

AN ANALYSIS FRAMEWORK FOR VIETNAM E-BUSINESS PORTAL

Lai Huy Hung

University of Technology – VNU-HCM

(Received 17 June 2003)

ABSTRACT: *Touching with new business edge - doing business on Internet - Vietnamese companies have prepared all their resources for approaching this trend. At the initiative step, building their owned web sites and promoting them by using search engines are major practices. There is lots of information about companies as their histories, products and services, references, linkage, partnerships etc included in these websites' contents. However, promoting as B2B is not only basing on their websites themselves, they need more getting support from other sources as basic technical infrastructure, banking system, customer relationship, legal environment, associations, other organizations and so on. In this analysis, it is focusing more on the support from Vietnam business portals.*

1. Introduction

E-Business Portals are rapidly becoming a requirement for doing business. Once a "nice to have" activity, Portals have become a "must have" for Global 2000 firms. Indeed, pioneering Portal builders in these enterprises can today articulate the benefits of Portals and are increasing their efforts and investments. (Factpoint group)

Leading corporate Portal adopters are beginning to deliver interactive, real-time business processes to a wide range of trading partners and customers. This paper offers an analysis framework for assessing the business benefits of E- Business Portals and offers specific advice to Portal adopters.

2. What is portal and its benefits

Portal concept and technology have become very generic in the past few years. Various applications are marketed in terms of "portal" as an entry port for everything, market places for enterprises, and platform for business operations integration. This concept is rapidly emerging and changing, thus it is important to understand and focus on various types of portals and their role and application. Portals play increasingly critical role for the business today on Internet, Intranet and Extranet. They enable users can access needed information, resources of an organization, use existing system effectively as CRM and ERP, improve the cooperation and virtual interaction within business (spanning various departments), personalize, intuitive view all relevant business operations and their information, increase transparency of business operations, increase productivity and efficiency of the staff and partner-client relationships, promote the integration of operations and corresponding knowledge, reduce the flood of information. However, they are classified as four different categories. (PortalsCommunity)

1. Corporate or Enterprise (Intranet) Portals- Business to employees (B2E) portals:

Enterprise Information Portals (EIP): these are portals that are designed for B2E processes, activities and communities to improve the access, processing and sharing of structured and unstructured information within and across the enterprise. EIPs also

incorporate roles, processes, workflow, collaboration, content, management, data warehousing and marts, enterprise application and business intelligence.

EIPs provide employee access to other types of portals as e-business portals, personal portals and public portals. EIPs also provide access to syndicated content which is defined as external information, from a single to multiple sources, that is maintained by a third party.

Corporate or Enterprise Information Portals include: Business intelligence portals, Business area (Intranet) portals, Horizontal portals (Collaboration, expertise, knowledge management, content management and document management), Role portals.

2. *E-business (Extranet) Portal- e-business portal have three sub- categories:*

a. Extended enterprise portals: example of extended enterprise portals are: business to customer (B2C) which extend the enterprise to its customers for the purpose of ordering, billing, customer service, self service... and business to business (B2B) which extends the enterprise to its suppliers and partners. B2B portals are transforming the supplier and value chain process and relationships.

b. E-marketplace portals: an example of an e-marketplace portal is CommerceOne.net. CommerceOne.net focuses on the North American Maintenance, Repair and Operations (MRO) market. CommerceOne.net provides commerce related services to its community of buyers, sellers and net market makers. Also Oracle Exchange is an open procurement community for buying and selling business goods and services.

c. ASP portals: ASP portals are B2B portals to allow business customer the ability to rent both products and services. Portera's ServicePort, Salesforce.com, SAP's MySAP.com and Oracle's oraclesmallbusiness.com are examples of ASP. Service port is both an application and web information portal for the professional services industry. MySAP.com and oraclesmallbusiness.com are examples of complete enterprise systems offered through a portal framework via the web.

3. *Personal (WAP) Portals- There are two major types of personal portal:*

a. Pervasive portals or mobility portals: these are portals that are embedded in web phones, cellular phones, wireless PDAs, pagers... Personal or mobility portals are becoming increasingly popular and important for consumers and employees to obtain product and services information, prices, discounts, availability, order status, payment status, shipping status, scheduling and installation information, etc.

b. Appliance portals: these are portals that are embedded in TVs (Web TV), automobiles (OnStar), etc.

4. *Public or Mega (Internet) Portals- Organization that fit into this category are becoming "new media" companies and are focused on building large online audiences with large demographics or professional orientation. They are two types of public portals:*

a. General public portals or mega portals address the entire Internet versus a specific community of interest and include: Yahoo, Google, Overture, AltraVista, AOL, MSN, Exite,...General public portals or mega portals will become fewer and consolidate over time.

b. Industrial portals, vertical portals or vortals. Vertical portals or vortals are rapidly growing and they are focused on specific narrow audiences or communities as

consumer goods, computer, retail, banking, insurance... Example of vertical portal include: iVillage, which focuses on families; The Thomas Register of American Manufacturers for products and services; and Bitpipe, that is syndication of information technology content...

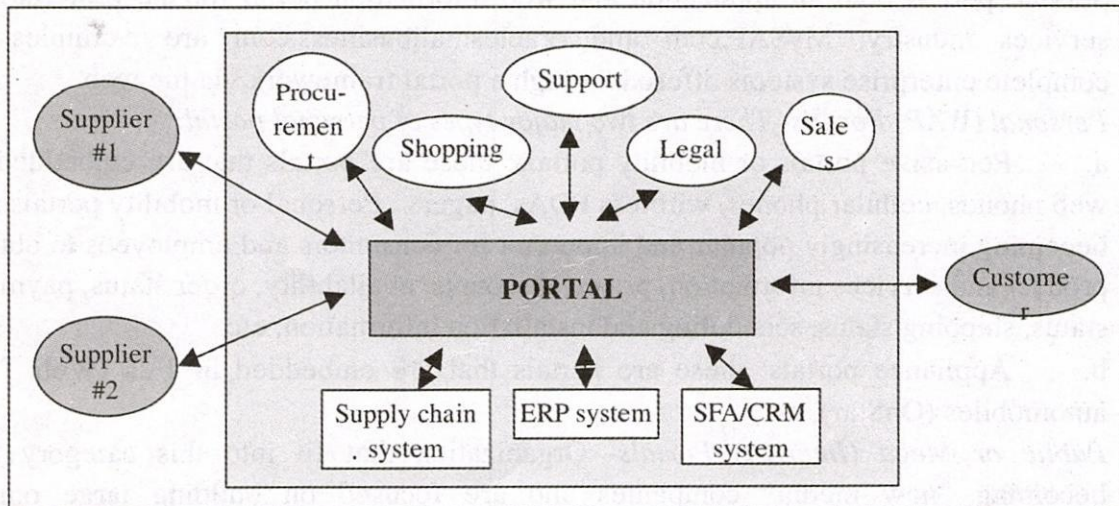
The above mentioned types of portals are rapidly evolving to support the natural related information, collaboration and community needs of individuals, employees, customers, suppliers and partners.

3. E-business Portal Model

The expanding role of E-business is indisputable in today's marketplace. E-business portals – comprehensive solutions providers for a specific industry or industries – stand to capture significant market share as the Internet "one-stop shop" for their respective industries. Traffick.com, the "portal for portals," describes the potential of E-Business portals as follows:

This is a relatively new phenomenon but possibly the most significant one in economic terms. E-business can act as real engines for the new economy, and are acting as a catalyst in making old economies new.

The FactPoint Group 2002 defines a E-business Portal as offering users a complete view of one or more business processes via a personalized Web interface. A user's "view of the Portal" is based on his or her role in their organization. This single gateway to role-based information allows users to transact and to make informed, actionable business decisions more quickly. Portals provide a place for their sponsors and constituents to collaborate and transact in a standardized fashion. Putting a web-based interface on top of a single enterprise application does not make a Portal. Instead the E-Business portal is the platform required to define the relationship and to deliver multiple business processes between trading partners.



Source: www.capv.com

Portals as Business Process Integration tool

A Portal can serve as a valuable tool to drive business process improvement. As organizations ramp-up to conduct more business-to-business commerce electronically, the need to integrate functional business processes and systems will increase. The volume of on-line interaction between employees, suppliers, and customers will be a key driver of this shift. The growth of the virtual enterprise, which represents an extended value chain, will also act as a driver. The information, the entities involved, and the processes underlying the

activities of a virtual organization will require non-intrusive management that supports and strengthens intra- and extra-organizational business relationships. Business-to-business commerce increasingly involves more than a simple buy-sell transaction. Even in a fairly straightforward implementation, customers must interact with an organization's departments and employees to:

- ° Collaborate with partners to bring products to market.
- ° Manage outsourcing relationships.
- ° Understand the appropriate pricing schedules.
- ° Determine the best sales terms and contract negotiations.
- ° Request fulfillment and delivery requirements.
- ° Obtain service contracts.

In the physical world, most of the interactions – whether with employees, customers, suppliers, distributors, or partners – are conducted in person or via the telephone. One of the goals of e-Business is to optimize much of the time-intensive interaction through an electronic exchange of information. As business-to-business communication increases between and among members of the value chain, updates that result from these information exchanges must be reflected automatically throughout a myriad of business process applications. Extending the reach of business process applications across the enterprise introduces improved efficiencies by eliminating the need for creation and management of redundant information. Thus, eliminating redundancy minimizes most, if not all, of the information discrepancies introduced by manual processes. More importantly, this ability enables organizations to extract additional value from existing investments. Even more promising are the possibilities for controlling the processes associated with using and updating information across business functions and systems. As disparate systems are linked, over-arching processes can be introduced. Information can be passed from one process step to the next, and the appropriate systems can be updated as needed for each process, using information supplied from the previous step. Hence, an effective business-to-business portal provides a “workflow”-type approach to information use. Streamlining processes and improving information flows leads not only to improved efficiencies but also opens up new possibilities for revenue generation.

Portals involve

There are four naturally occurring communities emanating from within and extending beyond the enterprise. The four communities that comprise the enterprise and extended enterprise are employee, customer, supplier and trading partner. Each community generates and uses information around its unique set of business requirements, processes, workflow, collaboration needs, legacy applications and technologies that support its efforts to conduct business and create value. The following describes the characteristics of each community and the associated business drivers.

- **Customer community:** The focus of a customer community portal is to improve a company's ability to acquire, serve, and retain customers. Companies are competing for access to customers and building loyalty and long-term relationships. Competitive advantage is becoming more about customer intimacy, relationships and service than product features and innovation. With a secure and scalable portal, businesses can deliver key information within and outside the firewall so customers can view products and prices, track orders, check inventory and view delivery and service call status. The

level of customer information and self-service will improve customer relationships and retention.

- **Supplier Community:** Supplier Community Portals are directed toward improving the company's ability to identify, maintain, and manage suppliers. Organizations are integrating and transforming their supply chain and realizing the value of up-to-the-minute information to manage more efficiently. Organizations are also trying to reduce redundancy, improve time to market and reduce overall costs.
- Supplier community information portals enable both users and external partner at every point along the supply chain to effectively use information to improve processes and time to market, reduce costs and manage the business more effectively.
- **Partner Community:** Companies are focusing more and more on their core competencies and depending more on synergistic partners for market presence and competitive advantage. Companies are looking to reduce their costs, improve their time-to-market, improve their overall efficiencies and generally improve their supplier relationships. Organizations need the flexibility and nimbleness to enter in and out of partner relationships on an on going basis, based on dynamic changes and competitive pressures in the market. The partner community portal allows corporate employees as well as channel partners to view information across both the enterprise and the channel partner.

In general, organizations would want to know what products are selling, how much revenue is being generated, what the amount of demand is and how many resources are necessary to fulfill the demand. In addition, they would want to know what the bottlenecks in the process are and how to improve the combined process. Companies will utilize partner information portals to provide access to and share information across the value chain with their partners, in order to collaborate on selling, delivering and serving their combined customers.

4. Vietnam E-Business issues and Portal framework

Web and Internet is changing rapidly the way conducting business. The change introduces new business opportunities and challenges to Vietnamese business companies as new competition appears unexpectedly on the horizontal, "time to market" being success factor and traditional transaction becoming outmoded. Companies that do not adapt and respond quickly may be replaced by other organizations meeting with the new demand of e-business conditions.

4.1 Internet connectivity and online trade

The Internet was not commercially available in Vietnam until December 1997, when the first Internet Service Provider (ISP) began operations. According to the Vietnam Post and Telecommunication (VNPT), the number of Internet user in national wide continuously growth. In 1997 there were about 30,000 users of Internet and email, up from 30 in 1994. Since Internet became available about 10,000 new users had registered for service every six months at the beginning stage of Internet connectivity. Up to now this amount is about 175,000 users up from 50,000 users in December 1999 and 80,000 users registered in 16 August of 2000.

In fact more and more people are using the Internet, which is a pre-requisite for expansion of trade on line, is not necessarily an indication of the existence of such expansion or of its pace. However, people rarely mention e-commerce as a frequent online activity. E-mail,

chats are only Internet activities that they engaged in the previous months. Some others use as searching tools and entertainments. The number of users who practice e-commerce is lower than average comparing with regional rate as lower capital incomes, credit card usage, lack of relevant products or services or poor logistics and fulfillment services. Therefore, e-commerce or trade online activity has growth, but more slowly than the number of Internet users in Vietnam.

4.2 Stage of e-business adaptation

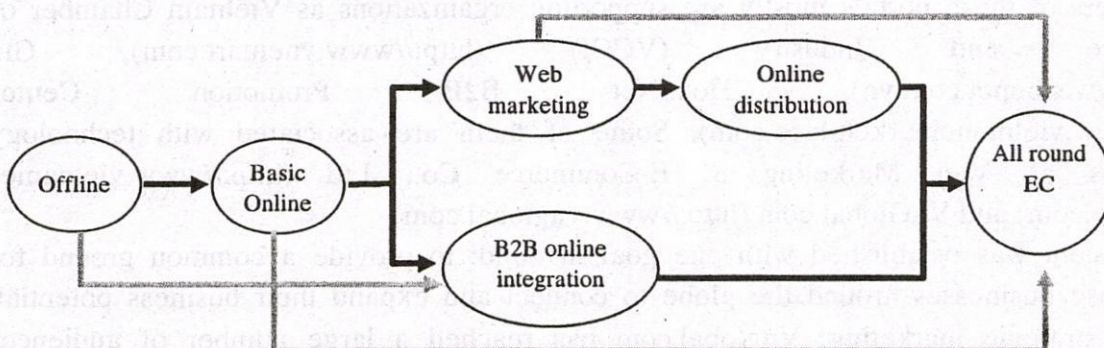
4.2.1 E-commerce development model

Each establishment can be assigned to a certain developmental stage relating to its use of Electronic Commerce. Apart from the non-user category "offline" we distinguish between 5 stages. These relate to different degrees of integration of Electronic Commerce into the production process. Initially most establishments use the Internet only as an information medium, i.e. in a passive way, and contact others interactively at best by e-mail (stage 1). This basic stage is followed by the active utilization of the Internet as an additional means for marketing (stage 2). Today many establishments are only present on the Internet because a proprietary website is regarded as expected, just like a business card or an entry in Yellow Pages, and not because this decision is led by an explicit marketing concept.

For further development basically 2 different options can be given (see figure below). While some establishments allow for online ordering of products and to a degree even transmit information to clients against payment on the Internet (stage 3), others concentrate on the optimization of their supply chain by exchanging data electronically or even integrating business processes with their suppliers and business clients (stage 4). While the first option is generally chosen to approach new clients, ie to increase or defend market shares, online integration of establishments along the supply chain aims at efficiency gains and rationalization effects.

Finally, establishments that apply online services in the business-to-business field as well as for the sale of products belong to the final stage in this simple development model. It goes without saying that there are also establishments that straight away start as web based organizations and therefore immediately reach stage 5 with their founding. However, in the economy as a whole they play only a very small role, especially in relation to their share of total employment.

Figure 1: E-Commerce development model



4.2.2 Vietnam development situation

At the beginning of the Internet development in Vietnam, most of companies registered the Internet account and used them as Email tool for connecting with partners and customers

since it reduces overhead cost in compared with fax or telephone, especially in the case of partners and customers out side of Vietnam. It is the basic online activity.

Currently, using web site and its all applications is next activity of all most Vietnamese companies to respond the digital business age. ASP, ISPs, ICPs as VDC1, VDC2, VDC3, VASC, FPT, Phuong Nam Net, Saigon Net, HCMC Post and Telecommunication, Cinet, etc. are supporting partners for organizations developing their applications and technologies. These Internet Content Providers (ICPs) simplify building web sites for companies as marketing on line purpose as <http://www.huyhuongceramic.com>; <http://www.hugamex.com.vn/> designed by FPT. These sites only content the information related to the companies as profiles, products and service. True online trade could not be practiced as their customers would feed back by mail, even though order form fulfillment, companies only will process it off line.

However, there are some companies reaching at stage 3 of development with their interactive web sites and online sales with the support of outside organizations as technology and correspondence bank system. i.e. customer can book tours and hotel online through <http://www.discovermekong.com> and pay by Master card, Visa, American Express, JCB, etc., or pay by Telegraphic Transfers.

B2B integrating process between partners in the value chain supply is still not applicable widely domestic organizations. There are only several international and multinational organizations applied technology for as Metro Cash and Carry- a worldwide company with its store chain over the world. It has Extranet connecting its stores to its suppliers in order to share stocking, ordering, billing etc information.

Touching with new competitive advantage in the new environment, Vietnamese companies seek way to create better partnering relationships. Companies rely on a variety of applied technology to automate business process at possible level from sales force, to procurement and fulfillment and distribution. Using web- base environment is a new way of e- business system that Vietnamese companies integrating at this time for their improvement.

4.3 Portal web site development status

Web portals can help business be more competitive by streamlining business process and saving money. By experiences of using web portals of many companies, Vietnam Companies have built their portals that allow them to share critical information such as inventory status, receipts, incoming orders, and so on, all on the Internet.

The owners of those portals mostly are supporting organizations as Vietnam Chamber of Commerce and Industry (VCCI) (<http://www.vnemart.com>), Gtz (<http://www.smenet.com.vn>), HexaNet B2B Promotion Center (<http://www.vietnammarketplace.com>). Some of them are associated with technology companies as Viet Marketing & E-Commerce Co., Ltd (<http://www.vietname-commerce.com>) and VnGlobal.com (<http://www.vnglobal.com>)

Vnglobal.com was established with one goal in mind: to provide a common ground for Vietnamese businesses around the globe to connect and expand their business potential. With its strategic marketing, Vnglobal.com has reached a large number of audiences worldwide who are business owners, decisions makers, buyers, importers, and exporters. Each day, thousands of visitors visit vnglobal.com to search for business development news, regulatory issues, financial market, and stock index in the Vietnam market and the countries

Vietnam does businesses with. More important, the majority of visitors come and look for new business opportunities or partners in Vietnam.

4.4 Challenges in building Vietnamese E-Business Portals

The advent of the Internet has allowed enterprises to morph themselves into extended enterprises, collaborating extensively with partners to deliver new products and services. Such collaboration depends on an organization's ability to capture and distribute information not only internally, but also to and from partners and to minimize the cycle time of these transactions. Corporate web sites and extranets let organizations distribute to partners essential business information that was once previously available only to a limited group of people inside the organization. In this way, the web has increased productivity and reduced operational costs. As a result, many line-of-business managers have raced to set up web sites and to add web front ends to previously isolated systems.

However, it is discovered that most of Vietnamese web portals are e-market place portals. Those provide related commerce information of seller and buyer and market to their communities. Users can be supplied the information about specific products, supporting headline and information, buyers and sellers through out an industry. Nevertheless, they cannot be connected online through those portal, they can only search the needed information of partners on the web, and connect offline. Furthermore, they cannot quickly locate, source and purchase online products and services.

The web-based systems are all built stand-alone web sites, thus for the purpose of B2B portals and partners portals development, those will face some problems as:

Product-centric, rather than partner-centric, view of information

With the proliferation of web sites, partners often find themselves accessing several isolated silos of information to solve a single business problem. Such an environment makes it difficult for partners to find the information they need for a given issue, whether it is determining the most appropriate product to present to a prospect, completing a business transaction or checking on a customer's order. At the same time, partners using these various extranets often experience information overload—they receive a flood of information, most of which is irrelevant to the task at hand.

Lack of consistency

One of the primary results of web site proliferation is that it is difficult for content owners to update all of these sites consistently—particularly because it may not be clear where the “system of record” resides. As a result, partners have no assurance that the information they are receiving from the organization is accurate, consistent or up to date across all product lines and partner channels.

Lack of personalized information

Many companies work out different relationships with different partners through a tiered partnership system. The company may want to provide different partners with different information based on the partner's importance to the business. Few systems installed today allow companies to efficiently furnish information that is customized for the relationship the business has with each of its partners. At the same time, partners find it difficult and time consuming to wade through all of the information on the site to find content relevant to the project or products of interest. Partners need a sophisticated personalization mechanism to make their tasks more efficient as well.

Difficulty in accessing operational information

To provide partners with true self-service capabilities, companies need to supply access to appropriate information from back-office systems. For example, partners may need access to information about new sales leads from recent campaigns, product inventory, account status or product shipment. Unfortunately, several factors have limited organizations' abilities to supply partners with self-service access to the data they need. Difficulties have included lack of a consistent user interface, absence of an effective security mechanism that furnishes access only to information relevant to that partner and lack of a means to allow partners to truly interact with operational data (for example, to change a shipping address)—rather than simply seeing a screen scrape of the information (such as a view of shipping status).

Lack of security

Companies want to make information available to partners over an extranet. At the same time, they need to ensure that intruders do not gain access to their private internal databases and that partners cannot see information about each other. An effective system for partner self-service adds security features to enforce data confidentiality, authentication, data integrity and access control. Additional role-based security features determine the information users can access and the types of changes they are able to make.

High costs

Web site proliferation results in higher than necessary costs. These costs include everything from purchasing and maintaining multiple servers and software products for separate web sites, to maintaining and updating these sites, to training partners on different software interfaces. As a result, organizations must contend with significant costs for establishing an effective online partner communication channel and with difficulties in maintaining good communications with their partners.

4.5 Frame work

4.5.1 Strategy and implementing

- **Strategy** - Investigating, implementing, measuring, and maintaining our Portal solution should all be factored into company's overall business strategy. Properly understanding the corporate strategy can allow us to place the correct functional components in the appropriate phases of our implementation to allow enterprise to derive as much business value as these phases are delivered.
- **Trends** - Portals have emerged in many markets as strong component of any solution delivery. Understanding the new and noteworthy directions affecting the portal market are an important step of defining the solution for corporate strategy for deployment for any project manager or technologist working with or planning for portal solutions.
- **Planning and Investigating** - Just getting started? The first stage involves research, business case writing, metrics setting, etc. This section contains articles and research papers regarding vendor's solutions and the methodology.
- **Business Case** - The business case consists mapping business drivers to user requirements, along with a financial impact if the requirement can be met. The financial impact can come in multiple ways, but must be related to hard, quantifiable results.
- **Feasibility Study** - In the case of portals, it is highly beneficial to embark upon a feasibility study. Such a study targets specific objectives; 1) accessing and prioritizing business requirements, 2) determining the feasibility of the fundamental concept, 3) identifying and weighing the issues surrounding the implementations, 4) identifying critical success factors, and 5) determining the likely cost of meeting the business

requirements based on the priority scheme. Feasibility for an enterprise wide implementation can typically be demonstrated via a prototype or pilot of the proposed solution.

- **Critical Success Factors** - Enterprise wide portal implementations are giving rise to a new set of Critical Success Factors (CSF's). Most implementations have standard success factors such as the following: well understood requirements, top management support, business area representation and a culture that supports collaboration and teamwork. Additionally, there are more refined success factors specific to Portals implementations that involve striking an important balance between items such as centralization and decentralization; ease of use and security, and pure technology vs. pure business focus.
- **Return on Investment (ROI)** - A calculation of how much money will be saved or earned as the result of an investment in a Portal Solution. ROI Calculations should be used in developing a business case for a given proposal; be sure to factor in investments of both time and capital. Typically in Portal implementations, streamlining business processes commonly returns ROI, however for each implementation of a portal the detailed ROI can be calculated.
- **Information Requirements** - Understanding the business information usage is the first major step involved prior to selecting the Portal technology. Conducting a business information study to understand how information is used within an organization, the objectives of such are to understand the following: 1) who uses the information, 2) how the information is used, and 3) how it flows into, within and out of each of the business areas.

Upon further understanding each of the broad categories of use the implications for security, availability and scalability are derived. Within these user classes and communities, the next step is to identify what information (including business intelligence, documents, Web pages, live feeds, etc.), applications and tools these communities need to access via a portal to do their jobs.

- **Business Process/Workflow** - The general understanding of the business process of all consumers of the portal (individual, department, division or entire company) can be leveraged within company portal solution to provide additional business value via timesaving or general cost reduction.
- **Enterprise Architecture** - This architecture includes the plans, methods, and tools aimed at providing a single point of access to information and applications from across an enterprise. Enterprise architecture defines the technological blueprint for how all the technical components of the enterprise fit together.
- **Implementation and Deployment** - Now that we have defined our portal strategy, reviewed our business requirements and validated the ROI for solution, this is where this information helps to plan for a successful implementation and deployment. Portal implementations are unique enough in the speed to market components and others to understand the unique issues for consideration when developing implementation and deployment plans.

4.5.2 Components of portal

Portals provide a combination of "out of the box" and custom functionality to allow users to find, to manage, to categorize, and to use content and applications. While not all

portals have all of the following features, they describe a good high-level view of the elements that can make up a portal solution.

- **Taxonomy** - Although taxonomy can be defined simply as the content directory for an enterprise's unstructured information, it can be populated with content and presented to the user in many different ways. Both substance and behavior of the directory define a usable Taxonomy for an enterprise. Indented lists, classification trees and hierarchies are other terms used to describe Taxonomy structures. Folders and sub-folders, topics and sub-topics, categories and sub-categories are others. Regardless of the terms used to describe taxonomy, however, it gives us a way to organize content into a structure that is easily browsed by the portal user.
- **Directory** - The portal's directory is its organization of content into a structure and hierarchy of categories. The directory is the implementation within the portal of the enterprise's taxonomy.
- **Browse / Navigate Documents** - This feature enables portal users to manually locate content by navigating the directory structure.
- **Search** - A fundamental part of a portal implementation is its search capability, which indexes enterprise content from multiple storage systems and allows users to browse and retrieve content based on selection criteria. Searching across multiple portals and their integrated applications is referred to as "federated" or network search. In this scenario, the user can specify the search criteria once, but retrieve relevant content links from the diverse repositories targeted by the search.
- **Content management** - Content management is the process of authoring, contributing, reviewing, approving, publishing, delivering, and maintaining content integrated with or accessed from a portal or other web site. Content management usually refers to text and graphical content that is viewed in a web browser.
- **Document management** - Document management is similar to content management, although it typically refers to the control and management of an enterprise's documents (other than web pages) stored in electronic files, including scanned images of paper documents. It also often includes check in and check out of documents to ensure version control.
- **End User Customization** - Customization refers to the capability of portals to allow users to specify their own preferences for the user interface look-and-feel attributes. Customization typically accommodates preferences for color schemes, modules that appear, and the layout of the modules and content on a page of the portal.
- **Personalization** - 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.
- **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.

- **Collaboration** - An EIP solution can be a very powerful collaborative tool. Collaboration functions enable a group of users to work together to share ideas and complete work as a team. Collaboration includes electronic interactions among users in different physical locations in real time ("synchronous") and at different times ("asynchronous"). Forms of collaboration are instant messaging ("chat") systems, team workspace, and discussion forums, document sharing, electronic white boarding, virtual conferencing, and video conferencing.
- **Business Intelligence** - Most enterprise portals can act as a universal front end to the different components of a BI solution, helping its users make better business decisions. BI includes enterprise reporting, ad hoc reporting, OLAP and multidimensional analysis, and exception reporting.
- **Alerts** - An alert is a notification of an event or change based on one or more conditions involving single or multiple information or application sources. These notifications can be delivered within a portal as well as by other mechanisms such as e-mail or wireless device. Alerts usually accommodate individual user preferences, such as the delivery mechanism and format, the conditions that should trigger an alert, and the frequency of notification.
- **Subscribe / What's new** - Many portals (and other web sites and applications) allow individuals to register an interest in or "subscribe" to a particular component or category of content. Portals will then notify the subscribers when the content changes or new content is added.
- **Workflow** - Workflow refers to the efficient electronic management of a business process, including roles, tasks, templates, checkpoints, approvals, and escalation procedures. Within a portal, workflow systems are administered and integrated to achieve the interaction between different component modules of the portal through which the business process flows. In addition, notification alerts that a workflow step or task have been assigned are typically delivered through the portal to its users.
- **Single sign-on** - The ability to see information from multiple systems, in multiple formats, all presented on a single page view is perhaps the largest benefit to a portal's user community. This results in significant reduction in employee orientation and training, as well as timesaving for the users who can monitor and update multiple systems through a single web view of the enterprise. Since the different systems that make up a page within a portal may be secured with different user login credentials, single sign-on solutions facilitate the navigation among the systems through a single authentication scheme.

KHUNG PHÂN TÍCH CHO CÁC “CẢNG” KINH DOANH TRỰC TUYẾN VIỆT NAM

Lại Huy Hùng

Khoa Quản Lý Công Nghiệp, Trường ĐH Bách Khoa – ĐHQG-HCM

***TÓM TẮT:** Để thích ứng với cách cạnh tranh mới – kinh doanh trên mạng Internet – các công ty Việt nam phải chuẩn bị các nguồn lực của họ cho khuynh hướng này. Trong thời*

gian đầu việc thiết lập các trang web và quảng bá nó thông qua các cổng Internet là cách làm thông dụng và hiệu quả nhất. Có rất nhiều thông tin về công ty như lịch sử hình thành, sản phẩm và dịch vụ, liên kết, quan hệ bạn hàng ... được đưa vào các nội dung của trang web. Truy nhiên việc thực hiện kinh doanh theo kiểu B2B không chỉ dựa trên trang web, doanh nghiệp cần nhận được sự hỗ trợ nhiều hơn từ các nguồn lực khác như hạ tầng kỹ thuật căn bản, hệ thống ngân hàng, mối liên hệ khách hàng, môi trường pháp lý, các hiệp hội và các tổ chức khác... Phân tích này chủ yếu tập trung vào vai trò hỗ trợ các doanh nghiệp từ các cổng kinh doanh trực tuyến của Việt Nam.

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