

BIOGRAPHICAL INFORMATION

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Specific Responsibilities

Joined Tier 3 in June 2004. Responsible for delivery with integrity of independent and unbiased geospatial management consulting services to public agencies and utility companies. He is responsible for business development, project management and client relationships for North American clients. Mr. Hobbs specializes in project and program definition and design, client representation and project oversight, existing systems assessments and improvement planning, business process improvement, project management and project management training.

Past Experience

Mr. Hobbs has a diverse experience in technical and management consulting for public sector and utility operations management geospatial IT systems. He has over 28 years of experience including more than 100 projects and is a pioneer in the development, integration, and implementation of geospatial technology and operations management applications for utility, local government, and petroleum industries. Mr. Hobbs has participated in or managed many projects with North American utilities that have resulted in the successful implementation of major enterprise-wide solutions. He has strong skills in project evaluation, definition, and management. His consulting experience spans from strategic project planning and implementation to oversight and advisement in large and medium sized infrastructure enterprises. Mr. Hobbs has excellent skills in developing consensus, problem solving and developing practical and effective solutions. He possesses strong team building, staff development, and motivational skills. Mr. Hobbs was Chairperson for the 2001 GITA annual conference held in San Diego, California March 2001, has presented over a dozen technical papers at past GITA conferences and lead five project management seminars over the past ten years.

Education Information

Grossmont College, El Cajon, CA
Regis University, Denver, CO

Engineering and Land Surveying
Computer Science

Professional Memberships

Geospatial Information and Technology Association (GITA)
Project Management Institute Certified Project Management Professional
Mr. Hobbs is a California Licensed Surveyor.

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**Post Implementation Syndrome -
Moving to the Next Level**

Abstract :

Whether your geospatial implementations were completed last year, near the dawn of the technology, or somewhere in between, learn what you can do to take your organization's systems to the next level. Implementing geospatial systems can be traumatic to organizations and the individuals who implement them. However, there is life after implementation, and this paper will discuss how to achieve balance and productivity as the geospatial system is taken to the next level.

Post Implementation Syndrome -

Moving to the Next Level

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Completing the implementation of a GIS is cause for celebrating in every case. What is not so obvious is how one may feel a few years later. As the system is rolled out, users become proficient with the new technology, and goals are met the GIS becomes a common part of the business environment. As the system settles in as a routine tool and the users become more familiar with its current capabilities and its potential to do more, the questions often arises “what do we do next”? This is a sign of “post implementation syndrome.” It also indicates it’s time to move to the next level.

Whether the move is a small step, or a major upgrade, having a plan in hand to guide the move to the next level is how to survive the syndrome. A 12 step program is outlined below that is proven to help overcome post implementation syndrome and help you move your GIS to the next level.

12 Steps to Move a GIS to the Next Level

Step 1: Assess Current Environment

Conditions have changed! Business does not stand still, and changes small and large are happening every day. When enough small changes are added together, the impact on systems become significant. Larger changes may come from many directions. Typical events include users wanting more functionality, business strategic directions change, government regulations change, and business processes need revision.

Assessing the current status of your environment can be accomplished using one or more of the following techniques. The goal is to identify what has changed that impact the performance of the system.

Survey internal users, maintainers, managers, and external users to identify:

- What’s working and what’s not;
- Learn about suggested improvements;
- Identify training issues;
- Find data issues;
- Discover needed new functionality;
- Review system performance / conditions;
- Measure response time;
- Confirm software revision levels;
- Review data management processes;

- Evaluate system replacement cycles;
- Review data maintenance service level performance;
- Review improvement request service level performance;
- Review program communications performance.

Compiling a summary of the current environment provides a context for understanding what changes may be needed to move the system to the next level. This first step includes looking at the following topics and areas: enterprise strategic direction, business processes impacted by changes in any system, the people who manage and perform these business processes, the data (existing and new) needed to support the business processes, and finally review the technology that may be used to support the move to the next level. Armed with an overview of the current conditions affecting your systems, following the remaining steps will lead to success.

Step 2: Confirm Your Enterprise's Strategic Direction

Every system used in an organization should align well with the enterprise strategic direction. Misalignment brings the risk of under-funding, or neglect of a project that leads to difficulty in maintaining the system and delivering the expected benefits. The following questions are a sample of the kinds of inquiries needed to assess the degree of alignment systems have with the enterprise strategic direction.

Has the business strategy change? Any changes in strategy should be evaluated for their impact on the system and its users. Even small changes in strategy may have an impact on how to take it to the next level. The following questions are a sample of the lines of inquiry to pursue in determining how well you systems are aligned with the enterprise strategic direction.

- Has the business reorganized? Changes in how the company is organized often reflect a change in strategic direction.
- Have new business units been added (mergers / acquisitions)?
- What are the current enterprise priorities and goals? Do they match prior goals?
- What role does / will the GIS play in the current enterprise strategy?

Answers to these questions will help identify where changes may be needed to align systems with the enterprise strategic direction.

Step 3: Identify Supporting Business Processes

Business processes are the means by which the enterprise will accomplish its work and execute its strategy. This step identifies the key business processes that support the organization's strategy. These processes define how work is performed, by whom, the tools that are needed, and what results are expected. Often, as strategy and conditions change, the business processes must also

change to accommodate the new environment. In preparing to move the GIS to the next level, it is necessary to understand the current business process and identify what changes are needed to the system to adequately support these processes. The following questions assist in identifying processes the impact or are supported by the GIS.

- What business processes may have changed that impact the GIS program?
- Are there new business requirements as a result of process change?
- Have one or more business requirements been eliminated?
- Are there new business processes that require or would benefit from GIS?

Compile the answers to these questions along with the business process descriptions for later reference. Review each process and identify what is new or different that will impact the performance of the GIS.

Step 4: Identify the People

A key component to evaluate when planning to move to the next level is the people engaged in the new or modified process. Internal staff, external customers, management, and regulators are all involved in some manner in the performance of business processes. Change occurs continually in an organization. Strategy and process change, business units reorganize, individuals retire, new staff is hired, and customers change. Over time, the people participating in getting the GIS off the ground will have changed through gaining new skills, having been promoted or transferred, and by leaving the organization. A thorough assessment of the people currently engaged in the process is needed to understand their requirements for the system and to acknowledge their role in the process. The following questions provide a guide to gathering important people related information.

- Has the staff performing business processes impacting the GIS changed?
- What are their current skill levels?
- What training do they need to improve their proficiency and productivity?
- Are there too many or too few people involved in key processes?
- Is there high staff turn-over in the organization indicating job dissatisfaction?
- Has there been a change in the number or type of clients the staff interacts with?
- Are clients demanding more from the staff can be provided in the current environment?

Finding answers to these and similar questions will develop a picture of the people needs in the GIS system. Resolving people related issues in a systematic and constructive way as the GIS is moved to the next level will go a long way toward achieving acceptance of process and system changes by the people engaged in performing the work.

Step 5: Identify the Data / Information Needed by Staff

With a clear understanding of the current strategy, process, and people issues, we can turn our attention to identifying the data and information needed to support them. It can be expected that much of the data already in the GIS will remain. However, with the changes identified in the previous steps there is opportunity for changing needs regarding data, its analysis, and the information used by staff and clients. Ask the following questions to identify the changing data and information needed to support the organization.

- What new data is required by the staff to effectively do their jobs?
- What new analysis is required to evaluate conditions and make decisions?
- Has the volume of data the staff collects, handles, reviews, uses, and distributes changed significantly?
- Has / can the data be automated prior to receiving?
- Are there alternative sources for the data?
- Can another organization or the client process and deliver the data in a consistent, more useable format?
- Is the current data spatially accurate enough to meet organization needs?
- Are the attributes of object accurate and complete?
- Are the data maintenance activities and cycles adequate to support the user's needs?

Capturing data needs and requirements at this point helps clarify what system changes are necessary to move GIS to the next level.

Step 6: Assess the Technology Needed

Often this is the topic that drives many decisions regarding the moving a GIS to the next level. Your system vendor may have recently released a new software version, changed their foundation technology, or added functionality needed by the organization. Mergers and acquisitions may trigger a need to consolidate all business units to a common platform. Whatever the business driver, assessing technology needs should be based upon the information collected in the steps above, and incorporated in a holistic way. Doing so will result in more practical solutions, improved performance, and higher user acceptance. In developing the technology assessment the following and similar questions should be asked.

- Is the current technology adequate to support the organization's latest strategy, new business processes, changing staff, and data needs?
- Identify the key organizational needs addressed and the functions to be delivered by the new or changed technology.
- Are there off-the-shelf technologies available that may provide practical solutions?
- Is a unique or cutting edge technology needed to solve the identified issues?
- What are the risks associated with changing an existing system?

- What are the risks associated with adopting a new technology?
- Are vendor recommended solutions a good match for your needs and requirements?
- Will a change in technology increase or decrease maintenance costs?

Step 7: Create a Strategy

In this step we create a strategy and plan to move the GIS to the next level. Organize and evaluate the information developed in Steps 1 through 6. Maintain an open mind and outline two or possibly three practical alternative strategies that may produce the needed results.

Outline the actions to be taken to achieve each alternative. Remain at a strategic level and describe the activities in broad strokes. Details can be added later as required.

In preparing each alternative, assure that each major element (organization strategic direction, business process, people that perform the processes, the data they use, and needed technology) is addressed in the plan. Identify the project champion and key supporters for the strategy.

Step 8: Identify What Changes Will / Must Occur

When taking a GIS or any system to the next level, change is inevitable. Carefully and honestly identifying (early, in the planning stage) what changes will occur provides an opportunity to mitigate the change through education, modification, and soliciting input from those most affected by the changes.

Change comes in many forms and in every stage of the project. The following are representative areas where change is likely to occur and mitigation can begin as the project is designed, and developed. The goal is to identify and minimize the negative impacts change may have on the business processes, the people performing the work, and the data needed to support the enterprise efforts.

- Identify the changes that will occur to business process as a result of the improvements.
- Identify the changes people performing the processes will be facing.
- Will job duties change as a result of the changes?
- Will organization responsibilities change?
- Will workloads change (either up or down) or will they be shifted from one group to another?
- List the changes required in the data (accuracy, completeness, collection techniques, analysis).
- Are data quality requirements greater than in the past (e.g., improved location accuracy, all attributes must be populated and accurate).
- Identify what changes are required in the current technology, or what new technology is needed to successfully support the organization.

- Will training be required?
- Is the technology being introduced to staff without prior experience with a specific technology (e.g., GPS, pen-top computers)?

Step 9: Identify the Costs and Benefits of Change

Many organizations require (either informal or formal) cost and benefit analysis as part of the strategic planning process developing a financial justification for moving to the next level. Although each organization addresses this analysis in a number of ways, the following are a sample of the types of information contained in the cost/benefit analysis.

- Estimate the costs associated with each of the strategy elements identified above.
- Estimate the expected benefits to be realized as a result of implementing each strategy.
- Identify risks to the project (e.g., ability to perform, experience with the technology, capacity to absorb change).
- Identify the risks of the project (e.g., size and cost, implementation timing)
- Develop a cash flow plan for both costs and benefits. Be realistic when determining these flows.

Review the resulting analysis with your finance department and ask them to add any specific enterprise analysis for used for discounted cash flow and ROI. Complete the analysis with a brief narrative outlining the information used to develop both the cost and benefit estimates. Include any surrogates you may have used to estimate benefits.

Step 10: Assemble the Business Case

Extend the cost and benefit analysis to include the identified impacts on the business as related to execution of the organizations business strategy, improvement / change in business processes, the impact (positive or negative) on the business staff and clients, and what near or long term impacts on the business are expected from the strategy.

Build on the financial information developed to this point and add conditions and results that may not be financially quantifiable (e.g., improvement to working conditions and employee job satisfaction). The business case should include “soft” benefits as well as the “hard” benefits usually included in the cost / benefit analysis. A summary of how the proposed improvements will better align the organization and its systems with the enterprise strategic direction, improves business processes, improves the working conditions for the people involved (internal and external to the organization), improves the data and its currency for better decision making, and how any changes in technology contribute to the long term betterment of the organization.

- Identify collateral benefits the organization may experience.
- Identify new and lost opportunities that may occur as a result of the selected strategy.
- Be realistic.

Step 11: Execute the Strategy

When each of the preceding steps has been successfully completed, this step will be relatively straight forward. You have clearly identified the “who,” “what,” “why,” “when,” “where,” and “how much” of the project. Management and staff understand what changes will occur during the project implementation. Risks have been identified and mitigation plans put in place. Schedules and needed resources have been developed and identified. The plan is complete, and everyone is in agreement and supports the goals of the project. Now it’s time to execute the strategy.

By following proven project management principals the organization will realize a smoother and more effective implementation. With a good strategic implementation plan and solid project management practices, the implementation team can concentrate on performing the upgrade and solving the inevitable unexpected issues that arise during all projects.

In summary, follow the plan, look for ways to improve, and be on guard for changes in any of the elements identified in Steps 1 through 10. Know that with a well thought out and documented plan the entire process will be less stressful, more productive, and widely accepted and supported by the enterprise.

Step 12: Celebrate (and start over!)

Congratulations you are successful in completing your project. Surprise – Conditions have changed! You now have the opportunity to do it again. Having gained experience with your recent success, you are ready to practice again what you have learned and further improve the process the next time around. Let me know how it works out!