Enterprise Information Portals

What they are, why they’re important, and why you may need one...

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Introduction: The Concept of an EIP

An Enterprise Information Portal provides the members of an enterprise a single place to access all of the information and applications that are relevant to performing their jobs. While this goal is ambitious, it is not new. In many ways, this concept - single, personalized access to corporate information - has been the nirvana of corporate IT for the last 20 years – often talked about but never achieved. The stovepipe nature of information systems, the lack of standards and interoperability, and the prohibitive costs of rewriting legacy systems have made this goal unattainable – until now.

The difference now lies in the standards and concepts developed for use with the Internet which have provided the tools to create a unified presentation layer for all types of data, even when the source formats and systems are different.

Enterprise Information Portals, often referred to as EIPs, or “Corporate Portals”, represent the merger of Internet technology with a company’s internal business systems...
and content in such a way as to give the user a single point of access to all of the information and applications they need. Based on web technology, Portals are not limited to employees, but the “extended enterprise” – customers, business partners, and suppliers can use them to create improved business results and value.

This White Paper explores the world of EIPs from both a business and technical perspective. The benefits of implementing an EIP range from reduced cost of ownership of existing IT investments, better competitive and market intelligence, faster time to market, increased collaboration and productivity of employees, and better control over the fundamental performance drivers in the business.

“Within two years, the business portal will be the pervasive computing systems platform and the primary vehicle for conducting e-business.”

“Business portal software is rapidly becoming a point of convergence for the enterprise.”

“Business Portals Make Mobile Work.” - The Delphi Group

Business Challenges That an EIP Can Address

Global 2000 companies have spent the last two decades spending billions of dollars on implementing enterprise process or function specific application systems such as ERP, SCM, CRM, e-Commerce and knowledge and document management. However, today, many of these processes and systems are still not integrated and users cannot access the vast amounts of structured and unstructured information contained in these systems.

Today companies of all sizes and in a variety of industries could benefit from the adoption of Enterprise Information Portal technology and solutions. The challenges facing these companies include:

- Too much fragmented structured and unstructured information – valuable company information exists in different formats, residing in many repositories and locations throughout the organization that employees either do not know exist or cannot access to do their jobs

- The inability to realize the return on the substantial investment in information systems and reduce the cost of operations. Organizations are constantly replacing or enhancing information systems

- The inability to improve employee productivity and produce greater results with limited personnel resources
• The inability of employees to collaborate and share valuable information both within and without the enterprise to make faster and better informed decisions, as well as to drive out process inefficiencies both internal and external to the enterprise

• The lack of flexibility, time to market and competitive advantage due to the fragmented and nonintegrated information and systems to support the dynamic change in the market and business

• Major companies are under increased pressure to collaborate, build tighter relationships and share information among employees, customers, suppliers and partners and make faster and more informed decisions

The emergence of EIP technology and solutions is a natural evolution of enterprise information systems. In order to realize the vast investment in information systems and overlay the disparate processes and systems, an enterprise must negotiate to obtain the necessary information to run and increase the value of its business.

What Exactly is an EIP?

“Enterprise Information Portals are applications that enable companies to unlock internally and externally stored information, and provide users a single gateway to personalized information needed to make informed business decisions.”

[Shilakes, Tylman of Merrill Lynch’s Enterprise Software Team; Nov. 1998]

While many definitions of EIP’s exist, the Merrill Lynch definition represents a good starting point. An ideal EIP provides a combination of “out of the box” and custom functionality to allow users to find, manage and categorize content and applications. While not all EIP’s have all of the following features, they describe a good high-level view of the elements that make up an EIP solution. Figures 2 through 5 show screenshots of typical EIP products that demonstrate these features:

• **Single Sign On** and **Single Page View** - The ability to see information from multiple systems, in multiple formats, all presented on a single page view – in essence, a virtual “dashboard” of everything that is important to them in the Enterprise- is perhaps the largest benefit to a user community that implements a corporate portal. This results in significant reduction in employee orientation and
training, as well as time savings for the users who can monitor and update multiple systems through a single web view of the enterprise.

- **Search, Browse, and Categorize Content** - A fundamental part of a portal implementation allows users to search, browse, categorize and manage different types of content, or unstructured data. Content consists of anything from a memo to a spreadsheet to items contained within a Lotus Notes database. Content can also include web pages users monitor on a regular basis. What makes the portal unique is that it organizes this information into a “logical” set of categories. In the same way that early search engines such as Yahoo! and Excite organized the World Wide Web and made it navigable to ordinary mortals, the EIP organizes the jungle of corporate information, simplifies navigation and the ability to conduct personalized searches.

**Figure 2** – An EIP organizes content from different sources into secure folders (example uses the Plumtree Corporate Portal)

- **Personalization, Subscribe/Alerts** – Portal personalization can occur at multiple levels. Each individual user can have settings for each of the portal functions that they use. A community, or group of users, can have settings and settings can be established up to the organizational level.
A portal provides the framework for users to store the settings and tailor the content that they are interested in seeing. Similarly, many portals have subscription options that allow them to receive, on their portal home page, or in their email, relevant pieces of content, as they are made available to the organization. This allows the portal to be used as a "management by exception" tool, with alerts set to monitor certain business or content conditions, on a user-by-user basis.

- **Expert Locator** - In addition to helping users locate information that is important to them, a portal can be very useful in finding "experts" within the organization. This extends the concept of corporate knowledge to include people and their skill sets. In some cases, these skill sets are implicit in their job functions and the types of information they regularly handle. In other cases, these skill sets are explicit.

![Figure 3](image)

**Figure 3:** An EIP allows personalization by letting the user bring together important documents and applications onto a home page (example using Viador)

- **Delivery Services (Reports)** - Many portals have the ability to tie into a business intelligence solution, which can query multiple databases and pull out relevant reports. The portal enables the user, on his or her home page, an updated list of reports that are important to them. Each user has their own personalized reports. This functionality makes an EIP solution an ideal executive information system that can be used by all managers.

Although many companies have spent millions of dollars on data warehouses and decision support solutions, many of these solutions have yet to fulfill their
promise. An EIP, by focusing in on what a user needs and wants to see, can unlock the information stored in data marts or a data warehouse in a meaningful way.

- **Publish / Content Management** - Many portals allow the implementation of a Knowledge Management and Content Management policy which allows members of the user community to harness each other's knowledge. Accomplished through the contribution of knowledge into the portal, and through associated workflows for proper approval, this allows the organization to "distribute" the jobs of managing the content in the portal and within the enterprise.

- **Collaboration** – An EIP solution can be a very powerful collaborative tool. Collaboration functions include tying into instant messaging systems, providing document management, team workspace, and discussion forum features. As the starting point for most enterprise users, portals also have community centric features, such as threaded discussions, task lists, etc.

- **Custom Modules** - Most portals have a mechanism for creating custom modules. The key to this mechanism is that each organization can create its own custom modules, tying into their own custom data sources, and yet have it appear as an integrated part of the portal, with security, personalization, and presentation handled by the portal itself.

Figure 4: An EIP can bring together a user’s email, calendar, and applications onto a single screen (example using Epicentric)
Choosing Portal Solutions: Who are the Leaders in this Category?

Once a company has decided that a portal solution can provide concrete benefits to their organization, the next step is to determine whether to build one from scratch or to buy and customize an off-the-shelf solution.

Initially, companies that needed a portal solution (either for an intranet or an extranet) tended to build them from scratch. This trend, however, has shifted, and today it usually makes sense to use building blocks that are already available to put together a portal solution. Even with this approach, considerable customization will be required to make the portal “just right for you”.

In a recent report, the Delphi Group identified over one hundred vendors claiming to offer an “off the shelf” portal solution. This market can be very confusing, as a result, evaluating the right EIP platform for your company could lead to a very lengthy and time-consuming process. While Unitas has its own detailed “Portal Evaluation Methodology”, an evaluation of Enterprise Information Portal software products is outside the scope of this white paper. However, for the purposes of this paper, the following list consists of some of the companies that have staked a claim in this market and provides a brief commentary on the various solutions companies use the Enterprise Information Portal for:
Figure 5: An example of the Plumtree Portal

- **Plumtree** - One of the best-known EIP product vendors, Plumtree is the acknowledged leader in this market. The Plumtree portal solution comes with a large number of “out of the box” gadgets for connecting into enterprise applications such as SAP, PeopleSoft, Siebel, as well as messaging, security, and business intelligence systems. A number of Fortune 500 companies, including Ford and Proctor & Gamble, have picked Plumtree as their portal of choice. It is considered one of the most complete enterprise portal solutions “out of the box”.

- **Autonomy** - Best known for its search and “categorization” technology, Autonomy has its own “Portal in a Box” product. The key to Autonomy’s success lies in its underlying technology for analyzing unstructured content. As a result, Autonomy’s products tend to be used in conjunction with other EIP vendors’ products, including Epicentric and Brio, to name just a couple. The other vendors generally provide the front end, the application integration, and the business intelligence components of the portal, while Autonomy provides the unstructured content technology.

- **IBM** - IBM has several offerings in the EIP space. The two most notable being the “Enterprise Information Portal” and the Lotus K-station. The “Enterprise Information Portal”, aptly named, functions particularly strong as a middleware for tying into legacy systems. The other, Lotus K-station, previously named “Raven”, strength rests in a particularly strong interface with Lotus Notes/Domino and with collaboration and management unstructured products. Companies that have standardized on either Notes or WebSphere will find these offerings attractive.

- **Viador** - One of the early leaders in the portal market, Viador’s particular strength lies in providing portals that require business intelligence. Viador has been used by a number of companies, including Schwab and Sprint for both Extranet and Intranet portals. Viador has a scaleable solution that leverages the companies own business intelligence technology.

- **Art Technology Group (ATG)** – Although not really an Enterprise Information Portal vendor, Art Technology Group is slowly becoming a player in this space. ATG’s Dynamo product, originally used for personalized e-Commerce environments, is proving to be a robust development and deployment environment around which a company can build its own EIP. Many companies who chose ATG for their externally facing e-Commerce applications are now bringing the technology in-house for their internal Intranet applications, including the Enterprise Portal.

- **Oracle** - The Portal market has become “too hot” for the big ERP, CRM and e-Commerce companies to not make their own plays in this space. Actually an extension of its web Application Server, the Oracle Portal connects very well to
Oracle’s back end systems. Companies that have standardized on Oracle, not just the database, but also the reporting and the application development platforms, may find this an attractive option.

- **TopTier** - Due to its close alignment with SAP and Baan, TopTier has received considerable attention recently. Its “hyper-relational” technology conducts queries across different enterprise systems without having to build an entire data warehouse. TopTier’s customers have included Herman Miller, Rolls Royce and many other large organizations.

- **Microsoft** - A late entrant into the portal market, preferring to allow its partners to use Microsoft technology as part of their portal solutions, Microsoft will release its SharePoint Server in early 2001. The SharePoint server, previously known as Tahoe, has strong document management capabilities, and ties very closely with Microsoft’s BackOffice suite and its .Net strategy. Microsoft has also recently announced a strategic relationship with Plumtree.

- **Brio** - A well-known leader in the business intelligence market, and it has parlayed this position into the portal space. The Brio Portal is particularly strong bringing enterprise data from multiple databases to the users when they need it. Brio partners with Autonomy for much of its unstructured content, resulting in a solution that has best of breed capabilities for analyzing both structured reports and unstructured content.

- **Epicentric** - As with Plumtree, Epicentric was founded specifically to attack the Enterprise Information Portal space. Epicentric has a very scalable Java based architecture and works with a variety of java application servers. Particularly strong in fueling externally facing portals that may have hundreds of thousands, even millions of users, Epicentric also has a significant number of deployments, including AutoDesk and the United States Postal Service.

Vendors at or Near Generation Two

Portal product vendors at or near Generation-Two functionality Include Computer Associates, Corechange, Epicentric, Hummingbird, Infolmage, iPlanet, Oracle, Plumtree, SilverStream, TopTier and Viador.

- **Gartner Group**

Now that we have defined an EIP is and identified the leaders, let’s take a look at why your organization might not survive without one for too long.
Benefits of Implementing an EIP

There are many reasons to consider implementing an Enterprise Information Portal solution. One of the best ways to evaluate whether or not an EIP solves your business problems is to look at the benefits of an EIP to the different communities both within and external to your organization.

The following table enumerates key benefits for each of these communities:

<table>
<thead>
<tr>
<th>Communities</th>
<th>Key Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employee Communities</td>
<td>• Allows the employee to personalize and filter the necessary information to do their jobs</td>
</tr>
<tr>
<td></td>
<td>• Allows employees to communicate, collaborate and share information and knowledge</td>
</tr>
<tr>
<td></td>
<td>• Allows employees to make faster and more informed decisions</td>
</tr>
<tr>
<td></td>
<td>• Facilitates employee self-service relative to such functions as HR and benefits which reduces overall employee cost</td>
</tr>
<tr>
<td>Customer Community</td>
<td>• Captures market and competitive analysis</td>
</tr>
<tr>
<td></td>
<td>• Links external sales and support personnel with company products, features, prices, promotions, discounts, billing and commitments</td>
</tr>
<tr>
<td></td>
<td>• Allows better communication and collaboration within the enterprise among marketing, sales, customer and support, as well as with the customer</td>
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<tr>
<td></td>
<td>• Facilitates the tracking of customer buying patterns and profitability</td>
</tr>
<tr>
<td></td>
<td>• Improves the ability to cross-sell and up-sell to customers based on a better understanding of their buying patterns and behavior</td>
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<tr>
<td></td>
<td>• Improves customer service and support by improved communication and collaboration. Helps build a stronger relationship with the customers</td>
</tr>
<tr>
<td></td>
<td>• Reduces the cost of marketing and sales and allows the organization to focus on the more profitable customers and to reduce the emphasis on unprofitable customers</td>
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<tr>
<td></td>
<td>• Allows single point of access for submitting orders,</td>
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</tbody>
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### Companies Using EIPs/Case Studies

According to corporate information and technology managers, the roll out of portals this year is already contributing millions of dollars to the bottom line. Others say that their return on investment will be measured in minutes and hours of employee time that is better and more profitably used. The following case studies illustrate the impact of an EIP solution on some very visible companies.

#### Employee Portals:

- **Staples Inc.** – Staples, the $9 billion office supply, furniture and technology chain in Framingham, MA., is phasing in Plumtree’s enterprise portal solution for as many as 10,000 of its 46,000 employees worldwide. “For us, the portal is about slashing the cost and hassle of running the office,” says Tom Tracey, IS Manager, intranet, and Chief IS officer for the company’s enterprise information portal.

- **Dunkin Donuts** - The Quick Service Restaurant group had no well-defined relationship, document, or knowledge management processes or systems in place, nor an effective electronic means of communicating with their franchisees. They needed a more effective way of managing communications, document flow, and compliance issues between their more than 5,000 franchisees and over 350 field executives. Company information was spread between databases, file servers, and operational sales and accounting systems. Dunkin Donuts turned to Unitas to design a new portal that provided a single source electronic activity planner and data repository for the field executives and support center staff for their management of daily contact with franchisees, managers, and other major business contacts.

- **DuPont & Co.** – DuPont estimates it will save up to $66 million from the first phase of its portal, based on the XML Portal Server from Sequoia Software Corp., which was rolled out last month to its sales and marketing business unit. Jim Wessely, portal...
architect and project leader for the Wilmington, DE, company says, “many of the 550 sales and marketing personnel who used the portal every day have already made it their standard desktop. Almost everything they need is on the portal”.

- **Eastman Kodak** – Kodak’s Professional Systems and Solutions group had a group of over 300 field support users and sales people spread all over the world. They needed to provide them with up to date sales, marketing, and technical information on its line of products and services; however, the organization had no central repository or knowledge management system that could present this unstructured information in a meaningful way. The valuable information was scattered between Kodak’s intranet, servers, databases, and the field itself. Kodak turned to Unitas to build a portal that presented a personalized view of the information that was both accessible from Kodak’s intranet and from the outside world while traveling. Just as important, the portal helped to collaborate and submit information from anywhere in the world as it became essential for users in the Far East, the Middle East, Europe, and North America.

- **General Electric Appliances** - GE located in Louisville, KY, expects 6,000 executives and managers to use portals specific to their business functions, according to Chad Fowler and Bill Nall, senior systems professionals who share responsibility for the portal design and implementation. “If we’re able to save each individual 10 minutes a day, what’s that worth? We think it’s worth a lot,” says Fowler.

- **Hewitt Associates** – Hewitt, a human resource outsourcing company, located in Lincolnshire, IL, is saving $8 million annually and providing 75% faster responses to client requests for benefits information after implementing the IBM Enterprise Information Portal, say Helen Tipton, Hewitt’s ContentConnect product manager. The portal serves as the primary desktop for about 500 employees. The company is currently studying ways to make it useful to as many as 11,000 employees worldwide says Heidi Self, a Hewitt IT manager.

- **Sprint** – Sprint PCS has the largest 100% digital PCS nationwide wireless network in the United States. New service areas are being added all the time. Effectively overseeing these markets requires a network of informed sales and financial managers with access to current data. In such a rapidly growing business, Sprint’s IT department could hardly support the flow of new users fast enough. Each department used its own variation of database, reporting and analysis tools. A disconnected and heterogeneous IT landscape was evolving. Sprint turned to Viador for their comprehensive, integrated approach. Viador provided Sprint with an open, thin-client solution that is both universally deployable and centrally managed. Based on a multi-threaded Java server, Viador’s solution offered Sprint web-based access to virtually any data source for thousands of users, without the need to install any client software. Sprint could provide any number of users with customized access to the reports and data they needed. The Viador solution also gave Sprint the ability to deploy one reporting solution to all users.
Customer/Partner/Supplier Portals:

- **Charles Schwab & Co.** - Schwab’s Mutual Fund OneSource brings together over 300 well-known fund families to enable its customers to trade over 2,000 different mutual funds in one convenient location. Each business day, Schwab executes tens, if not hundreds of thousands of trades in these funds. Schwab needed a way to integrate suppliers into their e-business supply chain. Authorized users from each of the fund companies needed the ability to download and view information about the sales volume and performance of their funds every day. Schwab turned to Viador to help them build an automated decision support system and secure extranet application to provide web-based access to information both inside and outside Schwab. The system allows Schwab and authorized users at more than 300 mutual fund companies to use a web browser to download or dynamically generate one of a number of reports about the performance of any mutual fund.

- **OrderTrust** – OrderTrust, a leading outsourcer of order processing services, was rapidly expanding both its direct sales force and its partner program. OrderTrust's partner community consisted of over 850 trading partners, including fulfillment partners, integration partners, call center partners, and resellers of their order-taking platform. With no effective means of communicating electronically, nor processes in place to manage third party relationships, OrderTrust needed a way to coordinate communications with this diverse community of partners, as well as a method of sending and receiving leads to and from partners as part of their sales cycle. OrderTrust asked Unitas to develop and
deploy a "Partner Portal" that enabled channel partners to securely log on for information sharing purposes with OrderTrust.

- **South Central Community Health System** – South Central, located in York, PA, plans to roll out a portal in July, that is expected to save hundreds of thousands of dollars per year, safeguard patient health, and serve as a complete desktop that contains everything needed by its two hospitals and hundreds of primary-care and specialist physicians, pharmacists, and other caregivers and administrators, says William “Buddy” Gillespie, the health systems’ CIO and VP.

- **AutoDesk, Inc.** - AutoDesk needed way to better connect with their customers after they had purchased AutoDesk products. The goal of the initiative was to encourage collaboration between customers, business partners, and employees, leading to greater customer loyalty and more upgrade/repeat business. AutoDesk used Epicentric’s portal platform and rapidly deployed the site to all three communities which included collaboration and training services to encourage the users to stay at the portal for extended periods of time.

**An EIP Implementation Roadmap**

If your company has an interested in evaluating or deploying an Enterprise Information Portal, follow the roadmap below:

- **Take a phased approach** – The portal project should take a phased approach that delivers fast results but increasingly supports a broader enterprise vision. We recommend *Think Globally, Act Locally*. This means to factor in criteria for an enterprise wide deployment, but to identify one or two key user communities that will “drive” the initial deployment.

- **Identify Business Drivers for the EIP solution** - The first step is to identify business drivers for the organization and how they map to an Enterprise Information Portal solution. These are strategic goals of the corporation that the portal project should not only be aligned with, but be a critical component of.

- **The next step is to identify and prioritize the key stakeholders and sets of users** – These “sets of users” could be internal employees, external partners, suppliers or customers – for the portal project. This is an important step – simply saying that “everyone” will use the portal is not specific enough and a formula for failure.

- **Identify key requirements** - The next step is to do a “requirements analysis” at a high level of the user communities in question to identify the key features the portal will fill for the organization. This should be done across different levels of users (senior management, middle management, staff, IS) and can be part of an “evaluation workshop”.

www.unitas.com
• **Conduct an “evaluation workshop” of portal products** - An evaluation workshop will bring together different portal vendors and provide a structured process to determine which vendor(s) best meet the requirements of the company. The goal is to come up with one or two key vendors who can meet the needs of the company.

• **Conduct a “discovery/ proof of concept” workshop** - A discovery workshop is meant to take the most important requirements for a group of users and to visualize them in an actual working proof of concept at your site. This proof of concept ties into actual production systems and is used to present the concept of the portal to senior management to get buy in from all the departments that are important to the portal deployment.

• **Portal Deployment** - Once a discovery workshop has been completed, the actual portal deployment can begin. This includes a detailed design phase, development phase, integration and deployment to a group of users. The process is then repeated for other departments/communities for additional content sources/applications as they are brought into the portal.
About Unitas

Unitas Corporation specializes in the rapidly emerging market of enterprise portals. As the only IT services company focused specifically on planning, developing, integrating and implementing enterprise portals, Unitas fuses e-business strategies with enterprise portal technology solutions to create united business communities within the corporation and among customers, partners and suppliers. The company’s consulting expertise and implementation services help large and mid-size corporations apply their knowledge assets through an enterprise portal to create strategic advantage and operational value in the networked economy.

Unitas Corporation assists with all aspects of Enterprise Information Portal planning, analysis, integration and deployment. We have out of the box “Evaluation Workshops” and “Discovery Workshops” to help you choose the best solution, get buy-in from senior management, and plan an Enterprise Information Portal Solution. We then provide custom services to rapidly develop, integrate and deploy a portal solution – sometimes in as little as 60 days.

Contacting Unitas

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