

System Selection: Aligning Vision and Technology



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President Obama’s recent allotment of roughly \$20 billion for health information technology (HIT) has healthcare information technology (IT) professionals and provider organizations across the U.S. reconsidering long-deferred IT projects. Whether embarking on the monumental task of an electronic health record implementation, or simply replacing an out-of-date billing system, it is imperative to select the vendor and system whose strengths are most in line with organizational vision and functional needs.

This paper discusses a system selection methodology for aligning the provider organization’s strategic vision, goals and objectives with the proposed technology solution being purchased from the vendor.

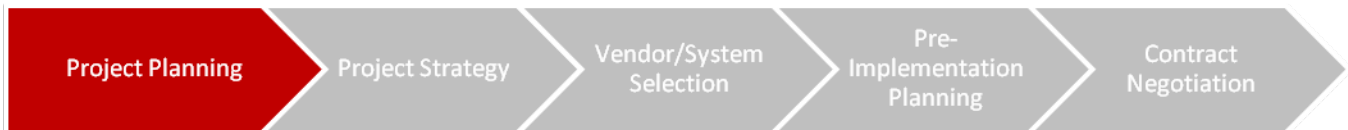
Introduction

There are three generally accepted approaches that a provider organization might adopt when embarking on the selection of a new IT system – industry leader, best functionality and system matching. This paper focuses on the latter of these three options, system matching, and how this five point methodology results in the selection of the vendor/system most in alignment with the organization’s strategic vision, goals and objectives.

System Matching Methodology



The key principle of the system matching methodology is that the organization’s goals and objectives are given the highest priority. System matching facilitates matching the technology with the organization’s vision, as opposed to other approaches that might focus on changing the organization’s business objectives to accommodate the proposed technology.



Before diving into a selection project, considerable consideration and effort should be given to basic project planning and definition.

Create a Project Charter

All projects, be they vendor selection or other, should begin with the development of a project charter. The project charter clearly defines the purpose of the system selection process, the expected assumptions, outcomes and criteria for success, the high-level mission statement, and the project governance structure.

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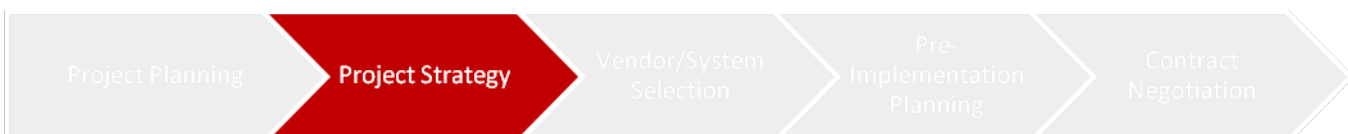
Identify Project Governance

All too often, technology purchases are completed in a vacuum without the involvement of key stakeholders resulting in, at best, a selection and implementation based on a partial set of requirements; therefore, it is critical that project governance be defined at the onset of the selection process. In establishing project governance, define key stakeholders and end users, the project steering team (PST), and executive steering team (EST) members. After the governance structure is defined, project communication tools for each group should be created, including, status reporting structures, formats and schedules.

Develop a Draft Project Plan

The PST should now have the starting pieces of information necessary to develop a draft project plan and to begin the development of an initial list of functional criteria. The project plan should include key tasks, timelines and resources.

Upfront project planning provides a critical foundation of knowledge and guidelines for the strategic and business decisions that must be made during the vendor/system selection process.



After completing project planning activities, but before beginning the actual selection process, begin mapping out the strategy behind the selection project. Information gathered and created at this point

includes the definition of current and future state, a gap analysis aimed at closing the gaps between the current and future state, a preliminary analysis of impact to the organization and validation of the future state.

Define Current and Future State

The current state defines the “as-is” state. Key steps include:

- Conducting individual stakeholder interviews and structured focus-group sessions to discuss and document key decisions that have been made, the impact of those decisions, and the decisions that remain to be made.
- Assessing and evaluating current operational processes and workflows looking for opportunities to eliminate operational inefficiencies.
- Developing a gap analysis documenting opportunities for improvement.

The future state defines the desired “to-be” or “future state”. Key steps include:

- Conducting focus group sessions with appropriate operational department staff and senior management to determine the organization’s vision of the future-state.
- Developing high-level roadmaps for key processes.
- Defining potential phasing strategies for the future state.

Finally, the information obtained in the steps above is used to document the current IT technology landscape (as-is) and the long-term technology strategy (to-be or future state).

Conduct Preliminary Impact Analysis

A preliminary impact analysis identifies key performance metrics to be captured, including high-level documentation of deficiencies with the current system or manual processes to be accomplished electronically with the new technology. In developing the preliminary impact analysis, the organization should document opportunities, challenges, and risks of implementing the new system with particular focus on operational processes that will likely require re-design. The final impact analysis should build a case for the organization’s board of directors by including a detailed description of the factors and reasons leading up to the need for the next technology.

An **IMPACT ANALYSIS** identifies key clinical performance metrics to be captured, including high-level documentation of deficiencies with the current system or manual processes to be accomplished electronically with the new system.

Validate Future State

In this step, the organization should secure approval of the proposed metrics and future state scenarios that will form the basis of vendor differentiation and identify additional needs, issues, and concerns that must be addressed by the selected vendor/system. After making any final refinements

to the future state vision statement and the road map-based scenarios, the organization should secure final approval and buy-in for both documents.



Create a Comprehensive Vendor List

Vendor/system selection begins with researching vendors that meet the defined requirements. Initially, the goal should be to create a comprehensive, but not exhaustive, list of potential vendors to ensure that all potential vendors/systems are considered. There are a number of ways to find vendor/system information including, but not limited to:

- Professional medical and IT trade organizations;
- Third-party reports from organizations such as KLAS, HIMSS Analytics, Gartner Group or the Forrester Report;
- Independent consultants with solution-specific experience;
- Web and periodical-based research.

Create a Vendor Short List

To create a refined list of vendor/system possibilities, begin by conducting a high-level evaluation of the long list of vendors looking for obvious reasons, such as company or product maturity, to narrow the pool of possibilities. All final vendors should be screened using the vendor evaluation criteria defined as part of the impact analysis to develop a final list of, at most, five potential vendors/systems. A list of alternatives that have a reasonable chance of meeting organization needs should be included in the case that one or more of the top five vendors are unable to respond to the organization's request for proposal (RFP).

Prepare Scope Documents/RFP

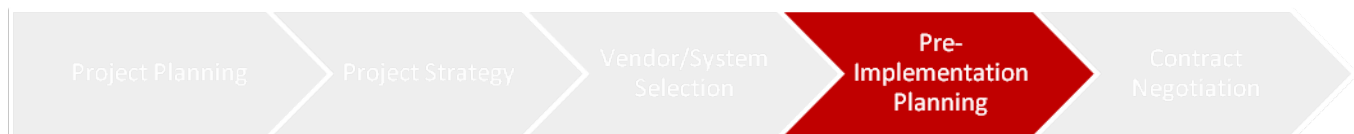
Initial project scope documents, implementation cost models, and time and effort estimates should be developed at this point in the process. An implementation cost model should include both operational and system (capital and operating) costs along with required time frames. In-house resource time and effort requirements should include those of the IT organization and each individual department involved in the implementation. Finally, the organization should revise recommended metrics and current values for key metrics, incorporating benefits, implications, costs and cultural changes. An RFP should be developed and issued to the short list of vendors. The RFP should be a standardized, formal document that explains to the vendor the organizational needs and defines a clear response format and timeframe.

Vendor Selection

There are many elements that must be considered when choosing the final vendor of choice (VOC). Careful attention must be given to mapping the proposed technology’s capabilities against organizational requirements to determine which vendors best meet the functional needs and most closely align with the organization’s vision, goals and objectives.

The vendor selection process begins with a methodical screening and scoring of the vendor RFP responses. Many times, this is the most difficult part of the vendor selection process. Most organizations create a “score card” that includes numerical scoring and weighting to rate how well the vendor’s/system’s capabilities perform against the defined requirements. A technical architecture document can also be used to define each vendor’s/system’s impact to the organization’s current technical architecture and the interrelationships with other information. Finally, all vendor exceptions to draft contractual language and ancillary documents included in the RFP should be closely scrutinized and become a critical component of final vendor evaluation.

Once a prioritized list of vendor solutions has been created, conduct a vendor open house for short-listed vendors as the final step before choosing a VOC.



Key to the success of any implementation, regardless of size and complexity, is pre-implementation planning and development of an effective communications strategy.

Develop a Communications Strategy

The communication plan should cover all stakeholders, internal and external, and define the messaging objective for each. Keynote messengers for each constituency group should be identified and trained in messaging specific to their group. These keynote messengers are responsible for deploying all communications to their respective groups.

Design a Total Cost of Ownership (TCO) Model

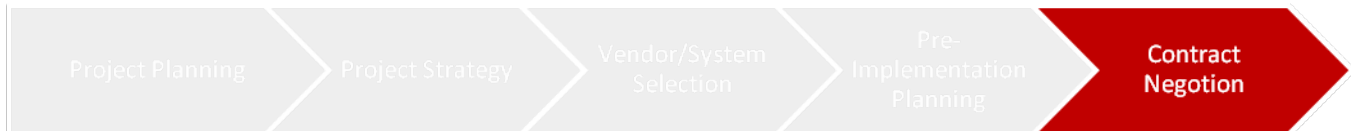
It important to identify a compelling definition of the total cost of system ownership (TCO) and the expected benefits over the life of the application/system. This information is captured in a TCO model. A TCO model identifies all currently available cost estimates, direct and indirect, associated with the proposed vendor/system and classifies those costs according to the organization’s financial policies and procedures.

The TCO model acts as an estimate of project costs based on data and decisions available as of the date of the initial TCO reports and is then evaluated and updated as the project moves from high-level planning into the detailed implementation phases. A final evaluation and interrelation of all results is conducted at key milestones during the project, and at the completion of the project, and are communicated to the organization's board of directors, EST and PST. (A more detailed explanation of the role of the TCO model can be found in DIVURGENT's white paper, [Understanding the Total Cost of Ownership \(TCO\) Analysis for IS in the Healthcare Setting.](#))

Create an Implementation Plan

Implementation plans should also include multiple key milestone dates covering different phases of the system implementation. These dates may change over the course of the project, but it is important to start out with targets. A comprehensive implementation plan should also include:

- **Implementation Assumptions:** Defines the overall implementation strategy, the high-level guidelines to be used in decision making, and the key drivers behind the implementation.
- **Communication Strategy:** Frequent and clear stakeholder-specific communications are designed to maximize stakeholder buy-in and acceptance.
- **Program Governance Model:** Defines the EST, PST, project teams, meeting frequency and the types of project decisions to be made by each group.
- **Implementation Approach:** Explains the rationale behind implementation phasing and timelines.
- **Project Plan:** Describes tasks, resources, constraints, and durations at a summary level.
- **Data Conversion Requirements:** Lists system, type of data, conversion timing and the database of record for data types.
- **Integration Requirements:** Lists the system, the type of data to be interfaced, the interface direction (uni- or bi-directional), the type of integration (real-time or batch) and the database of record for each data type.
- **High-level Change Management Strategy:** Includes sample assessment tools to help determine overall organizational motivation and drive, resource allocation and commitment level, climate for change and technical capacity.
- **Implementation Staffing Model:** Defines project roles and responsibilities.
- **Training and Education Model:** Defines the approach and methodology to be used in transferring knowledge from the vendor to the end-user community for each deployed solution.
- **Risk Management and Issue Escalation Strategy:** Establishes how risks and issues are to be handled and resolved as well as how these will align with the project governance model.
- **Implementation Budget:** Defines project costs and resource requirements per project year.



Build a Contractual Framework

A solid legal agreement should always be the foundation of any vendor relationship; however, contract negotiation preparation frequently does not receive the attention that it deserves. Prior to beginning vendor contract negotiation, organizations should begin with the development of a contractual framework that will allow for a structured negotiation process.

Building a contractual framework begins with a contractual risk assessment which is accomplished by conducting an evaluation of the organizations' current contractual relationships. Areas that should be given consideration when conducting a risk assessment include:

- Existing relationships that need to be terminated prior to implementation;
- The transition plan(s) from existing technology to the new solution;
- Existing technology integration requirements for the new solution;
- If an existing vendor is being replaced, any specific issues that should be addressed up front with the new vendor (e.g., lessons learned); and
- Transition costs (e.g., early termination, ongoing maintenance, transition fees, etc.).

Also included in the contractual framework is any information that supports assurances provided, or information submitted, by the VOC during the selection process, including:

- All draft contract information and ancillary documents from the original organization-created RFP package (e.g., terms and conditions, BAA, non-disclosure agreement, etc.; key business requirements; service levels and critical deliverables; and, preferred pricing methodology, terms and renewal options).
- The final RFP response and contract received from the VOC.

Conduct Structured Negotiations

Contract negotiations are the bridge between selection and implementation. Using a structured process that allows for open and collegial dialogue will set a positive tone for how the purchasing organization and the VOC will work together going forward.

Before the negotiation process can begin, a dedicated negotiation team must be identified. One person (or group of people) should be appointed to have oversight for all facets of the transaction to ensure that all contract components work as an integrated whole. This person(s) ensures that departments are not working in silos (e.g., pricing, SLAs, SOWs, Agreement, etc., and that all negotiation efforts work as an integrated whole.

Negotiation meetings should be guided by agendas that are developed and distributed in advance. Agendas allow all parties to come to the meetings prepared, and help avoid “run-away train” contract negotiations by providing meeting structure and guidance. Critical issues should always be at the top of the agenda and resolved first – before diving into less contentious items.

The primary topics covered during contract negotiation include the statement of work, price/payment, dispute resolutions/mechanisms, indemnity/liability limits, maintenance/support, and warranties. Each of these is discussed briefly below.

Statement of Work: A statement of work (SOW), also known as a work plan, should be developed prior to agreement execution even though it is not always possible to incorporate a comprehensive SOW into the initial draft of the agreement. At a minimum, both parties should have a clear understanding of critical implementation dates and timelines.

The SOW should clearly state both parties’ implementation resource obligations to ensure that both parties fully understand the resource allocation required to make the project successful. The vendor must be able to commit to minimum levels of retention for its key project employees. The organization should ensure it is involved in the selection and retention of all key project individuals.

Finally, the SOW should clearly state the consequences of failure (e.g., reduced hourly rate, service level credits, etc.), and the management process for ensuring such failures are addressed and remedied before they rise to the level of a material breach.

Price/Payment: Milestone-based payments with incentives for increased performance and penalties for poor performance are highly recommended. Although a vendor will be hesitant to accept penalties for poor performance, it must be willing to accept some level of risk (and accompanying deferred revenue) in order to entertain a win-win engagement. Similarly, the organization must be willing to pay for increased performance for exceptional work by the vendor. Such a shared risk component ensures that both parties’ interests are truly aligned in ensuring a successful project.

The contract should carefully define reimbursed expenses. Although not typically a contentious issue, the category of, rate for, and process for reimbursing reimbursable expenses should be understood by both parties prior to the start of the project and incorporated into the text of the agreement.

Discuss fixed fee versus time and materials arrangements. Although a fixed fee arrangement is generally preferred from an organization’s perspective, a time and materials arrangement with proper risk/reward incentives can be equally successful. Such a structure requires a comprehensive project

management methodology on the part of the organization to manage and evaluate vendor performance throughout the project.

Both parties should understand all pricing scenarios. Oddly enough, pricing is often the last component of a negotiation to be finalized. The vendor typically wants to ensure that all other components of the agreement are in place before it commits to final pricing. Although specific numbers may be left to the end, the overall pricing framework should be fully defined and understood by all the parties early in the negotiation process. In order to facilitate this understanding of the pricing methodology, specific pricing examples should be included in the agreement. Although the negotiation teams may understand the methodology, oftentimes, the individuals responsible for implementing the pricing were not involved in the negotiation process and will be relying on the text and examples in the agreement.

Finally, include acceptance testing rights that are linked to final payment. Some component of pricing should be linked to final acceptance of the system, product, software, etc. in order to truly ensure that the organization gets what it paid for from the vendor.

Dispute Resolutions/Mechanisms: A comprehensive dispute resolution process should be defined, and a joint advisory committee with representatives from both parties should be developed and incorporated into the agreement. Executives from both sides will be able to resolve disputes that cannot be resolved at the project management level.

Generally speaking, termination should be viewed as the option of last resort in the agreement. Although breach and termination are always listed in every agreement, it should be used as the remedy of last resort. After two organizations have spent thousands of hours negotiating an agreement, and then implementing a system, the last thing either party wants to do is actually terminate the Agreement. As a result intermediate remedies are critical and can include withhold credits, credit assessments, partial termination for certain modules/services, service levels, and management satisfaction reviews.

Indemnity/Liability Limits: This is almost always a contentious subject, and 99.99% of the time this is the last item to get finalized. In order to avoid delays at the end of negotiations, it is strongly recommend that this be elevated to management discussion early in the negotiation.

As part of the discussion around limitations of liability, the organization should address its primary risk exposure as a result of entering into the contract with the vendor. Both parties should understand these risk factors, and work toward allocating that risk in an equitable fashion. If the vendor is not able to assume the necessary risk relative to its performance, the organization should either reevaluate the

selected vendor or evaluate whether it has the ability to assume such risk on its own. In the end, the limitation of liability should be sufficient to permit the recovery of the organization's damages caused by the vendor.

All limitations of liability and exclusions of damages should apply equally to both parties. Limitations of liability are traditionally written one-way in favor of the vendor; however, the purchasing organization is entitled to the same level of protection from potential liability.

Finally, include "carve-outs" from any limitations of liability to address those situations where a limitation of liability cannot be justified under the circumstances. In all such instances, it should be the responsibility of the breaching party to bear the risk for the breach. Examples might include:

- Damages caused by a breach of confidentiality obligations (e.g., HIPAA / BAA).
- Damages covered by insurance, up to the amount of such insurance.
- Damages caused by the intentional breach of the agreement.
- Damages caused by the violation of applicable law.
- Damages resulting from breach of any intellectual property indemnification.
- Personal injury, death, or damage to tangible property.
- Other damages relevant to the specific transaction.

Warranties: Prepare a "Product Requirements" exhibit that defines the key requirements for the system being purchased. This document focuses the organization's attention on the specific business objectives to be obtained from the project. Depending on the system being purchased, any one or more of the following should be taken into consideration when developing the warranties for the agreement:

- Compliance with the guidelines of JCAHO, NCQA and any other applicable accrediting organizations;
- Compliance with all applicable federal, state and local laws, rules and regulations;
- Virus protection mechanisms and disabling device issues;
- Whether the recommended configuration is adequate to operate the software in the organization's environment;
- The ability of the product to integrate and interface with other systems and products that are anticipated to be purchased by the organization;
- The lifecycle of the product; and,
- The applicable licensing metric(s) (e.g., include examples to ensure that both parties are in agreement regarding when additional licensing fees will be paid and what triggers such fees).

Conclusion

As you go forth into the challenging and often time consuming world of system selection and vendor contract negotiation, keep in mind two underlying factors. First, the time and effort that you put into the initial selection methodology and negotiation process will in large part dictate the success of your organization's overall system implementation. Second, the ability to align your goals and objectives with those of your IT vendor will pay dividends not only during the implementation process, but throughout the life-cycle of your organization's IT initiative.

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Davis Shiple has more than 24 years of IT implementation and strategic planning experience. His background includes 15 years of IT experience in the healthcare industry where he has led a broad range of projects, including CPOE/ Meaningful use strategy and program management, health analytics strategy, community physician connectivity strategies, IT strategic planning, and best practices research. Mr. Shiple has worked for DIVURGENT since January 2009. Before DIVURGENT, he worked for companies such as Accenture, Gartner, IBM, and Navigant. Mr. Shiple is an active member of his local HIMSS chapter, and has been published in periodicals such as HFM Magazine, Bio-IT World, and Modern Healthcare.

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Founded by a team of consulting veterans, DIVURGENT is a national health care consulting firm focused solely on the business of hospitals and other healthcare providers. DIVURGENT provides advisory, interim management, revenue cycle management, project management, and modeling and simulation services to help improve patients' lives. A commitment to the client coupled with a unique combination of healthcare experience, flexible and scalable services, and proven methodologies differentiates DIVURGENT in our ability to provide our clients with the expertise necessary to plan, manage, implement and integrate healthcare IT into clinical, business and financial operations.

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