

A Forrester Total Economic Impact™ Study Prepared For Zephyr

The Total Economic Impact Of Zephyr PASSPORT

Project Director: Michelle S. Bishop, Senior Consultant

September 2011

FORRESTER

Headquarters | Forrester Research, Inc.
400 Technology Square, Cambridge, MA 02139 USA
Tel: +1 617.613.6000 | Fax: +1 617.613.5000 | www.forrester.com

Forrester Consulting
Making Leaders Successful Every Day

TABLE OF CONTENTS

Executive Summary.....	2
Consolidation To Zephyr PASSPORT Reduced Complexity And Operational Costs.....	2
Factors Affecting Benefits And Costs.....	3
Disclosures.....	3
TEI Framework And Methodology.....	4
Analysis.....	5
Interview Highlights.....	5
Costs.....	5
Benefits.....	7
Other Benefits Not Quantified.....	11
Flexibility.....	11
Risk.....	12
Financial Summary.....	14
Zephyr PASSPORT: Overview.....	16
Appendix A: Total Economic Impact™ Overview.....	17
Appendix B: Glossary.....	18

© 2011, Forrester Research, Inc. All rights reserved. Unauthorized reproduction is strictly prohibited. Information is based on best available resources. Opinions reflect judgment at the time and are subject to change. Forrester®, Technographics®, Forrester Wave, RoleView, TechRadar, and Total Economic Impact are trademarks of Forrester Research, Inc. All other trademarks are the property of their respective companies. For additional information, go to www.forrester.com.

About Forrester Consulting

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

Executive Summary

In April 2011, Zephyr commissioned Forrester Consulting to examine the total economic impact and potential return on investment (ROI) enterprises may realize by deploying alternative high-functioning terminal emulation products such as Zephyr PASSPORT. The purpose of this study is to provide readers with a framework to evaluate the potential financial impact of deploying Zephyr PASSPORT within their organizations.

Forrester interviewed representatives from *Organization X*, one of the largest insurance and financial services companies in North America. This organization has businesses in property and casualty insurance, life insurance, and retirement savings, as well as asset management and strategic investments. *Organization X* is a Fortune 500 company based in North America with more than 30,000 employees and more than \$18 billion in revenue.

Organization X's 3270 emulation costs were excessive because it had accumulated 11 emulation products through merger and acquisition activity and the decentralized nature of its divisional purchasing processes. It chose to consolidate the 10 other emulation products and exponentially expand its use of Zephyr PASSPORT, which resulted in significantly lower license and IT management costs for the organization.

Consolidation To Zephyr PASSPORT Reduced Complexity And Operational Costs

Forrester's Total Economic Impact™ (TEI) methodology captures and quantifies the voice of the customer relative to technology investments. In this study, we interviewed an enterprise about its experience in implementing Zephyr PASSPORT. Forrester's interviews and subsequent financial analysis found that the organization experienced the benefits, costs, and a risk-adjusted ROI summarized in Table 1.

Table 1

Three-Year Risk-Adjusted ROI

ROI	Payback period	Total benefits (PV)	Total costs (PV)	Net present value (NPV)
257%	4.7 months	\$2,098,370	\$587,558	\$1,510,813

Source: Forrester Research, Inc.

- **Benefits.** *Organization X* experienced the following benefits:
 - Cost avoidance of software license maintenance fees for 10 redundant products.
 - Reduced complexity leading to lower IT administration costs.
 - Cost avoidance of software licensing audit penalties.
 - Ease of migration resulting in cost savings.
 - Improved ability to implement new projects leading to increased end user productivity.

- Increased agility with faster solution deployment.
- Costs. *Organization X* incurred the following costs:
 - Annual subscription license fees for Zephyr PASSPORT.
 - Labor costs for implementation.
 - IT and vendor management administrative costs.

Factors Affecting Benefits And Costs

Table 1 illustrates the risk-adjusted financial results that would be expected by the interviewed organization described in Appendix A. The risk-adjusted values take into account *potential* uncertainty or variance in estimating the costs and benefits, with the aim of producing more conservative estimates. In that context, the following factors may affect the financial results that other organizations may experience:

- Implementation costs may vary for organizations depending on the scope of the implementation and the level of complexity of integration work required.
- The pre-Zephyr PASSPORT environment. Benefits derived from a Zephyr implementation may vary depending on the cost and level of duplication of other organizations' preexisting emulation software.

Disclosures

The reader should be aware of the following:

- The study is commissioned by Zephyr and delivered by the Forrester Consulting group.
- Forrester makes no assumptions as to the potential ROI that other organizations will receive. Forrester strongly advises that readers should use the framework provided in the report to determine their own estimates of the appropriateness of an investment in Zephyr.
- Zephyr 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.

TEI Framework And Methodology

Introduction

From the information provided in the interviews, Forrester has constructed a TEI framework for those organizations considering a Zephyr implementation. The objective of the framework is to identify the cost, benefit, flexibility, and risk factors that affect the investment decision.

Approach And Methodology

Forrester took a multistep approach to evaluate the impact that Zephyr can have on an organization (see Figure 1). Specifically, we:

- Interviewed Zephyr marketing and sales staff and Forrester analysts to gather data relative to Zephyr PASSPORT and the emulation market in general.
- Interviewed a Fortune 500 company currently using Zephyr PASSPORT to obtain data with respect to costs, benefits, risk, and flexibility.
- Constructed a financial model representative of the interviews using the TEI methodology. The financial model is populated with the cost and benefit data obtained from the interviews.

Forrester employed four fundamental elements of TEI in modeling the financial implications of deploying Zephyr PASSPORT:

1. Costs.
2. Benefits to the entire organization.
3. Flexibility.
4. Risk.

Forrester's TEI methodology provides a complete picture of the total economic impact of technology investment decisions. Please see Appendix A for additional information on the TEI methodology.

Analysis

Interview Highlights

These interviews uncovered a number of important insights about the organization's experience with Zephyr PASSPORT:

- *Organization X* wanted to reduce the complexity of its emulation environment and manage its operational costs. It decided to consolidate on one emulation product and chose Zephyr PASSPORT.
- *Organization X* had accumulated 11 3270 emulation products as a result of acquisition as well as a decentralized purchasing process. As part of its move to a standardized purchasing process, it also moved to a more centrally managed configuration.
- *Organization X* had recently been audited by one of its emulation vendors — the audit resulted in a \$2-million payment to the vendor for exceeding the number of users licensed. The product in question was more robust than the organization required, but under the terms of its contract, it could not downgrade its license to a lesser product version. Continued use of that particular emulation product was unsustainable for an enterprise of its size, so the organization decided to look for a scenario where it could better manage its costs and avoid future audit penalties.
- Over the course of several interviews, *Organization X* noted the ease of working with Zephyr. An audit process that took three months with the old environment now took only two weeks. The organization's vendor management team appreciated the ease of working directly with the account manager as their sole point of contact for accountability, and the desktop engineering team noted that they were "impressed with Zephyr's customer service." With Zephyr PASSPORT, the organization observed: "It's a lot easier to review and analyze the number of licenses that we have in our environment and get maintenance renewal completed each year."
- *Organization X* was concerned about the effort and cost to migrate 2,000 macros from the old emulation products to Zephyr as the largest risk in the implementation. Zephyr took responsibility for the migration and worked closely with the business units' staff that built and maintained these macros. The organization noted that the migration to Zephyr PASSPORT was easier than expected, and all macros were migrated successfully.

Framework Assumptions

The discount rate used in the present value (PV) and NPV calculations is 10%, and time horizon used for the financial modeling is three years. Organizations typically use discount rates between 8% and 16% based on their current environment. Readers are urged to consult with their respective company's finance department to determine the most appropriate discount rate to use within their own organizations.

Costs

The main costs associated with the deployment of Zephyr PASSPORT are: 1) Zephyr PASSPORT license fees; 2) internal labor costs for implementation; and 3) IT and supply management administrative costs. Zephyr provided assistance with the implementation but did not charge for this cost, as it is included in the annual subscription or maintenance fees.

Zephyr PASSPORT License Fees

Zephyr offers its customers the option to pay through a traditional licensing agreement with associated annual maintenance fees or via an annual subscription basis. Annual subscription rates vary based on the number of licenses required — from a high of \$30 per license starting at 100 users to a low of \$4 per license for 60,000 users. These charges are usually based on the number of installations, but they can also be concurrent. The majority of Zephyr’s customers choose the subscription model, and larger organizations tend to use an enterprise model to remove the need for additional monitoring of licenses. *Organization X* purchased Zephyr on a subscription-based model for 23,000 users, for a total cost of \$552,000 over a three-year contract term.

Implementation Costs — Internal Labor

Organization X spent a total of nine months implementing Zephyr PASSPORT. Apart from design, testing, and network setup, a major part of the implementation during this period was the migration of existing macros. This latter effort took up eight months of the implementation to gather and convert the macros throughout the organizations, although Zephyr converted the majority of the macros in one month, many with an overnight turnaround. The organization’s IT team as well as the business unit staff that maintained these macros worked with Zephyr consultants, who were provided as part of the software purchase contract. This eight-person project team dedicated 25% of their time during that period to the implementation. The team included the project manager, desktop engineering resources, and the deployment team to work on configuration management, compatibility testing, script development, and quality assurance. This team also included a business liaison resource to work with all the business owners for the various workloads during the migration. At an annual fully loaded compensation of \$80,000 on average for an IT resource, the total implementation cost of internal labor for the organization is \$120,000.

Table 2

Implementation Costs — Internal Labor

Ref.	Metric	Calculation	Per period
A1	Number of people (IT)		8
A2	Hourly rate per IT FTE (fully loaded)	$\$80,000/2,080$ hours	\$38.46
A3	Hours — length of implementation		12
A4	Percentage of time spent on implementation		25%
At	Training costs	$A1*A2*A3*A4$	\$120,519

Source: Forrester Research, Inc.

Note that calculation totals throughout the study may not reconcile because of rounding.

IT Administrative Costs

Organization X estimates that its staff spend 2 hours at most on an audit to determine the licensing costs to be paid to Zephyr annually. This responsibility is shared by one IT resource and one vendor management resource. At a fully loaded blended hourly rate of \$36.54, this corresponds to an annual IT administrative cost of \$150 or \$450 over three years.

Total Costs

The total cost of the Zephyr PASSPORT deployment to the organization is \$672,450 over a three-year analysis.

Table 3

Total Costs (Non-Risk-Adjusted)

Costs	Initial	Year 1	Year 2	Year 3	Total
Zephyr PASSPORT subscription license fees		(\$184,000)	(\$184,000)	(\$184,000)	(\$552,000)
Internal labor — implementation	(\$120,000)				(\$120,000)
IT administrative costs		(\$150)	(\$150)	(\$150)	(\$450)
Total	(\$120,000)	(\$184,150)	(\$184,150)	(\$184,150)	(\$672,450)

Source: Forrester Research, Inc.

Benefits

In the interviews with *Organization X*, Forrester quantified these benefits: 1) cost reduction in fees and maintenance of other emulation software applications; 2) reduction of environment complexity resulting in lower IT administration costs; 3) cost avoidance of penalties from audit; and 4) ease of migration to Zephyr PASSPORT resulting in cost savings.

Other benefits include increased agility and improved ability to implement new projects leading to increased end user productivity.

“From a vendor management and purchasing standpoint, it’s easier to work with Zephyr. We have one point of contact; we work directly with an account manager.” (Specialist, supply management services, Fortune 500 insurance firm)

Cost Reduction — Software Maintenance Fees

By reducing the footprint of emulation software from 11 products down to one product, *Organization X* eliminated the annual software license maintenance fees and support for the phased-out emulation products. The organization estimates \$400,000 annual savings in software fees, totaling to \$1.2 million over a three-year period.

Table 4

Cost Reduction — Maintenance And Support Fees

Ref.	Metric	Calculation	Year 1	Year 2	Year 3	Total
B1	Maintenance fees and support for previous emulation software		\$400,000			
Bt	Cost reduction — maintenance and support fees	B1	\$400,000	\$400,000	\$400,000	\$1,200,000

Source: Forrester Research, Inc.

Reduction Of Complexity — IT Administration Savings

By aligning around Zephyr PASSPORT, the organization reduced the complexity of its emulation environment and subsequently achieved labor savings for IT administration and audit hours to manage licensing.

“The more software that you have doing the same tasks, the more you have to spend on support for these items. With time spent on testing and development, we had to reduce the footprint of our emulation software.”
(Desktop engineering consultant, Fortune 500 insurance firm)

In the old environment, two FTEs spent 10% of their time over a period of three months to comply with audit requirements for the emulation software. This lengthy audit process involved internal research of discrepancies on vendor-provided initial license numbers. The three-month audit process was now reduced to two weeks under Zephyr’s simpler licensing process.

The organization estimates that by reducing 11 products to one, it has also decreased IT management time by 20 hours per year per product. The organization also noted: “When we start looking to chargeback business units for licensing or maintenance costs, having just one emulation product to manage makes it much easier, and we can charge the business units faster.”

This reduction in complexity and simpler licensing through Zephyr PASSPORT saves the organization \$11,692 per year or a total of \$35,077 over three years.

Table 5
IT Administration Savings

Ref.	Metric	Calculation	Year 1	Year 2	Year 3	Total
C1	Number of FTE		2			
C2	Hourly rate per FTE	\$80,000/2,080 hours	\$38.46			
C3	Hours spent — audit		520			
C4	Percentage of time spent		10%			
C5	Hours spent — administration	10*20 hours	200			
Ct	IT administration savings	$(C1 * C2 * C3 * C4) + (C2 * C5)$	\$11,692	\$11,692	\$11,692	\$35,077

Source: Forrester Research, Inc.

Cost Avoidance Of Audit Penalties

In the previous environment, *Organization X* had to pay significant audit penalties due to a licensing agreement with one vendor that required the organization to deploy the newest version on its machines as each new emulation product version was released. At the time of the interview, the organization had already paid \$2 million (negotiated down from a higher penalty) as a result of these audits. “This expectation to deploy a new version each time [the vendor releases an upgrade] — it can’t necessarily happen in a large enterprise environment,” one of the organization’s desktop engineers noted. He cited the need to rewrite all the APIs for softphone applications as one example of work needed for each upgrade. The significant effort required for each required enterprise deployment and the increase in environment complexity were deciding factors in the organization’s decision to move to Zephyr PASSPORT.

While this cost avoidance benefit can be computed as a function of the number of new users, the interviewed organization quantified this benefit as a function of the hardware refresh rate in its PC environment. The organization’s expected rate of hardware turnover is a third of its environment every year as purchased machines are on a three-year cycle. In the previous environment, this would mean that the organization would be liable under audit for approximately 7,667 users per year, as these users’ machines would not have been upgraded to the newest release of the vendor software. The licensing agreement did not allow the organization to “downgrade” these users to old versions of the software. Penalties as a result of audit findings are typically charged at a retail cost of \$180 per seat instead of the enterprise-level discount.

By implementing Zephyr PASSPORT and Zephyr’s model of an enterprisewide license versus a licensing model metered per user, the organization avoids the cost of these “true-up” audit findings. For a conservative estimate, the Forrester TEI model assumes that only one audit with resulting penalties over a three-year period would occur for the organization if it had stayed with its old emulation environment. By moving to Zephyr PASSPORT, *Organization X* has avoided the cost of approximately \$1.38 million in audit penalties.

Table 6

Cost Avoidance — Audit Penalties

Ref.	Metric	Calculation	Year 1	Year 2	Year 3	Total
D1	Number of machines		23,000			
D2	Expected rate of environment turnover	1/3	33%			
D3	Retail cost per seat		\$180			
Dt	Cost avoidance — audit penalties	$D1 * D2 * D3$	\$0	\$1,380,000	\$0	\$1,380,000

Source: Forrester Research, Inc.

Ease Of Migration

Organization X also noted that migrating to Zephyr PASSPORT was easier than it anticipated. “They [Zephyr] really stepped up to [the] plate when converting macros,” one desktop engineering consultant noted. The organization needed 2,000 macros converted over from its other emulation products. Zephyr provided this service at no added cost to the organization in terms of professional fees.

Without the help of Zephyr developers, the organization estimated that it would have required two developers working 1,500 hours to convert, test, and deploy those macros. Zephyr saved the organization \$115,385 in development costs.

Table 7

Migration Cost Savings

Ref.	Metric	Calculation	Year 1	Year 2	Year 3	Total
E1	Number of developers		2			
E2	Hours spent on migration		1,500			
E3	Hourly rate per FTE	$\$80,000 / 2,080$ hours	\$38.46			
Et	Cost avoidance — audit penalties	$E1 * E2 * E3$	\$115,385	\$0	\$0	\$115,385

Source: Forrester Research, Inc.

Total Benefits

Table 8 summarizes the quantified benefits from the organization’s investment in Zephyr PASSPORT.

Table 8

Total Benefits (Non-Risk-Adjusted)

Benefits	Initial	Year 1	Year 2	Year 3	Total
Cost reduction — maintenance and support fees		\$400,000	\$400,000	\$400,000	\$1,200,000
IT administration savings		\$11,692	\$11,692	\$11,692	\$35,077
Cost avoidance — audit penalties			\$1,380,000		\$1,380,000
Migration cost savings		\$115,385			\$115,385
Total		\$527,077	\$1,791,692	\$411,692	\$2,730,462

Source: Forrester Research, Inc.

Other Benefits Not Quantified

Other qualitative benefits cited by the companies interviewed but not quantified in this study include:

Increased Agility

Organization X noted that by concentrating on one emulation product, Zephyr PASSPORT, it was able to become more agile in its ability to deploy solutions in the emulation space and decrease its time-to-market. Being able to develop and test on one solution rather than its previous environment of 11 solutions gives the organization the ability to deploy solutions faster and more confidence that it is able to deploy those solutions without issue.

Improved Ability To Implement New Projects

In the old environment of 11 emulation products, *Organization X* refrained from developing new projects as it could not justify the effort required to implement projects compatible with the different environments. With the implementation of Zephyr PASSPORT, *Organization X* was able to implement new projects for process improvement. An example of this was a project developed to improve end user productivity in its customer service center. The organization's customer service representatives (CSR) typically use applications that show screen pop-ups of customer data based on a customer ID and phone number. By integrating its emulation environment with other software technologies, the organization was able to modify the application to allow the CSRs to get these screen pop-ups of customer data without having to key in account information. If a customer was dialing in from a phone number that was already in the organization's database, CSRs would have immediate access to the information.

Organization X estimates that this new project has probably saved its 3,700 CSRs 5 minutes per day on average. While this project might have been implemented in the old environment, the organization estimates it would have taken three times the effort required when compared with its current emulation environment with Zephyr PASSPORT.

Flexibility

Flexibility, as defined by TEI, represents an investment in additional capacity or capability that could be turned into business benefit for some future additional investment. This provides an organization with the "right" or the ability to

engage in future initiatives but not the obligation to do so. From our interviews, we've found that there are multiple scenarios in which a customer can deploy Zephyr PASSPORT and later realize additional uses and business opportunities.

Although data for calculating the value of these flexibility options was insufficient when this study was conducted, our interviews identified areas that could produce flexibility options based on next-stage real options that have been described by the organization:

- *Organization X* can realize cost savings for future development projects to integrate Zephyr PASSPORT with other applications, such as email and softphone. As Zephyr provides its development tool kit free of charge to enterprise-level customers, Zephyr's application development team can use these APIs and avoid the cost of purchasing professional services to develop these projects. These savings should be measured against the internal cost of project development. The organization estimates to have at least five projects in a year in the future where, by using Zephyr's development tool kit, the work can be accomplished as "standard everyday work" instead of "project-level work."
- Additional cost avoidance savings and benefits as the organization takes advantage of the new features and functions in the automatic PASSPORT upgrades that Zephyr provides.

The value of flexibility is unique to each organization, and the willingness to measure its value varies from company to company (see Appendix B for additional information regarding the flexibility calculation).

Risk

Forrester defines two types of risk associated with this analysis: implementation risk and impact risk. "Implementation risk" is the risk that a proposed investment in Zephyr may deviate from the original or expected requirements, resulting in higher costs than anticipated. "Impact risk" refers to the risk that the business or technology needs of *Organization X* may not be met by the investment in Zephyr, resulting in lower overall total benefits. The greater the uncertainty, the wider the potential range of outcomes for cost and benefit estimates.

Quantitatively capturing implementation and risk by directly adjusting the financial estimates results in more meaningful and accurate estimates and a more accurate projection of the ROI. In general, risks affect costs by raising the original estimates, and they affect benefits by reducing the original estimates. The risk-adjusted numbers should be taken as "realistic" expectations, as they represent the expected values considering risk.

The following implementation risk that affects costs is identified as part of this analysis:

- Internal labor needed for implementation and support may exceed initial estimates.

The following impact risks that affect benefits are identified as part of this analysis:

- Variability in end user productivity savings depending on the applications developed using the emulation software.
- Variability in the extent of migration effort required that Zephyr provides services for.
- Variability in cost avoidance and cost reduction savings based on the pre-Zephyr PASSPORT environment.

Table 9 shows the values used to adjust for risk and uncertainty in the cost and benefit estimates. 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. Readers are urged to apply their own risk ranges based on their own degree of confidence in the cost and benefit estimates.

Table 9
Cost And Benefit Risk Adjustments

Costs	Low	Most likely	High	Mean
Zephyr PASSPORT subscription license fees	100%	100%	100%	100%
Internal labor — implementation	100%	100%	125%	108%
IT administrative costs	98%	100%	105%	101%
Benefits	Low	Most likely	High	Mean
Cost reduction — maintenance and support fees	90%	100%	105%	98%
IT administration savings	90%	100%	105%	98%
Cost avoidance — audit penalties	50%	100%	110%	87%
Migration cost savings	90%	100%	105%	98%

Source: Forrester Research, Inc.

Financial Summary

The financial results calculated in the Costs and Benefits sections can be used to determine the ROI, NPV, and payback period for the organization's investment in Zephyr. These are shown in Table 10 below.

Table 10

Cash Flow — Non-Risk-Adjusted

Cash flow — original estimates						
	Initial	Year 1	Year 2	Year 3	Total	PV
Costs	(\$120,000)	(\$184,150)	(\$184,150)	(\$184,150)	(\$672,450)	(\$577,954)
Benefits	\$0	\$527,077	\$1,791,692	\$411,692	\$2,730,462	\$2,269,209
Net benefits		\$342,927	\$1,607,542	\$227,542	\$2,058,012	\$1,691,255
ROI	293%					
Payback period	4.2 months					

Source: Forrester Research, Inc.

Table 11 below shows the risk-adjusted ROI, NPV, and payback period. These values are determined by applying the risk-adjustment values from Table 9 in the Risk section to the cost and benefits numbers in Tables 3 and 8.

Table 11

Cash Flow — Risk-Adjusted

Cash flow — risk-adjusted estimates						
	Initial	Year 1	Year 2	Year 3	Total	PV
Costs	(\$129,600)	(\$184,152)	(\$184,152)	(\$184,152)	(\$682,055)	(\$587,558)
Benefits	\$0	\$516,535	\$1,604,058	\$403,458	\$2,524,052	\$2,098,370
Net benefits		\$332,384	\$1,419,907	\$219,307	\$1,841,998	\$1,510,813
ROI	257%					
Payback period	4.7 months					

Source: Forrester Research, Inc.

The data collected in this study indicates that deploying Zephyr has the potential to provide a solid ROI through quantifiable cost avoidance savings, IT administration and migration savings, and productivity benefits. The risk-adjusted ROI of 257%, along with a rapid payback period (breakeven point), raises confidence that the investment is likely to produce a positive outcome, especially after the risks and uncertainty that may affect the project have been considered, quantified, and incorporated into the business case.

In interviews with Zephyr customers, Forrester found that organizations can realize benefits in the form of:

- Cost avoidance of software license maintenance fees.
- Reduction of environment complexity leading to lower IT administration costs.
- Cost avoidance of audit penalties.
- Ease of migration resulting in cost savings.
- Improved ability to implement new projects leading to increased end user productivity.
- Increased agility with faster solution deployment.

Based on these findings, companies looking to implement Zephyr can anticipate cost savings, cost avoidance of audit penalties, and productivity gains. Using the TEI framework, many companies may find a potentially compelling business case to make such an investment.

Zephyr and PASSPORT Software: Overview

According to Zephyr, for more than 25 years, Zephyr Development Corporation has produced advanced terminal emulation and legacy application integration software solutions. Today, through its PASSPORT family of products, Zephyr provides an essential link to critical business applications running on IBM System z (mainframe), IBM System i (AS/400), and Open World (Unix, Linux, OpenVMS) hosts.

Zephyr PASSPORT solutions offer secure and cost-effective alternatives to software from Attachmate, IBM, Micro Focus, and many others. Companies seek the Zephyr solutions when they need to substantially lower their costs associated with terminal emulation and legacy integration software.

With its enterprise and other innovative licensing plans, Zephyr helps customers simplify licensing and administration, gain much greater flexibility in deployment, improve productivity, and lower the total cost of ownership of essential host access and integration software. Zephyr puts its extensive experience and skills at the customer's disposal to make the transition to PASSPORT easy and seamless. With free "Switch to PASSPORT" utilities, macro-conversion services, automatic API compatibility, and customized conversion routines, switching from Attachmate, IBM, Micro Focus, and others cannot be easier or less expensive.

Zephyr prides itself on its ability to listen to and understand each customer's requirements and to deliver tailored solutions to ensure customer satisfaction.

Terminal Emulation Software

PASSPORT features robust TN3270E, TN5250E, VT, SCO ANSI, and Wyse terminal emulation clients and includes imbedded FTP and IND\$FILE file transfer as well as a standalone FTP client. There are two PASSPORT emulators: PASSPORT PC TO HOST and PASSPORT WEB TO HOST.

PASSPORT PC TO HOST® - Zephyr's flagship terminal emulation suite, is certified for Windows 7, Vista, and XP. It can be deployed directly to Windows desktops, or it can also be published from Citrix, Microsoft, or VMware virtual servers. For large enterprise accounts, preconfigured end user session profiles can be generated and stored on any HTTP server and used to centrally administer standard configurations of the Zephyr emulator.

PASSPORT WEB TO HOST® - An ActiveX terminal emulation suite designed especially for Microsoft Internet Explorer. This can be centrally deployed from a web server, including Microsoft IIS, IBM WebSphere Application Server, Apache/Tomcat, BEA WebLogic, and others.

PASSPORT terminal emulation software highlights:

- Provides access to IBM System z series (mainframe), IBM System i series (AS/400), and Open World host applications.
- TN3270E, TN5250E, VT100, VT220, VT420, SCO, ANSI, and WYSE terminal emulation.
- FTP file transfer standalone client or imbedded in session.
- Certified for Windows 7 and Vista and supports all Windows OS.
- Advanced SSL/TLS or SSH security available for each host or file transfer session.
- Fast IND\$FILE file transfer to IBM mainframe.
- Standard packages for easy distribution of software and configurations.

- Can be published from Citrix, Microsoft, or VMware virtual server/desktop environments.
- Can be published from any web server, including IBM WebSphere on z/OS.
- HLLAPI and Object API available to support existing or develop new applications.
- Object and script macro support for productivity enhancement.
- Fully customizable keyboard layout, mouse buttons, keypads, toolbar, hotspots, colors, fonts, and cursor.

Host Integration software

Whilst PASSPORT terminal emulation software API's can be used to help integrate so-called legacy based host applications, these require the terminal emulation software, designed to run on a client machine to also be running.

By using PASSPORT Host Integration Objects® (HIO), 3270 (IBM Mainframe, System z) and 5250 (IBM AS/400, System i) applications can be quickly integrated with other web, server or client applications using .NET, COM, ActiveX, Visual Basic and C/C++.

PASSPORT HIO includes a secure, programmatic TN3270E and TN5250E communications module, an Object based API, sample applications, source code and product documentation to enable users to quickly adapt and develop their own applications in hours. By using the 3270 or 5250 screen object as an API, the Zephyr solution offers a low-cost, low-risk solution for integrating valued legacy applications with other systems.

PASSPORT HIO applications can be published to either a Microsoft desktop or server platform. Typically, organizations that require replacing the traditional green screen and keyboard interface with a custom user interface (UI) and other controls will deploy PASSPORT HIO from a Windows 2008 Server. With server deployed applications, client devices, if they are required, can be anything. Those organizations that still seek to expose the traditional green screen interface as well as a custom based UI will in most instances use the HIO Terminal Control and publish their applications on the desktop / client.

Appendix A: Total Economic Impact™ Overview

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. The TEI methodology consists of four components to evaluate investment value: benefits, costs, risks, and flexibility.

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: 1) the likelihood that the cost and benefit estimates will meet the original projections, and 2) 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 enterprise wide 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 B: 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 respective 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.

Return on investment (ROI): A measure of a project’s expected return in percentage terms. ROI is calculated by dividing net benefits (benefits minus costs) by costs.

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 1 through 3 are discounted using the discount rate (shown in Framework Assumptions section) 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.

Table [Example]

Example Table

Ref.	Category	Calculation	Initial cost	Year 1	Year 2	Year 3	Total

Source: Forrester Research, Inc.
