Avoiding the Technology Trap

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Executive Summary

I'm just going to admit this up front, I am guilty of thinking I am making progress when I'm wasting time. I'm good with Excel – not an expert or a superstar, but savvy. However, when I get ready to build a complex spreadsheet, I tend to just jump into Excel and start cranking away. I'm building fancy formulas, putting in clever formatting and more. But, inevitably, I get to a point where I realize the worksheet isn't solving the problem. It could be better and needs significant rework. So, I rip it apart and redo it – sometimes more than once. What I *should* do is plan out the effort and think through the ramifications *before* starting to "code." I know this. I really do. But, it is so satisfying to jump into Excel and start building. It's comfortable and I feel like I am making progress. In reality I'm wasting my time and delaying my ultimate goal. Worse yet, sometimes the "sort of solves the problem" spreadsheet gets used anyway and takes on a life of its own.

When people start to implement software, they do the same thing. People generally seem to be in their comfort zone when creating a simple requirements document, looking at demos, selecting a vendor and then moving forward to implement a solution. There is a real feeling of accomplishment in completing these activities – enough so that people like to dive into them without really thinking through the full ramifications or full requirements of the business. Unfortunately, this often leads to unanticipated and unwanted results, leading to creating spreadsheets as work arounds that take on their own life… sometimes to the point that the operation is run more on spreadsheets than on the solution that was selected.

At Skipping Stone, we've seen organizations get to the end of a technology implementation, live with it for a while, create spreadsheet work arounds and eventually rip it all out and start over. This is expensive, not to mention the disruptive impact on operations, and leads to many uncomfortable conversations with your boss and your boss' boss, etc. People lose their jobs over this and companies lose money because of this. This is the definition of pain. We call this the "technology trap."

The good news is, the technology trap is completely avoidable. By properly managing the three dimensions of technology implementations – people, processes, and technology – you can avoid the technology trap. Below we'll review the steps you can take to avoid the trap and get on the road to better technology implementations.

The Technology Trap

Let's say you are part of a retail energy or wholesale trading organization. You've undoubtedly encountered one or more of these common technology hurdles:

- Over reliance on spreadsheets
- Multiple and duplicate data entry points in often duplicate systems
- Error prone processes and/or data
- Resource intensive processes requiring lots of bodies
- Excessive execution time – things just take too long
- Redundant and/or overlapping systems

If so, you may be thinking – "I should install some new technology and fix this!" That sounds reasonable. After all, it's not rocket science. It should be easy to put in a new risk/trading/billing/etc. system. We just need to follow a few tried and true steps:

- Create a wish list
- Research the top vendors
- Get some demos

- Pick one
- Negotiate the price
- Implement the solution
- Reap the benefits

Viola - that wasn't so bad!

In this situation, the best-case scenario is that you'll get the solution implemented pretty much on time and within budget and with most of the functionality you wanted. Then people will start using the system and you're cruising happily along. Problem solved. Life is good. You're living the dream.

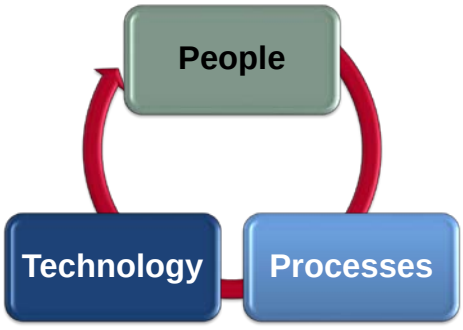
Then you wake up… You just fell into the technology trap.

After you wake up you find some groups won't use the new system at all. Then you find out you're using even more spreadsheets than before and some business processes are taking longer than ever. Many of your old problems still exist – some are even worse! You're now seeing problems you didn't even realize you had before. And you just spent a million dollars or more. So, what happened????

Unfortunately, technology is not an end game in and of itself. In fact, unless your "problem" is very specific, technology by itself won't fix it. When companies implement new technology they often make a series of assumptions such as:

- We will become more efficient
- We will reduce errors
- Our processes will improve or just "be better"
- Our people will embrace the change and be more engaged/productive/happier/etc.
- We will ultimately save money
- We will have a competitive advantage

Unfortunately, at some point in the post-implementation, companies come to realize they aren't necessarily capturing the expected benefits. The problem is that technology is only one part of the solution. It is a critical component but not the only component; therefore, companies are only addressing one piece of the puzzle. For technology transformations to be successful you need to address each of three critical dimensions: *People, Processes, and Technology*.



You need to address all three dimensions and you need to address them in that order. People first, then processes, and finally technology. Furthermore, it is an iterative and ongoing process. When you get to the end of the technology piece, you need to loop back to people. This is a complex ecosystem.

Put People First

People are the foundational component of the system and need to be considered first. Ideally you would map out your staffing needs, then build a fulfillment plan, bring the staff onboard, and so on. In

almost all cases, however, we have existing organizations and don't have the luxury of starting with a clean slate. Or we have pesky budgets that prevent us from creating the dream team from scratch. In those cases, we just need to start where we are to understand the status quo and build the roadmap for where we want to go. We need to take an unbiased view of our staff to ensure we have the right people with the right skills to perform the necessary functions at the level we require. Having the "right" people also includes a good cultural fit with the organization. If not, the resulting friction will erode morale and productivity, and things will never get better regardless of process or technology improvements.

We also need to make sure we have the right number of people. Are all roles filled? Do we have people doing "double duty" that might impact the quality of work? Do we have too many people because existing processes are overly manual or technology isn't working?

Formalize the Processes

Once we have our people squared away we move on to processes. Everyone has business processes. But, do you have the right ones? Does your team know them? Do people follow the processes? Are the processes documented?

A lot of folks get scared when you start to talk about processes. They envision bringing in truckloads of consultants and spending months developing massive Level 1 – Level 4 process maps. That is certainly a valid approach. Too often however, people quickly conclude they can't afford the time or money to do that and just stop there. The reality is that process mapping needs to be sized to fit the specific situation. There are light, medium and heavy approaches and you need to find the one that best fits your situation. At the highest level, there five steps you need to follow:

1. Document the processes
2. Match processes to procedures and business rules
3. Train people to follow the processes
4. Monitor the results and make sure people follow the processes (enforce them)
5. Identify process improvements (ongoing)

At the end of step four you go back to step one and adjust your processes. These should generally be incremental improvements but some may require more extensive rework. How deep you need to go in step one (i.e., Level, 1, Level 2, etc.) will depend on your specific business. Factors such as maturity, size and complexity of the business are some of the drivers for this.

We have seen many companies that decide to skip the process step. They have similar attributes:

- Perpetual turnover seeking new people or management that can solve the problem
- High costs due to inefficiencies and the wrong number of people
- Inability to grow
- Numerous internal meetings to "get everyone in a room" to sort out problems
- Massive numbers of spreadsheets (with no one quality checking formulas)

Tackle Technology

You have the right people. Everyone is following your documented business processes. Now you're ready to tackle the technology. The first step is to assess your needs by performing a system assessment. The system assessment should catalog your existing systems (mapped to your business processes from the Process step) and identify gaps, strengths, usage (e.g., are you using the systems to your best advantage and are they fit for purpose), areas for improvement, inefficiencies, and other

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parameters. The assessment will identify upgrade potential and where new solutions might be warranted. Skipping Stone uses a facilitated System Assessment Checklist to document these results and ensure all areas are fully addressed.

Where new system needs have been confirmed, the next step is to go through a system selection. To prepare for the system selection the high-level activities include:

- Review Business Processes: Make sure your business process definitions are up-to-date. Hopefully you went through the process work above and this is in good order.
- Define and Document Clear Business Objectives: You should have clearly articulated business objectives around why you are implementing the technology and what the benefits will be. This should be agreed upon by all stakeholders and serves as a guiding light throughout the implementation. As with many of the items we are discussing, this is not a one size fits all exercise. For some implementations, this will be one page. For others, it could be multiple pages and sections. The size of the implementation, complexity of the business, company culture and other factors will drive this. Just be careful that flexibility doesn't become an excuse for not doing it at all.
- Develop and Validate Requirements: At a minimum, high-level requirements should be developed and used as input into the system selection process. Recognize that if you defer the detailed business requirements until after you have selected your technology, you run the risk of having selected a technology that is not a best fit for your needs.
- Prepare a System Selection Criteria Matrix: Using the above parameters, the selection criteria matrix provides a systematic approach to reviewing and ranking potential solutions. The matrix should include business and technical requirements, cost, vendor viability, vendor implementation capabilities and other parameters.

In some cases, you can now directly engage system vendors, but in others a formal request for proposal (RFP) is required. In either case, system vendors should complete your selection criteria matrix for their specific solution(s). Once you have processed the completed selection criteria matrix and ranked the system vendors, you can prepare a vendor short-list. This typically includes 3-5 system vendors (per solution) that you want to bring in for system demonstrations (demos). Recognize that there is a "right way" and a "wrong way" to prepare for these demos. A detailed review of demo preparation is outside the scope of this paper but putting sufficient effort into this step will save you time and aggravation in the long run, so don't gloss over this.

Once you have selected the best fit solution(s), the next phase is the actual implementation. When preparing to start any technology implementation you should ensure you have structured the work appropriately, assembled the right team and have the proper governance in place. A comprehensive discussion of project governance and implementation best practices is outside the scope of this paper, but there are a few items to stress:

- Develop Detailed Business Requirements: Yes, business requirements were identified in the selection phase, but some implementations will include a work stream to develop the detailed requirements and validate them against the business processes. At this stage make sure your requirements are understood and accepted by all stakeholders – end users, IT, support teams (business and technical), management, vendors, etc.
- Invest in Project Management: There are many accepted project methodologies. Which one you choose will depend on your specific situation, company culture, etc. There is no single correct or best methodology, but using a formal methodology is important to the success of the

implementation. At a minimum, most implementations will have an internal project manager and a vendor project manager. In many cases, having an independent project manager to oversee the entire implementation will provide significant benefits as the independent project manager understands the big picture and can identify risks and risk mitigation strategies to ensure a successful project. This person helps manage the internal and external stakeholders and makes sure everyone is working to meet the overall business objectives.

- Dedicate the Right Resources: One of the primary reasons implementations fail is a failure to dedicate sufficient business resources with adequate knowledge of how the business works. Having these people on the project are critical to your success. It is not easy to free these people up from their "day jobs," but it is a major determinant of implementation success.
- Identify Specific and Measurable Success Criteria: While the old adage "if you can't measure it, you can't manage it" is not necessarily true in all situations, you do want to have specific and measurable success criteria for your technology implementation. These should tie to your business objectives. In combination, these will allow you to measure implementation success and provide guidance to recognize when you are done. Technology implementations are highly susceptible to scope creep. Having clear business objectives and success criteria will form a powerful weapon to combat scope creep.
- Initiate an Implementation Quality Review: When you are managing a complex technology implementation it is very easy to get caught up in the weeds and lose objectivity. Having an independent implementation quality review (IQR) can drive project success by identifying risks and mitigation actions that are hard for the day-to-day project team to recognize. The IQR engages the project and executive teams at the beginning of the implementation and at major project inflection points to identify potential risks and risk mitigation actions to help ensure project success. The IQR helps you mitigate these risks before they become issues.

The technology needs to support your business processes. If it doesn't, you're going to have issues at some point. The sooner you discover the issues the better – preferably before you start the implementation. Skipping Stone has been called in to help fix projects where the client discovered process gaps after they'd spent months of labor and millions of dollars. We've seen projects that went live before the gap was uncovered – things got really painful then! You also need to understand from the beginning that the technology won't support your processes 100% – and that can even be a good thing. Be aware that implementing a technology that doesn't support your existing processes means you are making a conscious decision to change them. If you are going to do this, it needs to be deliberate and there needs to be a net benefit to changing the processes.

Finally, you need to recognize that in most cases, you aren't going to get everything you want in the first pass. Resources are limited and some things will inevitably need to wait. Make sure you create a roadmap of future enhancements and a plan to achieve them.

What Does Good Look Like?

Congratulations - you've gone through the all the dimensions.

- Your people are on-board and trained
- Processes are defined, communicated, being followed, and monitored
- The technology is implemented and you met your business objectives and success criteria

Can you stop now? No!

Remember, the three dimensions – people, processes, and technology – are a continuum. A cycle, so to speak. You need to be diligent to ensure continued success and improvement. Part of that is deciding

"what does good look like" and how good you want to be. People learn. Processes evolve. Technologies improve. Markets change. You can always be better. But resources are limited. You need to understand what good looks like… basically the landscape of best practices for your business. Then you need to decide where you want to fit on that landscape and how you are going to get there. It is always a journey.

You don't necessarily need to spend a lot of time and money doing this but at a minimum you should have a clear road map and embrace integrated planning across the three dimensions: people, processes, and technology. You also need to recognize that these are dynamic elements so you need to regularly review your approach and progress.

Ensuring Successful Technology Transformations

To summarize, there are three major steps to avoiding the technology trap:

1. **Put Your People First:** Step one is to assess your team. Do you have the right people? Enough people? Are your people well-trained? Does the team have management support? Are they empowered? If not, develop the plan to correct the situation.
2. **Formalize the Processes:** Step two is to formalize your processes. Are your current processes documented? If not, document them. Are people trained on the processes and are you enforcing adoption? Then make sure you monitor your processes and work to improve them and fill in any gaps.
3. **Tackle Technology:** Step three is to update your technology – your original goal. Have you defined and documented your business objectives? Are your requirements documented in sufficient detail to support your business processes? Are the requirements understood by all stakeholders… including vendors? Have you identified specific and measurable success criteria? If so, make sure you are following the selection guidelines, have proper project governance in place and are adhering to the implementation best practices identified above. Consider initiating an IQR. After checking these off, don't forget to create your future enhancement roadmap.

Get in the habit of structuring your technology implementations to consider people and processes up front and recognize the three dimensions are an iterative cycle. Finally, create a "living" roadmap for each of the dimensions and conduct periodic (at least annual) reviews of people, processes and technology. The roadmap should be a holistic view that considers the interaction between the dimensions. It will guide you in avoiding future technology traps.

What if you already have a technology implementation in progress? There are still things you can do (short of stopping and starting over – probably not an option).

Here are a few things you can introduce without derailing the effort:

- Create a plan to make sure people are trained on the new technology and any new processes. Good documentation will be key as well.
- Get the end users involved as much as possible – the sooner you identify potential "gotchas" the better. Be diligent to distinguish between must-haves and nice-to-haves.
- Perform a quality review of the project to identify specific risks and develop risk mitigation strategies. Revisit these periodically.

About Skipping Stone:

Skipping Stone is a privately held professional services company focused solely on energy markets. For two decades, we have assisted clients achieve their goals by helping them navigate energy market changes, capitalize on growth opportunities and solve business problems. Our specialty is collaborating with clients on ideas, strategies and tactics, and then working with our clients to turn those ideas into success. Skipping Stone's model of deploying energy industry veterans has delivered measurable bottom-line results for over 270 clients globally. Headquartered in Boston, the firm has regional offices in Atlanta, Houston, Los Angeles, Tokyo, and London.

Skipping Stone's services include market assessment, strategy development, strategy implementation, managed services, technology selection, technology implementation, project management and talent management. Our sector focus areas are natural gas and power markets, demand response, technology services, renewable energy, and distributed energy resources.

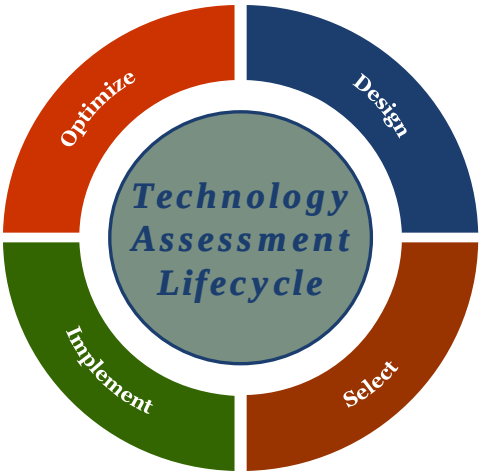
Skipping Stone's Technology Services practice focuses on assisting our clients across the entire technology assessment lifecycle:

Design: Assess business strategy, review and improve business processes, develop business and technology roadmaps

Select: Develop and validate requirements, drive to vendor short-list, facilitate vendor interactions (demos, contracting, etc.), select a vendor

Implement: Lead implementation efforts for the client and vendor, provide functional and technical resources, identify and mitigate project risks, perform implementation quality reviews (IQR)

Optimize: Improve system use, add system functionality, facilitate process improvement, anticipate business growth and expansion



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