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# The Forrester Wave™: Human-Centric BPM For Java Platforms, Q3 2007

by Colin Teubner  
for Business Process & Applications Professionals



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## The Forrester Wave™: Human-Centric BPM For Java Platforms, Q3 2007

Pure Plays Maintain Lead, But Infrastructure Giants Enter The Market

by **Colin Teubner**

with Connie Moore and Jamie Barnett

### EXECUTIVE SUMMARY

Forrester evaluated leading human-centric business process management suite (BPMS) vendors across approximately 150 criteria and found that Appian, Lombardi Software, Pegasystems, and Savvion lead on the strength of their people-oriented products and excellent monitoring and analysis tools. Software AG and TIBCO are also human-centric BPM Leaders, thanks to their all-around strength and integration prowess. BEA, Fujitsu, Graham Technology, and HandySoft are Strong Performers but lack either breadth of product or vision, while IBM is a Strong Performer that has some missing features but an extremely strong future. Finally, Contender Intalio brings an open source offering to the market that could win over buyers with its low cost.

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### NOTES & RESOURCES

Forrester conducted lab-based product evaluations in March and April 2007 and interviewed 24 vendor and user companies including Appian, BEA, Fujitsu, Graham Technology, HandySoft, IBM, Intalio, Lombardi Software, Pegasystems, Savvion, Software AG, and TIBCO.

#### Related Research Documents

[“BPMS Revenue To Reach \\$6.3 Billion By 2011”](#)  
July 30, 2007

[“BPM Best Practices For Process Professionals”](#)  
January 12, 2007

[“The Forrester Wave: Integration-Centric Business Process Management Suites, Q4 2006”](#)  
December 20, 2006

## BPM SUITES GO MAINSTREAM IN BUSINESS AND IT

It's official: Business process management (BPM) has moved beyond fad status. BPM suites are rapidly becoming the next big thing, not just in IT but also in corporate management. As momentum grows, vendors from every imaginable market space have jumped on the bandwagon, attaching the BPM label to everything under the sun. If we weed out the vendors that don't have a legitimate claim to call their products BPM, the number of vendors and products is still a very large number. These days, everyone — from pure-play startups to integration vendors to large IT infrastructure and packaged apps vendors — wants a piece of the BPM suite market. Based on user demand for BPM software, Forrester projects the market for BPMS software licenses will grow to \$6.3 billion by 2011.<sup>1</sup>

Companies that embark on BPM initiatives need software tools to properly support their efforts. So how do technology buyers in this most confusing of markets know where to look? How can a company choose between the likes of IBM and Intalio for BPM tooling? For starters, buyers who are beginning their journey from scratch should look at BPM suites. Also, to cut through the clutter and help buyers know where to focus their efforts, Forrester has identified several categories of BPM suites, including human-centric, integration-centric, and the subset of human-centric suites that focus only on document-intensive processes.

## USE YOUR BUSINESS PROCESSES TO GUIDE YOU THROUGH THE BPM MAZE

The term “business process management” covers a lot of ground. Confusion reigns because the extremely broad BPMS software market offers products that vary widely in what they do, what they don't do and which business processes they target (see Figure 1). BPM is much like that old story about several blindfolded men trying to figure out what kind of animal an elephant is by touching it. The man touching the tail thinks the elephant is a rope-like animal, while the man feeling the leg thinks the elephant is treelike. BPM is like that, it's extremely confusing: Some BPM vendors feel like integration tools, others feel like rich human tools for participating in processes, and others feel a lot like document management systems or packaged business apps.

Because of this, enterprises must deeply understand the types and characteristics of their processes before evaluating BPMS products. Depending on the tool chosen to support the identified business processes, selected products could exceed expectations or fail miserably.

Although the terms are incredibly wordy and the terminology drives everyone nuts, dividing all business processes into human-intensive and system-intensive provides much greater clarity when trying to sort out the vendors and their diverse BPMS products. The two broad categories are:

- **Human-intensive processes.** These processes require people to get work done by relying on and interacting extensively with business applications, databases, documents, and other people (via

collaboration tools). They require human intuition or judgment for decision-making during individual steps in the business process. Examples of human-centric processes include claims processing, loan approvals, accounts payable, mortgage origination, and customer service.

- **System-intensive processes.** These typically involve millions of transactions per day that are handled on a straight-through basis with minimal or no human touch and few exceptions. Examples include trade reconciliations, supply chain management, and line provisioning in the telecommunications market. Integration-centric BPMS manages the interactions between packaged applications, custom applications, external applications, and occasionally, the people who use them.

### Which BPMS Tool Is Right For Your Business Process?

Before embarking on your BPMS journey, ask yourself and others many questions about your different types of business processes: Do your processes involve mainly people, documents, and decisions, or is most of the action behind the scenes and system-to-system? After deciding to automate a business process, use characteristics of the process to determine the best product category: integration-intensive, people-intensive, or document-intensive (see Figure 2):

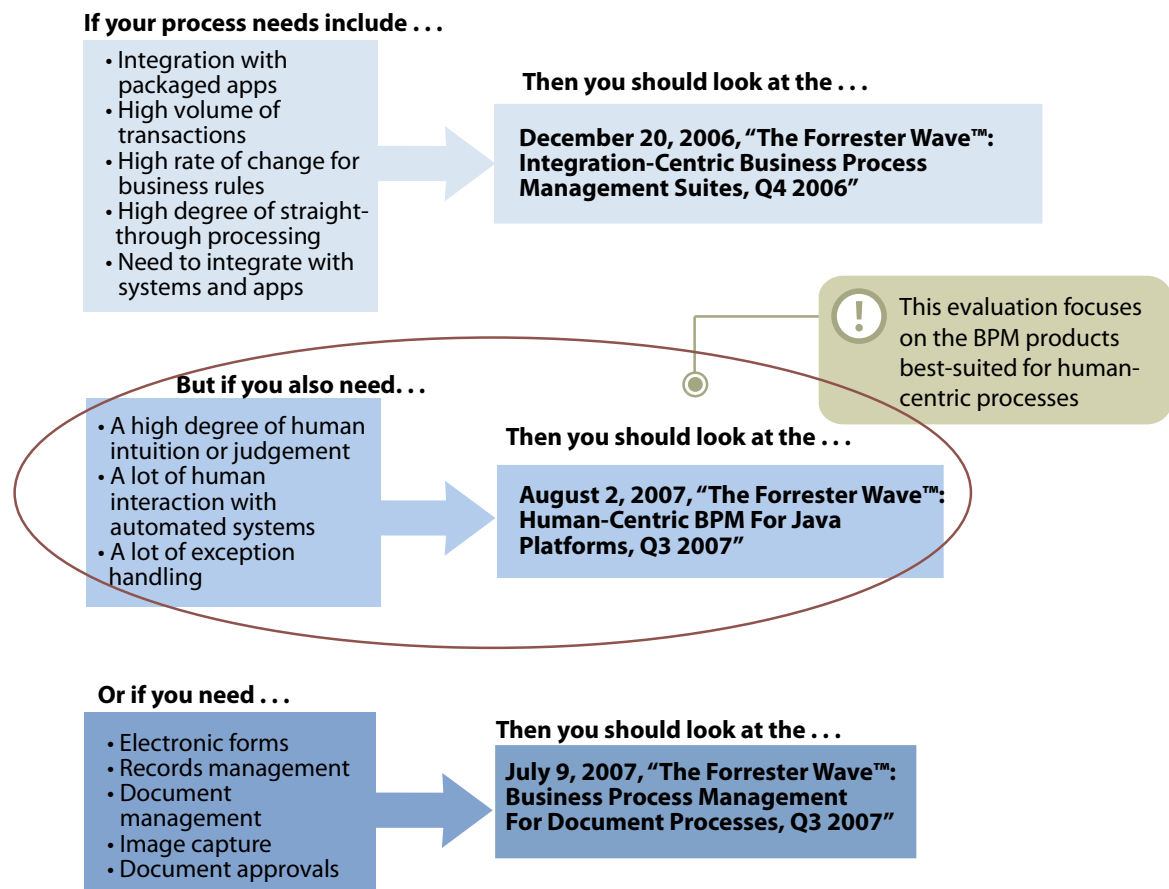
- **People-intensive processes.** These involve a high level of interaction among individuals for routing, approving, and fulfilling requests such as customer service requests, travel requests, and purchase requests, or work submitted by insurance agents and adjusters. If your process has a high degree of human interaction, need for human intuition or judgment, and a high rate of exception handling, then this Forrester Wave evaluation of human-centric BPMS products can help narrow the vendor field.
- **Decision-intensive processes.** These complex processes involve gathering information, automatic and manual scoring of customers or loans, and mission-critical decision-making. A rules engine is a must-have for this type of process, and the easier it is for decision-makers to get access to the information they need, the better. Insurance and financial services companies that have high value processes with important decisions should make this process type their highest priority. However, there is not a true product category devoted to these processes; some of the products in our human-centric BPMS Forrester Wave evaluation focus on this area and are best suited for companies with a decision-intensive process landscape.
- **Document-intensive processes.** These processes require users to review documents for approval, enter data from those documents into a back-office system, and make decisions. Action is driven by information found in scanned images or electronic forms, or possibly electronic documents created in Microsoft Word or other tools. Examples of document-intensive processes include new-account opening, invoice processing, and litigation support — or industry-specific processes like medical records, mortgage origination, claims processing, or loan approval. If your processes have a strong need for image capture, forms processing, and document management, make this BPM category your highest priority.<sup>2</sup>

- **System-intensive processes.** These business processes involve transactions among systems on a straight-through basis with minimal human involvement. A high volume of transactions, the need to integrate with other systems, and a high degree of straight-through processing with very limited human interaction puts you in this category.<sup>3</sup>

**Figure 1** Four Types Of Business Processes

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

**Figure 2** Forrester's BPMS Wave Decision Tree



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Source: Forrester Research, Inc.

### Platform Choice Adds Another Fork In The Road

Forrester's client inquiries about BPM suites nearly always start the same way: "We're a Microsoft shop and . . ." or, "Our developers use Java and . . ." A combination of these strong platform preferences — which are usually tied to skill sets — and the vast number of interesting vendors in the market led us to split this human-centric BPM suite evaluation into Java-oriented and Microsoft-oriented vendors. However, many buyers will and should want to look across this Java-focused Forrester Wave and Forrester's upcoming Microsoft-oriented evaluation to pick the vendor that best fits their needs. If a vendor is Java-oriented, that means:

- **Java development and administration skills will be needed.** Regardless of vendors' claims of a code-free environment, their ability to coexist peacefully with .NET infrastructure, or their language-agnostic development tools, at some point coding is needed in BPM implementations. The vendors evaluated for this document are most easily extended using Java, and use Java for

deployment; if your organization is not appropriately staffed to support such technology, this will be an important issue. Note that Software AG and TIBCO provide standalone integration and process servers on the back end that are not written in Java; still, their developer tools are oriented toward engineers with Java expertise.

- **Integration to Windows-based and .NET applications will not be a problem.** Today's BPM suites are completely focused on standards-based, services-oriented methods for integrating to other systems. Customer references for Java-oriented vendors reported few issues with using Web services to talk to applications running on other platforms and technologies.
- **Support for Microsoft clients, desktop apps, and SharePoint varies.** Some of the vendors in this evaluation have integration to Microsoft Office SharePoint Server and the Office desktop clients that matches or surpasses the best of the vendors that are focused solely on the Microsoft platform. Others have built their own collaboration tools or simply haven't thought much about SharePoint integration. If SharePoint is a major part of your collaboration or process strategy, don't overlook the vendors in this evaluation just because they are "Java-oriented" — some of them are as integrated with Microsoft clients as any.

## THE HUMAN-CENTRIC MARKET ADDS BIG PLAYERS AND INTEGRATION SPECIALISTS

The creation of a separate Microsoft-oriented Forrester Wave for human-centric BPMS saw Global 360, Metastorm, and Ultimus move out of the vendor list; FileNet (now part of IBM) likewise moved to our Forrester Wave evaluation of BPM for document processes. These changes made room for a number of new players in this update: Graham Technology, IBM (for WebSphere, not FileNet products), Intalio, and Software AG (through its webMethods acquisition). Graham Technology and Intalio were newly able to meet our criteria for inclusion based on their ongoing growth, but IBM and Software AG arrived by developing or acquiring new capabilities that give them entry to the market. These vendors with strength in integration technology and SOA infrastructure join their peers — BEA and TIBCO — in attempting to extend integration-centric BPM clout to human-centric BPM.

However, these companies arrived on the scene in different ways: BEA and TIBCO bought pure plays (Fuego and Staffware, respectively); IBM acquired process modeling tools (from Holosofx) and tied together several existing products including MQ Series Workflow; and webMethods built its entire human-centric capability from scratch once the threat from TIBCO's acquisition of Staffware presented itself — then Software AG acquired it, giving the combined company a strong international presence and excellent SOA infrastructure products.

Oracle is also making a run for the market with its Oracle BPA Suite and Oracle SOA Suite products; the former is technology sold under OEM agreement with process modeling experts IDS Scheer, while the latter includes BPEL execution and workflow products, partly acquired and partly homegrown. The database gurus still need more business-facing packaging and a better workflow portal to make a play at this market, but those upgrades are not far away.

Our evaluation showed that pure plays still lead the market in current offering and innovative product vision. The Leaders in this Forrester Wave have been working at human-centric BPM for a long time and have the strongest plans for the future of process — ideas like software-as-a-service (SaaS) process modeling (Lombardi), tools to enable highly ad hoc work (HandySoft and Appian), the BPMS as the “business process expert” for a company (Savvion), and nearly complete applications built on a BPM platform (Pegasystems). As with any market, eventually marketing brawn, sales contacts and sheer developer numbers will win out over product ingenuity. Still, one or two of the pure plays has a chance to become the Siebel or Salesforce.com of process management — if IBM or Oracle doesn’t buy them first.

### WHEN SELECTING HUMAN-CENTRIC BPM SUITES, FOLLOW THE PROCESS LIFE CYCLE

Across BPMS technologies and implementations, no matter the industry or the process tackled, Forrester has consistently observed practitioners focusing on a narrow field of BPM value: process automation and efficiency. Vendors can point to many case studies with happy customers where the implementation involved simply modeling a process, improving it somewhat, automating manual work, and letting workflow handle the human interactions. Companies have been doing that since the 1980s on top of document imaging systems, and while BPM suites bring better development tools, standards-based integration, and execution flexibility to the picture, the majority of references miss out on even higher levels of BPM value.

For the executive who’s bought in to the BPM religion and wants to transform his or her business using BPM methodologies and technologies, process automation is nearly beside the point. These types of BPM practitioners will need robust monitoring and management tools to gain visibility and insight into their running processes. Moreover, they will need advanced analysis and simulation tools to allow business analysis gurus to find ever more ways to optimize the process. Only with the “ah ha!” moments that come from holistic process monitoring — from a business point of view — will companies find the transformational promise of BPM becoming reality. Vital feature areas for advanced BPM include:

- **True human-centric support at runtime.** Be wary of IT-oriented vendors that promise support for “human components” in a process. Real human-centric processes are much more collaborative, dynamic, and ad hoc than what can be handled by an engine built for straight-through processing. Investigate in detail the vendor’s support for collaboration at the time of process execution, the ability to pull in both structured and unstructured information to help people make decisions, and support for flexibility in the way processes are executed (while still keeping the process within the rules and auditing everything that happens).
- **Monitoring tools with process context that build themselves.** Business intelligence (BI) has long promised to provide insight into how businesses are running based on data from traditional packaged applications. But two main problems get in the way of this promise. First, BI tools don’t understand the process context inherent in the data they’re analyzing. Instead, reporting is done in the context of a department, a business function, a customer, or a supplier.

While these contexts can be useful, to truly change the way a business works, process is the most important backdrop against which to analyze your data. Second, traditional BI tools take too much effort to get at the data needed, and when the sources of data change, reports break and must be recreated by developers. Ideal process-contextual reporting tools can update the reports when a process model is updated, saving that extra step and allowing business users to see data based on the most up-to-date version of the process.<sup>4</sup>

- **Management tools for people and processes.** Part of the BPM promise is the ability to actively manage work. Make sure your suite includes robust tools for reassigning work among workers and even among processes. Perhaps more importantly, explore the suite's ability to change process models at runtime. Look at the ways processes are deployed, and find out what happens when a process model needs to be changed — for all instances, for new instances only, or for just a subset of running instances (maybe even only a single instance).
- **Advanced analytics that use process data to drive process optimization.** Ideal process analysis tools don't just let users view results in process context. They include interactive, data-driven simulation features that let users understand what has happened in the past and see how changes to a process model will affect execution going forward. Make sure that data from process runtime can be imported into the simulation environment; this feature is most powerful if individual process instances from history can be run through the simulator, rather than just aggregate statistics being brought back.

## HUMAN-CENTRIC BPM SUITES EVALUATION OVERVIEW

To assess the state of the human-centric BPM suites market and see how the vendors stack up against each other, Forrester evaluated the strengths and weaknesses of top human-centric BPM suite vendors.

### Evaluation Criteria Cover The Process Life Cycle

After examining past research, user need assessments, and vendor and expert interviews, we developed a comprehensive set of evaluation criteria (see Figure 3). We evaluated vendors against approximately 150 criteria, which we grouped into three high-level buckets:

- **Current offering.** We focused on process design, development, execution, monitoring and management, and product architecture.
- **Strategy.** BPM vendors need strong stories around their ability to help customers succeed, through methodologies for process implementation and setting up centers of excellence. We also investigated vendors' product road maps, corporate strategy, and marketing activities.
- **Market presence.** We evaluated vendors' current installed bases and the size of their development, services, and support staff; we also included overall revenue and growth as an indicator of their ability to increase market presence.

**Figure 3** Evaluation Criteria

CURRENT OFFERING	
Modeling	How sophisticated is the product's development environment for designing processes?
Process solution	What tools and features are provided to allow the creation and execution of an automated business process?
Process execution	How extensive are the product's features for automating business processes built by the modeling tools?
Monitoring and management	How sophisticated is the product's set of tools for monitoring and managing running processes?
Product architecture	How robust is the product's runtime integration environment in terms of high performance, reliability, and scalability? What measures have been taken to localize the product for multiple regions?
STRATEGY	
Product strategy	How strong is the vendor's product strategy?
Corporate strategy	How strong is the vendor's corporate strategy?
Process expertise	What is the vendor's expertise and skill in process methodology?
Product cost	What is the product's average price, and how is it licensed?
MARKET PRESENCE	
Installed base	How large is the vendor's installed base of customers for this product and for all products?
Revenue	What is the vendor's revenue during the past four quarters?
Revenue growth	What is the vendor's year-over-year revenue growth during the past four quarters?
Systems integrators	How many integrator partners have completed three or more deployments of any version of this product in the past 18 months?
Services	How strong are the vendor's implementation and training services?
Employees	How many engineers does the vendor have dedicated to this product? How big is the vendor's sales presence?
Technology partners	How strongly do technology partners support this product?

Source: Forrester Research, Inc.

### A Slate Of Java-Oriented Vendors Compete For A Growing Market

Forrester included 12 vendors in the assessment: Appian, BEA, Fujitsu, Graham Technology, HandySoft, IBM, Intalio, Lombardi Software, Savvion, Software AG, Pegasystems, and TIBCO. Each of these vendors has (see Figure 4):

- **An offering that covers all parts of the business process life cycle.** This means business-user-accessible support for process modeling, process-oriented development tools, a process execution engine that supports human work, a work portal environment, and tools to support managers and administrators monitoring, changing, analyzing, and optimizing processes.
- **At least \$30 million in revenue.** In an effort to accommodate enterprises interested in open source software, we also included the small vendor Intalio, the only open source company with a credible play at human-centric BPM.
- **A Java-oriented platform.** While all of these vendors integrate with other technologies, and many run on Windows, the vendors in this Forrester Wave are dedicated to J2EE as a development or runtime environment.

**Figure 4** Evaluated Vendors: Product Information And Selection Criteria

Vendor	Product evaluated	Product version evaluated	Version release date
Appian	Enterprise	5.6	May 2007
BEA Systems	AquaLogic BPM	5.7	January 2007
Fujitsu	Interstage Business Process Manager	8.1	January 2007
Graham Technology	ciboodle	2.4.0	February 2007
HandySoft	BizFlow	10.1.2	December 2006
IBM	BPM Suite	6.0.2	December 2006
Intalio	Intalio BPMS	4.4	January 2007
Lombardi	Teamworks	6.0	May 2007
Pegasystems	SmartBPM Suite	5.2	January 2007
Savvion	Savvion BusinessManager	7.0	December 2006
Software AG	webMethods BPMS	7.0	December 2006
TIBCO Software	TIBCO iProcess Suite TIBCO Business Studio	10.5, 2.0	November 2006, May 2007

**Vendor qualification criteria**

**An offering that covers all parts of the business process life cycle.** This means business-user-accessible support for process modeling, process-oriented development tools, a process execution engine that supports human work, a work portal environment, and tools to support managers and administrators monitoring, changing, analyzing, and optimizing processes.

**At least \$30 million in revenue.** In an effort to accommodate enterprises interested in open source software, we also included the small vendor Intalio, the only open source company with a credible play at human-centric BPM.

**A Java-oriented platform.** While all of these vendors integrate with other technologies, and many run on Windows, the vendors in this Forrester Wave are dedicated to J2EE as a runtime environment.

Source: Forrester Research, Inc.

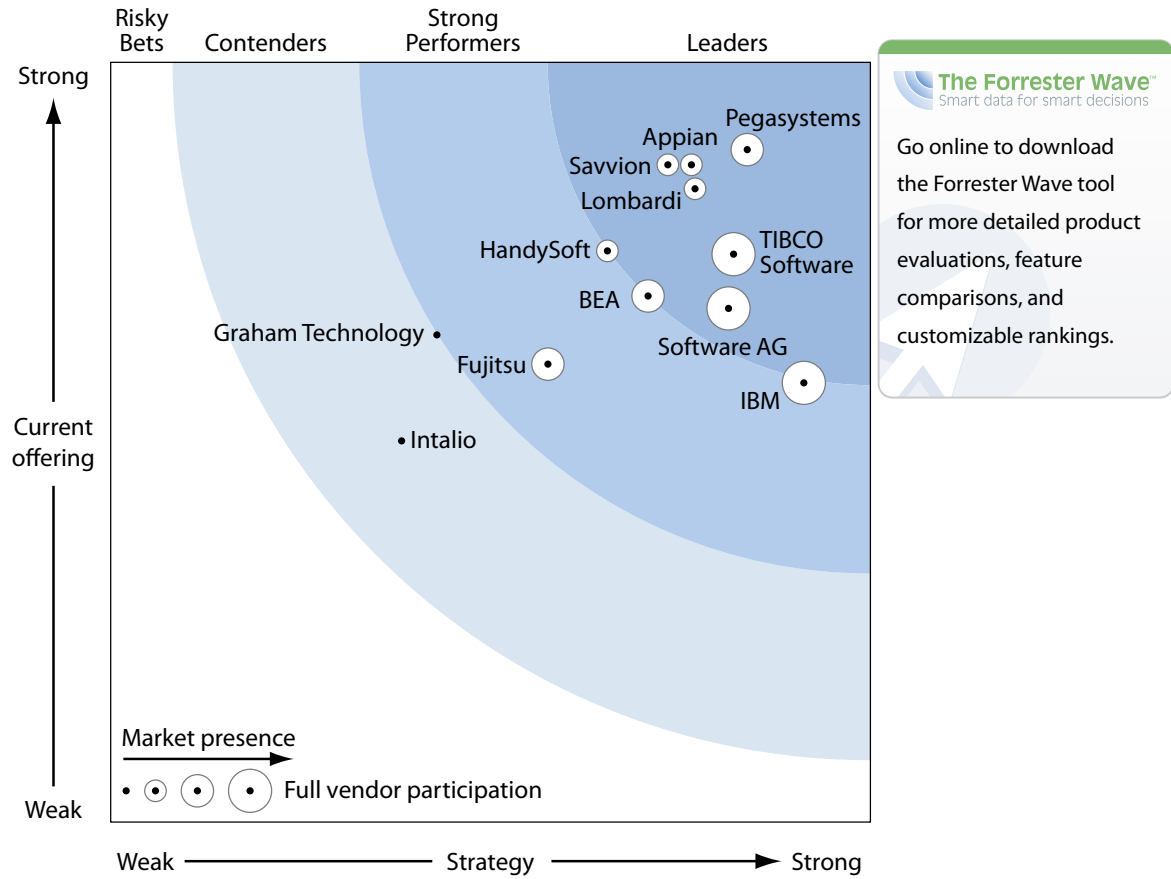
## LEADERS PIT PURE INNOVATION AGAINST INTEGRATION SAVVY

The evaluation uncovered a market in which (see Figure 5):

- **Appian, Lombardi Software, Pegasystems, and Savvion lead the pack.** These pure plays all have extensive experience with process implementations, strong technology, and relatively stable futures. But the differences between them are not cosmetic — they all have differing philosophies on what BPM should be, as well as different product strengths.
- **Software AG and TIBCO are also Leaders with integration-centric focus.** These vendors have backgrounds in integration, but today both bring their process expertise and technology to bear on a broader set of process problems. TIBCO has been competing for human-centric deals since its 2004 acquisition of Staffware, while Software AG just recently acquired webMethods, which started building its own human-centric features in 2004, as well.
- **Vendors BEA, Fujitsu, HandySoft, and IBM provide good products with their own strengths.** BEA and HandySoft are both truly innovating, despite being just short of the Leaders on some features; Fujitsu and IBM both have some product shortcomings they make up for with market presence and, especially in IBM's case, broad services expertise.
- **Graham Technology and Intalio are players with strong, specific appeal in their niches.** Graham Technology should be considered by any buyer looking at contact center or other live customer interaction environments; Intalio is an open source product that is strong enough to warrant a look by any devotees of open source software.

This evaluation of the human-centric BPMS market is intended to be a starting point only. Readers are encouraged to view detailed product evaluations and adapt the criteria weightings to fit their individual needs through the Forrester Wave Excel-based vendor comparison tool.

**Figure 5** Forrester Wave™: Human-Centric BPM For Java Platforms, Q3 '07



**The Forrester Wave™**  
 Smart data for smart decisions

Go online to download the Forrester Wave tool for more detailed product evaluations, feature comparisons, and customizable rankings.

Source: Forrester Research, Inc.

**Figure 5** Forrester Wave™: Human-Centric BPM For Java Platforms, Q3 '07 (Cont.)

	Forrester's Weighting	Appian	BEA Systems	Fujitsu	Graham Technology	HandySoft	IBM	Intalio	Lombardi	Pegasystems	Savvion	Software AG	TIBCO Software
<b>CURRENT OFFERING</b>	50%	4.33	3.48	3.02	3.22	3.80	2.95	2.53	4.20	4.46	4.33	3.42	3.76
Modeling	25%	4.69	3.08	2.50	2.18	3.17	3.07	1.56	4.84	4.13	3.68	2.66	3.80
Process solution	25%	4.68	3.32	2.48	4.08	3.84	3.24	3.06	4.24	3.82	4.48	2.86	3.84
Process execution	10%	4.36	2.78	2.96	3.04	3.70	3.83	2.11	3.93	4.76	4.16	4.47	3.29
Monitoring and management	35%	3.74	3.99	3.52	3.23	4.20	2.27	2.73	3.79	5.00	4.70	4.06	3.88
Product architecture	5%	4.80	4.20	5.00	4.50	4.20	3.80	4.10	4.20	5.00	4.60	3.40	3.20
<b>STRATEGY</b>	50%	3.82	3.54	2.87	2.16	3.29	4.56	1.93	3.84	4.19	3.77	4.08	4.13
Product strategy	45%	3.70	3.20	1.60	1.90	3.20	4.80	2.40	4.20	4.30	4.60	3.50	4.40
Corporate strategy	50%	3.80	3.70	3.80	2.60	3.20	4.80	1.20	3.40	4.50	2.90	5.00	4.30
Process expertise	0%	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Product cost	5%	5.00	5.00	5.00	0.00	5.00	0.00	5.00	5.00	0.00	5.00	0.00	0.00
<b>MARKET PRESENCE</b>	0%	2.11	3.10	3.56	1.45	2.25	4.60	0.78	2.94	3.85	2.93	4.11	4.59
Installed base	25%	1.55	3.00	3.25	1.50	2.10	5.00	0.75	2.50	3.20	2.30	4.50	3.70
Revenue	5%	1.00	5.00	5.00	1.00	1.00	5.00	0.00	1.00	2.00	1.00	4.00	4.00
Revenue growth	10%	5.00	3.00	1.00	0.00	3.00	1.00	0.00	5.00	5.00	5.00	5.00	5.00
Systems integrators	20%	1.00	1.00	3.00	1.00	1.00	5.00	0.00	4.00	5.00	3.00	3.00	5.00
Services	20%	2.20	4.20	4.00	2.80	2.20	5.00	0.80	2.00	4.20	2.20	4.60	5.00
Employees	10%	1.80	4.60	5.00	1.60	2.80	5.00	0.80	2.60	3.60	2.60	4.60	4.60
Technology partners	10%	3.50	3.00	5.00	1.00	4.50	5.00	3.50	3.00	2.50	5.00	3.00	5.00

All scores are based on a scale of 0 (weak) to 5 (strong).

Source: Forrester Research, Inc.

## VENDOR PROFILES

### Leaders

- **Appian.** This pure-play process specialist has a background in BI, as well as in monstrous deployments in terms of the number of users. Its product is the easiest to use for building processes that pull together human work, analytics, and collaboration tools. It also has extremely powerful methods for administering massive numbers of end users.<sup>5</sup> The company has true thought leadership in integrating BPM with BI, and also in expanding BPM to include collaboration tools for ad hoc processes.
- **Lombardi Software.** Lombardi's vision always stays out in front of the pack, and 2007 saw Lombardi release Blueprint, a groundbreaking set of SaaS tools for rapid process modeling and discovery. This adds to the vendor's excellent integration with SharePoint and unmatched tools for analyzing processes through data-driven simulation and what-if scenarios.<sup>6</sup>

- **Pegasystems.** Due to its rules heritage, Pega's unique and compelling BPM suite is a bit different than its competition, but to great result. Developers who learn to properly design solutions on Pega will be rewarded with the most powerful and flexible product architecture we evaluated, backed by excellent scalability and well-designed developer tools.<sup>7</sup>
- **Savvion.** Among the Leaders in this evaluation, Savvion has one of the longest continuous track records of providing powerful, scalable solutions to customers, with a well-architected BPMS that addresses the needs of developers and business users for all types of processes. Its extremely long-tenured technology team keeps innovating and expanding its vision of what process management means within companies. This pure play applies its strong technology suite in some industries its close competition rarely sees, such as manufacturing and high-tech.<sup>8</sup>
- **Software AG.** This integration and SOA infrastructure company entered the BPM market through its 2007 purchase of webMethods, which had added human-centric capabilities to an already strong integration-centric BPM suite. That may sound confusing, but the product has excellent usability and fits well into a raft of SOA infrastructure tools available from the combined vendor. The Software AG purchase puts webMethods on solid financial ground and adds international presence, giving buyers another reason to look to it as a strategic partner.<sup>9</sup>
- **TIBCO.** When TIBCO acquired Staffware in 2004, industry watchers saw it as the bellwether of BPM market consolidation. Though several other examples of acquisitions exist, none has combined the products into an offering that hits as many feature high notes as TIBCO's. And to top that, TIBCO will soon integrate all its developer tools under Eclipse, increasing productivity immensely.<sup>10</sup>

### Strong Performers

- **BEA.** With acquisitions of Plumtree Software in 2005 and Fuego in 2006, BEA has assembled a combination of best-in-class portal and BPM features. The resulting AquaLogic BPM Collaboration Edition covers a wide range of collaboration and integration scenarios.<sup>11</sup> This infrastructure company is committing considerable resources to providing a compelling BPM and SOA product portfolio.
- **Fujitsu.** This massive technology vendor has limited mind share for its size when it comes to software in the Americas, but Interstage BPM is a solid product with several large North American customers and a successful and impressive track record of OEM sales. As it tries to move its extensive experience in Japan and Europe to the United States, Fujitsu must contend with the loss of some uplift from its strategic partner Software AG, which (having acquired webMethods) has less need for Fujitsu BPM.<sup>12</sup>

- **Graham Technology.** While Graham is mostly a contact-center specialist, it appears here because its customer interaction technology is underpinned by a true BPM suite. Though Graham lacks some of the feature niceties of the stiff competition in this evaluation, this vendor should be on the list of anyone who is worried about a customer interaction process — and will then prove useful for other process improvement efforts, too.<sup>13</sup>
- **HandySoft.** Like Savvion, HandySoft has a long track record, but one that has been more shaken up by management changes and wavering attention from its Korean parent. Efforts have been redoubled, though, with several areas of innovation since our last evaluation — most notably OfficeEngine, a product that specializes in enabling dynamic, ad hoc processes. The road map calls for integration to the traditional BizFlow BPM suite, which will enable previously unaddressed scenarios in BPM.<sup>14</sup>
- **IBM.** “Big Blue” is devoting a huge amount of attention to the BPM market — which it sees as critically linked to SOA, and its marketing activities in this space make that clear. IBM is the only vendor that appears in all of Forrester’s BPM Wave evaluation — BPM for document processes, integration-centric BPM, and human-centric BPM — and it is a Leader in two of the three. Still, IBM arrives here from an integration-centric focus, and its good business modeling tools are still not as linked to developer tools as they should be. BPEL also imposes some limitations on flexibility of human-centric processes. But with FileNet now in its portfolio, IBM is a force to be reckoned with.<sup>15</sup>

### Contenders

- **Intalio.** This small company was formerly a commercial entrant into the BPM space; after putting too many resources into BPML, an early, ill-fated standard for BPM, it was reborn in 2006 as an open source BPM provider. While its product doesn’t match the leaders in this space, it is a strong enough offering that cost-conscious buyers and open source devotees should not overlook it.<sup>16</sup>

## SUPPLEMENTAL MATERIAL

### Online Resource

The online version of Figure 5 is an Excel-based vendor comparison tool that provides detailed product evaluations and customizable rankings.

### Data Sources Used In This Forrester Wave

Forrester used a combination of four data sources to assess the strengths and weaknesses of each solution:

- **Hands-on lab evaluations.** Vendors spent one day with a team of analysts who performed a hands-on evaluation of the product using a scenario-based testing methodology. We evaluated each product using the same scenario(s), creating a level playing field by evaluating every product on the same criteria.
- **Vendor surveys.** Forrester surveyed vendors on their capabilities as they relate to the evaluation criteria. Once we analyzed the completed vendor surveys, we conducted vendor calls where necessary to gather details of vendor qualifications.
- **Vendor briefings.** We asked vendors to conduct phone briefings with us to describe their product and corporate strategies as well as to discuss their market presence generally. We used these briefings to better understand the surveys vendors provided for the strategy and market presence sections.
- **Customer reference calls.** To validate product and vendor qualifications, Forrester also conducted reference calls with two of each vendor's current customers.

### The Forrester Wave Methodology

We conduct primary research to develop a list of vendors that meet our criteria to be evaluated in this market. From that initial pool of vendors, we then narrow our final list. We choose these vendors based on: 1) product fit; 2) customer success; and 3) Forrester client demand. We eliminate vendors that have limited customer references and products that don't fit the scope of our evaluation.

After examining past research, user need assessments, and vendor and expert interviews, we develop the initial evaluation criteria. To evaluate the vendors and their products against our set of criteria, we gather details of product qualifications through a combination of lab evaluations, questionnaires, demos, and/or discussions with client references. We send evaluations to the vendors for their review, and we adjust the evaluations to provide the most accurate view of vendor offerings and strategies.

We set default weightings to reflect our analysis of the needs of large user companies — and/or other scenarios as outlined in the Forrester Wave document — and then score the vendors based on a clearly defined scale. These default weightings are intended only as a starting point, and readers are encouraged to adapt the weightings to fit their individual needs through the Excel-based tool. The final scores generate the graphical depiction of the market based on current offering, strategy, and market presence. Forrester intends to update vendor evaluations regularly as product capabilities and vendor strategies evolve.

## ENDNOTES

- <sup>1</sup> Forrester predicts the market will grow from approximately \$1.6 billion in 2006 to \$6.3 billion in 2011. Many trends are driving this rapid growth, from business improvement and optimization mandates to service-oriented architecture initiatives. See the July 30, 2007, “[BPMS Revenue To Reach \\$6.3 Billion By 2011](#)” report.
- <sup>2</sup> Forrester recently evaluated eight vendors in its Wave evaluation of the document-centric BPM market. See the July 9, 2007, “[The Forrester Wave™: Business Process Management For Document Processes, Q3 2007](#)” report.
- <sup>3</sup> Forrester recently published a Forrester Wave evaluation of the integration-centric BPMS market. See the December 20, 2006, “[The Forrester Wave™: Integration-Centric Business Process Management Suites, Q4 2006](#)” report.
- <sup>4</sup> Forrester has predicted the convergence of BPM and BI technology for some time, due to the benefits that BI users gain from evaluating data in the context of business processes. See the June 26, 2006, “[Business Intelligence Meets BPM In The Information Workplace](#)” report.
- <sup>5</sup> View the vendor summary for more detailed analysis on how Appian fared in this evaluation. See the August 2, 2007, “[Appian Is A Leader For Human-Centric Processes](#)” report.
- <sup>6</sup> View the vendor summary for more detailed analysis on how Lombardi Software fared in this evaluation. See the August 2, 2007, “[Lombardi Leads With An All-Around Powerhouse Human-Centric BPMS](#)” report.
- <sup>7</sup> View the vendor summary for more detailed analysis on how Pegasystems fared in this evaluation. See the August 2, 2007, “[Pegasystems Leads With A Focus On Process Agility](#)” report.
- <sup>8</sup> View the vendor summary for more detailed analysis on how Savvion fared in this evaluation. See the August 2, 2007, “[Savvion Is A Leader For The Human-Centric BPMS Market](#)” report.
- <sup>9</sup> View the vendor summary for more detailed analysis on how Software AG fared in this evaluation. See the August 2, 2007, “[Software AG Is A Leader In Human-Centric BPMS](#)” report.
- <sup>10</sup> View the vendor summary for more detailed analysis on how TIBCO fared in this evaluation. See the August 2, 2007, “[TIBCO Leads Human-Centric BPMS With High-Functioning Suite](#)” report.
- <sup>11</sup> View the vendor summary for more detailed analysis on how BEA fared in this evaluation. See the August 2, 2007, “[BEA Is A Strong Performer In Human-Centric BPMS](#)” report.

- <sup>12</sup> View the vendor summary for more detailed analysis on how Fujitsu fared in this evaluation. See the August 2, 2007, "[Fujitsu Is A Strong Performer In Human-Centric BPMS](#)" report.
- <sup>13</sup> View the vendor summary for more detailed analysis on how Graham Technology fared in this evaluation. See the August 2, 2007, "[Graham Technology Offers A Strong Solution For Customer Interaction Processes](#)" report.
- <sup>14</sup> View the vendor summary for more detailed analysis on how HandySoft fared in this evaluation. See the August 2, 2007, "[HandySoft Strengthens Its Human-Centric BPMS Offering With A Focus on Collaboration](#)" report.
- <sup>15</sup> View the vendor summary for more detailed analysis on how IBM fared in this evaluation. See the August 2, 2007, "[IBM Is A Strong Performer In Human-Centric BPMS \(J2EE\)](#)" report.
- <sup>16</sup> View the vendor summary for more detailed analysis on how IBM fared in this evaluation. See the August 2, 2007, "[Intalio Offers A Suitable Open Source Alternative For Human-Centric BPMS](#)" report.

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