

White Paper: *Golden Thread of Change Management*



ABSTRACT

Change management runs through every aspect of a project and business. If proper communication and standardization are not implemented throughout the entire organization, change management can fail, and cause projects to fail along with it. However, it can be difficult to successfully implement the golden thread of change management without the necessary people, processes, and technology in place. These three pillars, along with five key criteria, should be part of any new change management procedure. When carried out correctly, this golden thread of change management results in significant time and cost savings, as well as increased project performance, due to transparency, visibility, and greater efficiencies.

INTRODUCTION

Every project has a transactional change control component embedded into it. Therefore, every company that executes projects is already dealing with change and the management of change, separate from any organizational change transformation that may take place.

The problem is that the majority of organizations are trying to use spreadsheets as their mechanism for tracking and managing change, and when it comes to change management, spreadsheets have two major failings. First, they do not accurately reflect the complexity that change can have on medium-to-large projects. Second, they are unable to provide the big picture and historical context of the change, as well as the knock-on effect to other systems and aspects of the project.

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Organizations need a robust change management procedure that supports communication with all stakeholders, both inside and across the organizational boundary. Strong governance and a clear audit trail are a crucial part of the administration of change management on major capital programs. Without a consistent thread running through the entire project environment, assessing and managing the impacts of change becomes unwieldy. In fact, understanding how to implement structured change management processes, procedures and controls successfully can make the difference between whether or not a project succeeds.

Section I of this white paper discusses the importance of the golden thread, and Section II touches on the difficulties that companies face when implementing it. Section III and IV cover the factors of a successful implementation and how long it typically takes to be adopted. Section V provides the benefits of utilizing the golden thread, and, finally, Section VI will provide a real-life example of these benefits.

I. THE IMPORTANCE OF THE GOLDEN THREAD

Two years from now, you may find the project you are engaged on is behind schedule or over budget. You will find yourself and others asking, “Why? How did we get here?” Without robust change management procedures, processes, and tools, you will not have the traceability to answer those questions.

It is difficult to understand the complexity of change and complete appropriate impact assessments, without structured change management processes throughout the entire organization.

Without a strong change tracking capability, that can fully integrate with other systems, it is also impossible to take those impact assessments and turn them into what is coming to be known as the golden thread through the project – thread that can be followed from its current position back through all the change efforts and throughout the project.

You can trace it back through all the scope changes and the productivity issues, back through the unexpected events, all the way back to the original schedule and budget estimate. A list of changes in a register or spreadsheet is no longer sufficient. There is now a requirement for a strong audit function, and it is very difficult to set up systems to be able to manage this capability in a spreadsheet.

Spreadsheets are often like a leaf on the end of the branch – they are at the end of the line and do not feed back to the other systems. The information contained within them does not go anywhere. It just drops off. When it has done its job, it just falls away, and the history of that leaf is gone, and a new leaf emerges.

If you are going to run a professional cost management environment, or project controls environment, you must have streamlined change management. When attempting to manage change in multiple tools or within a spreadsheet, it is very difficult to maintain the golden thread throughout the project and organization.

It is paramount to be able to answer the following questions:

- **How did a change go through the review and approval cycle, was the appropriate due diligence undertaken?**
- **What was the result of that review and approval?**
- **Who physically or electronically signed off and committed the program to go down that particular path resulting from that change?**
- **How was the funding requested, allocated, and tracked?**
- **Who agreed to the changes in design, cost, and schedule?**

These questions may not be asked immediately; sometimes they come up well down the project's timeline, which makes an audit trail even more essential. Individual's memories are not reliable or capable enough to recall 12 months, 18 months, or five years worth of data, a particular metric, or simply recalling why we went down a particular path.

This ever-occurring situation creates a need for strong governance on who can and cannot sign off on change, so that later the team can go back and see exactly when, why, how, and who authorized or caused change.

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COMMUNICATION ACROSS ALL DIVISIONS

Organizations need a robust change management procedure that supports communication with all stakeholders both inside and across the organizational boundary.

Internal stakeholders may all have their own local working methodologies and reporting structures. Often, each stakeholder group (estimating, cost, engineering, contracts, supply chain, etc.) also has their own way of doing things. This includes their own procedures, reporting habits, ways of making decisions, and protocols for delivering their contribution to the project. They may also be working with their own separate systems.

Without integration and a common thread, projects cannot be fully transparent. The same change management processes, procedures, and standards need to be followed, controlled and communicated throughout the entire organization so that all departments and stakeholders are aware of changes and their impacts.

Without this communication and awareness, there is an increased risk of rework and inefficiencies, as well as missed impact analyses.

STANDARDIZATION

Implementing project controls software brings with it the benefits of standardizing procedures. Specifically, for change management, it systematizes who has authority to review and approve change. It assists in establishing a communication plan, roles and responsibility, control accounts, as well as change control and its trends.

This systemization enables not only enhanced communication, but also transparency and proper valuation of change. The stakeholders and the client or customer need to be able to see the change being requested and what the full impact of that change is, in order to make the right decision for approving or rejecting it.

In addition, if due diligence is not completed, and the full impact of bringing that change on board is not understood, money may end up being lost on the change. With a standardized process and a strong audit trail, all change can be linked back to deviations in the schedule, the estimate, and their impact on cost at completion.

DECISION MAKING

Implementing a cohesive thread throughout the organization provides for better-informed and faster decision making.

Often, a situation will arise and forecast that a potential change may be coming. One of the great benefits of a golden thread approach is the opportunity to do scenario modeling earlier with all the facts and the traceability back to the historical data. Without this thread, it can be burdensome, and time consuming to evaluate the different options and understand what risk management approach ought to be implemented.

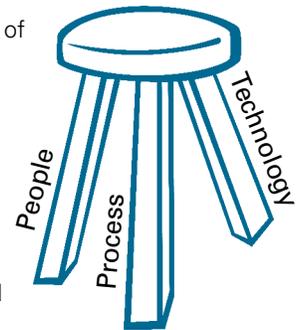
For instance, it can be challenging to model the cost and impact of mitigating the risk compared to just accepting it when systems are siloed instead of integrated. Without the finance system, engineering system, scheduling system, etc. all being connected, modeling possible mitigation plans and understanding the impacts of each course of action may not be feasible within the timeframe available. The golden thread provides the ability to have well-informed decision making occur earlier in the project. This increases the likelihood of project success and can result in fewer delays and increased cost savings.

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II. THE DIFFICULTY OF IMPLEMENTING ROBUST CHANGE MANAGEMENT

Successful change management relies on three pillars within a company. These are the three legs of the stool that make the whole system work:

1. People
2. Process
3. Technology



If the people are not engaged and the process is not sound, the system will never work. The change management process needs to map into the organizational structure and be underpinned by the systems or applications.

It's critical that the organizational process includes strong governance, such as mandated approval limits for each level of approver. The technology must be able to support these mandates. The more stakeholder support the change software can provide for ensuring its easy for people to adhere to the processes, the stronger a company's ability to manage change.

When sound governance and the supporting technology are not in place, change management will be challenging. The following five scenarios will make implementing structured change management more problematic:

1. **Implementing a change management system is not an IT project. It is a cultural change and an overall business change. If not approached in that way, it can fail, as it must be adopted throughout the entire organization.**
2. **People may understand the mechanical process for change management, but may not fully grasp the complex impact that change can have. They do not understand the longevity of the change record and what it affects.**
3. **A lack of strong leadership from the top can cause processes to fall apart. Senior management may not have a full understanding of, or may not be in strong support of, the change management process.**
4. **People are not engaged, either because they are emotionally invested in their old methods, or because they do not fully understand the new processes and systems. It is easy for people to become entrenched in familiar ways of doing things, or for people to be nervous or fearful of change.**
5. **Another hurdle is that people fear the loss of control. There is a worry that the systems and processes will cause delays. This may create an unwillingness or inability to do proper impact assessments, due to the potential time it may take and the number of people who need to assess.**

III. 5 FACTORS OF A SUCCESSFULLY IMPLEMENTED GOLDEN THREAD

Implementing a strong change management software system is only part of the solution. In addition to the three main pillars needed to make the system work, there are five key criteria that are necessary for the implementation itself to be successful.

1. Strong Sponsorship

Success starts at the top. A powerful, bold sponsor is imperative to the successful implementation of any significant change. Regardless of who the tactical operating contact is, strategic sponsorship is best placed with someone on the executive team. In fact, the sponsor should be in as high of a position within the company as possible.

Change management affects too many departments and is too integrated for it to be led by an isolated functional leader, as this is a business transformation. Therefore, even if the everyday contact is within one function, executive sponsorship is necessary to ensure the business is fully on board and engaged.

2. Change Leaders

One dedicated sponsor is not enough for the success of a new change management process. Lower-level leaders, spread throughout the organization, also need to act as champions of change.

Dedicated and engaged individuals throughout the company need to have the power, knowledge, and confidence to implement the new processes and to stand up to those who are opposed to change.

3. Foundational Training

Key users or super users need to be selected and provided with in-depth training. The training needs to not only include how to use the software, but also the proper processes for change management, including the processes that happen outside of the system. These super users are necessary to both act as change leaders and to support the average user.

The average user will be trained in less than half a day. They need to be provided with easy to digest snippets of knowledge that are easy to comprehend and implement. This can then be followed up with user videos and documentation that they can go back to repeatedly as their use of the tools progress.

4. On-Site Support

On-site or at-elbow support allows for employees to gain the confidence to deploy and disseminate what they know. Embedding experts into the change management teams helps empower the super users.

It ensures there is sufficient time for in-depth knowledge transfer, including training on the nuances of how the system works. In addition, it helps support the cultural change and transition of the company and reinforces the idea of continual improvement.

5. Fluid Processes

It is important to have process governance, to ensure processes are followed. However, if processes are too rigid, they can cause delays, incur costs, or even kill a project. If a process is too lengthy or time-consuming, teams could end up with a standing army costing their companies money every day, while they wait for an impact assessment or approval.

The change review and approval process needs to be streamlined to provide the best service to both the project management team and senior management. It is critical to have tools and techniques that support quick communication of changes and decision-making. The ability to set up different approval hierarchies for different levels of changes can expedite the process

IV. HOW LONG DOES IMPLEMENTATION TAKE?

Implementation of a new change management software could take as little as 6–8 weeks if there are already change management processes in place within the organization. However, if strong processes are not in existence, and individuals and/or teams are not yet in support of standardized change management, it could take up to six months. Ultimately, the timeframe depends on the maturity of the organization.

Best practice indicates that it is ideal to begin implementation with a pilot, usually a small project or program. This can be accomplished by running a pilot quickly, on a very limited budget, in a small part of the organization, at very low risk. Afterwards,

it becomes the norm for future programs and perhaps even back-fitted to existing portfolio programs, retrospectively.

This ensures that the business procedures and the people in the organization can come onboard with the technology that is underpinning it before rolling out that capability globally within the organization.

V. THE BENEFITS OF A SOUND CHANGE MANAGEMENT PROCESS

The two greatest benefits of structured change management are that it provides an organization with transparency and with time.

1. Transparency

A standardized system provides an audit trail. A standardized system can determine the downstream impact of a change and find its root cause, allowing users to see the historical context for changes. For example, the history can be read up on, even if it occurred two years ago.

A strong process and system create integrity in change management data. It allows users to see every change that has impacted every control account or aspect of a project. This insight can be used to benchmark on future projects.

If you can manage the change records well, and you can manage the change events well, it is much easier to take the cost values and the effort at the outcome and push them back into the estimating database to improve future estimates. Structured change management better allows for seeing why outcome cost turned the way it is, and in turn is more useful when trying to redefine norms for future projects.

2. Increased Awareness

The golden thread removes silos and allows for improved communication and increased awareness across the different project stakeholders. The integration between departments, systems, and processes ensure that everyone is aware of changes and their impacts.

A process and tool that can communicate across the different systems used by finance, risk management, health and safety, engineering, etc. ultimately reduces rework by ensuring everyone is aware of change proposals and approvals. It also decreases the risk of missed impact assessments.

3. Improved Decision Making

A powerful system can use the history of change to illustrate trends and forecast the outcome of a project. It can also provide early notifications of potential changes. The expediency of this information allows for decisions to happen sooner.

The visibility and the clarity of a completely live system mean users are no longer waiting on a report at the end of the month to tell them that they have a problem. This also allows fast insight into where the problems are, allowing users to differentiate the significant issues from the noise.

The ability to do scenario modeling can improve risk management and mitigation plans, leading to reduced impacts to the project. The golden thread allows for analyzing the forecasted results of each option quickly. This then enables a proactive approach and results in more timely action plans.

4. Time Savings

The golden thread of change management can also save administrative time. The streamlining of processes makes management less resource dependent. Team members can get up and running more quickly, as there is no need to manage multiple tools or spreadsheets, allowing highly knowledgeable individuals to spend more time doing other value-added activities, such as impact analysis, data analysis or other planning and management tasks.

5. Compliance

The American National Standards Institute (ANSI) has developed standards around many aspects of project management, including change control. There are now more than 270,000 companies and organizations around the world that have adopted ANSI compliance standards. Some of these include the U.S., U.K., and Canadian Government and Military.

Organizations that are contractors for one of these companies or governments, will have to prove their change management systems and processes meet the ANSI standards. Adopting the golden thread of change management allows these organizations to demonstrate this compliance.

VI. CROSSRAIL - A REAL LIFE EXAMPLE

Crossrail is a very significant European capital program that has been running in full construction mode for the last 8-10 years. The company was at the point where they were close to awarding major construction projects that had finalized much of their design work, and they made the decision to run a single, central project management office (PMO).

They needed a software application to underpin the processes that the PMO required, which included change management. ARES PRISM partnered with Crossrail to expand the change management capabilities within the tool to accommodate the vast number of complex changes on the program. This functionality is now a part of the standard product offering and helps users manage project changes and have complete visibility into change order status.

ARES PRISM enabled the organization to come together instead of living in functional stovepipes of schedule and cost, engineering, etc. It provided a single record of change in a single application.

Whereas, in the past, there would have been a record in a scheduling tool, and another one in the engineering tool, and yet another in the contracts management tool.



“Implementing the golden thread throughout the project enabled Crossrail to see beyond the data in the spreadsheets to the real-world implications.”

Using a powerful change management tool facilitated integration with other systems, such as the client’s ERP system, while still maintaining one version of the truth. This technology also allowed the process to move into the 21st century by supporting mobile access as needed.

This single version of the truth had a significant project benefit on the administration of the number of changes. Due to the complexity of their program, the company’s administration had hundreds of records per monthly reporting period. ARES PRISM made managing large volumes of change an effective and efficient process within the application.

Systematizing the change management process removed the manual signature process that many companies rely on now. Speeding up the process saved the company not only time, but money. This key factor was transformational in the way the company was able to go forward and deliver their project.

Implementing the golden thread throughout the project enabled Crossrail to see beyond the data in the spreadsheets to the real-world implications. For example, as the project was tunneling under London, it came across old Roman ruins.

Using the more robust change management processes and tools allowed Crossrail to assess the feasibility and implications of the different options such as tunneling around or excavating the ruins. With the golden thread approach, all factors could be considered including not just delays and costs, but also health and safety implications, and the decisions could be made faster than before.

CONCLUSION

Structured change management processes and procedures are imperative for the success of a project and an organization. In order for these systems to be successful, more than just advanced technology is needed. The five key factors discussed in Section III are critical for the successful implementation of the golden thread into businesses and organizations. Also, for the system to have lasting success, the three pillars covered in Section II need to be in place. A lack of any of these components can cause change management to fail.

If these key factors and pillars are successfully integrated, change management can create significant benefits for a company, including improved decision making, streamlined processes, reduced administration, and improved transparency and project visibility. This translates to better performing projects, improved margins and schedules, and more satisfied customers.

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Simon Johnson is the Director of Operations and Principal Consultant UK, European and the Middle East. In this role, he is responsible for supporting ARES PRISM, a fully-integrated project controls solution designed to manage local and multinational capital projects from conception to completion. Simon provides advisory services to major programs and supports the successful deployment of effective change management processes.

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Karl Vantine has been implementing ERP, Contracts, Scheduling, and Earned Value Cost Management systems around the world for 20+ years. Now living in Washington, D.C., Karl has lived and worked in Europe, Asia, Africa, and South America, where he has helped clients successfully implement new software systems as well as improve their related business processes for Program Management and Project Controls. This includes helping design and roll out change management solutions on some of the biggest capital programs in the world (e.g., HS2, Crossrail, Dubai Expo 2020, and others). Karl's specialty areas of expertise include SAP Integration, Program Analytics, Skills Development, Process and Procedure Improvement, and Cost/Schedule Integration.

ABOUT ARES PRISM



ARES PRISM is an enterprise project controls software that manages the complete project lifecycle delivering dependable forecasts, cost control, and performance measurement. Organizations around the world rely on PRISM to manage projects, programs and portfolios of growing size and complexity in a variety of industries. PRISM is a scalable, robust and intuitive system that harnesses industry best practices and integrates all aspects of the project, including cost and schedule, change management, estimating, earned value, contracts & procurement, and field progressing. Achieve superior project management with increased visibility and control, boosted accuracy and efficiency, and improved financial performance.