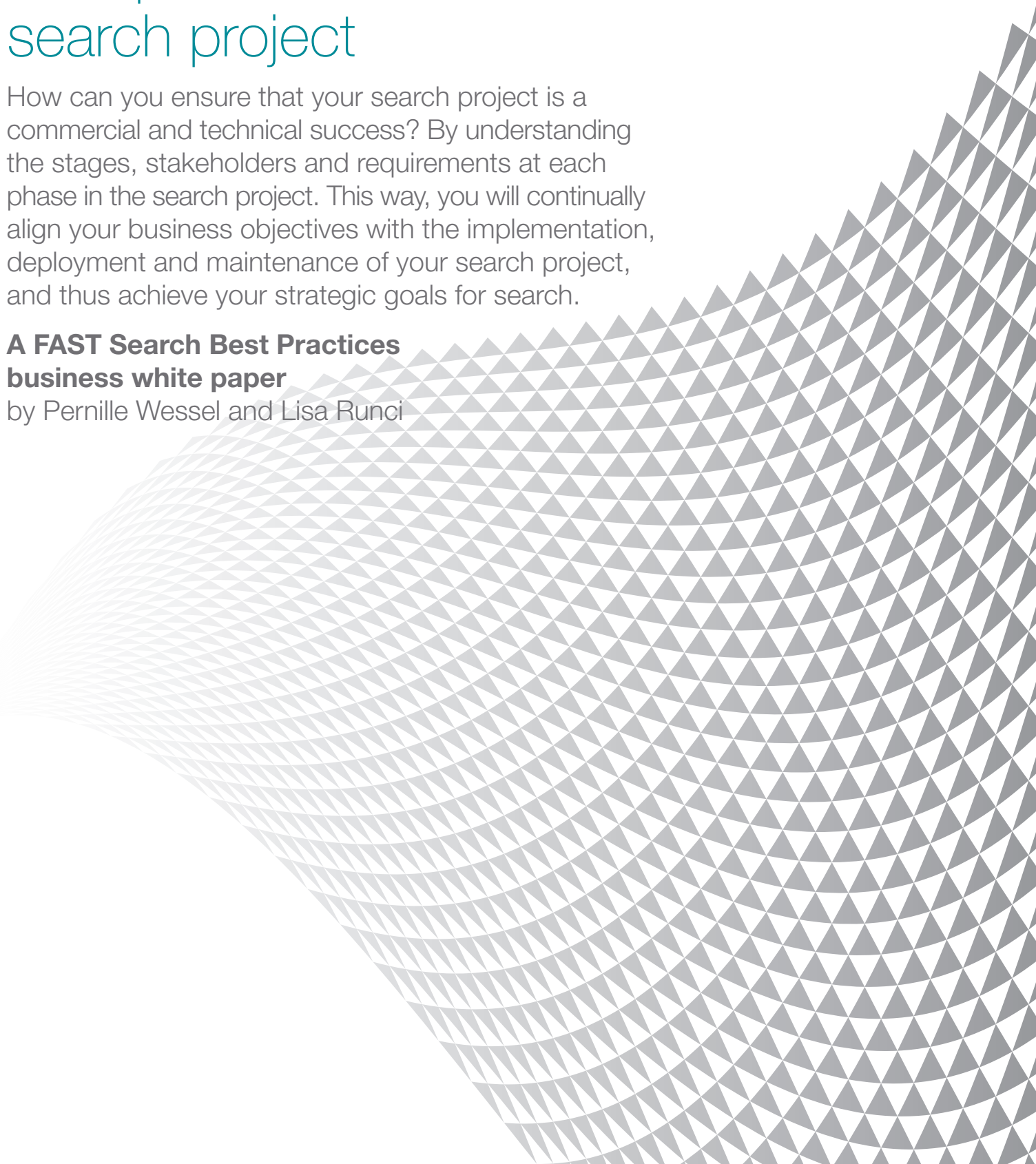


# Best practices in a search project

How can you ensure that your search project is a commercial and technical success? By understanding the stages, stakeholders and requirements at each phase in the search project. This way, you will continually align your business objectives with the implementation, deployment and maintenance of your search project, and thus achieve your strategic goals for search.

## **A FAST Search Best Practices business white paper**

by Pernille Wessel and Lisa Runci



## Introduction

Enterprise Search has emerged as the most powerful enabler for capitalizing on vast information assets. To leverage this power for the most benefit, it is critical to align the strategic vision and goals of the search-driven solution with the reality of implementation. Attention to this alignment at each phase of the project is critical to its success. A search project typically consists of 4 different phases – Discovery, Evaluation, Implementation & Deployment, and Operations & Continuous Improvement. Key stakeholder involvement and contribution is necessary through all phases of the project to keep the project aligned with the business objectives. This paper will focus on business and project goal alignment, deliverables, and key decision milestones critical for each phase of a successful search-driven solution deployment.

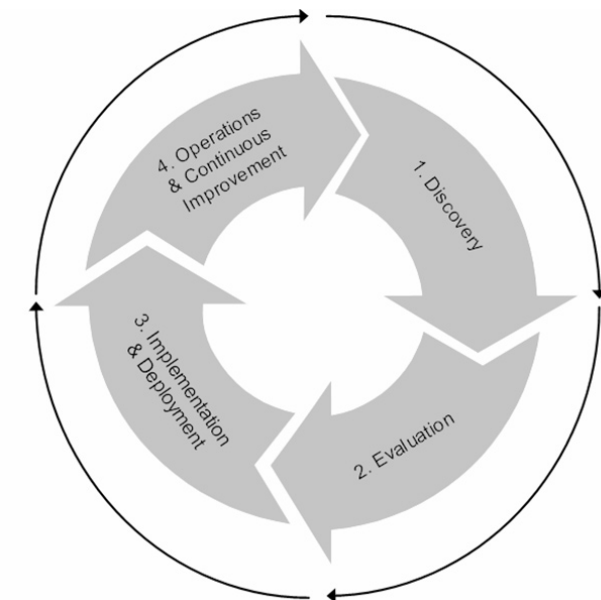


Figure 1.

## Phase 1 - Discovery

The objective of the Discovery phase of a search project is to review business goals and explore opportunities for the innovative use of search technology to address the needs of the organization. The investigation and analysis in this phase leads to the creation of a well substantiated business case.

The Discovery phase requires both an external and internal business analysis. Externally; evaluating market position, competitive threats and market trends provide the framework for a thorough understanding the business opportunity. Internally; evaluation of the infrastructure, solution portfolio and current business processes are critical for determining the organizations readiness for a search-enabled business transformation.

There should be a well defined search strategy, aimed at identifying where search fits the business model and aligns with the short- to long-term go-to-market strategy. Where

### Discovery Phase

#### Goal

Value Identification: Discover and understand how search can create business value for the company.

#### Objectives

**Search overview:** Understand search-driven market opportunities and trends and the application of search to capitalize on the opportunity.

**Search Strategy:** Define strategy to leverage search to achieve business goals.

**Value proposition and business case:** Identify search-related business value and opportunities.

#### Roles Required

*Sponsorship:* Executive and Project Sponsors.

*Expertise:* Business Analysts, Search Subject Matter Expert.

#### Anchoring

Top Management.

#### Required Decision Milestone

Go/No-Go for evaluation of specific search technologies.

and how search will impact the business within a given timeframe are important aspects of the search strategy and must align with the overall goals of the business.

Another important aspect of the search strategy is developing a comprehensive understanding of available search capabilities. Mapping these capabilities to the real business needs helps the team assess the business value of the project. There must be understanding and agreement from all project

stakeholders on:

- What business challenges a search solution is intended to solve
- How the investment in search supports the overall business strategy
- How it aligns with the short- to long-term go-to-market strategy
- Anticipated return on investment
- Incremental shareholder value

Properly communicating the goals and objectives of the project to all stakeholders and team members not only provides a clear picture of why this project is important, but also mitigates the risk of departmental misalignment and false expectations. Key to success in this area is the involvement of the project sponsor(s) from the very start of the project and throughout the project lifecycle. The right level of management involvement will ensure appropriate visibility and alignment of resources applied toward ratified goals.

If knowledgeable internal resources are not available for this phase, consulting services should be considered to articulate market trends, identify opportunity, and develop the business case for the project.

Before moving on to the Evaluation Phase, a decision as to whether to invest in search as a strategic platform is required.

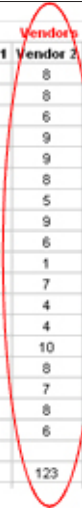
## Phase 2 - Evaluation

The goal of the Evaluation phase is to select the search vendor with platform and solution capabilities that are best suited to the defined business needs and who can support the entire lifecycle of the search solution project.

To ensure a concise vendor evaluation organizations need to define and be able to clearly articulate their needs and expectations to prospective vendors including;

- Use case scenarios
- Content structure and requirements
- Business goals
- Key performance indicators (KPIs)
- Functional, technical and operational requirements
- Support requirements
- Success criteria

When discussing needs and expectations with search vendors, it is absolutely critical to understand the users and their content profiles. Who are they, what are they searching for, and why? Users' information needs can be identified through surveys and interviews. Exploring the content the users need to solve their information needs should include; pinpointing the quality, size, location, frequency of updates, and security requirements. These are all factors that may influence the requirements and vendor selection. The findings in these analyses can then be used to determine critical search capabilities required relative to the business objectives.



Evaluation criteria	Vendors		
	Vendor 1	Vendor 2	Vendor 3
Compatible with source systems	4	8	2
Product Features	8	8	4
Management Console & Reporting	6	6	8
Service and Support	3	9	7
Flexibility	7	9	2
Scalability	2	8	2
Connector availability	1	5	2
Product Roadmap	6	9	5
# of Trained System Integrators	3	6	4
Cost of System Integrators	3	1	8
Internal resources needed	2	7	4
Risk	5	4	5
License cost	10	4	8
Hardware cost	2	10	6
Search Vendor Support	2	8	6
Business understanding	4	7	7
Trustworthiness	7	8	9
Reference Customers	8	6	7
<b>Total Score</b>	83	123	96

Figure 2.

Based on the accepted search strategy and needs, a requirements specification is very useful when evaluating vendors' capabilities. A detailed specification will not only help define the acceptance criteria, but subsequently identify the appropriate test scenarios and the key performance indicators (KPIs). Successful projects have diligently benchmarked their search solution from the very start, measuring areas such as traffic, popular queries, abandonment rate and click through rates. Although benchmarking brings an obvious benefit to the project by providing a performance baseline and identifying requirements for improvement, this task is often ignored. Defining the business and success criteria for the search solution early on provides additional guidance for the vendor selection process.

While the technology itself is a key component of the vendor selection, organizations must seriously consider the vendors ability to support the organization's strategic initiatives. Not only is it critical that a vendor deliver the desired

## Evaluation Phase

### Goal

Vendor selection.

### Objectives

**Requirement Specification:** Development of the acceptance criteria and KPI's based on benchmarking baselines and achievement of strategic goals.

**Success Criteria:** Development of the acceptance criteria and KPI's based on benchmarking baselines and achievement of strategic goals.

#### Vendor Evaluation:

- *RFI Evaluation* - Review capabilities of available solutions and vendors.
- *Benefits Mapping* - Mapping the business benefits of the vendor capabilities and roadmap.
- *Operational Support* - Assesses requirements for adequate operational support for operations strategy.
- *Risk Mitigation* - Assess the risks and how to avoid them.
- *Decision Matrix* - Prioritizing all requirements and scoring search vendor's ability to meet them.

**Evaluating Solution Architecture:** Evaluation of selected vendors' Solution Architecture and Design Specification.

**Test Readiness:** Evaluation of test environment requirements and resources to assess readiness to test a vendor solution.

### Roles Required

*Sponsorship:* Executive Sponsor, Business Owner.

*Expertise:* Project Manager, Content Manager.

### Anchoring

Upper Management, Project Team and Process Owner.

### Milestone

"Sign off on both the Solution Architecture and Design Specification, and the solution vendor(s) contract.

### Required Decision

Vendor selection.

search capabilities, but of equal importance is their domain and vertical business knowledge, trustworthiness, ability to execute, and their ability to scale to the organizations needs.

Assess the organization's need for operational support. Is there a need to host the search solution? Who will perform routine maintenance? Who is responsible for first and second-level support? It is critical to identify what part of the operational structure will be affected by a search solution and if there is a need to in-source or outsource any new areas of responsibility (such as the hosting, application management or search management and analysis). Understanding the tasks, routines, tools and manpower needed to operationally support the organization's search solution will help identify vendors able to provide the level of support needed, helping to narrow the list of vendors and ultimately facilitating a clean deployment.

Common for successful search projects is risk assessment detailing potential risks and the recommendations for mitigating the risk. The risk analysis should include a description of the calculated risks and the magnitude of their consequences. If there are actions or steps that can be taken to mitigate the risk, the assessment should include these recommended actions. For example, there will most likely be migration(s) associated with implementing the search-driven solution. A migration strategy should be created that is aimed at preventing undesired events from developing and reducing the effects of the events if they occur. The mitigation strategy would focus on the measures for reducing or eliminating risk, including contingency planning.

The evaluation of potential vendor solutions should be based on characteristics that are important to the organization. As previously mentioned, this is not only a feature or functionality issue, but also involves areas such as the search vendors' ability to provide support and their future product roadmap. Search is a long-term investment strategy adding to the importance of focusing on a wider set of requirements that go over and above basic functionality needs. Listing important characteristics in a decision matrix (figure 2) and scoring each of the selected vendors will help the organization sort their priorities, weighting their requirements relative to their prioritized business goals, and map them against the capabilities of the vendors to identify the search vendor with the overall best fit for the organization.

Once a vendor is selected, be prepared to work with select vendors in the development and approval of a Solution Architecture and Design Specification. These documents outline the search vendor's high-level project plan aimed at defining the major milestones as well as securing the resources for the project. Furthermore, it outlines the

recommended design, architecture and sizing, as well as specifically addressing the success criteria and the defined content augmentation steps. Details of the project plan and the design will traditionally not be available before the next phase of the project. However, at this point in the project the production hardware and other infrastructure should be ordered (including network etc.), while an evaluation of the development environment is conducted to ensure sufficient resource allocation for the project.

Selecting the right search vendor is one of the most important decisions to be made throughout the project lifecycle. Bottom line, the goal is to find a strategic business partner, not just a technical solution vendor.

## Phase 3 - Implementation & Deployment

The goal of the Implementation and Deployment phase is a successful launch of the search-driven solution, supported by quality operational procedures.

Once the solution vendor has been selected and the high-level project plan is approved, this next phase focuses on requirements refinement, implementation planning and design. The systems integration team together with the internal stakeholders should further refine the requirements for infrastructure, users, and content. The right investment in both internal and external resources is critical to the scoping and planning portion of this phase to create ownership among the team. End-users and external search domain experts are often considered for involvement at this stage, as they tend to have an acute sense of what is critical in the deployment of search-driven solutions.

The system integrator will be highly focused on configuring and developing the solution to meet the accepted requirements. Regular review of the acceptance criteria among the teams is important to ensure that nothing is overlooked as the project progresses. The project manager and key stakeholders within the organization should be having frequent contact with the system integrator, providing details around requirements and making key decisions.

Key project team members require training on any new technology, as they are expected to participate in all aspects of the deployment and ultimately ongoing support. Early training establishes a solid understanding and thus higher

involvement and more significant contributions to the search project, thereby increasing the likelihood of success.

Implementing a search-driven solution that is intended to

### Implementation & Deployment Phase

#### Goal

A successful implementation with quality operational procedures.

#### Objectives

**Project Planning:** Development of the project plan for specific project deliverables, identification of dependencies, and the relative timeline.

**Design:** Detailed design of the search-driven solution including from the infrastructure to the user interface.

**Team Development:** Search expert training to ensure the project team is capable of contributing to the success of the project from the start.

**Process Development:** Ensuring business processes and procedures are developed and documented for the testing and then ongoing support and success of the implementation.

**Launch Readiness:** Ensuring the solution meets the acceptance criteria, the production infrastructure is in place, and the project plan has been executed with all deliverables in place.

#### Roles Required

*Sponsorship:* Project Sponsors

*Expertise:* Business Owner, Content Manager, UI Engineer, HW Engineer, Network Engineer, Search Analyst.

#### Anchoring

Process Owners, Project Team, Developers, Search Technical Architect, Stakeholders and Key Users.

#### Milestone

Search Solution Launch.

#### Required Decision

Go/No go; Achieved launch readiness with agreement to move forward with implementation.



drive business transformation will ultimately require organizational changes to support the innovative initiatives leveraging search technology. New roles within the organization will emerge that require sourcing, such as a Search Analyst who will analyze logs, maintain and revise dictionaries, tune relevancy and queries, boost documents, and validate the quality of documents. Transitioning this role into the search

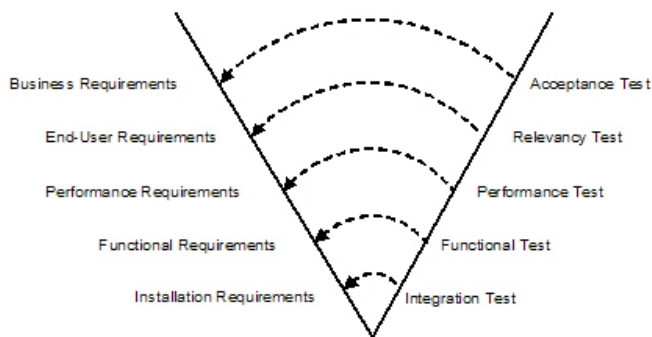


Figure 3.

project early ensures ownership of the important aspects of this role and an early understanding of the technology and architecture. Additional organizational and cultural changes may be necessary as new responsibilities are defined.

While maintaining focus on the business objectives driving the search implementation, the importance of developing the appropriate back-end systems and operational tools can not be ignored. Required enhancements to infrastructure and legacy systems should be addressed in this stage. Also, the necessary tools and procedures to support the operational strategy should be created and evaluated in the development environment.

Evaluating the search-driven solution in the development environment requires involvement of both the systems integrator and all key stakeholders, providing input into live scenarios for the test plan and verifying results at all levels of the search-driven solution. Assigning test resources early in the project ensures adequate time to develop the test plan and get familiar with the search solution. Allowing sufficient time to test and adjust for issues discovered during testing is critical. On average, the test phase takes approximately 1/3 of the total implementation time.

A minimum of 5 levels of testing should be included in the test plan as illustrated in Figure 3. Each level of testing works toward verification that the search-driven solution is

meeting the expectations and requirements defined by the organization.

The system integrator will typically be responsible for the integration test; verifying that any relevant content enters the search platform as required. The functional testing focuses on specific capabilities of the solution and if they are working as specified. The functional testing is performed by the customer as a way of verifying the functional aspects of the acceptance criteria under live use case scenarios. The performance testing validates three equally important factors:

1. Search query response speed
2. Front-end application performance
3. Infrastructure performance (network)

The appropriate domain experts for each of these areas must be involved in not only the test plan development, but validation of the test metrics. The relevancy testing ensures the search result set is returned in a way that is expected by the end users—do the end users get to see content, teasers and navigators as they expect?

The final test is the acceptance testing, ensuring that the original goals and objectives have been delivered upon. As the details of the search solution are verified in previous tests, the acceptance testing steps through the acceptance criteria to verify the “big picture” solution. The final acceptance testing should be configured to utilize real queries run through a live front-end application on a full data set.

Prior to going live, ensure the support infrastructure must be in place and aligned with the launch plan. Even with good planning and testing it is difficult to completely emulate the live environment. Having qualified personnel to monitor and tune the search solution is essential during and immediately following launch to ensure the highest-levels of quality. Expect the need for tuning to taper off as the solution matures, however it is important to periodically evaluate performance and relevancy of the search-driven solution to continue delivering the highest business value to the organization.

## Phase 4 - Operations and Continuous Improvement

The focus of the final phase of the search project is to conduct quality maintenance of the solution and evaluate if and

### Operations and Continuous Improvement Phase

#### Goal

Quality maintenance of search solution, maximize Business Value through search, and evaluate whether new features or upgrade are required.

#### Objectives

**Monitoring and Tuning:** Routine monitoring and analysis of the user experience - queries, relevancy, etc.

**Search Benchmarking:** Measure the solution against business objectives and competitors.

**Lessons Learned:** Review leveraging the lessons learned from the project experience.

**New Feature and Upgrade Assessment:** Review of next steps in the business plan.

**Usability Review:** Evaluation of the user experience.

#### Roles Required

*Sponsorship:* Project Manager, Project Team  
*Expertise:* HW Engineer, Technical Operations, Search Analyst.

#### Anchoring

Management Sponsor, Business Owner, Project Manager, End Users.

#### Milestone

Benchmarking activities and Next Step plans.

#### Required Decision

Is the solution in need of tuning, maintenance or upgrade?

Do the operational procedures need to be adjusted?

when new features or upgrades are required.

Analysis and tuning is recommended to be part of the Search Analyst's tasks (the role recommended earlier). Expect a heavier focus on tuning and adjusting relevancy, monitoring user patterns, and analysis of content immediately following a go-live. For routine maintenance, plan for weekly monitoring and maintenance of the content, queries and relevancy. The search platform will generate usage reports which can be extremely valuable to the Search Analyst for these monitoring tasks. It is important to ensure

consistent evaluation on metrics such as "0-hits" and "Top 200 queries".

Benchmarking should be performed against the criteria set earlier in the project. Comparisons against the old solution can be extremely valuable in identifying areas that need improvement. Consistent and regular benchmarking enable proactive responses to potentially negative conditions.

Within the first few weeks after implementation, an evaluation of the effectiveness of the operational procedures should be made to determine whether adjustments are needed. Organizations should expect some operational fine-tuning.

"After the first weeks of operation, organizations should tune and adjust the solution focusing on the following areas:

- Analysis of user patterns
- Infrastructure performance
- Operational procedures

After the first month tuning should again be performed with a focus on:

- Stable routines
- Zero hits
- Top 200 queries

At this time of stability, a benchmark to establish a performance baseline should be performed and recorded for future evaluations.

To ensure continuous success in the search project, a review of "lessons learned" with the entire team will be essential for ongoing success and the success of future projects.

A major evaluation of the search-driven solution should be conducted within 6-12 months of the first release covering the following areas:

- Status of the deployment
- User satisfaction
- Meeting business objectives
- Next steps in the business plan
- Analyze competitors' utilization of search
- Roadmap and upgrade options
- Lessons learned

A thorough review of the business plan and evaluation of new search functionality relative to future business plans is critical to the ongoing success of the search solution. A review of the current search capabilities and potential extensions will help determine if upgrading to the newest version of the search platform will provide stability, increase performance, and provide new business opportunity.

Finally, common for all successful search implementations is a continuous Quality Assurance (QA) process through every phase of the project. To gain an independent and objective perspective, consider external assistance to review project deliveries.

## Summary

The key to success with search lies within the organization's involvement throughout the project. Clear and regular communication between the project team and the management sponsors will help avoid misalignment of project objectives and business goals. Some points to remember that will help ensure a successful search implementation throughout all phases of the project are:

- Clear business objectives that are understood by the team and endorsed by the management sponsors
- Clearly communicated responsibilities
- Well defined scope with measurable success criteria
- Phased approach to the project to ensure that short-term objectives can be met in an acceptable time-frame
- Identified project prerequisites; both business and technical
- Search vendor evaluation based on the ability to help achieve the defined business objectives, both short- and long-term
- Prioritized evaluation criteria to ensure the proper weight is being applied to key search capabilities and ability to meet the support needs of the organization
- Continuous improvement and QA

Planning, clear communication, and a good support infrastructure throughout the life-cycle of the search project are essential for a successful implementation. An established process for continuous improvement ensures the constant alignment of the search-driven solution with evolving business and end-user needs, the development of new market opportunities, and the continued realization of the maximum business benefit.



### About FAST SBP (Search Best Practices)

FAST SBP is a highly focused transfer of search knowledge and experience from FAST to its prospects and customers. FAST SBP workshops aim to help enterprises realize the full potential of search, by creating optimal strategic, functional and technical roadmaps, delivered in the form of business model, solution and architecture designs.

For any feedback or questions related to this paper, please contact us at [sbp@fastsearch.com](mailto:sbp@fastsearch.com).

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