

The Mechanics of Gap Analysis

Automobiles as Systems

When I first became an analyst, I started looking for educational tools and work techniques that I could use in my daily routine. One of the tools I came across was a gap analysis check list. I figured there must be something I was missing. It can't possibly be that simple!

The truth is I actually learned gap analysis from my step-Dad Glenn. He is a mechanic and I spent more weekends at his shop watching him figure out what was wrong with a car based on what it was doing. This has actually come in handy in helping friends with car problems, but it has had an unexpected benefit. It gave me insight into how to break down a problem by simply understanding the chain of events in a given process.

Routine, Re-Alignment or Peripheral Gaps

Gap analysis is a technique that can be utilized in three primary different scenarios: analyzing and understanding the differences between current and future states (defining the path: Routine Gap Analysis), to re-align projects that are not delivering the functionality required to meet business objectives and understand where and why they went off track (re-assessing and getting back on the path: Re-alignment Gap Analysis), and exposing pre-existing gaps that are not directly being addressed by your current project (Peripheral Gap Analysis).

Routine Gap Analysis

Analyzing the differences between current and future states is a routine part of your project. To understand, document and define where we are now, and compare that to where we want to be in order to design the path to get between the two. Typically this means defining the integration points of building an interface between two applications or understanding important factors when transitioning from one system to another.

Re-Alignment Gap Analysis

Realigning a project that is off-track is going to be similar, but you have to consider that you essentially now have three states to map instead of just current & future. You now also have a problem state, and in order to prevent future projects from repeating this break again, we need to understand how we got from the current state to the problem state, and we need to understand how we now get to the future state. And, we have to know if we have to alter the future state for what we can deliver based on where we are now.

When to use Gap Analysis:

- ✓ **Routine process & requirement analysis**
- ✓ **Discovering peripheral gaps**
- ✓ **Re-alignment of requirements, design & deliverables to business objectives**

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Tips & Tricks:

- ❖ *Try to keep Routine & Peripheral Gap Analysis down to 3 pages*
- ❖ *Document each gap separately*
- ❖ *Capture recommendations to close each gap*

Peripheral Gap Analysis

If we were on a road trip, and we got lost part-way to the destination, would we keep driving or stop and figure out where we are and how to get back on track? Well, I get stressed and starts to get angry if I get lost, and need a lot of quiet while I formulate a plan to my destination. Wow! That sounds a lot like my last project... It actually explains why tensions were so high when I joined the team... They were lost!

Since most projects are started to address a business problem or improve the way we do business, we will periodically find gaps on the peripherals of our project that we cannot address. The best tool we can use is gap analysis to advise the business that an issue has been discovered.

How to Perform Gap Analysis

So I have been doing a lot of preaching to the choir, but I really haven't told you how to use gap analysis or how to use it effectively. Basically, performing gap analysis should include a step by step walk through of the work and data flows to ensure we capture integration points completely and accurately. It should also include mind-mapping and facilitated brainstorming sessions with architects, developers and business intelligence resources.

You want to document the gap analysis as cleanly as possible by identify a single specific gap in one document. Include details about where the gap is – i.e. the specific process name, what happens, why it is a gap, and what your recommended solutions are. Now here is where I differ from everyone else out there: I anticipate and answer the next set of questions I know my stakeholders are going to ask.

What does this impact? What are the risks? What is the probability the risks will occur and what are the impacts if they do?

Anticipating and answering these next questions a especially important when you discover gaps on the peripherals of your project because there is an inherent assumption that defining the path between current and future states is part and parcel with the project you are working on. I'd really only worry about answering these questions, if I discovered the problem was significantly bigger than originally thought and would impact the project schedule, deliverables and budget.

It is also especially important to answer these questions when your project is off track and not delivering the functionality that will address the business

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problem and meet the objectives. This information will be critical for stakeholders to make informed decisions and mitigate the risk of continuing down the wrong development path.

It is also important that the organization learn and evolve, so this information needs to be documented in a lessons learned log. The last thing you want to do is document it and not learn from it. You don't have to wait for the next project to implement it either. If you add some simple items to your lessons learned log you will add tremendous value right now. Those items are recommended action plan, status of actionable items, when they are due and who they have been assigned to.

Roots of Better Gap Analysis in the Shop

Okay, so I never said I learned it all from watching my step-Dad fix cars. I have added some things I picked up along the way from project management, change management and change control. But I still owe a lot of what I do and do well to Glenn. He inspired me to want to solve problems and helped me to learn the fundamentals of systems analysis.

If you're ever in a place called Manigotogan (pronounced 'man-i-go-tog-gan'), ask for Glenn. Spend some time in the shop and watch him work. I guarantee you'll be a better analyst as a result!

Case in Point

E2 Consulting has applied its gap analysis on multiple engagements. The most notable instances were during routine BPM project with a large oil & gas client, discovering security gaps on the periphery of a vendor transition project with a healthcare insurance client and to re-align deliverables that did not meet business scope & objectives project with an insurance client.

In the case of routine gap analysis, the team was mapping business processes for SOX compliance and used gap analysis to document gaps in management processes that would impact CSOX 404 compliance.

In the case of peripheral gap analysis, our team was transitioning one print vendor out as another vendor was transitioned in. The complexities of the print vendor access to the network created unique issues and revealed critical security concerns with the client's network that exposed them to risk of theft. These gaps, risks, impacts and probabilities were documented and presented to stakeholders for consideration. They were not directly addressed by our project and as such left stakeholders armed with information for future strategic & risk planning.

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Finally, in the case where gap analysis was used to re-align project deliverables with business objectives and scope, our team was defining the requirements for a new driver program. The project objective was to build and implement the software and processes to support a new program targeting risky drivers, run the new program in parallel to the old program and then to decommission the old program and move forward with the new one.

After Phase 1A implemented, the project ground to a halt due to the discovery of 396 post production issues. In analyzing and fixing these issues, it was discovered that design & development compartmentalized the old program and deleted the old environment without testing it. They then re-used functionality of the program by implementing new code into the compartmentalized sections.

In understanding how design & development could have created something so vastly different from the scope and requirements, it was discovered that requirements and design were written in seclusion at the same time and were signed off by two completely different sets of stakeholders.

E2 resources documented the gap analysis, issues and lessons learned and escalated them to the stakeholders. We held workshops with the team and stakeholders to define a new future state and ensure that everyone was on the same page.

Results

As a direct result, we were able to implement Phase 1B with only 2 post production issues.

In each case, the clients had the information they needed at their disposal in order to make informed decisions more rapidly.

Benefits to Client

The most significant cost savings in the above cases were realized by the client where we applied re-alignment gap analysis as we were able to prevent further divergence from the business objectives.

In addition to reducing an outstanding change request for additional funding of \$4 mil to continue the project for another year to \$2 mil, the client also benefitted from cost savings realizations of \$250,000 for Phase 1B. The business benefitted from getting more of the features they needed in the new product designed to support the program.

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