

## ZAPTHINK ZAPNOTE™

### CORDYS COMPREHENSIVE ENABLER OF SERVICE-ORIENTED BUSINESS APPLICATIONS

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#### Abstract

Netherlands-based Cordys followed the core principles of Service-Oriented Architecture (SOA) to build a Composite Application Framework from the ground up. The eponymously named Cordys offers integration capabilities, Web Service creation and enablement, composite application creation and management, and rich user interface capabilities, in addition to data management and security. Furthermore, since Cordys built the entire product as a single, standards-based, integrated suite, Cordys customers have seamless, agile capabilities that enable them to get the most out of their SOA implementations. As a result, Cordys is a member of a new class of Service-oriented applications that might be called the killer apps of SOA.

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## Cordys: Assembling the SOA Killer Application

Today's dynamic enterprises require technologies, products, and solutions that enable agile business processes that respond to business change, rather than inflexible application functionality that traditional Business Process Management (BPM) and workflow tools offer. Such is the current problem, or perhaps opportunity, for Service-Oriented Architecture (SOA). Many such products on the market are stuck in the programmatic, traditional mindset of encoding business process as a pseudo-programming language, and design tools that do little more than build well-orchestrated, flowcharted, yet inflexible business processes. In many instances, the vendors of these old-fashioned products have taken the horseless carriage approach of adopting old forms of programming and flowcharting to new technologies. Such hidebound approaches are of little help in a world where we're trying to shift the burden of process development to the line-of-business user who has no interest or capability in programming.

In fact, enterprise software must itself be Service-oriented. The elements of process, presentation, and integration must work seamlessly together, yet be modular and standards-based. The business goal of SOA is to put the control of the business into the hands of business users. Therefore, these users must have a flexible interface that allows them to build, modify, and manage the business processes in the enterprise. The underlying infrastructure should be invisible to the business user, yet respond quickly and efficiently to changes in the business environment. For such power and flexibility to become a reality, enterprises need broad, Service-oriented capabilities that tie together the presentation layer, business process, and the underlying infrastructure, enabling business users to create and manage Service-Oriented Business Applications (SOBAs).

SOA tools have been maturing significantly, but even now the SOA tools on the market are still limited in their capabilities. The market has still not delivered a single product that brings together all of the capabilities companies require into a single, Service-oriented tool, including modeling, Service lifecycle management, business visibility, Service consumption, and Service composition. Today, the demand for such a comprehensive tool is emerging, and the requirements and characteristics of this sort of tool are now becoming clearer.

The sort of tool companies require to build Service-oriented applications is not a simplistic extension of the concept of an IDE to the world of Web Services, but rather a new kind of tool that is itself a new kind of application—a tool that promises to disrupt the current tools space and define a new market in the process, in other words, the SOA Killer App. And while no vendor has yet delivered fully on this vision of the SOA Killer App, one of the closest is Cordys.

With Cordys, enterprises get the efficiency benefits of a comprehensive software suite, combined with the agility benefits of SOA. Cordys' primary strength is its combination of business process definition and execution, browser-based rich presentation, and Service-oriented integration capabilities. Many vendors focus on one or two of these areas, but Cordys is unusual in that it is strong in all three. As a result, companies are better able to build SOBAs on Cordys than on any mix-and-match collection of products from different vendors.

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Cordys provides a Composite Application Framework simply called *Cordys* that provides the process, presentation, and integration infrastructure necessary to implement SOA. Cordys provides the following basic capabilities:

- *Modeling* – Cordys enables users to define and deploy business processes and workflows from a visual modeling environment.
- *Integration* – Cordys provides for the interoperability among IT systems, integration of disparate data, bridging of the functional gaps between applications by creating the missing functionality.
- *Visibility* – Cordys provides flexible monitors that provide insight in business activities, generates alerts when exceptional events occur, and enables users to take action on those alerts.
- *Development capabilities* – Cordys offers both a programmatic Java environment as well as declarative composition capabilities.
- *Business process optimization* – Cordys also enables business users to optimize business processes, workflows and applications in a flexible, declarative manner.

Furthermore, Cordys exposes all of the above capabilities within a single, comprehensive browser-based environment.

## Cordys Composite Application Framework

The best way to describe Cordys is that it is first and foremost a Composite Application Framework in that it facilitates the design, development, and deployment of composite applications, or SOBAs. In fact, Cordys built the product following SOA principles. Cordys is itself a set of Web Services that can invoke each other, providing customers with better scalability, fewer hardware needs and better load balancing than traditional enterprise applications. Cordys is also building a more pluggable architecture that allows third party components like rules engines into the Cordys platform. In some ways, therefore, Cordys is becoming a SOBA itself.

There are several elements that make up Cordys. First, *Cordys Business Process Management (BPM)* leverages a full library of business Services, and enables business users to model composite flows that represent new or existing business processes, by enabling them to model and execute SOBAs. Cordys then enables users to adjust those applications quickly to meet ever-changing business needs.

*Cordys Business Activity Monitoring (BAM)* enables businesses to gain access to operational process performance. Cordys BAM enables users to optimize existing processes, and respond more quickly to unforeseen business events. Cordys BAM also provides users with relevant intelligence on process execution and performance.

*Cordys WS-AppServer* is an application server that enables companies to extend and customize application functionality that underlies the Services in the SOBAs. Cordys WS-AppServer helps IT shops take advantage of the resources of existing applications and build new functionality as well when the business requires it. Cordys exposes this new functionality as reusable Services. WS-AppServer supports Java coding and also offers the ability to implement selected event hooks as Web Services. WS-AppServer is therefore an intuitive way to combine Web Services from multiple legacy applications. In addition, the Studio environment allows the creation of AJAX-based user interfaces and SOBAs, in conjunction with Cordys BPM.

The *Cordys Enterprise Service Bus (ESB)* provides extensive connectivity to existing environments. The ESB enables the generation and exposure of Web Services, and provides connectivity, integration, and communication services for SOA implementations. Unlike

traditional centralized or messaging-based integration solutions, the Cordys ESB is fully distributed, enabling increased scalability and reducing the need for additional middleware.

*Cordys Web Workplace* generates rich user interfaces for Web Services and SOBAs on the fly. Since SOBAs typically span multiple applications, it's essential to build consistent user interfaces. Cordys Web Workplace alleviates this usability challenge for users.

*Cordys Master Data Management (MDM)* enables SOBAs to tap into multiple data sources that each serve up similar or partial master data objects, each with varying nuances in metadata models. And finally, *Cordys eNotary* facilitates secure and legally sound exchange of business documents and online business-to-business transactions over the Internet.

In addition to the diverse features of Cordys, the Composite Application Framework, Cordys also offers *Cordys@Work*. Cordys@Work is Cordys' delivery methodology for SOA-based solutions. Cordys@Work consists of a repository of guidelines, blueprints, templates and best practices for the development and implementation solutions using Cordys in SOA-based environments.

## The ZapThink Take

How would you build enterprise software if you had the luxury of starting with a blank page, and the resources to build a product that was truly enterprise class? That's exactly what Jan Baan intended to do when he founded Cordys in 2001. By taking the principles of SOA to heart, Cordys has built a comprehensive suite that includes everything from legacy integration technology to Service enablement to declarative Service composition to rich user interface capabilities. Furthermore, Cordys built all this technology themselves, without acquiring any companies in the process, facilitating the creation of a seamlessly architected suite for implementing SOBAs.

As a result, Cordys customers are able to get the best of both worlds: they can take advantage of a broad Service-oriented product suite to build and run SOBAs, but they are also free to use Cordys' fully standards-based approach to interoperate with other products as necessary. Cordys is therefore one of a new breed of enterprise software vendors who offers a complete solution that is at the same time modular and standards-based. In fact, Cordys offers many of the capabilities of what might be termed a SOA "killer app": a combination modeling, composition, and visibility application that is itself Service-oriented in design. This combination of capabilities offers Cordys customers increased ROI by extending the lifecycle of legacy investments. Cordys also offers a single comprehensive solution that provides the infrastructure necessary to implement SOA and build SOBAs. At the end of the day, Cordys offers improved business agility, helping its customers adapt to a changing business environment.



## Cordys Features

### Cordys

#### Overview:

Cordys is a comprehensive Composite Application Framework that offers process, presentation, and integration capabilities to firms who wish to leverage Service-Oriented Architecture to build agile Service-Oriented Business Applications.

#### Features:

- **Cordys Enterprise Service Bus (ESB)** – provides distributed connectivity, communication, and integration capabilities.
- **Cordys WS-AppServer** – enables the development and deployment of Web Services
- **Cordys Business Process Management (BPM)** – facilitates the composition and management of SOBAs within a flexible modeling environment.
- **Cordys Business Activity Monitoring (BAM)** – offers business intelligence for process execution and performance.
- **Cordys Web Workplace** – enables the rapid design of uniform rich user interfaces.
- **Cordys Master Data Management (MDM)** – coordinates and synchronizes critical business data.
- **Cordys eNotary** – adds a public key infrastructure-based security framework for information exchange.
- **Cordys@Work** – a delivery methodology for SOA-based solutions.

#### Value Proposition:

- **Increased ROI** – Cordys extends the lifecycle of existing legacy investments and enables the reuse of existing functionality within a SOA implementation.
- **Lower TCO with a single comprehensive solution** – Cordys provides the infrastructure necessary to implement SOA and build SOBAs with a specific focus on ease-of-use.
- **Improved business agility** – Cordys helps its customers adapt to ever-changing market dynamics.



Profile: Cordys	August 2006
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## Related Research

- *Building Composite Applications with Legacy Systems* ZapForum Webcast (ZTP-0179)
- *Process, Presentation, and Integration* White Paper (WP-0131)
- *SEEC Enterprise Workspace Suite* ZapNote (ZTZN-1192)
- *Prima Solutions* ZapNote (ZTZN-1177)
- *NetManage* ZapNote (ZTZN-1174)
- *Webify Solutions* ZapNote (ZTZN-1172)
- *Seagull Software* ZapNote (ZTZN-0160)



## About ZapThink, LLC

ZapThink is an IT advisory and analysis firm that provides trusted advice and critical insight into the architectural and organizational changes brought about by the movement to XML, Web Services, and Service Orientation. We provide our three target audiences of IT vendors, service providers and end-users a clear roadmap for standards-based, loosely coupled distributed computing – a vision of IT meeting the needs of the agile business.

ZapThink helps its customers in three ways: by helping companies understand IT products and services in the context of Service-Oriented Architecture (SOA) and the vision of Service Orientation, by providing guidance into emerging best practices for Web Services and SOA adoption, and by bringing together all our audiences into a network that provides business value and expertise to each member of the network.

ZapThink provides market intelligence to IT vendors and professional services firms that offer XML and Web Services-based products and services in order to help them understand their competitive landscape, plan their product roadmaps, and communicate their value proposition to their customers within the context of Service Orientation.

ZapThink provides guidance and expertise to professional services firms to help them grow and innovate their services as well as promote their capabilities to end-users and vendors looking to grow their businesses.

ZapThink also provides implementation intelligence to IT users who are seeking guidance and clarity into the best practices for planning and implementing SOA, including how to assemble the available products and services into a coherent plan.

ZapThink's senior analysts are widely regarded as the "go to analysts" for XML, Web Services, and SOA by vendors, end-users, and the press. Respected for their candid, insightful opinions, they are in great demand as speakers, and have presented at conferences and industry events around the world. They are among the most quoted industry analysts in the IT industry, and their recent book, *Service Orient or Be Doomed!*, is the leading book on the business concept of Service Orientation.

ZapThink was founded in October 2000 and is headquartered in Baltimore, Maryland. Its customers include Global 1000 firms and government organizations, as well as many emerging businesses. Its analysts have worked at such firms as IDC, marchFIRST, and ChannelWave, and have sat on the working group committees for standards bodies such as RosettaNet, UDDI, and ebXML.

Call, email, or visit the ZapThink Web site to learn more about how ZapThink can help you to better understand how SOA will impact your business or organization.

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