concerns.

Progress offers a unique approach to partnership that provides a comprehensive set of support programs to help partners expand their businesses, maintain competitive advantage and develop sustaining technical skills, processes, and insight required to transform their applications.

Progress® Business Empowerment® provides unique value to the partners through both one-to-one and one-to-many programs designed to help partners increase revenue and improve marketing and sales effectiveness. Business Empowerment focuses on business planning development, go-to-market planning and demand generation to produce qualified leads and increase market awareness.

Progress® Technical Empowerment® helps partners create competitive applications. Programs consist of education, communication, consulting services, and their Application Transformation Approach. Technical Empowerment enables partners to build flexible applications and helps partners build and transform applications in logical steps and in modules that match resource and business plans.

Figure 1: Progress Partnering Approach



Source: Progress Software

Analysis

As stated in the Executive Summary, Forrester took a multistep approach to evaluate the impact that transforming an application on the Progress platform can have on an organization, including:

- Interviews with Progress Software product development and technology experts as well as marketing and sales executives
- In-depth interviews with six partners currently using the Progress platform
- Construction of a common financial framework for the transformation of an application on the Progress platform versus an alternative platform
- Construction of a composite organization based on characteristics of the interviewed organizations

Interview Highlights

A total of six interviews were conducted for this study, involving representatives from the following Progress partners:

1. A European-based provider of human resources (HR) software
2. A European-based provider of document management software
3. A US-based global provider of enterprise resource planning (ERP) software
4. A European-based provider of ERP software
5. A US-based global provider of ERP and supply chain software
6. A US-based global provider of supply chain software

Four of the interviewed organizations have annual sales of between $20 million and $60 million. The remaining two interviewed partners have annual sales of approximately $200 million. The composite partner organization created from the results of the partner interviews represents a US-based provider of ERP software with annual revenue of approximately $60 million. The composite organization's core product, an ERP added-value module, is written on several application development solutions including the Progress platform. The financial analysis presented here examines the total economic impact across the application development life cycle of transforming the application (modernizing the architecture, functionality and interfaces to support new technologies and adding new features) on the Progress platform.

For the purpose of this analysis, Forrester breaks out the application development life cycle into three stages: development, deployment, and management.

- **Development.** The development stage includes tasks associated with designing, creating, and testing application code and associated databases.
- **Deployment.** The deployment stage includes tasks associated with establishing the runtime environment; configuring the system, application, and database; and integrating with existing systems.

- **Management.** The management stage includes tasks associated with monitoring the running of the deployed system, ensuring performance and reliability, and addressing any issues that arise.

The six in-depth interviews uncovered that the Progress partnering approach, programs, and flexible infrastructure allow partners to realize the following cost savings across the application development life cycle and in relationship to an alternative platform:

- Fewer full-time equivalents (FTEs) are required to develop on the Progress platform.

- Progress provides a better match than alternative vendors between the deployment costs (specifically the redistribution payments) and how the ISV does business. For many scenarios, including the one highlighted in this case study, this results in a lower cost of the redistribution payment.

- Fewer FTEs are required by the partner to handle ongoing management of the application on the Progress platform.

Financial Framework

Introduction

Based on the interviews with the six existing partners provided by Progress Software, Forrester has constructed a financial framework for those organizations considering an application transformation on the Progress platform. The objective of the framework is to identify the cost, cost savings, risk, and flexibility factors that impact the investment decision.

Composite Organization

The composite organization created from the results of the partner interviews represents a $60 million global provider of ERP software based in the US. The composite organization's core product, an ERP added-value module, is written on several application development solutions including the Progress platform. For the purpose of this analysis, Forrester considers the financial impact across the application development life cycle of transforming the core product on the Progress platform versus an alternative platform. The transformation process includes: 1) modernizing the architecture and interfaces to support new technologies and 2) adding new features to the application. The composite organization sells the transformed product to 200 customers in a new market. The incremental license, services, and maintenance revenue associated with the transformed product is approximately $17 million in present-value (PV) terms (over a two-and-a-half year period).

Based on information captured in the in-depth interviews, Forrester assumes that in either scenario (transforming the product on the Progress platform or an alternative platform) the composite organization engages with the platform vendor for business and technical advice and consulting.

See Appendix A for more details on the composite organization.

Framework Methodology

Using the results of the partner interviews, Forrester identified the areas across the application development life cycle where there is significant variance in costs between the Progress platform and the alternative (non-Progress) platform. The three areas of significant cost variance are the cost of development, the cost of the redistribution (or royalty) payment, and the cost of ongoing management. The financial analysis presented below quantifies the cost variance for each of the three areas.

Framework Assumptions

Table 2 lists the discount rate used in the PV and net present value (NPV) calculations and time horizon used for the financial modeling. The discount rate is the interest rate used to compute the present value of future cash flows.

Table 2: General Assumptions

Ref.	General assumptions	Value
	Discount rate	10%
	Length of analysis	Four years

Source: Forrester Research, Inc.

Organizations typically use discount rates between 8% and 16% based on their current environment. Readers are urged to consult with their finance department to determine the most appropriate discount rate to use within their own organization.

In addition to the financial assumptions used to construct the cash-flow analysis, Table 3 provides salary assumptions used within this analysis. Because salaries vary according to seniority, vertical market, and geography, readers are encouraged to use their own numbers within the financial framework presented below.

Table 3: Salary Assumptions

Ref.	Metric	Calculation	Value
A1	Fully loaded salary per business analyst		$150,000
A2	Fully loaded salary per developer		$125,000
A3	Fully loaded salary per manager		$150,000
A4	Fully loaded salary per support FTE		$100,000

Source: Forrester Research, Inc.

Financial Analysis

The financial analysis presents the quantification of the cost savings between the two options (transforming the product on the Progress platform and transforming the product on an alternative (non-Progress) platform) for the three areas of significant variance: the cost of development, the cost of deployment, and the cost of ongoing management.

It is important to note that values used throughout the financial analysis are based on in-depth interviews with six partners and the resulting composite organization built by Forrester. Forrester makes no assumptions as to the potential cost savings that other organizations will receive within their own environment.

Lower Cost Of Development On The Progress Platform

The first of three key areas of significant cost variance is the cost to develop the product, specifically tasks associated with designing, creating, and testing application code and associated databases.

Interviewed partners identified a substantial difference in the amount of time to develop on the Progress platform. One partner indicated that if the original product were written on an alternative platform, developers would have spent three times as long writing and transforming the application. Another interviewee noted in a given amount of time, developers could write up to twice as much code on Progress versus alternative platforms.

As a result of faster time to develop, interviewed partners noted a significant difference in the cost of development on the Progress platform. One partner stated that to design for SOA, it would have been three to four times more expensive on an alternative platform. Another partner indicated that development is 50% less expensive on Progress as compared to development on alternative platforms.

Partners identified the following technology reasons as inputs to the lower cost of development on the Progress platform. The Progress platform:

- **Promotes code reuse.** All common business logic is centralized in the distributed architecture. By separating the business logic and placing it in a single location, the logic can be called whenever needed.

- **Supports multiple user interface technologies.** On the Progress platform each user interface can access common logic through an application server and, as a result, applications are independent of the user interface. One partner noted that it was so easy to make changes to the user interface that he is able to develop new reports in the back seat of a taxi. Another partner provided the example of building an e-procurement application where the partner was able to leverage the Web services capabilities and the business logic in Progress OpenEdge platform. The partner only had to build a new browser user interface and was able to do this in 90 days. The interviewee estimated that if he had to build the application from the ground up it would have taken between six and 12 months.

- **Supports integration functionality.** The business logic can be exposed to other applications for integration purposes in a number of ways, including the use of cross-platform technologies like Web services. This makes it easy to integrate into the existing infrastructure of the user environment.

- **Has a business orientation.** Progress offers a complete toolset across the business services, data access, presentation, and integration layers. In addition, the platform offers an administration-free embedded database. Partners noted that other platforms force developers to get close to the database. With Progress, however, the person writing the business logic does not have to focus on database administration.

- **Incorporates industry standards.** The OpenEdge platform works with current industry standards and incorporates Web services and SOA principles. The technology neutral architecture allows applications to be built that support a wide range of industry-standard technologies.

There are two approaches to model the financial impact of the variance in the cost to develop the transformed product. The first is to show the financial impact of the composite organization developing the transformed product on the Progress platform at a lower cost than on the alternative platform by using fewer developers. The second method is to show the financial impact of the composite organization developing the transformed product at the same cost on the Progress platform as on the alternative platform but getting to market faster on the Progress platform (by increasing the number of developers). Forrester chose to model the former approach because it more closely reflects the information captured in the partner interviews. Based on this information, Forrester assumes that the composite organization can develop on the Progress platform with 50% fewer developers and managers than on the alternative platform.

Development Costs On The Progress Platform

Forrester assumes that two business analysts, 10 developers, and two managers spend 18 months to transform the product. During Year 1, the business analysts, developers, and managers spend 100% of their time on development of the transformed product. During Year 2, the employees spend 50% of their time on development of the transformed product, and in Years 3-4, the employees spend roughly 10% of their time on minor enhancements to the transformed product.

Table 4 presents the calculations for the business analyst, developer, and manager costs on the Progress platform. The cost of business analysts in Year 1, for example, is equal to the product of the fully loaded salary per business analyst, the number of business analysts, and the percent of time allocated to the transformed product in Year 1 ($300,000 = $150,000 x 2 x 100%).

Table 4: Calculation Of Business Analyst, Developer, And Manager Costs For The Progress Platform

Ref.	Metric	Calculation	Business analysts	Developers	Managers
B1	Number of employees		2	10	2
B2	Fully loaded salary per employee		$150,000	$125,000	$150,000
B3	Percent of time allocated to transformed product in Year 1		100%	100%	100%
B4	Percent of time allocated to transformed product in Year 2		50%	50%	50%
B5	Percent of time allocated to transformed product in Years 3-4		10%	10%	10%
B6	Cost of employees in Year 1	(B1*B2*B3)	$300,000	$1,250,000	$300,000
B7	Cost of employees in Year 2	(B1*B2*B4)	$150,000	$625,000	$150,000
B8	Cost of employees in Years 3-4	(B1*B2*B5)	$30,000	$125,000	$30,000

Source: Forrester Research, Inc.

Table 5 presents the total development costs on the Progress platform for the composite organization.

Table 5: Total Development Costs On The Progress Platform

Ref.	Development costs	Calculation	Year 1	Year 2	Year 3	Year 4	Total	Present value
C1	Business analysts		$300,000	$150,000	$30,000	$30,000	$510,000	$483,696
C2	Developers		$1,250,000	$625,000	$125,000	$125,000	$2,125,000	$2,015,402
C3	Managers		$300,000	$150,000	$30,000	$30,000	$510,000	$483,696
C4	Total	(C1+C2+C3)	$1,850,000	$925,000	$185,000	$185,000	$3,145,000	$2,982,795

Source: Forrester Research, Inc.

Development Costs On The Alternative Platform

Using data collected from the partner interviews and described above in the section titled “Lower Cost of Development on the Progress Platform,” Forrester finds that the composite organization requires twice as many developers and managers on the alternative platform as on the Progress platform. Therefore, on the alternative platform, two business analysts, 20 developers, and four managers spend 18 months to transform the ERP module. As above, during Year 1, the business analysts, developers, and managers spend 100% of their time on development for the transformed product. During Year 2, the employees spend 50% of their time on development of the transformed product, and in Years 3-4, the employees spend roughly 10% of their time on minor enhancements to the transformed product.

Table 6 presents the calculations for the business analyst, developer, and manager costs on the alternative platform. The cost of developers in Year 2 is equal to the product of the fully loaded salary per developer, the number of developers, and the percent of time allocated to the transformed product in Year 2 ($1,250,000 = $125,000 x 20 x 50%).

Table 6: Calculation Of Business Analyst, Developer, And Manager Costs For The Alternative Platform

Ref.	Metric	Calculation	Business analysts	Developers	Managers
D1	Number of employees		2	20	4
D2	Fully loaded salary per employee		$150,000	$125,000	$150,000
D3	Percent of time allocated to transformed product in Year 1		100%	100%	100%
D4	Percent of time allocated to transformed product in Year 2		50%	50%	50%
D5	Percent of time allocated to transformed product in Years 3-4		10%	10%	10%
D6	Cost of employees in Year 1	(D1*D2*D3)	$300,000	$2,500,000	$600,000
D7	Cost of employees in Year 2	(D1*D2*D4)	$150,000	$1,250,000	$300,000
D8	Cost of employees in Years 3-4	(D1*D2*D5)	$30,000	$250,000	$60,000

Source: Forrester Research, Inc.

Table 7 presents the total development costs on the alternative platform for the composite organization.

Table 7: Total Development Costs On The Alternative Platform

Ref.	Development costs	Calculation	Year 1	Year 2	Year 3	Year 4	Total	Present value
E1	Business analysts		$300,000	$150,000	$30,000	$30,000	$510,000	$483,696
E2	Developers		$2,500,000	$1,250,000	$250,000	$250,000	$4,250,000	$4,030,804
E3	Managers		$600,000	$300,000	$60,000	$60,000	$1,020,000	$967,393
E4	Total	(E1+E2+E3)	$3,400,000	$1,700,000	$340,000	$340,000	$5,780,000	$5,481,893

Source: Forrester Research, Inc.

The difference between the development costs on the Progress platform and the alternative platform is equal to the development cost savings on the Progress platform.

Table 8: Development Cost Savings On The Progress Platform

Ref.	Development costs	Calculation	Year 1	Year 2	Year 3	Year 4	Total	Present value
C4	Development costs on Progress		$1,850,000	$925,000	$185,000	$185,000	$3,145,000	$2,982,795
E4	Development costs on alternative		$3,400,000	$1,700,000	$340,000	$340,000	$5,780,000	$5,481,893
F1	Development cost savings	(E4 - C4)	$1,550,000	$775,000	$155,000	$155,000	$2,635,000	$2,499,098

Source: Forrester Research, Inc.

Lower Cost Of Deployment On The Progress Platform

The second area of cost variance is the redistribution payment from the partner back to the platform vendor. The payment depends on the licensing arrangement between the partner and the vendor and can be a royalty fee equal to a percent of revenue (license and maintenance), a fixed-price fee per server, or a fixed price per client access license, for example. Partners noted that the Progress redistribution payment, a royalty fee equal to a percent of revenue, is the most closely aligned with the partner's business model.

Forrester assumes that the transformed ERP added-value module sells at a license fee of $2,000 per seat. On average the composite organization sells 45 seats per customer and during the 30-month period post-product launch sells the product to 200 customers. The partner charges an 18% maintenance fee to its customers starting in Year 2 and has a retention rate of 97% for maintenance (this is based on one interviewee indicating a 96% retention rate and another indicating a 98% retention rate). The composite partner typically sells services of 10% of license fees for implementation.

Table 9: License And Maintenance Metrics For Transformed Product

Ref.	Metric	Value
G1	License fee per seat	$2,000
G2	New customers (total)	200
G3	Average number of seats per customer	45
G4	Average services fee (percent of license fee)	10%
G5	Maintenance fee (percent of license fee)	18%
G6	Maintenance fee retention rate	97%

Source: Forrester Research, Inc.

Table 10 presents the breakdown of sales of the transformed product to new customers over the four-year period considered in this analysis. The model assumes that sales ramp over a two and half year period, with 20 customers in the second half of Year 2, 80 customers in Year 3, and 100 customers in Year 4.

Table 10: Growth In New Customers

Ref.	Metric	Year 1	Year 2	Year 3	Year 4	Total
H1	New customers		20	80	100	200

Source: Forrester Research, Inc.

Table 11 outlines the incremental license, services, and maintenance revenue generated by the transformed product during a two-and-a-half year period. License revenue is equal to the product of the license fee per seat, the number of new customers, and the average number of seats per customer. For example, license revenue in Year 2 is equal to $1,800,000 (= $2,000 x 20 x 45). Services revenue is equal to the product of license revenue and the average services fee. Services revenue in Year 1 is equal to $180,000 (= $1,800,000 x 10%). Maintenance revenue is equal to the product of license revenue, the maintenance fee, and the maintenance fee retention rate. Maintenance revenue in Year 3 is equal to $314,280 (= $1,800,000 x 18% x 97%).

Table 11: Incremental Revenue

Ref.	Metric	Year 1	Year 2	Year 3	Year 4	Total	Present value
I1	License revenue	$0	$1,800,000	$7,200,000	$9,000,000	$18,000,000	$14,348,610
I2	Services revenue	$0	$180,000	$720,000	$900,000	$1,800,000	$1,434,861
I3	Maintenance revenue	$0	$0	$314,280	$1,571,400	$1,885,680	$1,584,387
I4	Total revenue	$0	$1,980,000	$8,234,280	$11,471,400	$21,685,680	$17,223,823

Source: Forrester Research, Inc.

Deployment Costs On The Progress Platform

The deployment costs (specifically the redistribution payment) for Progress is a percent of license and maintenance revenue. For the purpose of this analysis and based on information captured in the partner interviews, Forrester assumes a 15% redistribution payment (royalty fee) on license and maintenance revenue for the composite organization. Interviewed partners identified the Progress redistribution arrangement as being the most closely aligned with how the ISV does business and as a result indicated it is often the most cost-effective licensing arrangement.

Table 12 presents the redistribution payment on the Progress platform. The payment is equal to the product of the 15% royalty fee and the annual incremental license and maintenance revenue (see Table 11). The redistribution payment in Year 2 is equal to $270,000 (= ($1,800,000 + $0) x 15%).

Table 12: Redistribution Payment On Progress Platform

Ref.	Metric	Year 1	Year 2	Year 3	Year 4	Total	Present value
J1	Redistribution payment	$0	$270,000	$1,127,142	$1,585,710	$2,982,852	$2,368,344

Source: Forrester Research, Inc.

Deployment Costs On The Alternative Platform

The calculation of an equivalent royalty payment for an alternative platform depends on the alternative vendor considered and the per-seat product license fee. Assuming the transformed product has a $2,000 per-seat license fee, Forrester converts a typical fixed-price per client access license fee on an alternative platform into an equivalent royalty payment of 27% for the alternative platform.

Table 13 presents the redistribution payment on the alternative platform. The payment is equal to the product of the equivalent royalty payment of 27% and the annual incremental license and maintenance revenue (see Table 11).

Table 13: Redistribution Payment On Alternative Platform

Ref.	Metric	Year 1	Year 2	Year 3	Year 4	Total	Present value
K1	Redistribution payment	$0	$486,000	$2,028,856	$2,854,278	$5,369,134	$4,263,020

Source: Forrester Research, Inc.

The difference between the redistribution payments on the Progress platform and the alternative platform is equal to the deployment cost savings on the Progress platform.

Table 14: Deployment Cost Savings On The Progress Platform

Ref.	Deployment costs	Calculation	Year 1	Year 2	Year 3	Year 4	Total	Present value
J1	Redistribution payment on Progress		$0	$270,000	$1,127,142	$1,585,710	$2,982,852	$2,368,344
K1	Redistribution payment on Alternative		$0	$486,000	$2,028,856	$2,854,278	$5,369,134	$4,263,020
L1	Redistribution payment cost savings	(K1 – J1)	$0	$216,000	$901,714	$1,268,568	$2,386,282	$1,894,675

Source: Forrester Research, Inc.

Lower Cost Of Ongoing Management On The Progress Platform

The third area of cost variance is in ongoing management, tasks associated with monitoring the running of the deployed system, ensuring performance and reliability, and addressing any customer issues that arise.

Interviewed partners identified a significant difference in the cost to support the Progress platform versus the cost to support an alternative non-Progress platform. One partner noted that it was 50% less expensive to support the Progress platform versus an alternative platform. Another interviewee offered that within his organization 3.5 FTEs are required to support 1,000 customers on the Progress platform versus an alternative platform where two FTEs are required to support 150 customers. If the alternative platform had the same number of customers as the Progress platform, it would require approximately 13 FTEs to support it.

According to interviewees, the key reasons that fewer support technicians are required on the Progress platform are because 1) the platform architecture eliminates duplicative or overlapping coding and 2) high application reliability results in fewer customer service and maintenance calls. The partners indicated these findings based on their experience with alternative platforms.

To be conservative, Forrester assumes that the composite organization requires 50% fewer FTEs to support the application on the Progress platform versus an alternative platform.

Ongoing Management Costs On The Progress Platform

Based on information captured in the partner interviews, Forrester concludes that one FTE is required for ongoing management of the transformed product on the Progress platform. Using the customer rollout schedule in table 10, Forrester assumes that the FTE allocates half of his time in Year 2 to support the transformed product and 100% of his time in Years 3 and 4 to support the product. The fully loaded annual salary for a support FTE is equal to $100,000.

Table 15 presents the ongoing management costs on the Progress platform.

Table 15: Ongoing Management Costs On The Progress Platform

Ref.	Metric	Year 1	Year 2	Year 3	Year 4	Total	Present value
M1	Support FTEs	$0	$50,000	$100,000	$100,000	$250,000	$203,231

Source: Forrester Research, Inc.

Ongoing Management Costs On The Alternative Platform

Using data collected from the partner interviews and described in the above section titled “Lower Cost of Ongoing Management on the Progress Platform,” Forrester finds that on the alternative platform, the composite organization requires twice as many support FTEs as on the Progress platform.

Table 16 presents the ongoing management costs on the alternative platform.

Table 16: Ongoing Management Costs On The Alternative Platform

Ref.	Metric	Year 1	Year 2	Year 3	Year 4	Total	Present value
N1	Support FTEs	$0	$100,000	$200,000	$200,000	$500,000	$406,461

Source: Forrester Research, Inc.

The difference between the ongoing management costs on the Progress platform and the alternative platform is equal to the ongoing management cost savings on the Progress platform.

Table 17: Ongoing Management Cost Savings On The Progress Platform

Ref.	Ongoing management costs	Calculation	Year 1	Year 2	Year 3	Year 4	Total	Present value
M1	Ongoing management costs on Progress		$0	$50,000	$100,000	$100,000	$250,000	$203,231
N1	Ongoing management costs on Alternative		$0	$100,000	$200,000	$200,000	$500,000	$406,461
O1	Ongoing management cost savings	(N1 - M1)	$0	$50,000	$100,000	$100,000	$250,000	$203,231

Source: Forrester Research, Inc.

Risk

Risk is used as a filter to capture the uncertainty surrounding different estimates. If a risk-adjusted return still demonstrates a compelling business case, it raises confidence that the investment is likely to succeed because the risks that threaten the project have been taken into consideration and quantified. The risk-adjusted numbers should be taken as “realistic” expectations, since they represent the expected values considering risk. In general, risks impact cost savings by reducing the original estimates.

For the purpose of this analysis, Forrester risk adjusts the cost savings estimates to better reflect the level of uncertainty that exists for each estimate. The TEI model uses a triangular distribution method to calculate risk-adjusted values. To construct the distribution, it is necessary to first estimate the low, most likely, and high values that could occur within the current environment. The risk-adjusted value is the mean of the distribution of those points.

For example, take the case of development cost savings attributed to the Progress platform (see Table 8). The $2,449,098 value used in this analysis can be considered the “most likely” or expected value. However, cost savings vary based on the complexity of modernizing the architecture and interfaces to support new technologies and adding new features. This variability represents a risk that must be captured as part of this study. Forrester assigns a risk factor of 75%

on the low end, 100% as the most likely, and 100% on the high end based on its understanding of the risks as communicated by the interviewees and Forrester's own best practice work in risk analysis. This has the effect of decreasing the cost savings estimate to take into account the fact that original cost savings estimates are more likely to be revised downward than upward. Forrester then creates a triangular distribution to reflect the range of expected costs, with 92% as the mean (92% is equal to the sum of 75%, 100%, and 100% then divided by three). Forrester applies this mean to the most likely estimate, y, to arrive at a risk adjusted value of $2,290,840.

The following risks were considered in this study:

- The risk that selling to customers not familiar with Progress Software lengthens the sales cycle, or increases the amount a partner must spend on product marketing.

- The risk that integrating applications and databases causes incremental development and support costs. One interviewee noted that adding a non-Progress database adds another 2% to 3% to the R&D budget.

Table 18 shows the values used to adjust for uncertainty in cost savings estimates. Different cost savings estimates have different levels of risk adjustments. For example, Forrester applied a higher risk weighting to deployment cost savings as compared to development cost savings in part due to the assumption that there is more variability in the redistribution payment estimates. Readers are urged to apply their own risk ranges based on their own degree of confidence in the cost and benefit estimates.

Table 18: Cost Savings Risk Adjustments

Ref.	Risk to cost savings	Low	Most likely	High	Risk adjusted
P1	Development cost savings	75%	100%	100%	92%
P2	Deployment cost savings	50%	100%	100%	83%
P3	Ongoing management cost savings	85%	100%	100%	95%

Source: Forrester Research, Inc.

Flexibility

Flexibility, as defined by TEI, represents investing in capacity or agility that can be turned into business benefit for some future additional investment. Flexibility benefits typically increase with the scalability of the technology investment. For example, a scalable investment can allow an organization to adapt without having to incur significant future cost.

Interviewed partners noted that they were considering investing in new features and functionality associated with Progress® OpenEdge™ Release 10, including Type II data sets, integration with Sonic Software and Real Time Division, and Progress® ObjectStore®. Forrester believes that organizations that use the Progress platform to transform their applications are laying the groundwork to quickly meet new technology standards, creating a more flexible and less costly environment.

TEI Framework: Summary

Considering the financial framework constructed above, the results of the financial analysis using the representative numbers can be used to determine a risk-adjusted cost savings on the Progress platform. Table 19 shows the consolidation of the numbers for the composite organization prior to any adjustment for risk.

Table 19: Total Cost Savings, Nonrisk Adjusted

Ref.	Metric	Year 1	Year 2	Year 3	Year 4	Total	Present value
Q1	Development cost savings	$1,550,000	$775,000	$155,000	$155,000	$2,635,000	$2,499,098
Q2	Deployment cost savings	$0	$216,000	$901,714	$1,268,568	$2,386,282	$1,894,675
Q3	Ongoing management cost savings	$0	$50,000	$100,000	$100,000	$250,000	$203,231
Q4	Total cost savings	$1,550,000	$1,041,000	$1,156,714	$1,523,568	$5,271,282	$4,597,004

Source: Forrester Research, Inc.

Table 20 below shows the risk-adjusted values, applying the risk adjustment method indicated in the “Risks” section and the values from Table 18 to the numbers in Table 19.

Table 20: Total Cost Savings, Risk Adjusted

Ref.	Metric	Year 1	Year 2	Year 3	Year 4	Total	Present value
R1	Development cost savings	$1,420,833	$710,417	$142,083	$142,083	$2,415,417	$2,290,840
R2	Deployment cost savings	$0	$180,000	$751,428	$1,057,140	$1,988,568	$1,578,896
R3	Ongoing management cost savings	$0	$47,500	$95,000	$95,000	$237,500	$193,069
R4	Total cost savings	$1,420,833	$937,917	$988,511	$1,294,223	$4,641,485	$4,062,806

Source: Forrester Research, Inc.

Table 21 shows that after adjusting for risk, Forrester finds an overall cost savings of 40% for the composite organization to develop, deploy and manage on the Progress platform versus an alternative platform.

Table 21: Total Cost Savings As A Percent Of Revenue, Risk Adjusted

Category	Cost of Progress	Cost of alternative	Cost savings on Progress	Risk-adjusted cost savings on Progress	Risk-adjusted cost savings on Progress as a percent of alternative
Development	$2,982,795	$5,481,893	$2,499,098	$2,290,840	42%
Deployment	$2,368,344	$4,263,020	$1,894,675	$1,578,896	37%
Ongoing management	$203,231	$406,461	$203,231	$193,069	48%
Total	$5,554,370	$10,151,374	$4,597,004	$4,062,806	40%

Source: Forrester Research, Inc.

It is important to note that values used throughout the TEI framework are based on in-depth interviews with six organizations and the resulting composite organization built by Forrester. Forrester makes no assumptions as to the potential cost savings that other organizations will receive within their own environment. Forrester strongly advises that readers use their own estimates within the framework provided in this study to determine the expected financial impact of transforming a product on the Progress platform versus an alternative (non-Progress) platform.

Study Conclusions

Forrester's in-depth interviews with current Progress partners yielded the following important observations:

- Across the application development life cycle, Forrester finds three areas of significant cost savings on the Progress platform versus an alternative platform: cost savings in development, cost savings in deployment (specifically, the redistribution or royalty payment) and cost savings in ongoing management. For the composite organization (created from the results of the partner interviews) Forrester calculates a 42% lower cost of development, a 37% lower cost of deployment and a 48% lower cost of ongoing management on the Progress platform. Overall, for the composite organization, Forrester finds a cost savings of 40% on the Progress platform versus an alternative platform.

- For the partners interviewed, several factors contributed to the difference in cost savings. Forrester found that greater cost savings were associated with partners that were facing market demands for more service orientation and diverse integration points. Lower cost savings were associated with partners that were homogenized or uniquely standardized on an alterative platform.

The financial analysis provided in this study illustrates the potential way an organization can evaluate the value proposition of the Progress OpenEdge platform. Using the financial framework, many partners may find the potential for a compelling business case to transform an application on the Progress platform.

Appendix A: Composite Organization Description

In this TEI study, Forrester has created a composite organization to illustrate the quantifiable costs and benefits of transforming an application on the Progress platform versus an alternative (non-Progress) platform. The composite company is intended to represent a $60 million US-based provider of ERP software. The composite organization's core product, an ERP module, is written on several application development solutions including the Progress platform.

The composite organization transforms its core product in order to modernize the architecture and interfaces to support new technologies and add new features to the application. The composite organization sells the transformed product to 200 customers in a new geography during a two-and-a-half year period. The transformed product has a $2,000 license fee per seat. On average, the composite organization sells 45 seats per customer. Incremental license, services, and maintenance revenue associated with the transformed product is approximately $17 million in present-value terms.

Appendix B: Total Economic Impact™ Overview

Total Economic Impact™ is a methodology developed by Forrester Research, Inc. 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.

The TEI methodology consists of four components to evaluate investment value: benefits, costs, risks, and flexibility. For the purpose of this analysis, the impact of flexibility was not quantified.

Benefits

Benefits represent the value delivered to the user organization — IT and/or business units — by the proposed product or project. Often product or project justification exercises focus just on IT cost and cost reduction, leaving little room to analyze the effect of the technology on the entire organization. The TEI methodology and the resulting financial model place 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. Calculation of benefit estimates involves a clear dialogue with the user organization to understand the specific value that is created. In addition, Forrester also requires that there be a clear line of accountability established between the measurement and justification of benefit estimates after the project has been completed. This ensures that benefit estimates tie back directly to the bottom line.

Costs

Costs represent the investment necessary to capture the value, or benefits, of the proposed project. IT or the business units may incur costs in the forms of fully burdened labor, subcontractors, or materials. Costs consider all the investments and expenses necessary to deliver the proposed value. In addition, the cost category within TEI captures any incremental costs over the existing environment for ongoing costs associated with the solution. All costs must be tied to the benefits that are created.

Risk

Risk measures the uncertainty of benefit and cost estimates contained within the investment. Uncertainty is measured in two ways: the likelihood that the cost and benefit estimates will meet the original projections and the likelihood that the estimates will be measured and tracked over time. TEI applies a probability density function known as "triangular distribution" to the values entered. At a minimum, three values are calculated to estimate the underlying range around each cost and benefit.

Flexibility

Within the TEI methodology, direct benefits represent one part of the investment value. While direct benefits can typically be the primary way to justify a project, Forrester believes that organizations should be able to measure the strategic value of an investment. Flexibility represents the value that can be obtained for some future additional investment building on top of the initial investment already made. For instance, an investment in an enterprisewide upgrade of an office productivity suite can potentially increase standardization (to increase efficiency) and reduce licensing costs. However, an embedded collaboration feature may translate to greater worker productivity if activated. The collaboration can only be used with additional investment in training at some future point in time. However, having the ability to capture that benefit has a present value that can be estimated. The flexibility component of TEI captures that value.

Appendix C: Glossary

Discount rate: The interest rate used in cash flow analysis to take into account the time value of money. Although the Federal Reserve Bank sets a discount rate, companies often set a discount rate based on their business and investment environment. Forrester assumes a yearly discount rate of 10% for this analysis. Organizations typically use discount rates between 8% and 16% based on their current environment. Readers are urged to consult their organization to determine the most appropriate discount rate to use in their own environment.

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.

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 net present value of cash flows.

Payback period: The breakeven point for an investment. The point in time at which net benefits (benefits minus costs) equal initial investment or cost.

A Note On Cash Flow Tables

The following is a note on the cash flow tables used in this study (see the Example Table below). The initial investment column contains costs incurred at "time 0" or at the beginning of Year 1. Those costs are not discounted. All other cash flows in years one through three are discounted using the discount rate shown in Table 2 at the end of the year. Present value (PV) calculations are calculated for each total cost and benefit estimate. Net present value (NPV) calculations are not calculated until the summary tables and are the sum of the initial investment and the discounted cash flows in each year.

Example Table

Ref.	Metric	Calculation	Year 1	Year 2	Year 3	Year 4	Total

Source: Forrester Research, Inc.