

A Total Economic ImpactTM Analysis of Remedy Asset Management: Retail

March 2, 2004

Introduction

In November 2003, Remedy commissioned Forrester Research, Inc. to examine the total economic impact of implementing its Remedy Asset Management solution.

Remedy Asset Management tracks the lifecycle and total costs of IT assets from purchase, to installation, usage, and ultimate retirement. It is part of its IT Management Services suite of software products consisting of Asset Management, Change Management, Help Desk and Service Level Agreements. This document highlights a financial model created as a result of discussions with a single customer, a US based retail organization, which implemented Remedy Asset Management along with other Remedy products including:

- IT Service Management
 - Help Desk
 - Service Level Agreements
- AR System
 - Migrator
- Support Services
- Training Services

This report focuses solely on the impact of Remedy Asset Management and the estimated five-year return on investment (ROI) within the retail organization's environment.

Purpose. The primary purpose of this report is to provide readers with a guide to model the costs and benefits of implementing Remedy Asset Management within their organization. Data contained within this report should be used as a starting point in calculating the costs and benefits of automating IT asset management. However, Forrester strongly advocates that organizations apply their own estimates to evaluate the full economic impact of Remedy Asset Management.

Methodology. Forrester was selected for this project because of its Total Economic ImpactTM (TEI) analysis methodology, which not only measures costs and cost reduction (areas that are typically accounted for within IT) but also weighs the enabling value of a technology to increase the effectiveness of overall business processes. The four fundamental elements of TEI are employed to model the ROI of the retail organization:

1. Cost and cost reduction
2. Benefits to the entire organization

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3. Flexibility
4. Risk

Given the increasing sophistication that enterprises have regarding cost analyses related to IT investments, Forrester's TEI methodology serves an extremely useful purpose by providing a complete picture of the total economic impact of IT purchase decisions.

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

- The study is commissioned by Remedy and delivered by the Forrester Consulting group.
- Remedy reviewed this document 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.
- Remedy provided the customer contact to Forrester.
- Forrester makes no assumptions as to the potential return on investment that other organizations will receive within their own environment. Forrester strongly advises that reader should use their own estimates within the framework provided in the report to determine the appropriateness of an investment in Remedy Asset Management.

Customer Goals, Objectives and Context

At the time of the IT investment, the retail organization wanted to achieve the following goals and objectives from Remedy Asset Management:

- Identify and track the organization's IT assets over the entire lifecycle: Prior to automating asset management, the organization did not have a way to accurately track and account for all assets at their retail locations. As a result, the organization was unable to determine the number and condition of existing assets on an enterprise-wide basis.
- Allocate and tie the costs of assets to individual retail locations: Prior to automation, there was no way to track specific assets distributed to individual retail locations, reducing the likelihood that the organization that could keep track of warranty and lease information.
- Improve efficiency of the help desk by providing timely and more accurate asset information.
- Centrally manage remote or distributed assets.

Prior to the implementation of Remedy Asset Management, the organization had the following characteristics:

- An asset management staff of 9 full-time employees.
- An estimated 1,400 US based stores with additional locations outside of the US, along with a corporate office.
- Approximately 150 different asset types.
- A distributed network and infrastructure environment with multiple business units located throughout the world.

TEI Framework

This section illustrates the sample financial model created from discussions with the retail Remedy customer that had deployed Remedy Asset Management. This framework will examine the costs incurred

to move to the Remedy solution, sample benefits potentially achieved from such a migration, and potential risks that could affect the individual cost and benefit estimates.

For this analysis, the interviewed organization listed several cost and benefit categories which drove their initial ROI analysis of the Remedy Asset Management solution. Specific estimates are based discussions with the retail organization and subsequent quantification and projections by Forrester.

Cost

Several different costs were incurred as a result of the migration to Remedy Asset Management. These included both internally generated costs as well as costs paid directly to Remedy. The following cost categories illustrate costs billed directly to Remedy as a result of implementing the Remedy Asset Management solution:

- **Licensing:** The cost to license Remedy Asset Management within the environment.
- **Maintenance and support services:** The cost of support and maintenance billed to Remedy. Forrester assumes that the cost of yearly maintenance constitutes roughly 19% of the total license cost which equates to \$16,742 per year.
- **Training:** The cost of a class to train the Remedy administrator.

The following costs were either incurred by the organization internally or billed to a separate third party organization:

- **Additional hardware:** The cost of scanning equipment for the collection of asset data. For the purpose of this analysis, the cost of additional hardware was estimated to be \$7,000.
- **Development cost:** The cost billed to an external consultant team to develop and build custom components that complement the asset management solution. These include the need to integrate Remedy Asset Management with the tagging and scanning of assets and creating a specific asset catalogue unique to the retail organization.
- **Internal management:** The additional cost to manage the Remedy solution. These costs include the ongoing cost of administration and internal development.

Total Costs

Table 1 illustrates the total costs during a five year period. The majority of the costs were incurred in the first year of analysis. The retail organization noted that while the implementation of the actual product took roughly 18 weeks, the accumulation of asset tracking data took longer, primarily because there was no unified asset tracking system prior to Remedy Asset Management. A discount rate of 10 percent was used for the net present value (NPV) calculations throughout this analysis.

Table 1: Total Costs

Cost	Year 1	Year 2	Year 3	Year 4	Year 5	Total	NPV
Licensing	\$88,116	\$0	\$0	\$0	\$0	\$88,116	\$80,105
Support & Maintenance	\$16,742	\$16,742	\$16,742	\$16,742	\$16,742	\$83,710	\$63,466
Training	\$14,425	\$0	\$0	\$0	\$0	\$14,425	\$13,114
Additional Hardware	\$7,000	\$0	\$0	\$0	\$0	\$7,000	\$6,364
Customized Development	\$107,000	\$0	\$0	\$0	\$0	\$107,000	\$97,273
Asset Tagging	\$110,000	\$0	\$0	\$0	\$0	\$110,000	\$100,000

Planning	\$7,000	\$0	\$0	\$0	\$0	\$7,000	\$6,364
Internal Management	\$40,000	\$40,000	\$40,000	\$40,000	\$40,000	\$200,000	\$151,631
Total	\$390,283	\$56,742	\$56,742	\$56,742	\$56,742	\$617,251	\$518,316

Source: Forrester Research, Inc.

Benefit

For this analysis, the interview uncovered several benefits attributable primarily to the IT organization. These include:

- Reallocation of Found Assets
- Warranty Tracking
- Reduction in Repair Costs from Tracked Assets
- Lease Management

In addition, to these benefits cited above, the organization discussed other benefits that were more difficult to quantify. These included:

- Asset analysis. The organization noted that by automating IT asset management they are now able to determine how many times an asset has been repaired and are able to retire that asset from the infrastructure before it becomes a problem. This reduces calls to the service desk and potentially reduces support costs.
- Asset tracking of non-IT assets in other departments.

To calculate the benefits, a five-year cash flow window is used beginning at the time that the first cost was incurred. The interviewed retail organization stated that the implementation of the system took several weeks. However, it took a period of 18 months for the organization to fully catalogue and track all assets within their environment. As a result, benefits begin in the second year of analysis and ramp up to 100 percent in the third year. Table 2 illustrates the ramp up schedule for benefits.

Table 2: Ramp Up Schedule

	Year 2	Year 3	Year 4	Year 5
Ramp up	50%	100%	100%	100%

Source: Forrester Research, Inc.

Reallocation of found assets: Table 3 illustrates the steps required to calculate the savings from the value of found assets. For example, the organization noted that as a result of automating the IT asset management process they have discovered assets previously unknown at retail locations. The interviewed organization noted that by better understanding the current asset mix within the individual retail locations, the organization can potentially save on future procurement of assets. For the purpose of this analysis, we assume that the organization has 150 asset types with an average of 40 assets found per type.

Table 3: Reallocation of Found Assets

Ref	Value	Equation
A1	Number of fixed asset types	150
A2	Average number of found assets by type	40

A3	% which could be reallocated	30%	
A4	Average cost of asset	\$100	
A5	Total Yearly Savings	\$180,000	$A1*(A2*A3)*A4$

Source: Forrester Research, Inc.

Warranty Tracking: Table 4 illustrates the savings IT can achieve through a better understanding of the current warranty status of existing assets. As the organization gains a more complete picture of which assets are under warranty, future repair costs may be avoided.

Table 4: Warranty Tracking

Ref		Value	Equation
B1	Number of fixed asset types	150	
B2	Average number of assets shipped by type	200	
B3	% of assets returned	10%	
B4	% of assets returned covered under warranty	35%	
B5	Average cost of repair	\$100	
B6	Total Yearly Savings	\$105,000	$(B1*B2)*(B3*B4)*B5$

Source: Forrester Research, Inc.

Reduction in repair costs from tracked assets: Table 5 illustrates another potential area of savings that the retail organization mentioned. The organization noted that repair costs for certain devices can be reduced if they are able to track and account for certain devices that are recalled due to product defects. As a result, if the organization has accurate tracking of IT assets and their individual serial numbers, the assets will be replaced or repaired free of charge. The organization expects that at least one asset per year will be eligible for repair under a product defects class action lawsuit.

Table 5: Reduction in repair costs from tracked assets

Ref		Value	Equation
C1	Average cost to repair device	\$80	
C2	number of devices	200	
C3	Yearly Savings	\$16,000	$C1*C2$

Source: Forrester Research, Inc.

Lease management: Table 6 illustrates the yearly savings due to better control and accounting of the retail organization's leased IT assets. The organization noted that, with Remedy Asset Management, they can more accurately tie particular lease agreements to specific IT assets and thereby reduce the potential for lease penalties due to improperly leased equipment.

Table 6: Lease Management

Ref		Value	Equation
D1	Number of fixed asset types	150	
D2	Number of devices under lease by type	20	

D3	Penalty of lost lease	\$40	
D4	Total Yearly Savings	120,000	D1*D2*D3

Source: Forrester Research, Inc.

Total Benefits: Table 7 illustrates a summary of total benefits.

Table 7: Total Benefits to the Organization

Benefit	Year 1	Year 2	Year 3	Year 4	Year 5	Total	NPV
Reallocation of Found Assets	\$0	\$90,000	\$180,000	\$180,000	\$180,000	\$630,000	\$444,325
Warranty Tracking	\$0	\$52,500	\$105,000	\$105,000	\$105,000	\$367,500	\$259,190
Reduction in Repair Costs	\$0	\$8,000	\$16,000	\$16,000	\$16,000	\$56,000	\$39,496
Lease management	\$0	\$60,000	\$120,000	\$120,000	\$120,000	\$420,000	\$296,217
Total	\$0	\$210,500	\$421,000	\$421,000	\$421,000	\$1,473,500	\$1,039,227

Source: Forrester Research, Inc.

Risk

Risk is an estimate of the level of uncertainty around cost and benefit estimates. Risk-adjusted and non-risk adjusted ROI are both discussed in this study. The assessment of risks provides a range of possible outcomes, based on the risks associated with IT projects in general and specific risks relative to system management projects.

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 accurately predicted, 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:

- Lack of corporate discipline in creating processes and procedures to best take advantage of the benefits
- Lack of appropriate training for IT and end-user personnel who will be responsible for achieving and optimizing the benefits from automated asset management
- Increase in variability around benefit estimates over time

Summary and Conclusions

Table 8 illustrates the cash flow resulting from the introduction of Remedy Asset Management within the retail organization.

Table 8: Resulting Cash Flow

Cash Flow	Year 1	Year 2	Year 3	Year 4	Year 5	Total	NPV
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Cost	\$390,283	\$56,742	\$56,742	\$56,742	\$56,742	\$617,251	\$518,316
Benefit	\$0	\$210,500	\$421,000	\$421,000	\$421,000	\$1,473,500	\$1,039,227
Cash Flow	-\$390,283	\$153,758	\$364,258	\$364,258	\$364,258	\$856,249	\$520,911
Payback							32 Months
ROI							101%

Source: Forrester Research, Inc.

The risk-adjusted cash flow appears in Table 9.

Table 9: Risk-Adjusted Cash Flow

Cash Flow	Year 1	Year 2	Year 3	Year 4	Year 5	Total	NPV
Cost	\$403,292	\$58,633	\$58,633	\$58,633	\$58,633	\$637,826	\$535,593
Benefit	\$0	\$206,992	\$413,983	\$413,983	\$413,983	\$1,448,942	\$1,021,907
Cash Flow	-\$403,292	\$148,358	\$355,350	\$355,350	\$355,350	\$811,115	\$486,313
Payback							33 Months.
ROI							91%

Source: Forrester Research, Inc.

These findings illustrate the five-year return for the interviewed organization.

The financial returns indicate that the use of Remedy Asset Management within the representative organization drives efficiency savings within the organization, leading to a positive return on the technology investment. While the overall cash flow is positive, it should be noted that the time it took for benefits to accrue was lengthened in part due to organizational and process issues that were addressed after implementing the solution.

Glossary of Financial Terms

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.

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 NPV's.

Payback period: The break even 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 expected return in percentage terms. ROI is calculated by dividing net benefits (benefits minus costs) by costs.