

# Magic Quadrant for Intelligent Business Process Management Suites

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Gartner's iBPMS Magic Quadrant positions 13 vendors focused on real-time agility, process optimization and other hallmarks of intelligent business operations. Early adopters are implementing IBO now; however, all organizations should factor iBPMS into their BPM planning horizon.

## Market Definition/Description

Business managers and knowledge workers today face a key challenge: They are being asked to make faster and better decisions and to "do more with less" in an ever-changing business context, but cannot do so without improved visibility into their operations and environments. To meet this challenge, leading organizations are seeking to make their business operations more intelligent by integrating analytics into their processes and the applications that enable them. Gartner has identified this trend as a new usage scenario for a business process management suite (BPMS) — a scenario that Gartner calls "intelligent business operations" (IBO; see "The Trend Toward Intelligent Business Operations"). To meet the needs for IBO, a BPMS must be enhanced with new capabilities. Accordingly, Gartner has evolved its definition of the business process management (BPM) market to reflect the IBO usage scenario and to introduce the next generation of BPMSs, which we identify as intelligent business process management suites (iBPMSs).

*Warning: Do not compare the new iBPMS Magic Quadrant with the prior 2010 BPMS Magic Quadrant.*

Readers should not compare positions in the new iBPMS Magic Quadrant with the prior 2010 BPMS Magic Quadrant positions, because the iBPMS Magic Quadrant assesses an evolution of the BPMS market and is centered on a new IBO use case. IBO represents a significant shift in BPM tool capabilities, and the iBPMS Magic Quadrant evaluates vendors against the new capabilities required to satisfy the IBO use case. Our research indicates that the IBO use case represents the future of BPM tools and is experiencing rapid adoption. We believe all organizations, not just early adopters, need to factor IBO into their BPM planning horizons. The 2010 Magic Quadrant for BPMS (see "Magic Quadrant for Business Process Management Suites" and Note 1) did not include the IBO use case. Despite overlap between BPMS and iBPMS vendors and products, the two Magic Quadrants do not measure the same feature sets, do not use the same weights, and do not share the same inclusion criteria. Therefore, a direct comparison between the two Magic Quadrants is not appropriate.

Gartner's first Magic Quadrant for iBPMSs evaluates the vision and execution of 13 vendors in this market (see Note 2). CIOs, business process directors, analysts, architects and other role leaders can use this analysis to help shortlist iBPMS vendors most appropriate for their needs.

Organizations seeking to incorporate IBO into their process capabilities are now considering adoption of an iBPMS or an upgrade to their BPMS. To assist these organizations, this research evaluates selected vendors using a range of criteria based on each vendor's Completeness of Vision and Ability to Execute.<sup>1,2</sup> Some organizations that are pursuing IBO have chosen to put together their own collection of other kinds of analytics, application integration and BPM technologies, rather than purchase an integrated iBPMS. An analysis of such alternatives to an iBPMS is outside the scope of this report.

### What Should BPM Tool Buyers Do About the New IBO Use Case?

IBO is the newest BPM use case and the subject of this Magic Quadrant. Because technology platform decisions will impact organizational capabilities for many years to come, all BPM buyers should consider the impact of the IBO use case on the evolution of their BPM capabilities and future tool needs. Although all organizations should consider IBO in their planning horizon, we estimate that, within the next three years, more than 70% of enterprises will be well-positioned to execute on the IBO use case (see Note 3). Here is our advice for addressing the BPMS versus iBPMS decision to lower the risk of being caught off guard during the planning horizon:

- **If you are making a BPMS purchasing decision in the near term:** Examine the new IBO use case before you decide on a product. If you conclude it might be applicable during the life of the installed solution, then ask your current vendor how its product road map supports the IBO use case. Then decide how crucial a factor IBO support will be to your final decision. You can also rely on Gartner research and advice to help you with your BPMS platform decisions (see Note 4).
- **If you already have a BPMS:** Evaluate your requirements for the IBO use case, and ask your current vendor how their product road map will address the new IBO use case.
- **If you already have an iBPMS or are planning to address the new use case via an iBPMS:** Use the iBPMS Magic Quadrant as an assessment tool against your current and future needs and possible solutions.

### The iBPMS Expands the Traditional BPMS With New Functionality to Support IBO

An iBPMS has all the features of a traditional BPMS, complemented with more advanced technologies (see "BPM Suites Evolve Into Intelligent BPM Suites"). A traditional BPMS brings together a complete set of integrated composition technologies for managing the interactions among all the resources — people, software systems, information, business rules and policies — that contribute to operational process outcomes. Its model-driven approach enables business and IT professionals to work together more collaboratively throughout the process improvement life cycle than is possible with other approaches to solution delivery. An iBPMS expands the traditional BPMS by adding the new functionality needed to support IBO, such as real-time business analytics, deep complex-event processing (CEP), social media to support social behavior and collaboration,

and expanded technologies to support growing requirements for mobility. This new functionality focuses on adding more machine and human intelligence in a much friendlier work environment that is characterized by role-based workspaces.

The following additions distinguish an iBPMS from current-generation BPMSs:

- Social media to incorporate more external data sources, external perspectives (such as experts and customer voices) and context data into the entire life cycle (not just the design-time experience). Social media can enhance and provide more information about the situational context. Social media will also support additional analytical techniques, such as social network analysis, to support decisions regarding the best next actions. This also allows for better collaboration and crowdsourcing.
- Mobile device support to give individual contributors and supervisors 24/7 access to work to sustain responsiveness, and to allow for mobile interactions within the process context, especially in global operations.
- Expanded active analytic capabilities in such areas as business activity monitoring (BAM) and CEP technologies to provide broader, better and predictive analytics; deeper and interactive business dashboards; better real-time visibility into process performance; more timely alerts for exception conditions; improved process intelligence; and better context awareness.
- Integration with on-demand analytic tools, such as statistical (predictive) analytics and simulation. When applied in an IBO context, these tools are aimed at repeatable, operational decisions, rather than ad hoc tactical or strategic kinds of decisions. The same analytics can play a role in active analytics (for example, when invoked by a BAM or CEP platform).
- An expanding set of decision management tools leveraging "poly-analytics," including more powerful support for rule management, optimization and simulation technologies, as well as constraint-based optimization engines that use advanced mathematical techniques to weigh trade-offs and generate the most effective available decision.
- Access to new forms of unstructured and external information sources, including video, audio and social streams.
- Role-based user access, user experience and interaction pattern support.

This market evolution is similar to the previous evolution from BPM pure-play products (see "Magic Quadrant for Pure-Play BPM, 2Q03") to BPMSs (see "Magic Quadrant for Business Process Management Suites, 2006").

The BPMS market is a mainstream one. Organizations with lower BPM maturity may find that a BPMS suits their requirements better than an iBPMS. Gartner has chosen to focus its Magic Quadrant on the advanced iBPMS market to help clients understand the market direction and what is required to achieve higher maturity. The IBO usage scenario and use of an iBPMS are more typical at higher levels of BPM maturity.

## An iBPMS Has 10 Core Components

Gartner has identified the following core capabilities of an iBPMS:

- **A process orchestration engine** to drive the progression of work in structured and unstructured processes or cases
- **A model-driven composition environment** for designing processes and their supporting activities and process artifacts
- **Content interaction management** to support the progression of work, especially cases, based on changes in the content itself (such as documents, images and audio)
- **Human interaction management** to enable people to naturally interact with the processes they are involved in
- **Connectivity** to link processes to the resources they control, such as people, systems, data, event streams, goals and key performance indicators (KPIs)
- **Active analytics** (sometimes called continuous intelligence) for monitoring activity progress, and analyzing activities and changes in and around processes
- **On-demand analytics** to provide decision support or decision automation using predictive analytics or optimization technology
- **Business rule management** to guide and implement process agility and ensure compliance
- **Management and administration** to monitor and adjust the technical aspects of the iBPMS
- **A process component registry/repository** for process component leverage and reuse

For more information on the expanded functionality required by an iBPMS within each of these 10 core capabilities, see "Selection Criteria Details for Intelligent Business Process Management Suites."

## iBPMS Vendors Come From Two Main Sources

There are two distinct sources of vendors for the iBPMS market:

- The first group includes the innovators that were fast-acting pioneers in adding intelligence to the BPMS, yielding an iBPMS. These players are often referred to as pure-play vendors. They generally offer significant features that enable clients to quickly deliver intelligent process solutions. See "Case Study: Learn Some Lessons from TXU Energy's Operational Intelligence System" for an example of an intelligent process. Their products are, in general, easy to use and nicely integrated from a business development and process composition perspective. The pure-play vendors tend to offer better visibility and collaboration and joined the social, mobile cloud bandwagon early in the emergence of IBO. They are quick on their feet and are generally the first to deliver compelling functionality. Their tight focus on the BPM software market enabled them to see the benefits of adding additional real-time analytic capabilities to BPM products before the larger vendors did, and their relatively small size allowed them to get to market quickly. The following vendors are primarily seen as pure-play iBPMS vendors because

of their historical emphasis on BPM: Appian, Bosch Software Innovations, DST Systems, OpenText, Pegasystems, PNMsoft, Vitria and Whitestein.

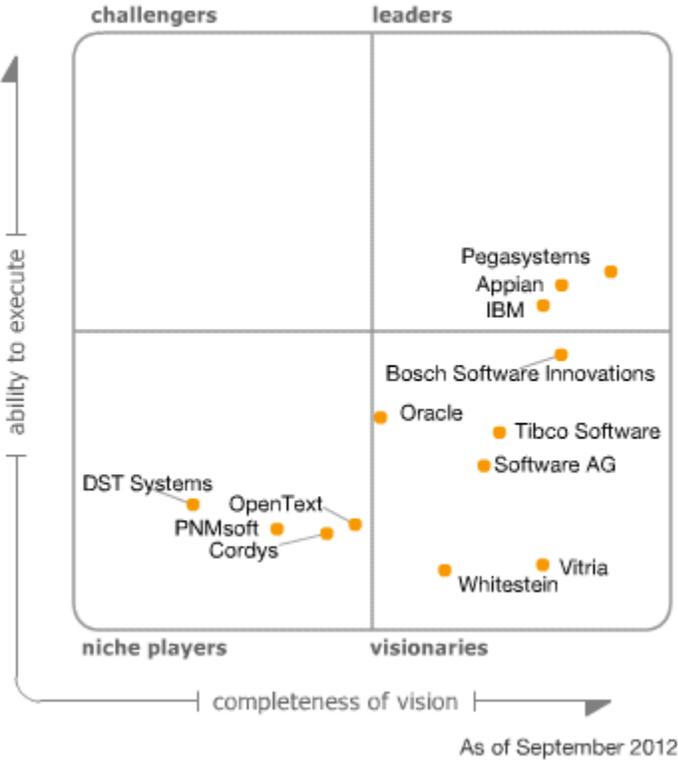
- The second group includes large, software infrastructure and middleware providers, also known as "stack vendors," with products aimed at the mainstream technology buyer. These providers generally serve a large base of existing clients and are software generalists that offer many different kinds of infrastructure software. BPM is just one of their concerns. They generally have rich and deep systems or application features. Their aim is to offer an array of products to their large client bases. They plan to be around for a long time and seek to handle large-scope processes, which are likely to include some deep system uses. In general, they are established, financially stable, and good at integration and complex system capabilities. They tend to be fast followers with deep pockets, and often break the lead that innovators have by buying innovators and integrating them into their offerings. The level and speed of integration of such innovators' functionality vary by vendor. The following vendors are primarily seen as stack vendors because of their origins in the application development and application integration/middleware markets: Cordys, IBM, Oracle, Software AG and Tibco Software.

It is important for organizations to determine whether they need offerings from one of these vendor camps or the other, or both, depending on the projects that are seen on the horizon. In general, pure-play vendors are good at innovative and tightly scoped processes, but there are exceptions. Pure-play vendors also tend to provide greater business role empowerment, letting business users undertake some elements of process governance. In general, the broader the process scope is, the more appealing the stack vendors tend to be because of the need to cross applications, data sources and localized processes. Over time, this distinction and overlap may decrease to some extent, but it is a clear distinction in the iBPMS market today.

Vendor product versions evaluated for this Magic Quadrant must have been available for purchase or subscription by any interested end-user company by 1 October 2011. In some cases, vendors have since released updated versions.

# Magic Quadrant

Figure 1. Magic Quadrant for Intelligent Business Process Management Suites



Do not compare this with the 2010 BPMS Magic Quadrant. They serve different audiences.

Source: Gartner (September 2012)

## Vendor Strengths and Cautions

### Appian

These comments refer to Appian BPMS v.6.6.1.

#### Strengths

- Appian BPMS is one of the most user-friendly products in this market for process composition and creation. It enables business users to take control of almost every function of an iBPMS offering.

- The product takes full advantage of the combination of social, mobile and cloud, and leads in the number of implementations with this nexus of functionality. The mobile experience leverages the deep native capabilities of each mobile platform as well.
- Appian BPMS is highly integrated and has a consistent look and feel, while allowing for core management of all process resources and content.
- It leverages an in-memory data store for rapid access to process-centric information and goals. This is beneficial for active and on-demand analytics.

### Cautions

- Some clients have expressed concerns that creating reports and dashboards with Appian BPMS requires more configuration than other competitors, and the product does not have the feel of real-time visualization like other event-driven competitors.
- Although the Appian iBPMS leads in intelligent collaboration, it lags in preconfigured analytics to combine its rich set of built-in math functions. The configurable analytics provided lag those of other offerings that link higher-level functions to business policy and rule management.
- Appian is growing so fast that it will have to work hard to build enough skills and partnerships to match or exceed its growth rate. The limited number of big consulting and system integration (C&SI) partners may hinder Appian's ability to support large, transformational multinational BPM projects.

### Bosch Software Innovations

These comments refer to inubit Suite v.6.0 (including Visual Rules 5.3).

### Strengths

- The inubit Suite is strong in application integration, including the capability to enable composite applications, event-driven applications, workflow and business process orchestration. It has a comprehensive enterprise service bus, more than 70 adapters, B2B capabilities (including good EDI features), and native support for popular message-oriented middleware products and major connectivity standards.
- The model-driven development environment is rich in features and capable of supporting demanding applications. Flow models are validated through 700 built-in flow-related rules, and can be tuned using the extensive process simulation features. It supports Business Process Model and Notation (BPMN) and other common industry standards, plus some less common industry standards, such as Petri Net Markup Language (PNML) and Common Base Event (CBE).
- The inubit Suite has a good business rule processing capability, Visual Rules, which is more user-oriented and visual than most competing products. It supports full validation, testing, debugging, simulation and configuration for business rules.

- The company has domain knowledge and product features for operational technology (OT) applications, specifically including energy, healthcare, manufacturing, transportation and other engineering systems. It has an extensive system integration practice, as well as its own rigorous design and development methodology.
- Bosch Software Innovations has low business risk. It has a staff of about 450 people, and is profitable and fast-growing. Its parent company, Robert Bosch GmbH, is privately held (owned mostly by a charitable foundation), and has annual revenue of more than \$71 billion and worldwide employment of about 300,000.

## Cautions

- Bosch Software Innovations has limited presence outside of Germany, Singapore and the U.S., although it is trying to expand into additional regions. It has a relatively small presence in financial services, although it has some customers in banking, insurance and government, particularly for its Visual Rules product.
- The inubit Suite is less attractive for many small-to-midsize projects, because it is geared toward complex IT-centric or OT-centric processes with extensive integration with other applications or physical devices. It supports agile or waterfall development approaches, and is best for projects that will ultimately result in large systems.
- The product has limited support for some kinds of active analytics (for example, the native process monitoring display is rudimentary). Developers can implement rich BAM dashboards and alerts, but will need third-party components for some capabilities, such as data discovery analytics, and some sophisticated variations of CEP.

## Cordys

This analysis is based on Cordys Business Operations Platform (BOP) 4.1 and Cordys Operations Intelligence (COI) 1.1.

## Strengths

- Cordys BOP allows heavy-duty process applications to be quickly constructed via a high-level programming model. Combined with its multitenant capability, this makes it suitable for OEM partners to use as the foundation for third-party, cloud-based solutions — for example, in the telecommunications market (such as Convergys), in the retail market (such as Agility) and in the cloud services provider market (such as Fujitsu).
- The integrated automatic business process discovery tool (the open-source tool, ProM) makes it easy to understand existing processes using graphical outputs and interactive animations, such as bottleneck analysis. It can, therefore, help users to identify potential areas of improvement.
- The new collaborative interface for process design, although not unique, makes process design more accessible to less technically inclined people. Several people can view and comment in real time on a proposed process change, facilitating more rapid adoption.

## Cautions

- The majority of Cordys customers use Cordys BOP for its platform capabilities, and are not yet fully using the intelligent capabilities of the product.
- Some clients note that the user interface capabilities of the product are less well-developed than those of some of its competitors' offerings. This could hinder end-user uptake of applications and processes constructed on BOP.
- The product has basic business rule management capability via a decision table metaphor (although the company also partners with other vendors, such as Everest Aquima, for more complex business rule management).
- Prospective customers should ensure that the analytics capabilities available within COI or via partners meet their needs, because there are few sophisticated out-of-the box analytics.

## DST Systems

This analysis covers AWD10.

## Strengths

- AWD is a mature product with a very intuitive authoring environment — based on configuration models — that supports technical and business roles working together on different aspects of the solution. DST Systems' extensive domain expertise in core operational processes in financial services is evident in its many prebuilt features, such as parsing of Twitter feeds, quality control selection algorithms, prebuilt rules and various workflow routing patterns for separation of duties (as an example). This makes solution development easier and faster for business roles and IT professionals.
- Image capture and document and content handling features are strong, regardless of whether DST stores the content in its own file system or in an external enterprise content management repository.
- It has a strong connectivity layer for system-to-system interactions, including Web services orchestration, RESTful APIs and traditional integration adapters (all DST-owned).
- DST has offices around the world and prides itself on its relationships with its customers. Customers with whom we spoke have a long history of working with DST and are very satisfied with their partnerships.

## Cautions

- DST has recently re-entered the BPMS market<sup>3</sup> and is not well-recognized as a BPMS provider. Although AWD architecturally is an iBPMS, most customers buy it for its imaging and workflow capabilities, or to enable configuration of a DST application, not as a BPMS or iBPMS.

- AWD has weak capabilities in the areas of social interaction, collaboration, CEP and advanced analytics (such as predictive analytics or statistical forecasting). Adapters for Twitter, Facebook and a few other social media sites constitute its "social" support.
- AWD's configuration-model-driven authoring environment passes values to tables that drive its Java and Java Platform, Enterprise Edition (Java EE) architecture. This architecture limits dynamic behavior. Dynamism is limited to options that are planned in at design time to be exposed in runtime. The authoring environment's primitives can be extended using its software development kit or by invoking an external component via a Web services call.
- The authoring environment uses a unique notation that does not include swim lanes. Although some BPMN metadata is captured, there is no executable organizational model.
- There are few production deployments yet of AWD10. Customers are only beginning to migrate from older versions that are being sunset. Many users have recently begun to migrate their solutions, which typically include a lot of custom code. This focus on migration, rather than new enhancements, means that production experience with AWD10 enhancements is low.

## IBM

This review applies to IBM Business Process Manager 7.5.1 and WebSphere Operational Decision Management (ODM) 7.5.

### Strengths

- IBM's iBPMS implements a centralized approach to process and rule governance. Process Center and Decision Center (the respective repository, registry and deployment centers) have very elegant and intuitive capabilities for artifact life cycle management. Many steps are semiautomated. Process Center uses a unique and highly collaborative approach to version management, using very late binding and snapshots that allow users to easily navigate back in time.
- Business Process Manager mostly uses a direct, model-driven architecture (see "The Changing Concept of Model-Driven Approaches") that delivers one of the most integrated design, simulation, analysis and testing experiences available in the market. Authors can collaboratively visualize trouble spots, explore optimization options through prototyping and integrated heat maps (driven by simulation or IBM's Performance Data Warehouse data), and use visual testing to aid continuous process improvement. Its BPMN model can be used for real-time, instance-level monitoring and real-time manipulation of in-flight work using predefined configuration options.
- IBM ODM incorporates rules and events for strong situation awareness, decision management and automated actions. It has a powerful in-line ability to look at historical data and simulate what happens if rules are changed. Rule monitoring is unified with process event monitoring in Business Monitor and can be combined with nonprocess metrics.
- The Performance Data Warehouse and configurable business intelligence functions as extensions to BPMN deliver very good process analytics for business roles, including out-of-

the-box critical path analysis, scorecards, and calculations on due dates, heat maps for bottleneck detection, and threshold visualization in the context of process flow.

- The overall experience of composing process solutions is intuitive for business and technical roles, with extensive use of models. This version adds a toolbar to its popular "Coach" form builder, adding social and collaborative capabilities. Its BPMN models include intuitive extensions, in which everything is configurable. Despite its Eclipse client authoring environment, little technical jargon is exposed.

## Cautions

- The architecture enabling IBM's iBPMS is not yet 100% unified. Although IBM has made a lot of progress unifying the architecture within IBM BPM as it merged the Lombardi acquisition with existing technologies, there is still debugging/troubleshooting that requires administrators to check multiple log files and correlate entries manually. With Advanced Edition, governance for a solution that uses process and rule artifacts requires an extra step of manual collaboration across the two repositories.
- Content integration and interaction patterns are only supported with IBM FileNet P8 and IBM Content Manager. This means that case management style processes are not easy to author, especially if content state changes trigger case progression. Even scanned-image viewing is lacking. IBM's next version, 8.0 (which was released after our cutoff date for inclusion), adds support for the Content Management Interoperability Services (CMIS) standard to integrate with SharePoint and Alfresco.
- As of the writing of this report, only a few customers were using BPM 7.5.1 Standard Edition in production. There are few customers fully leveraging the combined capabilities to support the IBO usage scenario.
- Many IBM customers are still upgrading their process solutions from prior versions and configurations of IBM BPM products, including Lombardi Teamworks, IBM WebSphere Lombardi Edition and many configurations of IBM WebSphere products. Many of these migrations have not been smooth.
- Maintenance costs are higher than average at 25%.

## OpenText

This analysis is based on OpenText MBPM 9.1, OpenText Smart Business Workspace (SBW) 9.0, OpenText Content Server 10, OpenText Metastorm ProVision 6.3, OpenText Metastorm Integration Manager (MIM) 8.5, OpenText managerView 3.0, Altosoft 4.2 (optional partner) and InRule (optional partner).

## Strengths

- OpentText offers strong support for the entire life cycle of process improvement, beginning with architectural planning using the OpenText ProVision Enterprise Architecture and Business Process Analysis models, which move directly into BPMS executable models.
- Ease of use for nontechnical and technical roles is strong. Version 9 has many productivity improvements, including visual scripting, prebuilt user interface components and a multilanguage processing engine.
- A sophisticated skills inventory helps in assigning cases and tasks. This inventory can be updated in a distributed mode to keep it up-to-date with incremental experience and skills.
- A considerable amount of prebuilt process content is available as process pods from smaller consulting partners, even in remote geographies (such as Eastern Europe).

## Cautions

- OpenText MBPM 9 continues using its proprietary modeling notation (based on its STAR metaphor), although BPMN-like constructs, including swim lanes, have been added. Existing customers will need to adjust. Prospects that are used to BPMN may not find it that intuitive.
- To truly support IBO, partner offerings from Altosoft and InRule are pretty much mandatory, so there are multiple development environments to learn.
- OpenText has a number of BPM offerings to sort out over time. The long-term road map for all products is still in flux.

## Oracle

This analysis pertains to Oracle Business Process Management Suite 11g (BPMS 11g).

## Strengths

- Oracle has delivered an integrated and agile iBPMS that will serve well as a process platform for Oracle Fusion Applications, as well as for BPM efforts.
- Oracle BPMS 11g can leverage several integrated capabilities, including complex events, business rules, social analytics and real-time optimization capabilities to support intelligent processes.
- Oracle has delivered social and mobile capabilities to enhance the Oracle 11g platform.

## Cautions

- Oracle is focused on selling applications, business intelligence and database technologies first. Oracle BPMS 11g is often used to leverage sales of other Oracle software assets. Therefore, we expect that release priorities will not be driven solely by IBO use cases in the near future.

- References that Gartner has spoken to are currently only making limited use of the intelligence capabilities (for example, simple simulation). They are not using the full set of iBPMS features.
- The iBPMS features lack a consistent look, feel and operation.

## Pegasystems

This analysis is based on PegaRULES Process Commander (PRPC) v.6.3.

### Strengths

- Pegasystems' primary strength remains its unified object architecture, which structures all process artifacts, including processes, policies and user interfaces. This architecture enables Pegasystems to deliver a declarative modeling composition environment that improves the ability of the BPMS to model, change and adapt to new business needs.
- This release includes many intuitive visualizations and social networking capabilities to enhance ease of use by participants, aid learning, support cross-role and even customer collaboration, and focus attention on changes in real time (for example, a "pushpin" metaphor, a "what's happening" view and an interactive process "sticky note").
- This version continues Pegasystems' tradition of business role empowerment, and has a design environment that makes its tools more role-appropriate and expands support for process discovery and case management. Pegasystems uses this new environment to manage its process of solution creation.
- New analytic options, such as predictive analytics, combined with the policy/rule-driven results, make the PRPC environment ideal for intelligent business improvement cycles. The next-best-action feature is appealing.

### Cautions

- Pegasystems is growing so fast that it will have to work hard to build enough skills and partnerships to match and exceed its growth rate. More initiatives, such as its recently launched video-based self-study service, will be needed to meet demand.
- Its declarative composition environment represents a paradigm shift for most prospects, and will require training to take advantage of the closed environment.
- Pegasystems' prices are high relative to others, reflecting the value it believes it delivers. It has a very disciplined approach to sales. Its first proposal is typically its final proposal. Buyers should not expect last-minute discounts that they may be accustomed to receiving from other software vendors.

## PNMsoft

This analysis is based on PNMsoft Sequence v.6.

## Strengths

- PNMsoft's range of pricing options is attractive (including per-process, per-user and enterprise licensing options) and will suit its target market, which tends to be projects within organizations with limited budgets and those in a Microsoft .NET environment.
- The solution scales well up and down, because it has a multitenant cloud architecture — even when deployed on-premises in a private cloud manner.
- The "process wall" within Sequence provides a good social BPM capability, allowing a more permanent and visible record of interactions relating to the process.
- Sequence has the ability to make audited changes to in-flight processes (especially long-running ones), and have more than one version of a process running at the same time, supporting greater agility. In more recent versions of the product, this capability is now called the HotChange Architecture.

## Cautions

- PNMsoft's product is aimed at a customer base with less sophisticated requirements for BPM and iBPMSs. With a customer base reacting slower than the market, the company is more visionary than its audience.
- PNMsoft is still quite small and only operates directly in a limited number of geographies. The majority of sales are still in Western Europe.
- PNMsoft has a relatively small number of partners (especially global C&SI partners), so there is a limited skill base to leverage.

## Software AG

This analysis applies to webMethods BPMS v.8.2.

## Strengths

- Software AG leverages its comprehensive middleware stack to provide good support for systematic projects (those that employ a thorough, disciplined approach to design, development and management). It has extensive methodologies, 1,800 prebuilt best-practice models, many training and service offerings, and a leadership position in enterprise architecture (through its Aris products) and repositories (through its CentraSite product).
- webMethods BPMS is based on a scalable and efficient event-driven architecture. Virtually all the runtime components are connected to a common message bus; adapters are available to a wide range of third-party platforms and packaged applications; and it supports OSGi and important industry connectivity standards.
- Software AG has strong support for process discovery, process optimization and active analytics, including a proven BAM tool (webMethods Optimize), a powerful event-processing platform for CEP (webMethods Business Events) and a rich dashboard tool (Aris MashZone).

- Software AG has relatively low business risk. It is profitable and has more than 1,500 customers for its BPMS products (and more than 8,000 total customers). With 2011 total corporate revenue of more than \$1.4 billion, it is larger than many competitors in the iBPMS market.
- The company has recently acquired technology in areas of growing importance, including in-memory caching (Terracotta), mobile computing (Metismo) and message-oriented middleware (my-Channels). When these are fully leveraged, they will further improve the overall product offering.

### Cautions

- webMethods BPMS projects tend to have long development cycles because of the rigor involved in enterprise architecture and formal repositories. The product can be used with less formal approaches, but the tools are still primarily oriented toward IT buyers and developers, and the integration between components is immature in some areas.
- The product has limited support for some kinds of on-demand analytics. Third-party products will be required for visual data discovery and some advanced statistical functions.
- Software AG's sales are hampered by its low level of marketing. Its capabilities in many of the important point technologies and its underlying vision are strong, but the company does not consistently articulate a compelling case for its iBPMS to sales prospects.
- Although it has numerous relationships with third-party service providers, the commitment from many of these partners is not particularly deep.
- Some users report high prices and uncomfortable experiences with aggressive audits for license enforcement.

### Tibco Software

This analysis covers a range of Tibco Software products, including Tibco ActiveMatrix BPM 1.2, ActiveMatrix BPM Spotfire 10.1.1, ActiveMatrix Decisions 1.0.0, BusinessEvents Enterprise Server 3.0.2, ActiveMatrix BusinessWorks Service Engine 5.9.2, UDDI Server 3.1.0, tibbr 3.0.1, Nimbus Control 8.1.3 and Business Studio 3.5.2.

### Strengths

- Tibco has all the components to make a great iBPMS. ActiveMatrix combines its SOA and BPM capabilities based on Service Component Architecture and OSGi, its event-driven architecture and Eclipse. Individually, the above listed products deliver strong functionality; however, collectively, they are not yet fully integrated.
- Visualization of dashboards and reports in ActiveMatrix BPM (AMX BPM) is strong, leveraging the Spotfire visualization technology. Add-on Spotfire products are required for analysis of the instance data, as well as for enabling sophisticated math algorithms (including predictive modeling, statistical programming and data mining).

- Tibco's separation of the organization model from the workflow and user interface models is a competitive differentiator that enhances workforce management capabilities. For example, this enables analysis of workloads across processes, not just within one process.
- AMX BPM has very strong human workflow, with many out-of-the-box advanced patterns, including separation of duties, retain familiar and round-robin allocation.

### Cautions

- The authoring environment is Eclipse-based and includes a complex set of capabilities that are very oriented toward enhancing programmer productivity, rather than encouraging business role involvement in the life cycle.
- Currently, AMX BPM has weak social support. Tibbr is a separate offering, supporting topical social interactions outside the process context. Group collaboration and instant messaging chats are outside the context of the running instance. Thus, the audit trail of interactions is spread across multiple log files.
- Despite its release nearly two years ago, there are few production deployments of AMX BPM. Many existing customers of Tibco's BPMS (iProcess) are happy and have not found a reason to migrate to AMX BPM.
- Some customers have reported that AMX BPM "still feels like a version 1 product." A few have reported stability and performance issues for enterprise-class requirements. (Version 1.3, released after the cutoff of this report, seems to address most of these concerns.)
- Few out-of-the-box process analytics are available (such as bottleneck, critical-path or social network analysis).

### Vitria

This analysis applies to Vitria Operational Intelligence v.3.2 (formerly called M<sub>3</sub>O v.3.2).

### Strengths

- Vitria Operational Intelligence's clear, simple, model-driven design enables the rapid development of small, medium-complexity or highly demanding applications. Its XML-centric architecture is particularly straightforward and efficient for processes that involve some semistructured documents and other XML messages.
- Broad and deep analytic features include BAM, CEP, integrated online analytical processing (OLAP) and extensive statistical functions. Business analysts and power users can participate in the development and tailoring of the solutions, because the system automatically builds default dashboards and has high-level tools, such as the KPI Builder, which generates analytic queries.
- There is strong support for process discovery for systems that are already in operation, regardless of whether they are orchestrated by a software tool. Vitria Operational Intelligence also provides its own workflow and process orchestration for problem resolution processes or for full business processes.

- The product is capable of very high-volume applications because of a scalable, grid-based architecture that leverages MapReduce principles.
- The company has a long record of innovation and is focused almost entirely on the concept of IBO, under its label of "operational intelligence."

### Cautions

- Vitria is a small company with limited financial, marketing, sales and support resources. The vendor's focus on an advanced technology vision consumes much of its energy, with fewer resources devoted to expanding market share.
- Vitria's field technical support and consulting staff is sparse, especially outside the U.S., China, Japan, Spain, the U.K. and Brazil. It also has relatively modest support from its service partners trained on Vitria Operational Intelligence.
- Although it supports all the feature categories of an iBPMS, Vitria Operational Intelligence's capabilities in mobile computing, content management, management of user notifications and business rules are fairly rudimentary.

### Whitestein

This analysis is based on Whitestein Living Systems Process Suite (LSPS) v.2.5.

### Strengths

- LSPS uses a unique modeling methodology with "goals" as the central semantic construct. Situational information (for example, "given knowledge K and event E, select best action A to attain goal G") is defined in the process model and may be altered dynamically during process execution. The runtime engine uses this information to determine the flow to execute. The approach is meant for processes that need a high degree of agility and intelligence (such as case management processes). It also supports BPMN modeling for processes that don't need much agility or intelligence.
- LSPS uses multilevel modeling, separating data, activity flow and organization models. This allows models to be easily reused and associated across domains. For example, the same organizational model can be shared across multiple solutions. Similarly, goal models can be linked into a hierarchy, recognizing that processes don't live in isolation.
- BAM data collection, KPI creation and visualization are strong and extensible, enabling in-flight impact analysis to locate process bottlenecks and inefficiencies, and determine how a process can be improved. Reporting, although basic in functionality, is easy to configure out of the box.
- LSPS is designed to be embedded under process applications, both in its architectural modularity and in its licensing and pricing. Partners use LSPS to power their solutions as an OEM.

## Cautions

- Under the modeling layers, LSPS is a Java EE, Eclipse-based environment that is most appropriate for programmers. Its expression language is quite technically oriented as well. The tool is designed to deliver programming productivity gains for complex, agile processes. Thus, business role participation is appropriate only for goal modeling and BPMN modeling.
- LSPS is still a very new product. Many areas of the product have weaker functionality than others in this analysis, such as out-of-the box reporting (based on BIRT), registry/repository and social interactions/social media.
- Whitestein is a small company. It has more partners using its product (C&SI partners and independent software vendor partners) than end-user companies.
- As a small company, there are only a few experts (professional services personnel) and little documentation on best practices for designing and implementing advanced, case-centric solutions in LSPS. (Product training is available.)

## Vendors Added or Dropped

We review and adjust our inclusion criteria for Magic Quadrants and MarketScopes as markets change. As a result of these adjustments, the mix of vendors in any Magic Quadrant or MarketScope may change over time. A vendor appearing in a Magic Quadrant or MarketScope one year and not the next does not necessarily indicate that we have changed our opinion of that vendor. This may be a reflection of a change in the market and, therefore, changed evaluation criteria, or a change of focus by a vendor.

### Added

This is a new Magic Quadrant.

### Dropped

This is a new Magic Quadrant.

## Inclusion and Exclusion Criteria

To be included in this Magic Quadrant, vendors had to meet *all* the following criteria:

- The vendor's product must meet Gartner's definition of an iBPMS, as described in the Market Definition Description section. "Selection Criteria Details for Intelligent Business Process Management Suites" elaborates on this definition.
- The product must be intended to address buyers' needs for developing and deploying IBO solutions. Some functionality can be sourced from partners, although the iBPMS vendor must be the single point of contact for customer support and maintenance.

- The vendor's iBPMS offering must be a general-purpose application infrastructure platform. It cannot be a specialized solution for horizontal processes (such as call center operations) or specialized for one or more vertical industries (such as insurance).
- The product must be offered to end-user buyers as a standard commercial software product — not as private intellectual property (IP) from a consulting or system integration firm's IP library that is delivered in a professional services engagement.
- The product must be of high interest to Gartner clients and nonclient buyers in the market, or Gartner analysts must feel clients should take note of it. We used Gartner market share data, Gartner client inquiry data, Gartner BPM and Application Development and Integration conference attendee questions, and other social media sources, as appropriate, to help us gauge end-user buyer interest.
- The product must regularly compete against offerings from other vendors represented in this Magic Quadrant.
- The vendor must provide at least two references that have deployed IBO solutions to end users in their organization that were built on the evaluated version. The referenced deployments should highlight how the organization is taking significant advantage of the major capabilities of the suite.
- Product versions to be evaluated must have been available for purchase or subscription by any interested end-user company by 1 October 2011. Products that were still in beta, controlled release or some other restricted availability at that date were not considered.

Although this Magic Quadrant relates to iBPMSs, the vendor offerings do not necessarily have to be a single SKU.

## Evaluation Criteria

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### Ability to Execute

A detailed description of the general Ability to Execute criteria can be found in "Magic Quadrants and MarketScopes: How Gartner Evaluates Vendors Within a Market."

Gartner analysts evaluate technology providers on the quality and efficacy of the processes, systems, methods or procedures that enable IT provider performance to be competitive, efficient and effective, and to positively impact revenue, retention and reputation. Ultimately, technology providers are judged on their ability and success in capitalizing on their vision. A common set of evaluation criteria is used across all markets, but we weight these criteria differently depending on the specific market.

Buyers of iBPMS technologies are looking for a well-designed, business-user-friendly product that provides the ability to quickly create new, intelligent processes. Business users are likely to be involved in the decision-making process for iBPMS projects, and frequently drive BPM projects (especially in mature regions).<sup>4</sup> In addition, because the iBPMS is an evolution of the BPMS, we

think it is important for vendors to help potential buyers understand what the "intelligent" prefix brings to the market, making how well the vendor executes its marketing an important evaluation criterion. Customer experience of the product is also considered a high priority because of the need to respond quickly in an IBO scenario. For these reasons, we gave product/service, marketing execution and customer experience a high weighting. Given the evolving state of the iBPMS market, we gave overall viability a lower weighting, because buyers of leading-edge technology tend to be more willing to work with smaller and less-well-proven vendors:

- **Product/Service:** Evaluates the core functionality required to meet the needs of IBO. The product should be responsive to changing conditions, not only reacting to changes but being predictive and context-aware, automating responses and anticipating needs. This includes current product/service capabilities, quality, feature sets and skills required — whether offered natively or through OEM agreements or partnerships, as defined in the market definition.
- **Overall Viability:** Viability includes an assessment of the overall organization's financial health, the financial and practical success of the business unit, and the likelihood of the individual business unit to continue to invest in the product, offer the product and advance the state of the art within the organization's portfolio of products.
- **Sales Execution/Pricing and Licensing:** Evaluates the technology provider's capabilities in all presales activities and the structure that supports them. This includes deal management, pricing and negotiation, presales support, proof of concepts, and the overall effectiveness of the sales channel.
- **Market Responsiveness and Track Record:** Evaluates the vendor's ability to respond, change direction, be flexible and achieve competitive success as opportunities develop, competitors act, customer needs evolve, and market dynamics change. This criterion also considers the provider's history of responsiveness to shifting market and buyer needs.
- **Marketing Execution:** Evaluates the clarity, quality, creativity and efficacy of programs designed to deliver the vendor's message in order to influence the market, promote the brand and business, increase awareness of the product, and establish a positive identification with the product/brand and organization in the minds of buyers. This mind share can be driven by a combination of publicity, promotional, thought leadership, word-of-mouth and sales activities.
- **Customer Experience:** Evaluates the degree to which the product enables business and IT role collaboration, and delivers a consistent and unified user experience throughout the process improvement life cycle and across all the technologies contained within the suite, as well as relationships, products and services/programs that enable clients to be successful with the products evaluated. Specifically, this includes the ways customers receive technical support or account support. This can also include ancillary tools, customer support programs (and the quality thereof), the availability of user groups and SLAs. The product must be able to demonstrate support for intelligence and innovation in processes, and must support socialization.
- **Operations:** The ability of the organization to meet its goals and commitments. Factors include the quality of the organizational structure, including skills, experiences, programs, systems and

other vehicles that enable the organization to operate effectively and efficiently on an ongoing basis. Nimbleness is needed for this emergent market.

Table 1. Ability to Execute Evaluation Criteria

Evaluation Criteria	Weighting
Product/Service	High
Overall Viability (Business Unit, Financial, Strategy, Organization)	Low
Sales Execution/Pricing	Standard
Market Responsiveness and Track Record	Standard
Marketing Execution	High
Customer Experience	High
Operations	Standard

Source: Gartner (September 2012)

### Completeness of Vision

Gartner analysts evaluate technology providers on their ability to convincingly articulate logical statements about current and future market direction, innovation, customer needs and competitive forces, and how well they map to the Gartner position. Ultimately, technology providers are rated on their understanding of how market forces can be exploited to create opportunity for the provider.

Given the complex nature of the iBPMS, our weightings have been set to reflect the need for strong vision and active promotion of this evolving market. Therefore, we weighted market understanding, marketing strategy, product strategy and innovation high. Because vendors in this evolving market may be small, and leading-edge technology buyers tend to be happy to work with a local or regional specialist, we gave geographical strategy no weighting:

- Market Understanding:** Ability of the technology provider to understand buyers' needs and translate these needs into products and services. Vendors that show the highest degree of vision listen to and understand buyers' wants and needs, and can shape or enhance those wants with their added vision.
- Marketing Strategy:** A clear, differentiated set of messages consistently communicated throughout the organization and externalized through all media, including the website, advertising, customer programs, positioning statements and collateral, conferences, and press interviews. As an emerging usage scenario, vendors must essentially promote IBO.

- **Sales Strategy:** The strategy for selling the product using the appropriate network of direct and indirect sales, marketing, service, and communication affiliates that extend the scope and depth of market reach, skills, expertise, technologies, services and the customer base.
- **Offering (Product) Strategy:** Evaluates the technology provider's approach to product development and delivery that emphasizes differentiation, functionality, methodology and feature set as they map to current and future requirements.
- **Business Model:** The soundness and logic of a technology provider's underlying business proposition as a commercial entity. This is about providing a product, rather than delivering product capability via a professional services engagement, ensuring that the product is commercially viable.
- **Vertical/Industry Strategy:** The technology provider's strategy for direct resources, skills and offerings to meet the specific needs of individual vertical market segments. The vendor should be focused on the industries where iBPMSs are needed first.
- **Innovation:** Consideration of unique approaches and innovations, such as innovative marketing, partnering, licensing, pricing, product enhancements, standards development and community development.
- **Geographic Strategy:** The technology provider's strategy to direct resources, skills and offerings to meet the specific needs of geographies outside the "home" or native geography, either directly or through partners, channels and subsidiaries, as appropriate for that geography and market.

Table 2. Completeness of Vision Evaluation Criteria

Evaluation Criteria	Weighting
Market Understanding	High
Marketing Strategy	High
Sales Strategy	Standard
Offering (Product) Strategy	High
Business Model	Standard
Vertical/Industry Strategy	Standard
Innovation	High
Geographic Strategy	No Rating

Source: Gartner (September 2012)

## Quadrant Descriptions

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### Leaders

In our 2011 research "BPM Suites Evolve Into Intelligent BPM Suites," we originally forecast that, by 2016, 5% of organizations worldwide would implement IBO for competitive advantage. However, by mid-2012, we already saw a significant increase in interest and adoption beyond our original assumption, and we strongly encourage all enterprises — Type A or not — to understand this IBO use case, because we believe it represents the future of this market.

The Leaders in the iBPMS Magic Quadrant not only exhibit features that help embody and employ intelligence in the context of a process, but also have clients that have shown innovative and successful processes that make a difference to their respective organizations. In addition to innovative processes implemented by multiple clients, the Leaders exhibited references where business professionals are delivering these differentiating processes in an accelerated time-to-market fashion, where the business was in direct control of the human and technical resources during the development and running of the resulting processes. In fact, many references cited either business professionals having a hands-on development experience during development or having levers for in-flight adjustment of running processes. The in-flight adjustments could have been the result of recognizing the occurrence of complex or real-time events that signify a pattern of business interest, the application of analytics to optimizing resources and outcomes, or the hypercollaboration of knowledge experts. Often, the Leaders show the application of social, mobile and cloud or always-on analytics linked directly to live data/events (even from physical objects/devices) for the opportunity to adjust the processes or the policies and goals that govern them.

The Leaders' products support an iterative process improvement method, in which the artifacts (outputs) created at each phase of the process improvement life cycle move very smoothly (if not seamlessly) from one phase to another. Products from vendors such as Pegasystems, IBM and Appian deliver automated, model-driven, round-trip behavior, where changes made to the model are immediately executed, thus blurring the distinction between design time and runtime. These products provide a fluid and unified user experience, as well as good support for dynamic IBO. Because the model is visible at all times and live (that is, executable), processes can be flexible without sacrificing management visibility and control. The Leaders are relatively low in the Leaders quadrant, because IBO and the iBPMS are relatively new in their application in production processes. Gartner believes that the level of intelligence will increase and evolve over the next few years, making leadership a changing landscape.

As a group, Leaders exhibit superior sales and marketing execution. Many Leaders show strong innovation in their products, business models, and consulting and educational services. Many of these vendors have introduced new software-as-a-service or cloud offerings and business process outsourcing alliances, and are developing their partner ecosystems to support business process platforms. We expect these Leaders to increase their overall investment into their iBPMSs to make them a stronger platform for the convergence of decisions and process. The age of the smart process is on us, and we expect spectacular leverage.

Appian has a strong story around social, mobile and cloud, and there is a strong set of built-in mathematical functions that business users have been able to leverage in real-time prediction and monitoring. Appian's growth trajectory has been stellar, and the trend toward IBO should help continue this strong growth. Some of the references have been very innovative in nature.

IBM is on a march toward a set of cooperating technology stacks aimed at decision and processing working seamlessly together. The integration of IBM's multiple and excellent technology components continues, and ease of use is improving toward a more consistent level. The standard edition of the product meets most customer needs, has good integration and is easy to use. Although the advanced edition adds more capabilities, it comes with increased complexity. IBM stands out as the leading example of a vendor that offers both a pure-play experience (IBM BPM Standard Edition) and a stack-based experience (IBM BPM Advanced Edition). It is, therefore, in a position to satisfy the requirements of a large number of customer projects, and is particularly competitive in large companies that have a mix of pure-play and stack-based projects.

Pegasystems leverages a strong champion-challenger approach to process optimization. Recent strides in adaptive case management and applying predictive analytics promise to keep Pegasystems a thought and market leader. It has consistently had the best integrated rule management capability aimed at process enablement and governance.

### Challengers

There are no Challengers for this first iBPMS Magic Quadrant. This is not unusual for an evolving market, and we expect Challengers to emerge in the next few years.

### Visionaries

In general, Visionaries are innovators. Thus, the Visionaries quadrant in any Magic Quadrant is often the one with the greatest degree of change from year to year. The Visionaries are Bosch Software Innovations, Oracle, Software AG, Tibco Software, Vitria and Whitestein.

Bosch Software Innovations offers a broad and deep suite, leveraging technology from its acquisition of inubit AG (a BPM vendor) and Innovations Software Technology (a vendor of a visual rule product). Its strong financial and marketing resources and substantial system integration staff make it a strong competitor, although it has limited presence outside of Germany, Singapore and certain parts of the U.S. market.

Oracle has progressed steadily by purchasing contributing technologies and integrating them into a cohesive offering. Although Oracle, as a stack vendor, has integrated better than others, to date, it has not pushed BPM as a leading strategy from the executive suite. Oracle BPM 11g is a good base for Fusion applications and extends their power. Oracle would be wise to put BPM front and center to progress in this market, and it has laid out plans to do so.

Software AG has all the parts necessary for a first-class iBPMS. It has significant features for organizations that want to leverage simulation and optimization, possesses great visualization features to track KPIs and goals, and excels in system integration. The company has not shown significant integration of all the technologies yet in client sites. Over time, Software AG seems likely

to improve its position. Its recent acquisitions in areas such as in-memory caching (Terracotta), mobile computing (Metismo) and message-oriented middleware (my-Channels) have not yet been fully integrated, but offer the potential for a significantly stronger product set within the next two years.

Tibco offers a rich and sophisticated set of capabilities for IBO. It excels in complex event management, human interaction management, data visualization and system integration. The offering is sophisticated but also complex, and Tibco has shown little progress in integrating it into digestible packages for customers. Tibco also lags the Leaders in providing out-of-the-box capabilities for business role participation in the process life cycle. AMX BPM is now Tibco's primary BPMS product. Few customers of its predecessor product, iProcess, have migrated yet to AMX BPM or implemented new IBO solutions on AMX BPM to take advantage of its more advanced features. Thus, there are still few production-level proof points of customers using the full set of capabilities to address IBO. Over time, we expect the company to advance.

Vitria has achieved one of the most sophisticated iBPMS implementations by combining process discovery, workflow, process orchestration, analytics and leading-edge, event-processing technology. Vitria's product is especially suited for business situations that involve monitoring current conditions and processes, applying real-time analytics and responding quickly. Its innovative technology is attractive to leading-edge buyers, but its small company size and limited resources, particularly in marketing and sales, keep it out of many customer deals.

Whitestein has blazed new ground in the area of goal modeling and dynamic adjustment to changing goals, but it currently has a small client base and few outlets to sell to and service its clients.

### Niche Players

Niche Players are narrowly focused as they initially approach the iBPMS market, having achieved significant-enough market awareness to be included among the vendors we considered. The Niche Players in this Magic Quadrant are Cordys, DST Systems, OpenText and PNMsoft.

Cordys is focusing on a number of industries that are open to cloud platform solutions, such as utilities and telecommunications, although its solutions can be deployed on-premises as well as in the cloud. End-user companies tend to use Cordys BOP more as a platform for SOA projects, where they can consider adding intelligent services in the future, rather than in a current IBO scenario.

Although DST Systems' AWD product technically meets our definition of an iBPMS product, its customers primarily view AWD as a configurable application environment with considerable out-of-the-box prebuilt business functions and algorithms, rather than as a model-driven development and composition environment that they apply to any and all process areas. Throughout the years, DST Systems has changed its positioning of AWD. For the past five years, AWD has been viewed by Gartner clients as an application infrastructure platform used by DST Systems itself and for its customers to leverage for building industry-specific, configurable applications, rather than as a general-purpose BPM suite. With AWD10, DST Systems is trying to broaden its market appeal by

positioning AWD as a general iBPMS, but has few proof points yet for customers using it as a BPMS or using it as an iBPMS for the IBO usage scenario.

OpenText has a few successes in the iBPMS market to date; however, since the acquisition of Metastorm by OpenText and shifting market strategy, we have not yet seen an intense focus on the IBO usage scenario. OpenText is moving to a more balanced approach by selling to more than its traditional Microsoft base. New management is stressing more BPM sales and has equipped a large sales force accordingly.

PNMsoft has significant features that can be aimed at iBPMS customers. However, its focus on and appeal to Microsoft .NET-focused shops often put it ahead of its clients' needs. PNMsoft has some references pursuing the IBO usage scenario in its largest customer implementations.

## Context

Business leaders face new challenges due to rapid change and accelerated business cycles, which often require them to manage their operations in real time. These leaders need tools to help manage their processes in a manner that enables them to assess and respond to changing conditions intelligently and swiftly.

BPMS products have evolved into iBPMS products to help cope with today's accelerated business cycles, which require managers to manage operations in real time. After-the-fact reports do not enable operational managers to track work in progress, make optimization adjustments in real time, and increase organizational responsiveness to market dynamics and evolving event patterns. This means that organizations must seek, model and adapt to new business and process patterns. Managers now need to be able to visualize the end-to-end process and work in progress to be able to interact with resources and work items, while dynamically balancing their KPIs, goals and expected outcomes. BPM disciplines and the new BPM-enabling technology identified as the iBPMS address these new business demands.

Integrating analytics into operational processes (versus approaches in the past that separated analytical work from transactional work) empowers the workforce to make better, faster and contextualized decisions to guide in-progress work toward optimal outcomes. A key requirement we observe among organizations pursuing IBO is to better guide individual contributors to the best next action for a given context. Rather than every work item being treated in the same fashion and prescribed actions applied, decision management services are incorporated into the workflow to most appropriately tailor actions for the given situation, yet stay within some corporate guidelines. In this way, the iBPMS will help manage agility better.

## Market Overview

The iBPMS represents the next evolution of BPM-enabling capabilities. By incorporating more analytics — and other technologies, such as deep CEP, social media and mobile devices — into process orchestration, process participants have better real-time situation awareness and can tailor their response most appropriately to emerging business threats and opportunities. Although

simulation, optimization, BAM and business intelligence tools have been included in our definition of a BPMS for years, we are now seeing these and other, more advanced technologies become better integrated into the stack. This evolution is similar to the past evolution from pure-play BPM products to BPMSs.

We predict that mainstream buyers will continue to invest in BPMSs through 2014. However, we expect spending to continue to shift in favor of the BPMS market leaders, which are among the first providers to expand their products into an iBPMS. Some buyers will select an iBPMS provider because they demand support for IBO use cases. Others will select an iBPMS simply because the iBPMS represents the next generation of BPM-enabling technology. Regardless, organizations wanting to advance their BPM maturity and increase business performance outcomes through process optimization will consider iBPMSs. This Magic Quadrant is a starting point in that process.

## Recommended Reading

*Some documents may not be available as part of your current Gartner subscription.*

"Magic Quadrants and MarketScopes: How Gartner Evaluates Vendors Within a Market"

"BPM Suites Evolve Into Intelligent BPM Suites"

"Use the BPM Sweet Spot Framework to Identify the BPM Technology You Need"

"The Trend Toward Intelligent Business Operations"

"Plans to Focus on aPaaS Market Signal Challenges Ahead for Progress"

"Selection Criteria Details for Intelligent Business Process Management Suites"

"The Changing Concept of Model-Driven Approaches"

"Reassess Adobe's BPM and CCA Platforms as Its Strategy Has Shifted"

## Evidence

<sup>1</sup> Gartner analysts conducted 14 in-depth vendor reviews during January, February and March 2012 to produce this report. One vendor (Progress) has since left the market.

<sup>2</sup> Thirty-seven end-user interviews were conducted during April and May 2012 to review how organizations were using these vendor's offerings.

<sup>3</sup> DST Systems was featured in the Gartner 2Q03 Magic Quadrant for pure-play BPM. In 2006, it was mentioned as a BPM specialist. In 2007, 2009 and 2010, it was not included, but has moved into the iBPMS market this year, because its product is frequently seen in competitive situations. For insight into the BPMS market evolution, see "Magic Quadrant for Pure-Play BPM, 2Q03," "Magic Quadrant for Business Process Management Suites, 2006," "Magic Quadrant for Business

Process Management Suites, 2007," "Magic Quadrant for Business Process Management Suites" (2009) and "Magic Quadrant for Business Process Management Suites" (2010).

<sup>4</sup> In "BPM Survey Insights: Business More Likely Than IT to Drive BPM Projects," we noted that, among survey respondents worldwide, almost 40% said that lines of business (LOBs) were the primary driver for their BPM projects, 23% said that IT was the primary driver, and 36% said that both IT and LOBs drove BPM equally.

#### Note 1 Vendors in the 2010 BPMS Magic Quadrant Focused on Mainstream BPMS Buyers

- Active Endpoints
- Adobe
- AgilePoint
- Appian\*
- Bizagi
- Cordys\*
- EMC
- Fujitsu
- HandySoft
- IBM\*
- Intalio
- K2
- Newgen Software Technologies
- OpenText\* acquired Global 360 and Metastorm, which were both in the Gartner 2010 Magic Quadrant
- Oracle\*
- Pallas Athena (now Perceptive Software)
- Pegasystems\*
- PNMsoft\*
- Polymita (recently acquired by Red Hat)
- Progress Software (Savvion)
- SAP
- Singularity (now Kofax)

- Software AG\*
- Tibco Software\*

An asterisk after the name indicates that the vendor is included in the 2012 iBPMS Magic Quadrant.

### Note 2 Special Mention Vendors

Beyond the vendors evaluated in this Magic Quadrant, a number of other vendors that we are watching closely should be mentioned here, because they are actively pursuing development toward an iBPMS, or they have a history in the BPMS market and continue to serve mainstream buyers. They may be of interest to our client base as well, and may be alternative sources of process support going forward.

Vendors that have made major efforts to pursue IBO:

- Be Informed
- Fujitsu
- Isis Papyrus
- Kofax-Singularity
- Lexmark/Perceptive Software/Pallas Athena
- Provenir

Vendors that are active BPMS providers:

- Active Endpoints
- Adobe
- AgilePoint
- Bizagi
- BonitaSoft
- BP Logix
- EMC
- Everest
- HandySoft
- Intalio
- K2
- Metasonic

- Newgen Software Technologies
- Polymita (recently acquired by Red Hat)
- Red Hat
- Savvion
- SAP
- Talend
- USoft
- XMPPro

### Note 3 Broad Applicability of the iBPMS Magic Quadrant

In "BPM Suites Evolve Into Intelligent BPM Suites," we stated our rationale for why the majority of BPM practitioners should pay attention to the IBO use case during the normal product selection planning horizon:

- Assess your organization's commitment to BPM. The greater that commitment is, the more likely it is that you will experience the need for IBO in the next five years.
- The IBO usage scenario aligns very well with Levels 3, 4 and 5 in Gartner's BPM maturity model.
- The number of organizations within that range that should understand the IBO use case, and consult the iBPMS Magic Quadrant during any BPM platform purchase decision, is at least 70% — the majority. IBO reflects and depends on a high degree of BPM maturity overall. Today, we estimate that, among organizations worldwide that are embracing BPM as a program, 30% are at Level 2 or below in BPM maturity, 68% are at or between Levels 2 and 3, and only 2% are above Level 3 and approaching Level 4 or Level 5.

### Note 4 Sample Gartner Research for BPMS Buyers

Clients that are not interested in the IBO use case can obtain BPMS research from Gartner and receive guidance on vendor selection. We encourage clients with specific questions about BPMS to schedule inquiries with Gartner analysts.

Gartner's ongoing BPM Vendor Insights research series examines vendors supporting all BPMS use cases, and Gartner's ongoing market analysis tracks the changing BPMS vendor landscape:

- "BPM Vendor Insights: Sourcecode Technology Holdings' K2 Blackpearl BPMS"
- "OpenText/Global 360 Deal Further Consolidates Microsoft BPMS Segment"
- "Kofax-Singularity Deal Reinforces Content Management Synergy With BPM"
- "BPM Vendor Insights: BonitaSoft's Bonita Open Solution BPM Suite"

## Evaluation Criteria Definitions

### Ability to Execute

**Product/Service:** Core goods and services offered by the vendor that competes in/ serves the defined market. This includes current product/service capabilities, quality, feature sets, skills and so on, whether offered natively or through OEM agreements/ partnerships, as defined in the market definition and detailed in the subcriteria.

**Overall Viability (Business Unit, Financial, Strategy, Organization):** Viability includes an assessment of the overall organization's financial health, the financial and practical success of the business unit, and the likelihood that the individual business unit will continue investing in the product, will continue offering the product and will advance the state of the art within the organization's portfolio of products.

**Sales Execution/Pricing:** The vendor's capabilities in all presales activities and the structure that supports them. This includes deal management, pricing and negotiation, presales support, and the overall effectiveness of the sales channel.

**Market Responsiveness and Track Record:** Ability to respond, change direction, be flexible and achieve competitive success as opportunities develop, competitors act, customer needs evolve and market dynamics change. This criterion also considers the vendor's history of responsiveness.

**Marketing Execution:** The clarity, quality, creativity and efficacy of programs designed to deliver the organization's message to influence the market, promote the brand and business, increase awareness of the products, and establish a positive identification with the product/brand and organization in the minds of buyers. This mind share can be driven by a combination of publicity, promotional initiatives, thought leadership, word-of-mouth and sales activities.

**Customer Experience:** Relationships, products and services/programs that enable clients to be successful with the products evaluated. Specifically, this includes the ways customers receive technical support or account support. This can also include ancillary tools, customer support programs (and the quality thereof), availability of user groups, SLAs and so on.

**Operations:** The ability of the organization to meet its goals and commitments. Factors include the quality of the organizational structure, including skills, experiences, programs, systems and other vehicles that enable the organization to operate effectively and efficiently on an ongoing basis.

### Completeness of Vision

**Market Understanding:** Ability of the vendor to understand buyers' wants and needs, and to translate those into products and services. Vendors that show the highest

degree of vision listen and understand buyers' wants and needs, and can shape or enhance those with their added vision.

**Marketing Strategy:** A clear, differentiated set of messages consistently communicated throughout the organization and externalized through the website, advertising, customer programs and positioning statements.

**Sales Strategy:** The strategy for selling products that uses the appropriate network of direct and indirect sales, marketing, service, and communication affiliates that extend the scope and depth of market reach, skills, expertise, technologies, services and the customer base.

**Offering (Product) Strategy:** The vendor's approach to product development and delivery that emphasizes differentiation, functionality, methodology and feature sets, as they map to current and future requirements.

**Business Model:** The soundness and logic of the vendor's underlying business proposition.

**Vertical/Industry Strategy:** The vendor's strategy to direct resources, skills and offerings to meet the specific needs of individual market segments, including vertical markets.

**Innovation:** Direct, related, complementary and synergistic layouts of resources, expertise or capital for investment, consolidation, defensive or pre-emptive purposes.

**Geographic Strategy:** The vendor's strategy to direct resources, skills and offerings to meet the specific needs of geographies outside the "home" or native geography, either directly or through partners, channels and subsidiaries, as appropriate for that geography and market.

## Regional Headquarters

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### Corporate Headquarters

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