NAEM Software Conference
EHS(Q) Software Selection Workshop
A Well-Managed Selection Process

PATRICK HECHT
Senior Project Manager
Management Information System

STEPHANIE TAYLOR
Global Director
Management Information Systems
Safety Moment
Session Syllabus

» Introductions

» Objectives

» A “Traditional” Selection Approach

» Timeline Overview

» Profiling Your Project: Accounting for Differences in Company Culture & Current Conditions

» Vendor Offerings vs. Your Requirements

» Traps & Tricks, Tips & Tools in the Selection Process

» Balancing the Technical Selection vs. the Economic Selection

» Key Points

» Q&A
Introductions

Patrick Hecht
Senior Project Manager
Management Information Systems

Stephanie Taylor
Global Director
Management Information Systems
EHS, Sustainability, Quality
Participation

We are going to use a real time polling tool today to quickly and easily (hopefully) capture and share some inputs from all of you.

Please take a minute and using your smartphone or computer and a web browser, access the url below

https://pollev.com/aecommis

Let’s try a quick test….type an answer to the question you see on your screen
Session Objectives

» Provide an overview of the EHS application selection process with coaching on planning and execution of a well-managed EHS software selection project.

» Provide tools (guidance and tips) to use over the next two days when engaging with vendors and evaluating presentations with respect to your goals/needs.
Where are you in the process?

- Planning for a system selection in the next 1-2 years: 37%
- Have started our selection process: 33%
- Already have a system we will likely be using for a while: 30%
A “Traditional” Selection Approach
The EHS(Q) Software Selection

» Software Selection is a project
  • It has goals, budget, schedule, team and deliverables…

» Deliverables include…
  • Business Case
  • Scope and Requirements
    (System Requirements Specification = SRS)
  • Estimated (range) of costs
  • Gap Analysis
  • Risk Register & Assumptions
Appreciate the Breadth of the EHS(Q) System

Network Security

Document Publishing
Document Management
H&S Reports
Safety Management
H&S Metrics

Email

SCADA
Asset Management
Historian

Training
Tasks
Audit
Incidents

Environmental Metrics
Environmental Reports
Environmental Compliance

Appreciate the Breadth of the EHS(Q) System

Document Publishing
Document Management
H&S Reports
Safety Management
H&S Metrics

Email

SCADA
Asset Management
Historian

Training
Tasks
Audit
Incidents

Environmental Metrics
Environmental Reports
Environmental Compliance
Defining the Scope

» What “Modules”? 
» What Geographies? 
» What Businesses? 
» What are you replacing? 
» Will there be a “now’ and “later”?”
Costing

- Implementation Costs
- Software Fees

- Number of Modules Implemented
- Number of Modules Licensed
- Number of Items Defining Module
# System (Software) Requirements Specification (SRS)

<table>
<thead>
<tr>
<th><strong>IEEE Standard 830</strong></th>
<th><strong>AECOM Best Practice</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Correct</td>
<td>Explicit</td>
</tr>
<tr>
<td>Unambiguous</td>
<td>Simply stated (avoid jargon)</td>
</tr>
<tr>
<td>Complete</td>
<td>Categorized for analysis</td>
</tr>
<tr>
<td>Consistent</td>
<td>Scored for value to you</td>
</tr>
<tr>
<td>Verifiable</td>
<td></td>
</tr>
<tr>
<td>Modifiable</td>
<td></td>
</tr>
<tr>
<td>Traceable</td>
<td></td>
</tr>
</tbody>
</table>

The **SRS** specifies *what* the software will do, *not how* it will do it.

The **SRS** does **not** tell you what the project team should do.
The Project Team

» An Executive Champion
» A Project Lead/Manager
» IT representation
» Business representation
» Other Stakeholder representation
» Consider a consultant experienced in the process
RACI

Responsible
- The person who actually carries out the process or task assignment
- Responsible to get the job done

Accountable
- The person who is ultimately accountable for process or task being completed appropriately
- Responsible person(s) are accountable to this person

Consulted
- People who are not directly involved with carrying out the task, but who are consulted
- May be stakeholder or subject matter expert

Informed
- Those who receive output from the process or task, or who have a need to stay informed
# Selection Team - RACI Example

<table>
<thead>
<tr>
<th>Item</th>
<th>Business</th>
<th>IT</th>
<th>Stakeholder</th>
<th>Purchasing</th>
<th>Consultant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Management</td>
<td>A</td>
<td>R</td>
<td>I</td>
<td>I</td>
<td>C</td>
</tr>
<tr>
<td>Vendor Survey</td>
<td>A</td>
<td>C</td>
<td>I</td>
<td>C</td>
<td>R</td>
</tr>
<tr>
<td>Business Requirements</td>
<td>A</td>
<td>C</td>
<td>C</td>
<td>I</td>
<td>R</td>
</tr>
<tr>
<td>IT Requirements</td>
<td>C</td>
<td>A, R</td>
<td>I</td>
<td>I</td>
<td>I</td>
</tr>
<tr>
<td>Contracting</td>
<td>A</td>
<td>I</td>
<td>I</td>
<td>R</td>
<td>I</td>
</tr>
</tbody>
</table>
Does IT or EHS typically lead an EHS IT Project in your organization?

- IT Resource: 24%
- EHS Resource: 69%
- Other: 7%
Scripted Demonstrations

» Critical for selection success

» Address key requirements

» Workflow based

» Look and feel
AECOM Overview of the Vendor Selection Project

Team Formation

Requirements Definition

RFI

Evaluation

Presentation Scripts

Presentation

Evaluation

Evaluation

Initial Filtering/Selection

Presentation Evaluation

Contract

Selection

Negotiation
Overview of a System Selection Timeline
## Example Selection Project Schedule

<table>
<thead>
<tr>
<th>Task Name</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>RFI</td>
<td>43 days</td>
</tr>
<tr>
<td>Team Formation</td>
<td>5 days</td>
</tr>
<tr>
<td>Requirements Build</td>
<td>15 days</td>
</tr>
<tr>
<td>RFI</td>
<td>10 days</td>
</tr>
<tr>
<td>Evaluation</td>
<td>10 days</td>
</tr>
<tr>
<td>Presentation Scripts</td>
<td>12 days</td>
</tr>
<tr>
<td>RFP</td>
<td>34 days</td>
</tr>
<tr>
<td>Invitations to 3/4</td>
<td>1 day</td>
</tr>
<tr>
<td>Presentations</td>
<td>2 days</td>
</tr>
<tr>
<td>Evaluation</td>
<td>4 days</td>
</tr>
<tr>
<td>RFP to 2/4</td>
<td>2 days</td>
</tr>
<tr>
<td>Evaluation</td>
<td>5 days</td>
</tr>
<tr>
<td>Contract</td>
<td>12 days</td>
</tr>
<tr>
<td>Selection Recommendation</td>
<td>2 days</td>
</tr>
<tr>
<td>Negotiation</td>
<td>10 days</td>
</tr>
<tr>
<td>Contract</td>
<td>0 days</td>
</tr>
</tbody>
</table>

![Gantt Chart for Example Selection Project Schedule]
Profiling Your Project
Exercise – **J**EOPARDY!

**EHS IT Tools**
The most commonly used data management tool used in the business and engineering world.

What is Excel?

Consider — it is used to collect and organize data, gets passed around by email (creating multiple copies throughout the company), analyzes the data and presents it in tabular and graphical format. Everyone in your community knows how to use it.

...And how often have you wanted them to stop?
The most commonly used reporting tool

What is Microsoft Word?

Consider — it is used to create reports for documentation, to deliver to management and to the government. Often consumes charts and table from Excel. Frequently saved as a PDF for final delivery.
What is Email?

Consider — how many did you received yesterday asking for information to which you responded by providing data?

...And how often have you wanted to get them to stop?
For how many of you is this “system” the one you use now?
How can you engage Stakeholders during System Selection so they are accepting of change?
Who Are Your Stakeholders and How Will They Be Impacted?

» **Who will benefit?**
  - You?
  - Your executive community?
  - Your team?
  - Your contractors
  - Others?

» **Who will be burdened?**

» **How?**
  - Quicker access to information
  - Better quality information
  - Less manual intervention
  - Proactive

» **How?**
  - Work process changes
  - Extra training
  - More complexity for IT
  - Group decision making
Who/What is Driving The Project?
How Will It Impact Commitment/Acceptance?

» Top Down or Bottom Up?
» EHS or IT? Both? Neither?
» Legacy System Issues or NO System Issues?

» Enterprise/Multi-module or a Narrow Need?
» Big Bang or Phased Approach?
When a Non-Traditional Selection Process Makes Sense

» You have an existing system that is well liked and accepted

» Members of your team have familiarity with and are inclined towards one or more tools

» Your timeline is short

» You have a relatively fixed amount of funding

» You are looking for a “fit for purpose” solution.
So What is a Non-Traditional Approach?

» Start by looking at what you have.
» Start with scripted demonstrations → filter from there and THEN move to more detailed requirements
» Select a representative solution from the major categories
“Shortcut” Selection Project

Team Formation

- Requirements Definition
- RFI
- Evaluation
- Presentation Scripts

Evaluation

RFP

- Initial Filtering/Selection
- Presentation Evaluation

Selection

Contract

Negotiation
Based on this session, do you believe a traditional or non-traditional selection approach is a better fit?

Traditional selection approach: 40%

Non-traditional selection approach: 60%
Vendor Offerings vs. Your Requirements
Gap Definition & Management

» Gaps — differences between a vendor’s offering and your requirements

» Good Alignment ~ 80%

» So what do you do about the other 20%?
Strategy for Handling Gaps

» Verify the need
» Can it be handled by:
  • Compromise?
  • Phased implementation?
  • Ancillary tools?
  • Configuration?
» Stay away from solving gaps with customization unless absolutely necessary
» Budget impacts?
» Vendor approach?
What do you believe is the most important feature of an EHS software application?
Traps & Tricks, Tips & Tools in the Selection Process
Traps and Tricks

» Trap: A decision maker with pre-determined preferences
» Trap: IT dictates a solution
» Trick: Show me all your logos
» Trap: Hidden agendas
» Trap: The “low ball” vendor estimate
Traps and Tricks

» Trick: The oversell = “Yes it can be done”

» Trick: The a la carte licensing scheme

» Trap: Blindly go where the analyst has gone before

» Trick: Bedazzling Demos
Vendor Offerings – Avoiding the “Bedazzled Effect”

» Maintain focus on requirements
» Allow for “cool” stuff afterwards
» Don’t buy stuff you will never use
» Verify the technology is sound
Figure out how you can verify that a vendor can meet your performance criteria.

Transformations are defined to meet Air Regulation/Reporting requirements. All data is aggregated to a day or a month period (user determined).

The engineer determines what information is required, that transformation is used and what period the results are aggregated to.
Identify Independent References

» Conferences
» Industry peer groups
» EHS consultants
» Script your questions
What to Ask a Client Reference

- Customer care?
- System performance?
- Integration challenges?
- User acceptance?
  - Biggest complaint?
  - Highest praise?
- Management success?
- Yes but…what would they have done differently?
Vendor Questions

» What is your primary delivery model — on premise install, SaaS, hybrid, all of the above?

» What was the first module in the suite?

» How have you added additional modules?

» Is the system open to different reporting tools/systems?

» Who was their first client and are they still using the system?

» Primary client (industry) base?
What do you think is a good question for one of the software vendors?

“Is product support located onshore or off-shore?”
3 days ago

“How long have you been in business”
3 days ago

“Support”
3 days ago

“Longevity”
3 days ago

“Easy customization where needed”
3 days ago

“What's on your roadmap”
3 days ago

“How much of your revenue is derived from your top 5 clients”
3 days ago
Balancing the Technical Selection vs. the Economic Selection
Balancing the Solution and the Costs

» Look in-house first or in addition because that IS likely to be the most cost effective

» Don’t neglect the set up/configuration costs

» Don’t neglect ongoing O&M support costs

» Be sure to clearly understand if other licenses for ancillary tools will be needed
Balancing the Solution and the Costs

» Understand the costing model
  • Number and type of accounts
  • Named users/concurrent users
  • Number of facilities/sites
  • Number of “assets” (e.g., emission sources or source types)
  • Number of modules
  • Is “Enterprise” licensing possible and what are the limitations?
  • For phased can you get multi-module discounts that don’t kick in until those are deployed?
Negotiation Points

» First client in a vertical?
» Geographic expansion?
» Willing to invest sweat equity?
» Press releases?
» Early adopter?
Key Points
Selection Dictates Project Costs & Success

Influence

Major Influence

Rapidly Decreasing Influence

Low Influence

Expenditures

Project Plan

Functional Spec
System Blueprint

Build/Construct

Testing

“Go-Live”

Appraise

Plan/Design

Execute

Test/Deploy
Remember

» Focus on what you want not what the vendor has that looks cool (Bedazzle Effect)

» Profile your project in order to identify if a traditional, modified hybrid or different approach is better suited

» Develop a question set up front for your information gathering during the conference. Don’t JUST focus on the functional requirements but also consider the vendor’s “client care”

» Separate functionality and IT requirements from costing but don’t forget that the cost will matter

» .....
Q&A Session

AECOM

PATRICK HECHT
Senior Project Manager

STEPHANIE TAYLOR
Global Director Management
Information Systems

March 2017