

ERP the fallen Warrior . BPMS the blazing knight.

**"We are drowning in information but starved for knowledge."
-- John Naisbitt**

ERP the fallen Warrior . BPMS the blazing knight.

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Information Systems Principles

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CIO Article Review:

Article No.1:

An ERP Package for You...and You...and You...and Even You.

By- Derek Slater.

Article No.2:

Business Process Management: Taking All The Right Steps.

By- Greg Sarafin.

ERP the fallen Warrior, BPMS the blazing knight.

Sect. 1. Summary:

Enterprise Resource Software, a tool which has become the buzz word in the corporate world has a great importance to play in the effective running of a number of business houses. The first article is completely based on the effective customization and selection of the right form of ERP package depending on the nature of one's business. Derek Slater in his article spells out the various problems faced a number of companies which select an ERP package, or an ERP vendor without considering the fact whether the system can effectively engulf the complete spectrum of business processes offered by its organization. Derek takes the example of the Mapics software¹ to differentiate between the implementation of an ERP package which was basically designed for discrete manufacturing and was implemented in tracking flowing materials. This was the opening example of misfit between the ERP system and the business needs mentioned by Derek.

The main function of the ERP is to integrate effectively the different functions that are present in the organization example H.R, Financial Services, Manufacturing etc. Thus the package selected should be complementary to our business needs and functionalities. Another major factor that Derek pointed out was that ERP implementation is an expensive affair and the company should be able to equate the cost of implementing the package as compared to the savings made in operations, after its implementation. The latest boom in the ERP industry has attracted a lot of consultants and technical press to push ERP implementation towards a number of unrelated industries. Thus a number of companies have wrongly opted for the off-the-shelf

bandwagon. Derek gives an healthy example of Dell Computer Corp. which was opting for complete implementation of SAP R/3 systems, but dropped it after the HR module itself. Dell then settled down for assembled systems which was developed using a combination of a number of vendor specific ERP packages. Thus integration here was a massive affair. Derek mentions the importance of choosing wisely the right packaging for your enterprise disregarding the cost factor for the initial payment as, it was much wiser to pay a larger amount upfront. Then to end up paying larger sums in regular intervals. Companies generally disqualify themselves immediately when they know their package will not suite the clients business, But the real problem occurs when we come across a company who tries to market their package as “One size fits all”¹. This benefit rarely occurs and it is wise to not go for such packages.

The second article is written by Greg Sarafin who is a managing director of BearingPoint, Inc.² One of the leading business consulting, systems integration and management services firm. The article is based on a new systems suite known as the Business Process Management Systems (BPMS). A buzz word which can be linked with advanced enterprise wide cross-functional system which can support multiple platforms, databases, network domain and even external customers. BPMS can be used in a diverse field of applications ranging from retailing to defense⁴. Millions of dollars are being spent on realization of this new technology and the article gives us a tour around the concepts and details of the new enterprise wide systems.

A BPM solution is focused towards automating and managing human interaction with technology, systems, and business rules, leading to greater business integration and more user-friendly graphical tools, BPMS standardizes framework and

compatibility with existing technologies. The major areas of automation for a BPMS are “business process”, “workflow system”, “reporting”, “process modeling”, and “connectivity”.² Thus a productive BPMS is an effective bridge between the “as is” and “should be” positions of the business. The major thrust of a BPMS is the definition of business processes and problems, which are evolutionary in itself. This BPMS is targeted towards ever improving and changing businesses.

Greg defines six steps to a successful implementation and running of a BPMS suite, these points formulate basic contribution of the article; they are as follows²:

1. Understand your process.
2. Develop proof of concept.
3. Leverage iterative development.
4. Use vendor’s databases schema.
5. Establish enterprise architecture.
6. Getting past the technology.

Sect.2. Contribution:

The best contribution of Derek's article came in the form of numerous examples of ERP implementation in different companies. Some examples of ideal implementations like in the case of Dell Computers Corp, Dentsply International Inc, Burlington Chemicals Co and some where not so successful like the QAD Inc, Huck International etc. I completely agree with DeJarnett's views that companies are looking for an ERP solution in order to fix either or all of the following areas: Integration of Financial data; Standardization of manufacturing processes across several business units; or Reengineering of the human resource function. Thus a company should identify the prime focus of its ERP needs, and then opt for a product which redresses that particular area intensely. Again "The wise man does not choose a stool based on it's one sturdy leg." A company may have extreme need to reengineer one function specially but then it has to productively automate other departments too. Thus a company should along with focusing on its major systems need, should also look for a package which is decent in handling other functional needs also.

A company should try and select a package which equates their management style and corporate culture. For example if the management has a more generalist view towards organizational issues they should settle down for a package which gives them 'The Big Picture', like the Oracle Applications which is famous for providing aggregated views. Whereas if the management prefers drilling down to the most minutest details before framing a policy or plan. It should opt for a much stronger and dictatorial SAP R/3 package.⁶

Derek has very humorously explained the concept of “The Showstoppers” which is invariably an important factor leading to implementation failure. Examples of a probable showstopper could be missing features, unsupported business process, Time-to-implement etc. Finding out that one of the most important feature needed for our system is not supported by the new package could lead to a disaster. The example of BaanERP is classic example of such a situation. Again the speed at which entries are processed in the system should be grater then the speed at which they are generated by our businesses. Thus if this efficiency in processing is not achieved, the ERP would never be an efficient tool for automating our business processes. Derek rightly states that “An ERP package designed specially for one may not support the other comfortably.” Thus while choosing a pre-programmed ERP package, one must make sure that its supports their financial, manufacturing and HR functions perfectly. The IS department are always ready to fix major and minor flaws in the ERP package to suite business needs, but this defeats the entire purpose of buying an customized package to support our business needs.⁴

After selecting a host of alternatives for implementation, the next wise step is to ask for on-site demonstration of the ERP package. It is also smart to get an evaluation done by consultants and systems integrators in order to come to a more informed decision, but efforts should be made towards not letting the decision get biased on the basis of consultant’s preference or resource availability of the software provider company. Two of the key things that a company should keep in mind while going through the entire selection and implementation process is the cost factor related with the package, and the hardware platform which the company currently supports. Towards the end of the article Derek gives a table showing the ERP vendors and the industries they

primarily serve to give the reader an idea of different implementation options towards a package.

The second paper on “Business Process Management: Taking All The Right Steps.” is an excellent curtain raiser for the new evolution of BPMS. It defines in details what are business process (flow of structural tasks performed in a sequence or parallel by a group of individuals to achieve a singular goal.)⁴ and workflow systems which are used to regulate this flow of jobs in an organizations.

Greg’s greatest contribution through his article is the ‘Six Steps to Success’ he spells out for any organization opting for the BPMS option. The article rightly highlights the future areas of application of BPMS to be dispute management, mortgage and loan application processing, policy processing and insurance risk-management. It is true that implementing a BPMS is going to be more complex with respect to critical prerequisites and specific development approaches, as compared to hiring a consultant to install a system to automate a business function.

The first step towards a successful implementation of a BPMS is correct definition of all the business processes in an organization. BPMS is used to automate process and not to analyze it. Thus this is a procedure which comes before implementation. Modeling methods like UML (Unified Modeling Language) and BPMN (Business Process Modeling Notations) are used for this purpose. The second step is to develop proof of concept or prototype. This stage deals with ‘gap analysis’ which is used to find the gap between the ‘as is’ and ‘should be’ positions of the business. This is probably the most critical stage of the process and deals with improving the future productivity of the business. Third step is to leverage iterative development, by carefully

placing in new releases and fixing bugs in the systems from time to time. The step deals with creating effective human computer interfaces and allowing event triggers and business rules to seep in the system. This step takes a longer time compared to other steps but deals with smooth acceptance of the new system. Fourth step deals with the use of vendor's database schema which are either normalized relational databases and object oriented data structures rather than using proprietary components to access data because integration issues may cause disturbances in transaction and query processing. Fifth stage is to establish enterprise wide architecture which is based on a centralized administration and sign-on for end users, including access rights and user profiles. This is the biggest aspect which leads to complete systems integration.

Finally implementation is planned on which deals with shifting off the legacy system and allowing smooth transfer of existing information base to the new BPMS. Again BPMS implementation is the first step towards actual practice of the system which is ever changing and self evolving.

Greg gives a clear and comprehensive flow of stages which could trigger an effective BPMS implementation project for an organization.

Sect. 3. Relation to Course:

An ERP is a process of planning and managing all resources and their use in the entire enterprise. It promises benefits ranging from increased efficiency to improved quality, productivity, and profitability. The ERP do not concentrate on either planning or resource. ERP's major objective is to integrate all departments and functions across a company onto a single computer system that can serve all of the enterprise needs.¹ An

ERP suite provides a single interface for managing all the routine activities performed in manufacturing from entering sales orders, to coordinating shipping and after-sales customer service. ERP's are never meant to fully support supply chains, they are designed to facilitate business transactions. This is when a Business Process Management Solution comes into play. The basic thrust of a BPMS is towards automating all major business processes. Thus in time BPMS are targeted towards greater business problem solving compared to ERP's.

BPM life cycle consists of a four phases name: Process execution (dealing with workflow, automation, integration, business rules.); Monitoring and Management (Real-time dashboards, reporting); Analysis and optimization (Performance management, Simulation, Round tripping); Design and development (Graphical modeling, business and process rules, simulation.).⁴

Businesses are extensively using greater information systems and softwares to support more business processes. Enterprise systems are continuously increasing their network capacities, and e-business activities to capture larger market shares. The increase in the I.S architecture requires increase in the amount of I.T expenditure in companies which would require more efficient I.T professionals. Information systems principles and plans have to be engineered in order to increase the productivity and security of such enterprise systems and softwares for the business.

The increased use of e-commerce and internet technologies in business is another reason why care must be taken while designing such complex systems. Then whether they are operational ERP's or corporate BPMS's.

Sect. 4. Critique and Analysis:

There are a number points on the basis of which Derek's discussion can be broken apart. Derek elaborates extensively about the customization of ERP packages for the needs of the business. This entails finding out the perfect fit between the technology and the business and for this to take place the business processes should be efficiently structured. If there is a problem with the business process itself, then it is a wise thing to change the way a process functions to fit the need of the package as it would make it more systematic and profitable. Again each ERP package is unique and so is every business which implements it. Thus it would be very difficult to find a complete match between the business and software. The business has to leave room for the systems integrator to re-design either the package or the business to fit the needs of the company.⁵ Now, the question boils down to what is the maximum number of similarities between an ERP package and that particular business. Derek speaks on the common pitfalls that a company faces when they go for an ERP package, but a very important factor he misses out is the constant Upgradation that will be needed by the client for the software which he has installed. How does this factor play an important role in the identification of an ideal ERP solution?

Greg's analysis towards BPMS in the second article suffers from the fact that he has used a very generalist approach towards business process modeling. There are no case studies or any real life business scenarios on the basis of which we can evaluate the future of this technology. Greg gives a hefty explanation on the successful implementation of a BPMS in a business but they are more or less theoretical and has

very little practical application. In totality a new technology generally spends a lot of time on the drawing board before being implemented. Thus the tall assumptions made by Greg about the success of BPMS are far from reality.

Sect. 5. Lessons Learned:

Time has come to make a decision. Some consulting firms like Forrester Research believe that the ERP giant will be completely engulfed by the wave of BPMS. Companies like Savvion, Lombardi Software, Pegasystems, Fuego, Handysoft, TIBCO, Fujitsu, Ultimus, and Global 360 are already investing enormous sums towards the effort of developing Business Process Management Suits. Companies like Oracle, IBM, SAP, Peoplesoft etc are being challenged by these new technologies on a number of efficiency driven fields. The BPMS softwares are definitely greater when it comes to increasing business efficiency as they target a much larger set of business process automation and are able to envision far more productive 'should be' situation as compared to ERP softwares. But the basic question remains will they be able to sustain the high level of practicality which is achieved by these ERP packages. Are BPMS a practical success or a conceptually superior, yet operationally challenged system? The promises made by these systems are tall and prove correct when put on paper. But looking at the kinds of operational problems ERP had to face when they were first implemented, Will the BPMS be able to stand tall in the face of such major implementation issues ? Time is yet to decide. Again BPMS suites are used more for Human-centric businesses which run on intellectual capital and service provision, like call centers, banking services, consulting

services etc. They may not be as perfect a fit for manufacturing or other product driven businesses.

No matter what the spice of the future may be whether ERPs become a part of the larger BPMS suites or not. The pertinent question will always remain that; businesses will have to customize any software packages which they implement in their processes. The very unique nature of their business process will never allow them to use off-the-shelf solutions, whether they are ERPs or BPMSs. Thus increased investment in future technologies must be made with caution by any organization opting to automate their business processes.

Sect. 6. References:

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“Information Technology for Management. Transforming Business in the Digital Economy.”(pp.254-261)
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PowerPoint Slides Follows:

**ERP the fallen Warrior .
BPMS the blazing knight.**

**"We are drowning in information but starved for
knowledge."**

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ERP

Article No.1:

An ERP Package for You...and You...and You...and Even You.

By- Derek Slater.

- **How to decide which package is right for your business.**
- **How to avoid common pitfalls**
- **What not to worry.**

BPMS

Article No.2:

Business Process Management: Taking All The Right Steps.

By- Greg Sarafin.

- **Definition.**
- **Purpose.**
- **Future Promise.**

Enterprise Resource Planning

- The main Purpose is to integrate.
- Equating investment in implementation to savings caused due to increased efficiency through automation.
- Formulate your own opinion. (off-the –shelf package or customized software.) - Dell Corporation Example.

- **The 3 Basic Needs of an ERP:**
 - Integrating Financial Data.
 - Standardizing manufacturing processes across several business units.
 - Reengineering Human Resource functions.

ERP Systems Have Feelings Too:

- **Generalist (Big Picture) analysis based – ex: Oracle Applications,**
- **Details Oriented – ex: Peoplesoft. (drill down - HR reporting.)**
- **Select a package based on your companies Management style and corporate culture. (Flexible Vs Dictatorial Package)**

Ex: SAP R/3 – “notoriously dictatorial structure of the package.”

The Concept of “Showstoppers”:-

- ✓ **Unsupported Business Process.**
- ✓ **Missing Features.**
- ✓ **Time – to – Implement.**
- ⊗ **Never let the IS Department fix flaws in the ERP – It defeats the whole idea of buying a “Off-The-Shelf Package”.**
- **Beware of the term “One Size Fits All.”**
- 🌐 **Allways ask for Onsite Demonstration for the selected Package.**

| Who Does What ERP vendors and the industries they serve | Aerospace/ De fense | Automotive | Consumer Packaged Goods | Electronics | Industrial/ Manufacturing | Oil/Gas | Pharmaceuticals |
|---|------------------------|------------------|----------------------------|-------------|------------------------------|-----------|-----------------|
| Baan Baan Series | ✓ | ✓ | | ✓ | ✓ | | |
| J.D. Edwards & Co. One World, One World Software | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Oracle Corp. Applications | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| PeopleSoft Inc. PeopleSoft 7.5 | | ✓ | ✓ | ✓ | | | |
| SAP R/3 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| % Planned Penetration | 10- 15 | 5- 10 | 35+ | 40+ | 35 | 30 | 20 |

SOURCE: BENCHMARKING PARTNERS INC.

Do not worry about :

1. The Price.

(Better to pay the piper upfront then to let him pick your pocket in the long run)

2. The Hardware Platform.

Business Process Management Suits – BPMS

Enabling cross-functional workflow processing across organizational and geographic boundaries, spanning operating systems and platforms, databases and even network domains. Including external users such as suppliers and customers.

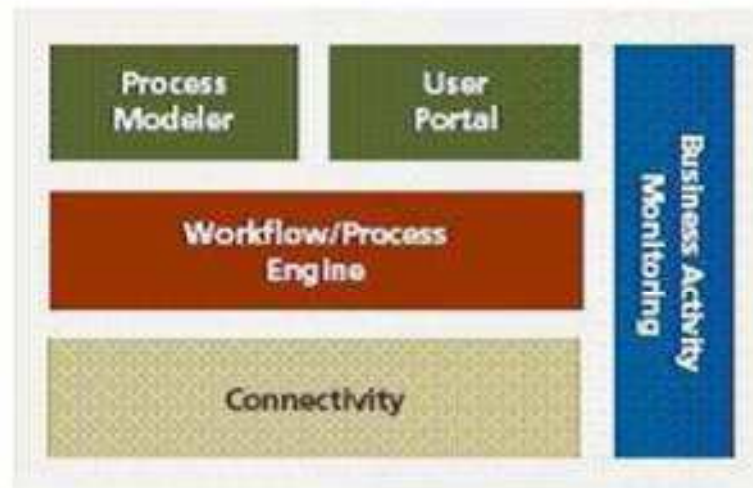
- Automate human interaction with technology systems and business Rules, concentrating on ‘Business Process’ and “Workflow Systems”.

• **As Is** •

BPMS
→
“Bridging the Gap”

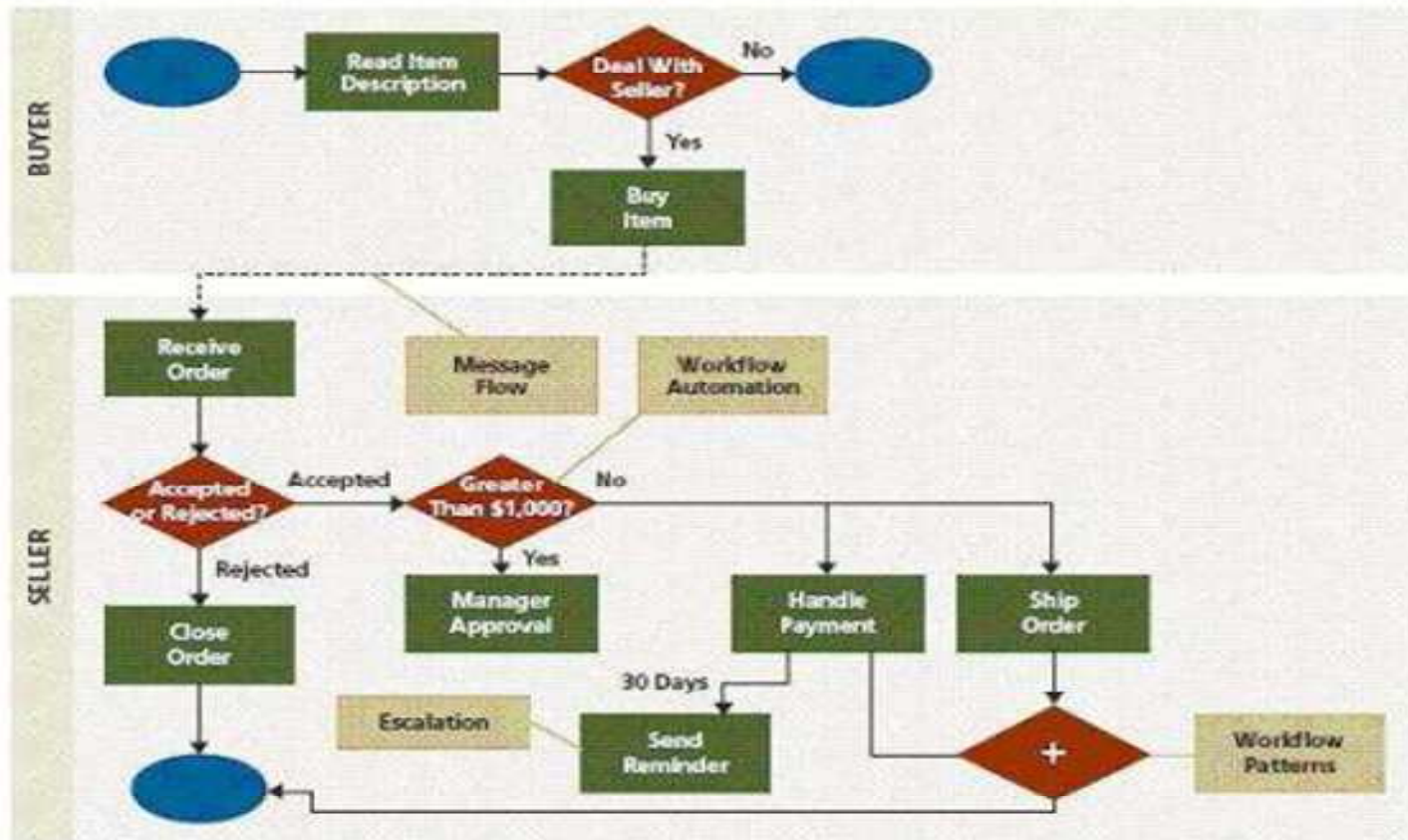
• **Should Be** •

Basic Architecture
for BPM Solutions

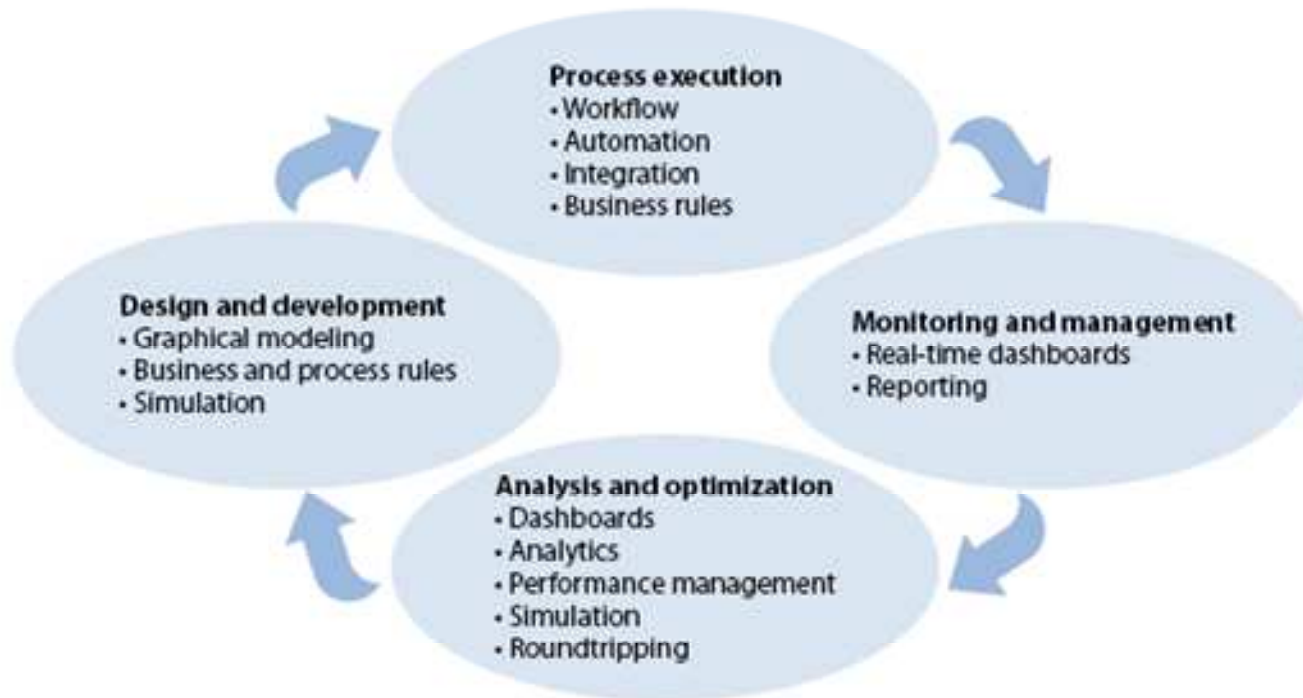


Ideal Scope of BPMS: Dispute Management, Mortgage & Loan application Processing, Policy Processing, Insurance risk-management, Call center Management, Financial and Consulting Services Management.

High-Level Business Process Flow for a Buyer or Seller Using Business Process Modeling Notation



BPM Life Cycle



Source: Forrester Research, Inc.

Four Types Of Processes

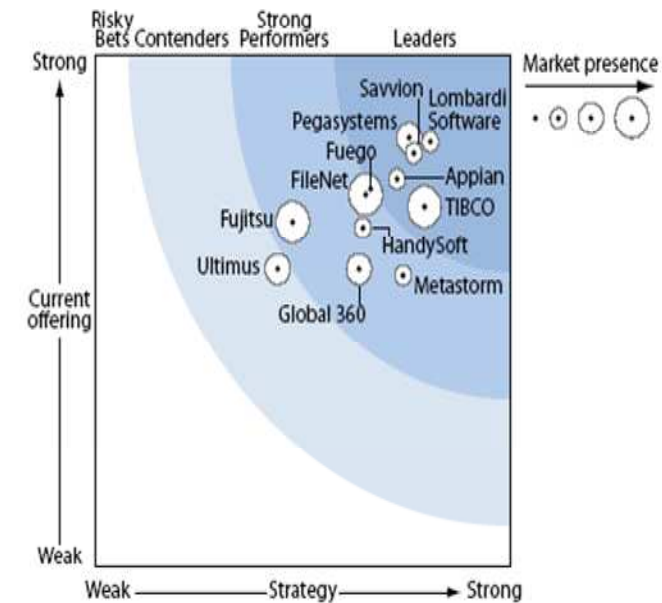
| Types of business processes | | | |
|--|--|--|---|
| Integration Intensive | People Intensive | Decision Intensive | Document Intensive |
| Characteristics | | | |
| <ul style="list-style-type: none"> Strong focus on automating processes that integrate systems and applications Typically involving few exceptions and limited human participation Can handle high transaction rates Often used for externally focused processes linking two or more enterprises | <ul style="list-style-type: none"> Strong focus on automating people-intensive activities like servicing customers, operating call centers, managing sales operations, supporting field-based agents, routing internal requests by employee | <ul style="list-style-type: none"> Strong focus on processes that require employees to make mission-critical decisions using information and business rules Processes in which the decision criteria and process rules change frequently | <ul style="list-style-type: none"> Strong focus on processes that involve extensive use of scanned images for back-office processes Focus on processes that require people to use documents extensively (not just author documents) |
| Examples of processes | | | |
| <ul style="list-style-type: none"> Order fulfillment HIPAA transactions Supply chain mgmt Any process requiring integration between applications, databases or business partners | <ul style="list-style-type: none"> Order to cash Employee on-boarding Claims processing (non-paper based) Handling exceptions from supply chain mgmt | <ul style="list-style-type: none"> Mortgage loan origination Underwriting Retail inventory mgmt Sales promotions and rebates | <ul style="list-style-type: none"> Claims processing (paper based) Account payable Contract mgmt Proposal mgmt SOX compliance and other compliance processes |
| Required features | | | |
| <ul style="list-style-type: none"> Integration tools Transaction mgmt Process modeling Trading partner mgmt Monitoring and reporting Embedded portal capability App development environment Life-cycle mgmt Comprehensive SOA capability | <ul style="list-style-type: none"> Task list/workflow portal Strong UI development Organization mgmt Native forms Integration with packaged applications, particularly CRM and ERP | <ul style="list-style-type: none"> Business rules (internal or integration with third parties) or native analytics for business information (more than process analytics) | <ul style="list-style-type: none"> Robust, native support for document imaging, document mgmt and records mgmt Task list/workflow portal BPM sold separately from ECM application |
| Desired features | | | |
| <ul style="list-style-type: none"> Simulation Rules engine support | <ul style="list-style-type: none"> Integration with third-party portals Native integration capabilities or integration with third-party integration products Integration with third-party e-forms | <ul style="list-style-type: none"> Integration with BI tools for analyzing business data (not just process data) | <ul style="list-style-type: none"> Event mgmt for changes to documents Integration with third-party ECM products Integration with desktop apps |

Source: Forrester Research, Inc.

Six Steps to Successful BPMS development:

- 1. Understand Your Process. – (UML or BPMN)
- 2. Develop Proof of Concept. – "Gap Analysis"
- 3. Leverage Iterative Development – Process Management System
- 4. Use Vendor's Database Schema. – (either RDBMs or OODBMs)
- 5. Establish Enterprise Architecture. – Centrally Managed User Directory.
- 6. Getting Past the Technology. – Implementation ; Fine-tuning ; User Acceptance

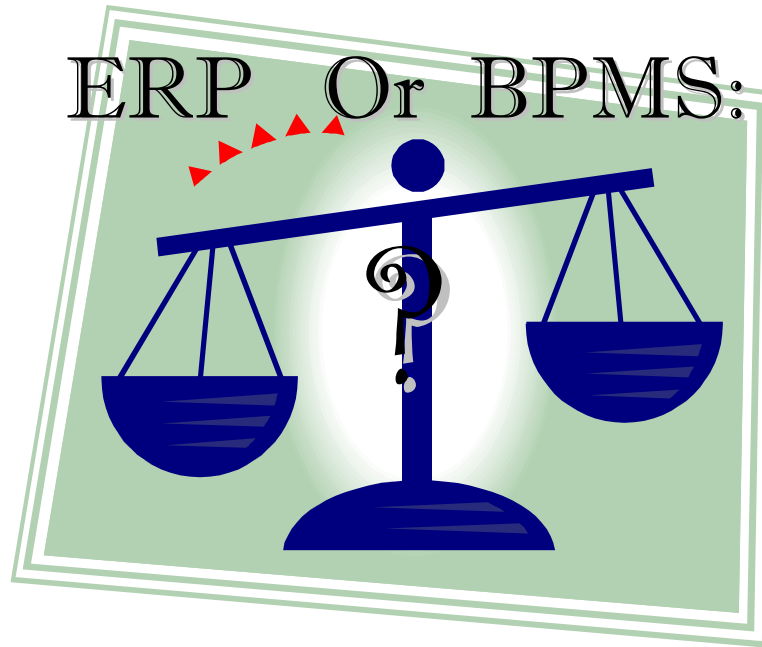
Forrester Wave™: Human-Centric BPMS, Q1'06



Source: Forrester Research, Inc.

Thus the Question Remains
Unanswered:

ERP Or BPMS:



Thank You



New Jersey's Science & Technology University

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