Evaluating ERP Software

Unconfirmed Functionality Data is *counterproductive*

SoftSelect

In hundreds of ERP selection projects from 1996 to around 2001, SoftSelect's process was heavily dependent on a database of observations on various ERP's functionality (ERP functionality data). As the SoftSelect process became less dependent on this ERP functionality data, the weaknesses of this type of data became increasingly clear. This real-world learning is the basis for this white paper that makes a case that unconfirmed functionality data on ERP software is counterproductive in helping companies select the best overall ERP software. Not just 'limited in its value' but counterproductive.

> DEFINITION of '*Unconfirmed ERP Functionality Data'*: Any representations (from any source) about the functional capabilities of ERP software solutions that are not known to be accurate by the user. Typically this data is seen in a long list of functionality statements with representations on how well a particular ERP can achieve the functionality.

Whether the unconfirmed ERP functional data is received from (1) an entity that collects and offers this type of data or (2) a software vender replying to a list of functional questions specific for your firm, this data is simply counterproductive to your team's efficient and accurate decision making. The reasons are:

1. Compounding inaccuracies: Unconfirmed ERP functionality data is subject to the following multiple levels of compounding inaccuracy when used by a company seeking ERP software.

   - Constant change in how specific ERP software can achieve specific functions (new versions, relevant 3rd party software, creative use of built-in configuration tools, etc.).

   - Functionality statements that are unclear and/or overly broad; therefore representations about a specific ERP is unavoidably imprecise.

   - Errors in how a company searching for ERP software (1) understands or interprets the meaning of a functionality statement, and (2) chooses functionality requirements it does not really need or want.

   - Functionality data answer codes, provided by the research source, that do not sufficiently model all legitimate answer options (there are more options than 'yes' 'partial', or 'no').

   - Willful misrepresentation in a software vender's answers to functionality questions— this is not all the fault of software venders as there is pressure to over represent their offerings as it is assumed the competition will do the same.

2. Functional match statistics: Functional data from a specific research source can only partially correlate to what is important to a specific company selecting ERP software. All ERP compared with these type of statistics will have hidden strengths and weaknesses based on the ERP's ability to meet (or not meet) other important functional requirements not

included in the functionality questions that developed the statistics. Therefore, functionality statistics will be off, to some degree, based on this factor. However this error factor is smaller than the error introduced in item #1.

3. Functionality parity: Parity has significantly been reached for typical functionality offered by viable ERP in a similar class (e.g. mid market). There are fewer functional differences, which become major influencers, if the selection team reviews candidate solutions properly. Contributing to this *functional parity* for solutions from viable software venders are:

   - Reasonably integrated 3rd party point solutions meeting specific functions not directly met by the ERP

   - The presence of modernized configuration, workflow, and BI tools (see detailed definition in addendum A.)

   - The selecting company's awareness that many of their apparent needs (what they do today) may change when (1) well designed future-state processes are determined and (2) the company is willing to be adaptive to the native structure of the properly selected ERP. This typically removes some of the apparent functionality deficiencies with candidate ERP

4. Non-functional factors: These factors, such as total cost of ownership, software architecture, implementation options, vender viability, to mention a few, should be very influential and are not reflected in functionality data.

5. Encourages shortcuts and provides false comfort: Selection teams accessing unconfirmed ERP functionality data have a tendency to depend on it, largely based on (1) a belief that it is useful, (2) it appears to lower the time needed (by the team members and calendar time) as compared to the selection team having to develop this type of detailed information.

Important note: These comments on the limited or even counterproductive nature of unconfirmed functionality data do not mean the business process requirements plan is not valuable and necessary. Detailed requirement/issues development is very important for:

   - Helping identify and define functional priorities and unusual workflow objectives that should be directly tested with candidate solutions during the selection process

   - Facilitating pre-implementation planning/readiness work, during the implementation, and over time as the ERP is improved further.

Addendum A: **Attributes of Modernized ERP**

The following seven attributes define the most of what should be present in an ERP that would be adaptive to supporting modern, flexible and collaborative business processes.

The following seven attribute statements are phrased in a question statement.

1. Configurability of the business application
   Configurations are ones made by authorized persons who design the business processes and users interfaces. This configurability objective should not to be confused with:

   - Customizing a business software application in which (1) custom code is generated, (2) specialists are usually needed, (3) extensive testing is needed, (4) unknown ramifications to other existing functions may occur, and (5) increasing obstacles to upgrades are established.

   - Personalization tools used by day-to-day ERP users (these enable user-specific application tuning and has no effect on enterprise business logic).

   Attributes:

   - User defined data fields and the level of field-level behavior that can be configured.
   - User defined data tables and the ability to set relations between data tables/fields.
   - User or group level security and rules for access to functions and forms (down to the data field level).
   - Creating/modifying user interfaces and to make a specific interface available to a specific group of users.
   - Audit-tracking capabilities for selected transactions.
   - Utilities/tools for a 'trained and authorized user' to make the configurations described above—and how company-specific configurations are held in a 'configuration layer' that does not confound overall business application upgrades and patches that are periodically released.

2. Business process workflow (or *event*) development tools

   Discuss your application's capability to model workflows/events and enforce workflow rules/exceptions *(for example, before a quote can be converted to an order, certain customer information is forced to be collected, a firm delivery date determined, and a communication made and acknowledgement received from the customer).* Specifically, discuss how:

   - A workflow/event is manually or automatically initiated.
   - Those involved in the workflow/event are signaled to take workflow actions (through a system interface in your application as well as an option to process selected workflow/event instructions through emails).
   - Steps within a workflow can be time sensitive and/or dependent on other steps. More specifically:
     - o An overall workflow should be complete by a certain date.
     - o Steps in a workflow should be completed by specific dates.
     - o Workflow steps can be parallel. For example steps #1, #2, and #3 are serial. But steps #4 and #5 can be completed in any order (parallel). Then serial steps #6, #7 and #8 can be started when steps #1 through #5 are complete.
     - o If a step becomes delayed, it can be escalated to others for review and action.

- A role can be used to assign a workflow step (for example a workflow step is assigned to the role of 'purchasing supervisor' and two persons have been associated to this role -- therefore both of these persons could see this workflow step every time this workflow was conducted).
  - Can one person be the default assignee within a role and first see the workflow step, but another person would see the step if the primary person was not logged into the ERP system?
- One person's workflow actions can be assigned to another person for some period of time (for example, when the first person is on vacation).
- Configured data fields can be used in workflows (for example a new supplier data field is added [using configuration tools in the prior HLD] and data in this new data field is to be used to influence triggering a workflow).
- Workflow development tools exist to facilitate authorized users to configure and manage workflows and events.

3. Business intelligence (BI) metrics

   Specifically discuss the:
   - BI configuration mechanisms (queries, exceptions reports, dashboards, etc.) and what level of BI objective would drive the need for third-party BI / reporting tools (if any).
   - Default library of standard metrics / reports that can be leveraged and how they can be used as templates for other metrics / reports.
   - User interface to see BI/metrics and exceptions (dashboard type functions, table views, drill downs, etc.). On the table view, discuss ability to sort and filter by data columns, change data in the table view by users with proper permissions.
   - The level of skill needed to develop BI metrics/reports (for full spectrum of use) and when external support is typically used.

4. Data file association mechanism

   Ability to associate data files (such as electronic documents, drawings, graphics, audio files, web links, etc.) to ERP data records (such as a data record for a part, a BOM, a routing, a sales order, a quote, etc.). An example would be a prospect's RFP (that exists electronically or is scanned) that is associated to an ERP quote record. Discuss how the:
   - Association is made and protected from being disassociated or changed.
   - Associated electronic file is stored (in data, a reference to a directory, or both).
   - Presence of associated item(s), to a particular ERP transaction, is visible to system users.

5. Document (electronic file) management:

   Structure, tools, and workflows to manage electronic data files (such as documents, drawings, graphics, audio files, web links, etc.). Specifically discuss:
   - Review cycles, orderly checking in and out of the items by only authorized persons.
   - Support for monitoring/managing candidate changes ("redlining") during the development of a new revision (while checked out).
   - Is your document management function included in your ERP or is it independent software your company offers, or a product from a third party vendor?

6. Remote access capabilities

   Discuss capabilities to securely allow and manage remote access for: 1) normal ERP usage by company employees, 2) customers, 3) suppliers, 4) sales representatives, 5) any other business partner for which some conditional direct access is advantageous. In these various potential

access objectives, describe the technical approach/options (e.g. terminal emulation, thin/fat clients, conditional or full browser based, etc.).

7. Structured comments
   Many transactions (e.g. a line item on a sales order or PO, customer record, or item in the item master, etc.) can benefit from having related ad hoc information be recorded and tied to the transaction. This information is not a candidate for more structured data capture/processing (standard data field). Discuss capabilities in general and specific capabilities to:

   - Add comments and have prior notes previously entered in the same notes data field protected.

   - Automatically record the originator and each additional contributor to the comment field

   - Automatically record the date/time of each comment and this information should be visible to users.

   - Make visible specific comments to those that 'conduct specific activities' for which these notes may hold relevance. For example sales order comments would be potentially useful to the shipping function and therefore this information would be made deliberately visible to appropriate persons in the shipping function.