

The Value of Change Management

More than Meets the Eye

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This Robert Frances Group (RFG) paper is an independent assessment of the value of change management to SERENA Software, Inc. clients. RFG held extensive interviews with five Serena clients to date to uncover the business benefits of using Serena Change Management solutions. The audience for the paper is C-level executives at large- and medium-sized organizations.



22 Crescent Road
Westport, CT 06880
<http://www.rfgonline.com>

The Value of Change Management – More than Meets the Eye

RFG believes enterprises typically underestimate the value of change management in the life cycle of software applications. Many enterprises have little or no repeatable processes in place, and often use only rudimentary tools before embracing the concept of process-oriented enterprise change management (ECM).

This white paper is an independent assessment of the value of change management as discovered amongst selected Serena Software, Inc. clients. IT executives should evaluate the costs and benefits of application change management from a holistic perspective to account for both tactical and strategic elements of a return on investment model. In addition, IT executives should consider the intangible benefits that do not have direct monetary visibility but are critical to the alignment of IT with business goals.

Business Imperatives:

- **Create Metrics:** Most development groups and IT organizations have no metrics to determine the value of specific development process or tool initiatives. While many work toward justification of specific applications, it is more difficult to make the case for improved processes and tools to support them. Justification of application change management requires IT executives to evaluate business as well as technical costs and benefits to achieve a true and complete view. IT executives should evaluate the cost savings landscape in its entirety, especially focusing on reduced unplanned downtime, which led to enormous savings for clients interviewed for this study.
- **Garner Executive Sponsorship:** ECM touches many people and processes in an enterprise. Therefore, those changing ECM procedures and tools need buy-in from senior executives and affected business units, as well as from development groups. Change often meets early resistance, but this study shows that eventually, even those reluctant parties end up benefiting from the improvements. IT executives should stay the course in the early stages of ECM implementations, as eventually progress will overcome transition issues.
- **Exert Process Control:** The current environment for application development is rife with challenges, requiring tight control of application releases. More than ever, enterprises rely on applications to become and remain competitive. Furthermore, regulatory requirements in many industries paint a risk management layer over all IT activities. IT executives with immature ECM processes and tools should completely evaluate the risks in their application rollouts, and look toward mitigation with solid ECM processes and tools.

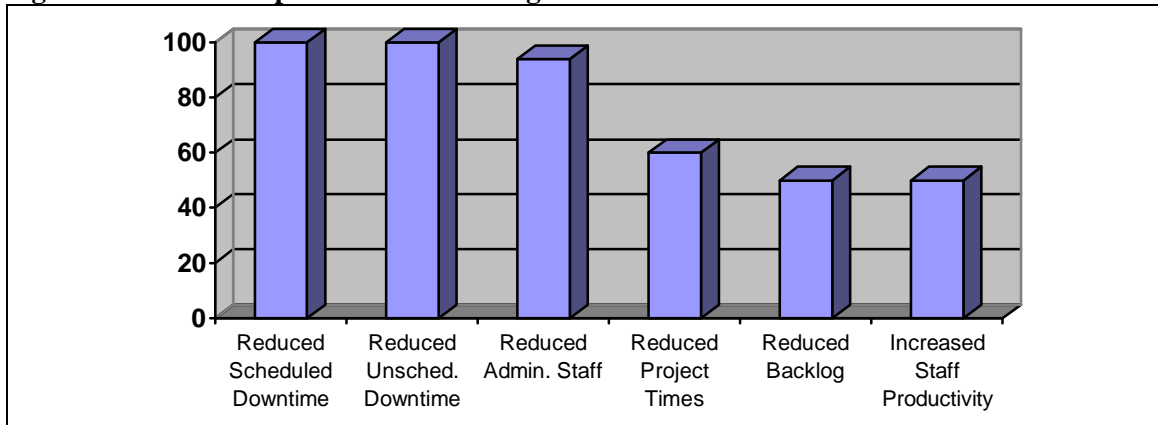
The Value Proposition – What Clients Say

Serena clients touted many benefits of Serena™ ChangeMan® products and ECM process compliance. Those benefits fall into three categories – those affecting operations, those associated with developers, and others. There are tangible benefits as well as intangible payback - all are important in the value equation for Serena ChangeMan products.

The five Serena Software client companies that participated in the study are briefly described below. Figure 1 presents a summary of the improvements experienced by study participants after deploying Serena ChangeMan products.

- Client 1: Retail Products, 200 developers, more than \$10B in annual sales
- Client 2: Financial Services, 40 developers, \$20M in annual sales
- Client 3: Managed Services Provider, 15 developers, \$150M in annual sales
- Client 4: Food Services, 500 developers, more than \$30B in annual sales
- Client 5: Transportation Services, 75 developers, privately held, does not disclose sales

Figure 1: Selected Improvement Percentages



Source: Robert Frances Group

Application Life Cycle Realities

RFG's interviews with Serena clients as well as interactions with many enterprise IT organizations indicates many common challenges related to managing the application life cycle.

- **Approvals and notifications are critical to successful application deployment.** If such approvals are not easy and fast, projects are likely to be late, off target, or fail entirely.

"After only six months of use, we are already experiencing benefits from ChangeMan. With very little training, we have seen administration savings with elimination of meetings and e-mails we needed to use before." Sr. Project Leader, Transportation Company.

- **Project backlogs are a fact of life.** There is always more demand than resource to support them. Organizations that combine business-centric priorities with solid tools to respond to constituent demands rapidly and efficiently are the ones most able to reduce project backlog.

"We reduced participation in our daily change meetings from 30 to three people because of Serena ChangeMan. Whereas before we needed everyone making a change, now only the key people need to attend." Team Leader, Retailer.

- **Competitive edge for a business can sometimes come through its applications.** An enterprise may therefore need to grow its internal development staff rapidly and/or outsource programming work. Such growth can introduce inconsistencies and other challenges, unless accompanied by efficient, effective ECM.

"Serena ChangeMan has been one main reason why we were able to grow our development staff by almost 100 percent in the last five years." Team Leader, Retailer.

- **Cross-platform development.** Legacy systems are not generally replaced outright. In addition, departmental purchases without standards, along with mergers or acquisitions and outsourcing, all create a mixed environment for all large enterprises. Change management solutions must therefore address the breadth of platforms in place to meet most effectively the requirements of the modern enterprise.
- **Disaster recovery requirements are critical.** Driven by regulatory requirements and/or business continuity needs, many enterprises are rethinking disaster recovery. Application change management is an important component of such plans, as it can be a basis for recreating applications if necessary.
- **Emergencies are more frequent than they ought to be.** RFG interviews indicated that for a variety of reasons, "emergency" requests to IT are growing in frequency. This may be due to rapid changes in business markets or even corporate cultures. IT can try to educate the business on the real costs of such emergencies. However, the best response is typically a process for handling emergencies effectively, backed by a solid set of tools that make such response possible.

"We have to deal with as many as 15 emergencies in seven production packages each day. There is no way we could do this without Serena ChangeMan." Director of Change Management, Food Industry.

- **Homegrown tools for change management are common.** Many organizations start with homegrown change management solutions, if they use any at all. Typically, those interviewed by RFG found these methods did not even begin to allow their organizations to address enterprise requirements effectively. Homegrown tools do not scale, and are often accompanied by lax processes for ECM.

"We had a homegrown system that would not scale. With Serena ChangeMan, we could move a lot more changes without adding any staff even though we grew 30 percent. Most importantly, Serena ChangeMan allowed us to handle very large clients who helped fuel our company's growth." Manager, Service Provider.

- **Production applications frequently need new functionality.** While respondents asserted that production applications are stable, they also said that business requirements often lead to new functionality requests, even for mainframe applications.
- **Rapid application recovery and rollback abilities are essential.** Changes sometimes inadvertently introduce new problems. These introduced problems can cause disruptive and expensive downtime. IT organizations must be able to quickly return to a functioning or previous state.
- **IT must do more with less, perhaps indefinitely.** - Many enterprise IT departments are chartered with more active roles at their enterprises, even while available resources decline. Also, some endure flux brought about by mergers and/or acquisitions. Change management can help impose control over IT initiatives buffeted by such developments.

"Because of Serena ChangeMan we were able to cut development and administration staff by 1/3 even while we were still acquiring other businesses." Director of Change Management, Food Industry.

Critical Success Factors

Executive-level support is essential for ECM process enforcement and tool implementation. While Serena ChangeMan offerings address the process requirements for Serena clients, all interviewed stressed the importance of executive support for the project. The use of an ECM process can be disruptive at first, because developers and others may be used to few or no rules. With an ECM implementation based on best practices, however, executives must direct those involved to use the proposed procedures and tools without exception. Clients interviewed said that after an adjustment period, even those originally opposed to the new processes fell in line, once they experienced the promised benefits.

Serena ChangeMan users with large implementations stressed the need to deploy new ECM systems in phases. This phase-in could begin with quick but comprehensive use of an ECM solution on a small number of projects, to show success and gain momentum for broader deployment. This strategy allows IT executives and developers to conduct and refine training and to work out other kinks with limited initial exposure, thereby smoothing full rollout.

"The number of people and applications we were able to bring up in the Serena ChangeMan environment during the first year was much higher than expected." SCM Administrator, Financial Services Provider.

Lastly, organizations that stress and value process are much more likely to achieve the most benefit from an ECM implementation. In fact, the full business benefits of ECM are impossible without this commitment. While 100-percent enthusiasm is typically unrealistic, enterprises with the executive endorsement described above and a culture of process adherence will find ECM returns faster and more frequent.

Unscheduled Downtime Reduction Means Huge Savings

While some enterprises plan periods of system downtime for routine tasks such as software installations or upgrades, unplanned downtime is almost always costly and disruptive. By some estimates, software error accounts for 8 percent of unplanned downtime. (Source: "Disaster Recovery Journal," Spring 2001.) The estimated costs of downtime vary by industry, and are as high as \$6.5 million per hour for financial services companies. As an average across all businesses, the hourly cost is estimated to be \$300,000 to \$1,000,000 per hour. (Source: "Building Effective Networks for Business Continuity," Computer Network Technology Corporation, 2001.)

"One big reason we purchased Serena ChangeMan was to stop outages caused by changes. Those outages were lasting several hours apiece. Speedy back-outs of failed code and automated changes means no long outages anymore." Team Leader, Retailer.

Using the above estimates and information provided by clients in this study, reduction of unplanned downtime results in huge annual savings for Serena ChangeMan users. Savings estimates ranged from as little as \$256,410 to as much as \$511,252, while estimated total downtime reductions ranged from one to 11 percent of revenues.

Based on downtime savings alone, some Serena ChangeMan clients experienced payback in as little as two to three months.

Risk Management – The New Imperative

According to clients interviewed, the single most important factor in selecting and using Serena ChangeMan is to reduce risk, which in turn saves money, as reflected by the downtime reductions explained above. Without controls, the application life cycle is full of huge risks. Such risk is unacceptable, especially for regulated companies. In some cases, Serena ChangeMan replaced legacy processes dependent upon paper notifications. Such processes rely on trust and manual steps prone to frequent errors.

"For us, the savings were not the big issue – we needed control. In our business we have audits and regulatory controls that require us to better manage application changes." VP, Financial Services Provider.

Two other key elements of risk management that drive ECM are application availability and security. Without controls such as ECM, security of applications tends to be more lax and less tested. Furthermore, ECM improves communication between developers and infrastructure experts to ensure applications are likely to meet service level requirements. In today's hyper-competitive business environment, application performance and uptime are not just nice to have – they are critical to business viability.

Thus, while Serena ChangeMan clients reduced costs in several ways, as discussed previously, risk management, not cost reduction, is the main reason for selection and continued use. Clients told RFG that even if the savings were not there, they would use Serena ChangeMan because of its extremely high value in managing risk.

"Serena ChangeMan gives us peace of mind. When things go wrong we no longer have to search or yell at programmers for missing code." Manager, Service Provider.

Strong Processes and Tools Lower Costs of Change while Increasing its Benefits

There are many ways to justify ECM. Like many IT undertakings, some of the justification involves tangible costs and benefits, while some justification relies on intangible elements. Justification is therefore multifaceted, as there are many issues and departments involved.

Past analyses focused on the benefits of version control, yet today's change management implementation in enterprises involves much more. RFG defines a return on value (ROV) approach for analyzing initiatives germane to a specific enterprise. Generally, to deliver ROV, an IT initiative must increase worker productivity, improve IT-business alignment, make the enterprise more money, and/or save the enterprise money. Specifically, the ROV of a proposed or ongoing incumbent project depends upon the project's effect on competitive, financial, functional, process, relationship, strategic, technical, and/or usage levels.

Competitive: Enterprises that can quickly respond to customer requirements and market changes are at advantage over their slower competitors. The ability to develop more applications with the same staff, while improving collaboration with business unit customers provides clear competitive advantage. Faster implementation of new features and changes into the production applications keep the enterprise nimble to respond to competitive pressures.

Financial: Financial ROI analyses can be designed to affect the top line by demonstrating cost savings, or the bottom line by anticipating increased revenue. For many IT departments this is the only analysis done. However, ROI alone does not provide a complete picture. While the costs of ECM are relatively straightforward, the financial benefits are typically subtler. For example, audit compliance is a key driver in some industries, as lack of sound process can result in lost business, fines, and sanctions. In addition, this study shows reduction in staff as a common benefit of using Serena ChangeMan ECM solutions, even at enterprises acquiring and/or merging with other companies and their IT departments.

Functional: The functional component measures how well IT applications line up with business needs. Those interviewed for the study believe Serena ChangeMan helps them be more responsive to business requirements. The clients concur that Serena ChangeMan, augmented with improved processes, provides the ability to handle application changes with more frequency, more speed, and with far fewer errors. This, combined with the documentation improvements inherent in effective ECM deployments, mean much better alignment with the business requirements.

Process: Process improvement is a major driver for ECM and one of the most important areas of benefit. Many companies struggle with issues around a lack of control over application changes. Serena ChangeMan implementation provides an opportunity for enterprises to implement stricter processes. These processes, combined with the strengths of the Serena ChangeMan solutions, lead to definitive improvements in application delivery and support with lower long-term costs.

Relationship: Customer and partner satisfaction are critical to business success. The ability to adapt applications for external access, for example, and to modify customer applications quickly, help enterprises better their external and internal relationships.

Strategic: The strategic component involves determining whether proposed or incumbent projects align with the enterprise goals. For development, such alignment involves support for changing business requirements, improved collaboration with business units, and scalability of the ECM infrastructure to support business expansion.

Technical: The technical component of ROV involves technical infrastructure and talent improvements. Serena ChangeMan offerings flexibly address all common development and deployment platforms. In addition, support for integration with incumbent infrastructure elements and development tools ensures easier transition. Ease of use leads to rapid training that saves staff time and improves productivity.

Usage: Some technology implementations fail because of misuse and under-use. IT executives should do the necessary due diligence to ensure ECM solutions meet current and future requirements. For most medium-sized and large enterprises doing application development, the question is not if but when they will need sophisticated ECM solutions such as Serena ChangeMan products. Once Serena ChangeMan solutions are deployed, this study shows enterprises use them more than expected. Such usage improves the overall return on the investment and ROV.

Figure 2 summarizes the tangible benefits Serena ChangeMan brought to subjects interviewed for the RFG study. Figure 3 below summarizes the potential value and ROV of ECM, as well as the areas likely affected by ECM and the estimated level of such effects.

Figure 2: Tangible Benefits From Using Serena ChangeMan Solutions		
Operations reductions	Development	Other
Administration staff by up to 94 percent	Reduce time spent on audit and trace activities by 63 - 100 percent	Increase staff productivity by 15 - 50 percent
Scheduled downtime by as much as 100 percent	Reduce project times by 30 - 60 percent	Increase new functionality into production applications by 15 - 80 percent
Unscheduled downtime by 20 - 100 percent	Reduce number of staff needed to deliver a build by 43 - 93 percent	Reduce time-to-market for new applications by 50 percent
	Increase number of application packages delivered 100 fold	Reduce backlog of software projects by 15 - 50 percent

Source: Robert Frances Group

Figure 3. Value Proposition for Application Change Management: Savings and Impact Areas

<i>Function</i>	Typical Value Potential (High/medium)	Competitive	Financial	Functional	Process	Relationship	Strategic	Technical	Usage
Audit compliance	High		X			X	X		
Automated notifications	Medium			X	X				X
Documentation of changes streamlined	Medium			X	X		X		X
Easy implementation	Medium	X		X		X		X	X
Easy integration	Medium		X		X	X		X	X
Improved collaboration with business units	High	X		X	X	X	X		X
Improved collaboration within IT	Medium	X		X	X	X			X
Improved control over development process	High			X	X				X
Increased value of development projects	Medium	X	X			X	X		
Intuitive graphical interface	Medium			X				X	X
Libraries locked down in ChangeMan	High			X	X		X	X	
More application packages processed	High	X	X	X		X			
One tool for all platforms	High		X				X	X	X
Opportunity to implement stricter processes	High			X	X		X		
Reduced time isolating problem-causing changes	Medium		X	X	X				X
Reduction of production control and administration staff	High	X	X						X
Risk mitigation and peace of mind	High				X	X	X		
Scalability of applications	High	X		X			X	X	X
Support for more developers with same ECM overhead	Medium	X	X				X		

Source: Robert Frances Group

RFG believes ECM can provide relatively rapid payback in many situations, especially those subject to high downtime-related costs. This study shows a clear connection between use of Serena ChangeMan solutions and reductions in unscheduled downtime. In addition, the implementation of Serena ChangeMan led enterprises to stronger control processes that also saved those companies both money and aggravation. Another key finding was the importance of risk management as a driver for initiating an ECM project. As part of any initiative to align IT with the business, IT executives should include ECM processes and tools as a critical component of the development infrastructure.

Research Methodology

RFG held extensive interviews with five Serena clients in various industries, including financial services, food services, managed services, and transportation. These clients described their environments and, to the best of their abilities, their costs and benefits, both before and after implementation of Serena ChangeMan solutions. One client used Serena ChangeMan DS while the others used Serena ChangeMan ZMF, with some use of ChangeMan ALM, DS, and ECP.

For the calculations in this paper, Serena provided RFG with specific client costs for licenses, maintenance, and services. Clients shared estimates for labor and time elements in the interviews.

Robert Frances Group (RFG) provides actionable, timely advice, consulting, and research about the information technology (IT) marketplace to Global 2000 executives. With a focus on "the business of IT," RFG helps IT executives maximize their effectiveness by helping them align IT efforts with corporate business strategies, drive revenue, improve productivity, and reduce IT costs. RFG accomplishes this by working closely and directly with clients to evaluate hardware and software acquisitions, help assess the impact of events, laws, and regulations, negotiate optimal contracts, and plan IT-empowered business strategies. In today's fast-moving, resource-constrained business environment, IT executives leverage RFG's resources to make better business decisions.

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22 Crescent Road
Westport, CT 06880
<http://www.rfgonline.com/>