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REQUIREMENTS ANALYSIS: THE SECRET TO SANITY

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WHAT'S THE SECRET TO KEEPING YOUR SANITY (AND YOUR JOB) DURING A TECHNOLOGY PROJECT? WELL-DONE (AND DOCUMENTED) REQUIREMENTS ANALYSIS!

Jerome put all his persuasive powers to work and his reputation on the line to get budget approval for a new technology solution. After dedicating most of his time on its implementation, the launch went off smoothly a few months ago. But, he can no longer ignore the chilling realization that "his" system – somehow it has become his system, not the association's – isn't meeting expectations around the building. And, however much he hates admitting it to himself, it's not living up to his expectations either. Where did things go wrong?

One of the most common reasons technology projects like Jerome's don't meet expectations is because a critical project process was done poorly, or not at all: requirements analysis.

HOW DO REQUIREMENTS IMPACT A PROJECT'S SUCCESS?

The success of a project is dependent upon the way in which requirements – what the system or software needs to do – are collected, analyzed, and documented at the beginning of the project. Even after that initial process, requirements come into play throughout the project timeline.

Whether your project is using a classic waterfall or an agile development methodology, requirements are the driver of the design, development, configuration, and customization of the system. Also, requirements provide the criteria for the testing and acceptance of the final product.

HOW DOES THE REQUIREMENTS PROCESS IMPACT AN ORGANIZATION?

Besides being the foundation for the project, the requirements process itself has a positive impact on an organization. When DelCor consultants are managing the requirements analysis for a project, we facilitate a great deal of discussion about organizational goals, culture, business processes, and training needs. The discussions and decisions made along the way are often as valuable as the solution selected. For example, requirements analysis often reveals opportunities to improve existing business rules and processes.

The requirements process also has a positive effect on the project's stakeholders – the people who will be directly or indirectly impacted by the new technology. Stakeholders have a critical and influential role in gathering and defining requirements. The requirements phase gives them the opportunity for discussion that doesn't exist in their usual work routines. After developing requirements together, stakeholders come away with a heightened spirit of collaboration and a shared vision for the project's success.

WHAT WILL BE REVEALED DURING REQUIREMENTS ANALYSIS?

Because of the information uncovered during requirements analysis, new opportunities for improving productivity and providing member value may be revealed. For example, a brave person on the project team proposes a change to a business process that will reduce the number of staff involved and improve turnaround time. Although the shift in staff responsibilities will require additional training, the new process will likely make customization unnecessary, speeding up the project schedule, and freeing precious dollars for another use.

During the requirements analysis phase, staff sometimes discover that communication has broken down somewhere along the line. We often hear, "I thought we weren't doing that anymore..." or "Why are you doing it that way? It's simpler to just..." Although these observations from colleagues aren't always easy to hear, they help to focus everyone on project and business goals, as well as the best ways to achieve them.

Not only are the business, user, and system requirements uncovered during requirements analysis, but so are discrepancies in key business processes and rules. These discrepancies all need to be dealt with prior to a system implementation.

WHAT HAPPENS IF REQUIREMENTS ANALYSIS ISN'T DONE WELL?

Requirements analysis takes time and talent. Problems arise when organizations move into system selection or software development without dedicating the appropriate resources to collecting and analyzing requirements. As Jerome can tell you, it's not worth skimping when it comes to requirements analysis because a project can go off the rails in a number of ways when you do.

- The developer calls to say they can't move forward until conflicting requirements are resolved. Jerome has to call some of his colleagues back to the table to wrestle over priorities, causing tension and further delaying the schedule.
- The governance director insists that the new system allow her to do her work the way she's always done it. If her demands prevail, the project's budget and schedule will have to be stretched to allow for expensive customization, and inefficient business processes will live on.
- During testing, a colleague from the government affairs department *finally* decides to show up and complains endlessly about the system. They have several requirements that Jerome never knew about because no one from that department attended the requirements meetings. The budget and schedule take another hit.
- A few months after launch, everyone is still whining about the new system. Jerome eats at his desk to avoid getting an earful over lunch about how the old system was better. Leadership is mulling over whether to budget for additional customization this year or pull money from reserves to start over next year. Either way, the experience hasn't been a boost for Jerome.

Scenarios like these can be avoided by having an experienced business analyst handling the requirements analysis process. Business analysts have a proven process for guiding associations through the requirements phase of a project. Unlike staff, they bring a fresh, objective perspective to the table when analyzing an association's processes, priorities, and requirements. They know which questions to ask to reveal issues and needs, and they can safely ask those sometimes-difficult questions. Consultants who have a deep knowledge of associations know how to help them leverage the potential of new and emerging technology.

WHAT ABOUT A DIY APPROACH TO REQUIREMENTS ANALYSIS?

As stewards of their association's limited resources, the C-suite's attention is naturally focused on two phases of a technology project: the selection phase (when the product is purchased) and the launch phase (when the final product is revealed). Not as much attention is paid to developing and documenting the requirements for product selection or development.

Instead, someone on staff – like Jerome – is asked to send out an RFP, even though they don't have the necessary business analysis, project management, and technical expertise to excel in this role. With little time for comprehensive professional development activities, Jerome's accustomed to learning on the job. He dove into this new assignment like he has with other new responsibilities – ready to learn and eager to please, but unsure of what he was getting into.

First, he reached out to ASAE's Collaborate community to see if anyone had a sample RFP he could use as a template. He revised it to fit his association and sent it to a half-dozen vendors he found in the association buyers' guide. In hindsight, he now knows that tweaking someone else's RFP and blasting it out to a list of vendors wasn't such a smart approach.

GOOD REQUIREMENTS ARE CLEAR, COMPLETE, CONSISTENT, AND UNAMBIGUOUS.

Staff usually lack another prerequisite for managing the requirements process: objectivity. By the very nature of their positions, they cannot provide an unbiased assessment. Was Jerome unwittingly biased toward his own department's needs? Could he objectively evaluate processes that he himself created? Could he say "no" to his boss, the chief lobbyist, or even the CEO's executive assistant?

Finally, there are always the unknowns. Jerome didn't have a complete picture of what his association needed. He isn't experienced with techniques that elicit the right information from his colleagues. He couldn't imagine the roadblocks he'd encounter. All by himself, he couldn't conceive of new ways to do things. He didn't know the possibilities that technology could bring to his association. He didn't know what he didn't know.

WHAT'S INVOLVED IN REQUIREMENTS ANALYSIS?

(1) The first step of requirements analysis is to talk to the leadership and project team about their goals and expectations for the new system, software, or product. How will it further the organization's mission and business objectives? What problems must the technology solve? What functions must it perform? What levels of performance must it achieve?

These discussions reveal needed context for the project, for example:

- Organizational goals and strategy.
- Existing business processes and practices.
- Existing technology, including systems that must be compatible or integrate with the new product.

(2) Next, identify the stakeholders who will help define requirements. Each stakeholder has their own perspective, but all those perspectives are necessary to get a full picture of the final product.

A variety of methods can be used to gather requirements:

- One-on-one interviews with stakeholders and end-users.
- Group interviews, focus groups, workshops, and review sessions.
- User scenarios, graphics, workflow diagrams, and system prototypes that show how the end product might look and work.

(3) Requirements are prioritized according to needs and value, among other criteria; inevitably, there will be disagreement, but the consultant helps to resolve conflicts. Further discussions about requirements are focused on those with the highest priority – this becomes the project scope.

(4) The project team then analyzes any business processes involving and related to the new technology solution.

- Are existing processes causing any difficulties?
- Do any of them need improvement?
- Are there redundancies or conflicts?
- Can any processes be streamlined or automated?
- Is the organization doing it that way just because they've always done it that way?
- What impact will the new technology have on existing business processes and staff responsibilities?

If there are problem areas that would limit the productive use of the new technology, now's the time to find them. Suggesting changes to improve the effectiveness of longtime business processes can be a contentious undertaking. Being a change agent can be a lonely job, but the results are worth the temporary discomfort.

For example, if the governance director had been given the opportunity to see how new processes would not only streamline the committee appointment process, but also provide the data she needs to better recognize volunteers, she might have been less resistant to

WATERFALL VS. AGILE DEVELOPMENT

	Waterfall	Agile
Characteristic	Scope is fixed, time and resources are flexible.	Time is fixed, scope and resources are flexible.
Sequence	Project moves to the next phase of the process (requirements analysis, design, development, testing, and launch) only when the previous phase is completed. Phases are not repeated.	Project is broken up into cycles (e.g., sprints) of requirements analysis, development, and testing for each feature set. Phases are repeated until feature is deployed.
Requirements	Development begins with a defined set of requirements. Changes are not welcomed once the requirements are set.	Development begins with less stringent requirements. Adjustments are made as needed throughout the project. Requirements may be changed, added, or dropped.
Staff Involvement	At the beginning during the requirements phase, then later for training and testing.	Throughout the project for repeated cycles of requirements gathering and testing.
Cultural Fit	Hierarchical, traditional cultures where process and structure are appreciated.	Collaborative, entrepreneurial cultures where experimentation is business as usual.
Budget & Timeline	Because of the predictable path, projections can be made.	Because of the many "unknowns," flexibility is recommended.

The success of either approach – agile or waterfall – depends upon how well requirements are collected, analyzed, and managed throughout the project lifecycle. Jerome's project followed the traditional waterfall method, but because additional requirements were revealed after the system was selected, his project timeline and budget suffered. Even worse, because the requirements never fully reflected the business needs of his association, the system isn't meeting expectations around the office.

"Jerome's new database." To lessen resistance to change, show how new technology and processes could positively impact staff productivity, member and user experience, and organizational goals – the positive side of the project balance sheet.

(5) The last step is documenting the requirements. Good requirements are clear, complete, consistent, and unambiguous. The requirements documentation clearly communicates the organization's needs and expectations to developers or vendors. It describes the requirements and behavior of the desired system, and the environment in which it will operate. During testing, the new technology is evaluated based on the criteria outlined in the requirements documentation.

That documentation is shared with all key stakeholders and development teams to get their feedback and sign-off. This mutually agreed-upon representation of the stakeholders' needs minimizes the risk of a project creeping beyond its original scope or not delivering upon expectations.

WHAT ARE THE RESPONSIBILITIES OF LEADERSHIP AND STAKEHOLDERS?

Associations and nonprofits depend upon technology to help them serve members and constituents, accomplish their goals, and fulfill their missions. In the past, technology implementations like new servers or applications were mainly the concern of the IT department. Now, because technology is entwined with everyone's job, system implementations involve a larger percentage of staff and budget than ever before – requiring a great deal more buy-in than in the past.

Even with a business analyst driving the requirements analysis process, an organization's leaders and staff have key roles to play. Leaders must communicate their vision, goals, and expectations for the project to everyone in the organization to gain their cooperation. If participation in the project is to take priority over other tasks, or if duties must be reassigned temporarily, the CEO and senior staff must make that clear from the start.

The input and buy-in of all stakeholders is necessary to ensure project success. A representative of each department or position that will use or rely on the system *must* participate in requirements gathering. If stakeholders are left out or don't dedicate sufficient time to the process, critical functions or processes could be overlooked and the final product won't fully meet business needs. Staff must also make time to review and approve the requirements documentation so they have a clear understanding of the project's deliverables and a sense of ownership in the project.

It can't be emphasized enough: communication is key to understanding, documenting, implementing, and testing requirements. Frequently, an outside consultant can spur better communication among staff and across departments, or dig deeper for underlying problems with existing systems, policies, or workflows.

HOW DO YOU PREVENT A PROJECT FROM GETTING BEHIND SCHEDULE?

When planning a project timeline, be mindful of departmental calendars.

- Are conference or education staff in the midst of a busy meeting cycle?
- Will staff be consumed with developing budgets for the board?
- Will lobbyists be unavailable because of legislative or regulatory hearings?
- Are membership staff working on a renewal campaign or membership drive?

Coordinate with department heads to make sure staff will be available to work with the consultant during the requirements, testing, and training phases of the project. In a tug of war between a project manager and a department head over someone's time, the project manager will lose every time *unless* leadership has made it clear what must be done to keep the project on schedule.

If the software or system is being developed with a traditional waterfall methodology, staff must be available during the requirements phase at the beginning of the project, and again during testing and training after the system or software is implemented. However, if developers use an agile methodology, staff will be asked to get involved repeatedly in requirements gathering and testing until all the features are rolled out. (See comparison chart on previous page.)

DO YOU NEED AN ORGANIZATIONAL THERAPIST?

Sometimes you need professional help. Consultants are more than business analysts and project managers – they're change managers and, as some of our clients have said, organizational therapists. A technology implementation project is also a change management project. Changes to business processes, staff responsibilities, and user experiences can cause conflict, stress, and anxiety. Although it's not always easy to let go of "the way we've always done it," it's often necessary for an organization to move forward.

Experienced project consultants help staff think strategically so they can see the bigger picture (a macro view) – how the new system or business process will help the organization meet its strategic goals. They also help staff see the smaller, more personal picture (a micro view) – how the new system or business process will improve their productivity or user experience.

A system implementation can be an emotional experience for staff – just ask Jerome! He tried to manage expectations and heated discussions while talking to staff about their needs, but he couldn't please everyone. One of his colleagues didn't get everything

on her list and is still giving him the cold shoulder, while cursing the new system. He would have benefited from professional help – someone who helps navigate discussions and resolve conflicts of interest between departments, and someone whose interest is in the project and its goals (the association's best interest), not one department or the other.

The "organizational therapists" at DelCor serve as translators between organizations and vendors. We help vendors understand the needs, operations, and culture of your organization, and we help your staff understand technical issues and processes. Since we're fluent in the languages of both parties, we can ensure that your organization and the vendor you choose to work with understand the deliverables and what it will take to achieve them.

Jerome wishes an organizational therapist had guided his project team. He was in way over his head and didn't have the knowledge, support or cooperation he needed. In hindsight, he understands how critical the requirements analysis process is to the success of any project. If there is a next time, things will be different.

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10 Your business analyst is surprised that members have such a large decision-making role regarding the budget.
Someone doesn't know how associations work! Is this consultant the right cultural match for your mission-critical project?

9 Senior staff seem uninterested in the new AMS and refer to it as "the membership database."
Without leadership involvement, staff cooperation will be difficult to obtain.

8 The governance director has been handling committee appointments the same way for 20 years and doesn't intend to change now.
Expensive customization will be necessary to accommodate old, inefficient ways, and productivity will continue to suffer if process improvements are unwelcome.

7 A department head says his staff is too busy to participate in requirements gathering.
Without staff input, requirements won't accurately reflect business needs and the new technology won't meet expectations.

6 A staff working group is in charge of the project.
No one person has ownership or accountability – that's big trouble. Everyone should have buy-in, but the buck has to stop somewhere.

5 Only the IT director knows the project plan and timeline.
Staff buy-in won't happen and schedule conflicts are likely, causing delays and frustration.

4 The stressed-out membership director is put in charge of managing the project.
This is a recipe for failure. Project management takes 50 to 100 percent of someone's time and requires specific skills and experience. Don't make your staff try to do two full-time jobs.

3 Your colleagues don't understand why they have to meet with the business analyst.
Sounds like the project goals and expectations were not made clear. Where's the shared vision? Where's the buy-in?

2 There's money in the budget for the system purchase and implementation – but nothing else.
Projects are more likely to fail when requirements analysis and project management are short-changed.

1 *And – drum roll – the #1 sign your project is in trouble:* Everyone treats the idea of requirements gathering meetings like a root canal.
Culture starts at the top. Staff won't see the positives if the CEO doesn't. Don't move forward until you have the cooperation and commitment you need from your association's leadership.

Jerome chimes in with another sign that your project is in trouble:
The person in charge of the project has never been on a project team before.
"I tried to be the hero and ended up getting in way over my head. Trust me, you don't want to go down that path. Get some professional help, or you're going to need a different kind of professional help."