

Prepared for Avanade

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## **The Total Economic Impact™ Of Employing Avanade® For A Microsoft Exchange Migration**

Single-Company Analysis — Hannover Re

Industry: Financial Services

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## **Executive Summary**

In May 2005, Avanade commissioned Forrester to examine the financial impact and potential return on investment (ROI) that an enterprise might realize by engaging with Avanade for migration of their Microsoft Exchange Server environment. In order to determine that impact, Forrester examined the specific costs, cost savings, flexibility, and risk elements for an organization that engaged Avanade for a migration to Exchange 2003. The organization in question is Hannover Re, a European-based financial services company with total premiums of €10 billion and roughly 1,200 employees.

### ***Purpose***

The purpose of this report is to provide readers with a *framework* with which to evaluate the potential financial impact of engaging with Avanade for a migration to Exchange 2003. Forrester's aim is to clearly show all calculations and assumptions that go into the analysis. This study should be seen as a guide to better understand and evaluate Avanade and its Microsoft Exchange Migration Solution to determine if it is a worthwhile investment.

### ***Methodology***

Avanade selected Forrester for this project because of its expertise in messaging platforms and because of its Total Economic Impact™ (TEI) analysis 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. Forrester's TEI methodology serves an extremely useful purpose by providing a complete picture of the total economic impact of purchase decisions. Please see Appendix A for additional information on the TEI methodology.

### ***Approach***

Forrester used a four-step approach for this study. First, Forrester interviewed Avanade system engineering and marketing personnel to fully understand the Avanade value proposition. Second, using input from existing Forrester research combined with knowledge of Avanade and its Microsoft Exchange Migration Solution, Forrester representatives conducted in-depth interviews with a representative from Hannover Re. Third, Forrester constructed a financial ROI model representative of the data collected in the interview. Fourth, Forrester created this study, which examines the estimated ROI and represents the findings of the customer interview and analysis process and leverages insight from Forrester's independent research.

### ***Key Findings***

Table 1 represents a summary of the ROI that Hannover Re achieved or can expect to achieve from using Avanade as lead consultant for its migration to Exchange 2003. The calculations of these financial metrics are explained in subsequent sections.

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**Table 1: Summary Financial Results Of Avanade Investment For Hannover Re**

Summary financial results	Unadjusted (Best case)	Risk- adjusted
ROI	281%	246%
Total three-year incremental costs (PV) <sup>1</sup>	€ 156,660	€ 167,104
Total three-year cost savings (PV)	€ 597,580	€ 577,661
Total three-year net savings (NPV) <sup>2</sup>	€ 440,920	€ 410,557

Source: Forrester Research, Inc.

In addition to calculating the incremental costs and benefits of choosing Avanade, we also calculated the estimated ROI of the overall Exchange migration. Table 2 illustrates the total costs and benefits of the migration from Exchange 2000 to Exchange 2003.

**Table 2: Summary Financial Results Of Exchange Migration For Hannover Re**

Summary financial results	Unadjusted (Best case)	Risk- adjusted
ROI	48%	34%
Total three-year incremental costs (PV)	€ 737,601	€ 786,774
Total three-year cost savings (PV)	€ 1,094,682	€ 1,058,192
Total three-year net savings (NPV)	€ 357,081	€ 271,418

Source: Forrester Research, Inc.

Several key factors drove the financial metrics contained within this analysis:

- For the value of the Avanade contribution at Hannover Re, the ability to speed up the time to project completion as well as reduction in the likelihood of higher internal costs were key factors in the added value of the Avanade solution.
- For the value of the Exchange migration at Hannover Re, there were several key factors that drove financial benefit. These included the number of users that are remote from the headquarters, the number of Exchange servers consolidated, the number of mobile users within the organization, and the estimated improvement in server availability with the Exchange environment.

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<sup>1</sup> PV: Present value of costs and cost savings. For this analysis, a 10% rate of discount is used to take into account the time value of money.

<sup>2</sup> NPV: Net present value; the difference in the present values of costs and cost savings

## ***Disclosures***

The reader should be aware of the following disclosures associated with this study:

- The study was commissioned by Avanade and delivered by the Forrester Consulting group.
- Avanade and Hannover Re reviewed the study and provided feedback to Forrester, but we maintained editorial control over the study and its findings, and did not accept changes to the study that contradicted Forrester's findings or obscured the meaning of the study.
- The customer name for the interview was provided by Avanade.
- Forrester makes no assumptions as to the potential ROI that other organizations will achieve within their own environment. Forrester strongly advises that readers use their own estimates within the framework provided in the report to determine the appropriateness of engaging with Avanade around an Exchange migration.
- This study is not an endorsement by Forrester of Avanade or its Microsoft Exchange Migration Solution.
- The study is not a competitive product analysis.

## ***Brief Description Of The Avanade Microsoft Exchange Migration Solution***

Founded in April 2000 in a joint venture between Accenture and Microsoft, Avanade is a technology integrator for Microsoft solutions. According to Avanade, its key areas of focus include: 1) infrastructure 2) .NET development; 3) security; 4) portals; 5) enterprise business solutions; 6) Microsoft Business Solutions; and 7) business intelligence. Within infrastructure, Avanade solutions include 1) desktop transformation; 2) platform migration; 3) enterprise communications; and 4) infrastructure management.

One solution within their enterprise communications suite of offerings is their Microsoft Exchange Migration Solution. Avanade performs end-to-end upgrades to Exchange 2003 from earlier versions of Exchange, as well as migrations from other non-Microsoft messaging platforms. They utilize a holistic approach when executing customized migrations and upgrades, ensuring that the customer is not adversely impacted during the migration. The migration process is kicked off with an assessment in which the business and technological benefits of implementing the new messaging system are analyzed. Then Avanade works with a company's staff to achieve quick deployments with little or no downtime by utilizing repeatable processes and reusable assets. A staged implementation approach is also typically followed, which allows a company to control cost and risk within parameters their organization can handle.

## **Summary Findings**

Developing a TEI model involves a multistep process. First, Forrester interviewed systems engineers and marketing personnel within Avanade. Then Forrester talked with a representative from Hannover Re who had used Avanade as part of a migration from Exchange 2000 to Exchange 2003. Data provided by the organization allowed Forrester to project a three-year ROI of between 246% and 281%. Forrester used the interview process to understand the distinct cost and value statements the organization saw as a result of its engagement with Avanade. Forrester then constructed a representative model based on those individual cost and value statements. The representative model makes up the main body of this report and should be used by readers as a guide to determine the ROI for their own organizations.

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Discussions with Hannover Re revealed several key drivers of benefits:

- The quality of the Avanade staff and their ability to handle difficult problems in a highly complex technical environment drove efficiency within the Exchange migration process, reducing the delivery time and risk associated with the migration.
- Avanade developed a scalable engineering process. A key part of the Avanade role was to build effective project management milestones up front to ensure a smooth migration of Windows and Exchange.
- The migration to Exchange 2003 and to a uniform technology environment provided increased stability, reliability, and scalability for the organization.

### **Organization Description**

This section illustrates a sample ROI analysis based on discussions with Hannover Re. This model was created as a result of discussions with the financial services organization to determine the underlying costs and benefits of engaging with Avanade for Exchange migration. Data contained within this model is based on information received from Hannover Re and represents preliminary interview findings. Since this model examines just one customer, data and the financial ROI should not be seen as validation of the potential return that any other organization may achieve from implementing the Avanade Microsoft Exchange Migration Solution. Organizations must use their own data to determine their own potential return.

Hannover Re and its migration to Exchange have the following characteristics:

- Hannover Re is a European-based financial services company with roughly 1,200 employees and total premiums under management of €10 billion.
- In January 2004, the organization decided to undertake a migration of its current Windows and Exchange environment. The decision to migrate was made for the following reasons: 1) to standardize and consolidate the technology environment; 2) to drive business efficiency and IT effectiveness; 3) to be able to better support and manage users and groups from around the world; 4) to collaborate and leverage common tools, processes, training, and technology across the organization; 5) to use improved functionality within the Windows and Exchange platforms; 6) to draw upon improved information-sharing capabilities; and 7) to access the Global Directory.
- The organization had originally engaged with a German-based consulting group to aid in the migration of the Windows platform. However, due in part to project delays, Hannover Re decided during the initial stages of migration to replace the initial vendor with Avanade for overall project management and implementation. The decision to engage with Avanade was based on the risk that the original consulting organization wouldn't be able to meet its migration commitments.
- The specific reasons that Hannover Re decided to upgrade its Exchange environment were to be able to consolidate the Exchange environment around a central IT location; to provide improved functionality to mobile and remote workers; and to ensure that high levels of performance would be maintained.
- Hannover Re also wanted to ensure that the current environment had high levels of stability prior to a major upgrade of its current ERP implementation.
- The organization implemented the Windows migration with Avanade over several phases: 1) project planning; 2) pilot migration; and 3) rollout to the remainder of the organization. The pilot program

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was designed to migrate all users over to the new Windows platform by June 2005 with the understanding that a majority of the work around the Windows platform would be completed in January 2005.

- For the Exchange platform, the organization planned on deploying Exchange in the latter half of 2004 and continuing through the first six months of 2005. As of June 1, all users were expected to be migrated over to the new platform.

Based on these assumptions, it is possible to construct a financial model that examines the costs and benefits of moving forward with Avanade for Exchange migration. The model will be measured on a three-year investment life cycle.

### **Costs Of The Avanade Contribution**

The total cost for the Exchange migration was estimated to be €849,997. This includes the costs of hardware, software, internal labor, and professional services. The organization estimated that it spent €75,000 in hardware costs on the migration; that Avanade spent 392 person days at an average billable cost of €1383 per day including expenses; and that the internal labor effort consisted of 389 person days at an average cost of € 600 per day. Table 3 illustrates the costs associated with the overall Exchange 2003 migration.

**Table 3: Overall Project Cost**

Ref.	Metric	Calculation	Value
A1	Hardware investment		€ 75,000
A2	Consulting cost — Avanade		€ 487,437
A3	Consulting cost — other		€ 54,160
A4	Consulting effort (person days)		392
A5	Avanade day rate		€ 1,383
A6	Total consulting cost	A3 + A2	€ 541,597
A7	Internal effort (person days)		389
A8	Internal day rate		€ 600
A9	Internal consulting effort (€)	A7 * A8	€ 233,400
A10	Total cost (without internal effort)	A6 + A1	€ 616,597
A11	Total cost (with internal effort)	A10 + A9	€ 849,997

Source: Forrester Research, Inc.

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For this analysis, we assume that the costs of the Exchange migration are allocated over two years with 50% in year 1 and 50% in year 2. Table 4 illustrates the breakdown in costs between year 1 and year 2.

**Table 4: Yearly Project Cost Breakdown**

Item	Year 1	Year 2	Total
Total cost incurred	€ 424,999	€ 424,999	€ 849,997
Avanade contribution	€ 243,719	€ 243,719	€ 487,437
Mailboxes converted	750	750	1,500
Cost per mailbox	€ 567	€ 567	

Source: Forrester Research, Inc.

A representative from Hannover Re believed that the original cost of the Avanade solution was an estimated 50% higher than the original consultancy the organization had engaged. Since this report examines the specific value of Avanade, we chose to isolate the added incremental cost the organization incurred by moving forward with the Avanade solution. Table 5 provides an estimate of the additional cost of the Avanade contribution compared with the original fixed-price alternative.

**Table 5: Incremental Cost Of Avanade**

Ref.	Metric	Year 1	Year 2	Total	PV
B1	Avanade cost	€ 243,719	€ 243,719	€ 487,437	€ 422,983
B2	Premium	€ 90,266	€ 90,266	€ 180,532	€ 156,660

Source: Forrester Research, Inc.

### ***Benefits And Cost Savings Of Engaging The Avanade Microsoft Exchange Migration Solution***

In speaking with the Hannover Re representative, Forrester discovered several benefits associated with using Avanade for their Exchange migration. These included the reduction in time-to-benefits around the Exchange platform as well as reduced internal project costs.

- Faster time-to-benefits.** A key benefit the interviewed organization identified was the reduction in time-to-benefits. By using Avanade, the organization believes it was able to complete the migration to Exchange 2003 12 months faster than it would have without Avanade. Table 6 illustrates the time-to-benefits provided by Avanade compared with that of an alternative option. With Avanade, all mailboxes are migrated by year 2; with the alternative, only 50% of mailboxes are migrated in year 2, and the rest migrate in year 3.

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**Table 6: Time-to-benefits: Avanade Versus Alternative Solution**

Item	Year 1	Year 2	Year 3	Total
Mailboxes converted — Avanade	750	750		
Cumulative mailboxes converted	750	1500	1500	1500
Percent complete — Avanade solution	50%	100%	100%	100%
Mailboxes converted — alternative	0	750	750	0
Cumulative mailboxes converted	0	750	1500	1500
Percent complete — alternative	0%	50%	100%	100%

Source: Forrester Research, Inc.

Through a faster migration, Hannover Re was able to realize key benefits associated with the migration to Exchange 2003 — savings from server consolidation, improved Exchange availability, and better mobile and remote access — a year earlier than it would have realized without Avanade. The description of each of these benefits is as follows:

- A major goal of the Exchange migration was the ability of Hannover Re to consolidate its remote Exchange servers into a central IT location. Prior to the migration to Exchange, Hannover Re had a total of eight remote offices running Exchange directly on a locally managed server. Typically, server management was performed by an employee, whose primary job function was not IT, thus taking away the overall productivity of the employee. In performing the migration, the organization believed it could generate higher overall cost efficiency by moving to a centrally managed Exchange environment. For the purpose of this analysis, we assume that for each of the eight locations, the organization will consolidate one server each to the central location. We assume that prior to the Exchange migration, one employee was devoting 50% of his or her time to managing the Exchange environment at an average cost of €45,000 per year. We also assume that the added cost of additional staff and hardware to the central location is €100,000. We can then calculate the total yearly savings of consolidation to be €260,000 ( $[45,000 \times 8] - 100,000 = €260,000$ ).
- Another goal of the Exchange migration was to provide mobile and traveling users with better access to the Exchange environment. Prior to the migration to Exchange 2003, the organization noted that mobile and traveling users had difficulty synchronizing and accessing their mailboxes. For the purpose of this analysis, we assume that roughly 10% of the population (120 users) is mobile or travels on a regular basis within a given year. In addition, we assume that each of those traveling users spends an average of 20 minutes monthly accessing their email from a mobile device. This translates into a total of four hours per year per user ( $[20 / 60] \times 12 \text{ months} = 4 \text{ hours}$ ). We also assume that the enhanced capabilities of Exchange — coupled with the benefits of Outlook Web Access — can reduce the total amount of time needed to access email by an estimated 40%, or 1.6 hours per year ( $40\% \times 4 = 1.6$ ). Assuming that the fully burdened salary of an end user is €45 per hour, this translates into annual savings of €8,640 per year ( $1.6 \text{ hours} \times €45 \times 120 \text{ users} = €8,640$ ).

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- In addition, the organization saw that a final key benefit of Exchange is the ability to improve reliability and minimize downtime of the Exchange environment satellite offices. The organization noted that prior to the upgrade of Exchange, remote sites typically took longer to recover if there was an incident related to the Exchange environment. The organization felt that by centralizing the Exchange environment and control and management of the Exchange servers, overall downtime to remote sites was improved. For the purpose of this analysis, we assume that the organization across their eight sites have an estimated five Exchange-related failures over the course of a year. For each of these failures, an average 50% of the user population is affected for a period of five hours. During this time, we estimate that the individual users are 40% less productive due to their inability to access Exchange. Assuming these failures will be reduced as a result of the migration to Exchange 2003, the annual net savings resulting from improved downtime will be €270,000 (1,200 users \* 50% \* 5 hours \* 5 failures \* €45 \* 40% = €270,000).

**Table 7: Exchange 2003 Migration Benefits**

Ref.	Metric	Percent	Value
C1	Hardware consolidation savings	48%	€ 260,000
C2	Remote access savings	2%	€ 8,640
C3	Improved end user availability	50%	€ 270,000

Source: Forrester Research, Inc.

The figures in Table 7 represent estimated yearly savings as a result of the Exchange migration. As stated above, one of the key savings Hannover Re realized as a result of engaging with Avanade was an improvement to the time-to-benefits. Applying the yearly benefits above to the time it will take for the mailboxes to be converted, we are able to calculate the savings resulting from faster time-to-benefits. Table 8 illustrates the differences in savings between Avanade and the alternative solution.

**Table 8: Avanade Versus Alternative**

Item	Year 1	Year 2	Year 3	Total	PV
Benefits received — with Avanade	€ 269,320	€ 538,640	€ 538,640	€ 1,346,600	€ 1,094,682
Benefits received — with alternative	€ 0	€ 269,320	€ 538,640	€ 807,960	€ 627,267
Savings — Avanade	€ 269,320	€ 269,320	€ 0	€ 538,640	€ 467,415

Source: Forrester Research, Inc.

The total savings of €538,640 (PV €467,415) represent the incremental benefit of choosing Avanade over the alternative solution.

- **Reduced internal resource costs.** In addition to faster time to Exchange benefits, the organization also identified a reduction in deployment effort over the entirety of the project. Hannover Re was unable to quantify the exact reduction in rework and critical defects, because it didn't experience a large-scale migration without Avanade. However, it did feel that the Avanade contribution reduced the overall project cost by approximately 25%. To be conservative, Forrester assumes that the 25%

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figure represents an additional 250 person days on the project. Assuming that the internal employee cost is €600 per day, this translates into €150,000 (250 days \* €600 = €150,000), a value divided equally between year 1 and year 2. Table 9 provides the benefits associated with reduced internal resource costs.

**Table 9: Time-To-Benefits Savings Of Using Avanade**

Item	Year 1	Year 2	Year 3	Total	PV
Savings from Avanade	75,000 €	75,000 €	0 €	150,000 €	130,165 €

Source: Forrester Research, Inc.

Table 10 illustrates the overall incremental benefits of choosing Avanade over the alternative solution.

**Table 10: Overall Benefits Of Using Avanade**

Item	Year 1	Year 2	Year 3	Total	PV
Savings from reduced time-to-benefits	€ 269,320	€ 269,320	€ 0	€ 538,640	€ 467,415
Savings from reduced internal costs	€ 75,000	€ 75,000	€ 0	€ 150,000	€ 130,165

Source: Forrester Research, Inc.

### ***Risks Associated With Estimates Of Costs And Benefits***

Risk-adjusted and unadjusted ROIs are both discussed in this study. Risk assessments provide a range of possible outcomes, based on the general risks associated with IT projects and the specific risks of moving to a new technology solution. In this study, Forrester discovered that engaging with Avanade was a relatively low-risk endeavor, as expressed by the interviewed organization.

Risk factors are used in TEI to widen the possible outcomes of the costs and benefits (and resulting savings) associated with a project. Since the future cannot be predicted with complete certainty, there is risk inherent in any project. TEI captures risk in the form of risks-to-benefits and risks-to-costs.

The following general risks were considered in this report:

- The risk that a portion of the benefits attributed to Avanade was instead a function of the Exchange migration as a whole.
- The risk that the estimated cost savings varied from the actual savings due to the difficulty associated with measuring cost savings post-implementation.
- The risk that the cost savings realized by Hannover Re were to some degree a function of the complex technical environment in which the organization operated — that a company with a less complex environment might not realize the same cost savings from employing Avanade.

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If a risk-adjusted ROI 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. Since the risk-adjusted numbers represent the expected value considering risk, they should be taken as “realistic” expectations. Assuming normal success at mitigating all risk, the risk-adjusted numbers should more closely reflect the expected outcome of the investment.

**Table 11: Summary Financial Risk-Adjusted Results For Hannover Re**

Summary financial results adjusted for risk	Year 1	Year 2	Year 3	Total	PV
Risk-adjusted savings and incremental benefits	€ 332,843	€ 332,843	€ 0	€ 665,685	€ 577,661
Risk-adjusted costs	€ 96,284	€ 96,284	€ 0	€ 192,568	€ 167,104
Cash flow	€ 236,559	€ 236,559	€ 0	€ 473,118	€ 410,557
Risk-adjusted ROI	246%				

Source: Forrester Research, Inc.

## Conclusions

This report is meant to provide the reader with a framework in which to examine the costs and benefits of the Avanade Microsoft Exchange Migration Solution on a geographically complex organization. Data derived from an individual customer interview supports Forrester's findings around the potential for Avanade to stabilize, reduce delivery time, and minimize downtime and risk.

It should be noted that although the initial cost of Avanade was higher than the alternative solution, the organization felt that the benefits received from improved time-to-benefits and lower overall migration costs provided a positive ROI.

Several key factors drove the financial metrics contained within this analysis:

- For the value of the Avanade contribution at Hannover Re, the ability to speed up the time to project completion as well as reduction in the likelihood of higher internal costs were key factors in the added value of the Avanade solution.
- For the value of the Exchange migration at Hannover Re, there were several key factors that drove financial benefit. These included the number of users that are remote from the headquarters, the number of Exchange servers consolidated, the number of mobile users within the organization, and the estimated improvement in server availability with the Exchange environment.

Based on our in-depth discussions with the Avanade customer, Forrester projects that the Avanade contribution yields a three-year risk-adjusted ROI of 246% (281% unadjusted). The net present values for the investment are \$410,557 (risk-adjusted) and \$440,920 (unadjusted). The present value costs of the investment are €167,104 (risk-adjusted) and €156,660 (unadjusted). The present value benefits of the investment are €577,661 (risk-adjusted) and €597,580 (unadjusted).

## Appendix A: Total Economic Impact™ Primer

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 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. TEI applies a probability density function known as “triangular distribution” to the values entered. At minimum, three values are calculated to estimate the underlying range around each cost and benefit.