Change Management: Best Practices for Implementing SAS® Prescriptive Analytics

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ABSTRACT

When new technologies, workflows, or processes are implemented, an organization and its employees must embrace changes in order to ensure long-term success. This paper provides guidelines and best practices in change management that the SAS Advanced Analytics Division uses with customers when it implements prescriptive analytics solutions (provided by SAS/OR® software). Highlights include engaging technical leaders in defining project scope and providing functional design documents. The paper also highlights SAS' approach in engaging business leaders on business scope, garnering executive-level project involvement, establishing steering committees, defining use cases, developing an effective communication strategy, training, and implementing of SAS/OR solutions.

INTRODUCTION

All projects look easy in PowerPoint. But implementing those projects is much more challenging, and many organizations fail to complete projects on time, stay on budget, and meet their original goals. Establishing best practices that are focused at the outset on process improvement, adoption, and sustainability improves the likelihood that projects will succeed.

ESTABLISH A STEERING COMMITTEE

Projects have many stakeholders, including business and executive leaders, technology leaders, end users, and others. It might seem obvious that organizations would establish steering committees to involve representatives from each of these stakeholder groups in project development. However, too often a small group of technology professionals or project managers is given responsibility for steering a project from kickoff to rollout without any involvement by these stakeholders.

Steering committees play a vital role in supporting and, more importantly, advocating for the projects they oversee. A steering committee does not serve a project management role; instead it complements the project manager's efforts to plan and direct the project.

A steering committee functions best when the scope of its responsibilities is well defined. It is a decision-making body that provides insight and feedback throughout the project. This group "comes along for the ride" throughout the project, without the burden of heavy time commitments. It is SAS' responsibility to keep the steering committee abreast of its efforts on the project during the project life cycle.

Each member of the committee should have a specific project-related function based on his or her skills and job knowledge. Most importantly, the steering committee should represent all the stakeholder groups in order to ensure timeliness in project development and in communication with the larger organization.

DEFINE PROJECT SCOPE

The preliminary foundation of a project is the project scope, which outlines the long-term vision of an organization. SAS engages the organization through scope workshops, which enable stakeholders to reach agreement on a baseline for the project. This baseline agreement can serve as the strategic road map for realizing the long-term vision of the project.

The primary product of scope workshops is a functional design document (FDD), which spells out the functional aspects of the SAS/OR solution to be implemented. It describes in detail the solution's subsystems and scope and includes a detailed project plan and budget. The intended audience includes business and technical team members. This document is also a valuable reference for end users of the

solution. The FDD acts as the blueprint for the various phases of the project and serves as the sole agreement between SAS and the customer regarding the scope of the project.

Managing scope during the project is as important as creating the long-term vision. Stakeholders on the steering committee are tasked with verifying any changes to the baseline agreement to ensure that these changes meet the long-term goals of the project. For each project deliverable, the steering committee is also responsible for determining its completeness and quality as it relates to the project.

EVOLUTION, NOT REVOLUTION

The long-term vision of a project is outlined in the project scope and documented within a functional design document. SAS works with its customers to realize this long-term vision by completing a phased set of deliverables that provide a series of short-term successes. This set of deliverables must be quantified as substantive successes that can be completed in relatively short periods of three to six months.

With the understanding that an organization's long-term plans can change, this phased approach provides the flexibility to modify the long-term vision of the project. Each phase of the project provides a foundation for the next phase, and successfully completing a phase offers incremental benefit to the organization. Within each phase, SAS also starts preliminary work for the following phase—identifying data requirements, operational requirements, or other pinch points in advance—to promote a better transition from one phase to the next.

PROTOTYPE EARLY

To achieve a high rate of user adoption, an organization must build a plan that involves end users early in the process, because no other group can provide their valuable insights. Prototyping can help.

Prototyping is the process of quickly building the main feature paths of an interface, report, or set of tools. A successful prototype can provide valuable information early in the project life cycle and guide many of the project activities. By demonstrating the ideal results of the project, a prototype helps tie together the long-term vision and the details outlined in the functional design document.

Prototyping does not require special development knowledge, and a prototype can be mocked up in a variety of ways. The key is to determine what service end users require of the project, what questions need to be answered, and what resources are available.

DEFINE SUCCESS METRICS

At the beginning of a project or very early in the development process, an organization should lay out the benchmarks and key performance indicators (KPIs) that will be used to validate the analytic solution under development. The use cases that are defined during the scope discussion should be used as reference points for the validation process.

The steering committee can play a key role in this process by coming to an agreement for the organization on the benchmarks and KPIs that are important to the project and the business.

Internal testing and validation are completed by SAS before the solution is released to the organization and tested against the benchmarks and KPIs. This reduces the time and effort required by the organization later, ensures quality in the end product, and minimizes any rework by ensuring a well-defined validation process.

DEVELOP A COMMUNICATION PLAN

Developing a communication plan is an essential task of the steering committee. Many individuals within an organization will need to know about the project and will require updates on its progress.

The first task in developing the communication plan is to identify all the groups who will require communication. Executive leaders, business users, technical managers, and administrators often need updates throughout the course of the project.

Determining what each group needs to know about the project and what the steering committee wants to tell them is also critical to the communication plan. The information that is provided will differ for each group. For example, executives usually want status updates, while technical managers typically want updates on data and architecture progress.

The method of communicating to the various groups can also differ. Meeting face-to-face with executive managers might be necessary to ensure effective communication, whereas email might be preferable for other groups.

Finally, the steering committee needs to consider who should communicate project updates. Selecting individuals who have strong credibility with the group that is receiving the communication is a best practice to gain buy-in over the course of the project.

KEEP SCORE

The steering committee needs to stay abreast of the progress of the project in a manner that allows for quick dissemination of project information on a weekly basis. A project scorecard serves this purpose well. Unlike a traditional project plan, a project scorecard keeps steering committee members updated on the high-level milestones throughout the project. SAS maintains the project scorecard as a good way to monitor progress against a key set of agreed measures, outline progress week by week, and assign tasks to both the SAS team and the customer organization.

A "score" is provided so that recipients can quickly assess the overall health of the project. If the score indicates that the project is falling behind, has significant challenges, or requires modifications, this triggers a discussion within the steering committee.

PROVIDE TIME FOR ROBUST USER ACCEPTANCE TESTING

User testing and validation should be planned with sufficient time to accommodate the complexity of the project and its deliverables. There are generally two options that SAS employs with testing and validation: customer-owned testing and testing performed by SAS. In the latter case, SAS performs the user testing and validation on behalf of the customer.

Testing is an iterative process that requires users to test and retest deliverables as modifications are made to the solution. Having a well-defined user testing plan with ample time to thoroughly test solution results at every stage is essential, and it provides quality assurance in the testing and validation process.

It is not uncommon for testing and validation to consume as much as 10% of the project timeline for complex analytics projects. Building enough time into the project plan and communicating the need for robust testing to the steering committee establish the right expectations for when the solution is released to the organization.

ESTABLISH CLEARLY DEFINED USER FEEDBACK LOOPS

In addition to user testing and validation, a long-term structure should be established for users to provide continuous feedback about the solution. In complex analytics projects, it is impossible to identify all potential use cases and outcomes in advance. As users begin to work with an analytic solution, they will encounter problems that might not have been anticipated.

Feedback loops help both the organization and the SAS team stay up to date on issues and opportunities after the solution is implemented. Establishing a user feedback loop should be a formalized process, communicated to steering committee members and managed by the organization. As questions arise, the steering committee can determine the best way to address them.

One helpful approach is to include a customer care agreement (CCA) at the end of a project. With a CCA in place, the organization can be confident that the expertise and knowledge of the SAS team will be available for an established period of time after implementation. The same individuals who developed the solution will be on hand to provide support as issues and opportunities arise.

CONCLUSION

Prescriptive analytics projects offer tremendous value to organizations. To provide as much value as possible from these types of projects, SAS employs a set of best practices to improve the likelihood that these projects will be completed on time and will have a high rate of adoption by users within the customer organization.

Establishing these best practices at the beginning of a project improves communication throughout the course of the project and improves the results aligned to the goals, objectives, and scope. Involving key stakeholders from across the organization is key to ensuring a successful project.

With a phased approach to deliverables aligned with the long-term vision of a project, prototyping early with end users, defining the benchmarks for testing and validation, and having a strong communications plan, an organization will be more successful with their analytics projects. These best practices should lay a foundation to help achieve widespread adoption, ensure sustainability, and increase the long-term value of the project.

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