A

Seminar report

On

E-Intelligence

Submitted in partial fulfillment of the requirement for the award of degree
Of MCA

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Preface

I have made this report file on the topic **E-Intelligence;** I have tried my best to elucidate all the relevant detail to the topic to be included in the report. While in the beginning I have tried to give a general view about this topic.

My efforts and wholehearted co-corporation of each and everyone has ended on a successful note. I express my sincere gratitude to …………..who assisting me throughout the preparation of this topic. I thank him for providing me the reinforcement, confidence and most importantly the track for the topic whenever I needed it.

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Secondly, I would like to thank my parents who patiently helped me as i went through my work and helped to modify and eliminate some of the irrelevant or un-necessary stuffs.

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Content

INTRODUCTION

As corporations move rapidly toward deploying e-business systems, the lack of business intelligence facilities in these systems prevents decisionmakers from exploiting the full potential of the Internet as a sales, marketing, and support channel. To solve this problem, vendors are rapidly enhancing their business intelligence offerings to capture the data flowing through e-business systems and integrate it with the information that traditional decision-making systems manage and analyze. These enhanced business intelligence—or *e-intelligence*—systems may provide significant business benefits to traditional brick-and-mortar companies as well as new dot-com ones as they build e-business environments.

Organizations have been successfully using decision processing products, including data warehouse and business intelligence tools, for the past several years to optimize day-to-day business operations and to leverage enterprise-wide corporate data for a competitive advantage. The advent of the Internet and corporate extranets has propelled many of these organizations toward the use of ebusiness applications to further improve business efficiency, decrease costs and increase revenues - and to compete with new dot.com companies appearing in the marketplace.

The explosive growth in the use of e-business has led to the need for decision-processing systems to be enhanced to capture and integrate business information flowing through e-business systems. These systems also need to be able to apply business intelligence techniques to this captured-business information. These enhanced decision processing systems, or E-Intelligence, have the potential to provide significant business benefits to both traditional bricks-and-mortar companies and new dot.com companies as they begin to exploit the power of e-business processing.

E-INTELLIGENCE FOR BUSINESS

E-intelligence systems provide internal business users, trading partners, and corporate clients rapid and easy access to the e-business information, applications, and services they need in order to compete effectively and satisfy customer needs. They offer many business benefits to organizations in exploiting the power of the Internet. For example, e-intelligence systems give the organization the ability to:

- Integrate e-business operations into the traditional business environment, giving business users a complete view of all corporate business operations and information.

- Help business users make informed decisions based on accurate and consistent ebusiness information that is collected and integrated from e-business applications. This business information helps business users optimize Web-based offerings (products offered, pricing and promotions, service and support, and so on) to match marketplace requirements and analyze business performance with respect to competitors and the organization's business-performance objectives.

- Assist e-business applications in profiling and segmenting e-business customers. Based on this information, businesses can personalize their Web pages and the products and services they offer.

- Extend the business intelligence environment outside the corporate firewall, helping the organization share internal business information with trading partners. Sharing this information will let it optimize the product supply chain to match the demand for products sold through the Internet and minimizes the costs of maintaining inventory.

INTELLIGENT E-SERVICES

The building blocks of new, sophisticated, intelligent data warehousing applications are now intelligent e-services. An e-service is any asset made available via the Internet to drive new revenue streams or create new efficiencies. What makes e-services valuable is not only the immediacy of the service, but also the intelligence behind the service. While traditional data warehousing meant simple business rules, simple queries and pro-active work to take advantage of the Web, E-Intelligence is much more sophisticated and enables the Web to work on our behalf. Combining intelligence with e-services promises exciting business opportunities.

E-INTELLIGENCE REQUIREMENTS

An e-intelligence system builds on and extends existing business intelligence tools and applications, including enterprise information portals (EIPs). Figure 1 outlines the architecture of an e-intelligence system and provides examples of the business intelligence capabilities an organization should seek in such a system, including:

- One-to-one e-marketing analysis applications that customize and personalize information, applications, services, and products offered to consumers and clients via the Internet.

- Content, customer, and merchandise-analysis applications that track and analyze how users navigate the organization's e-business sites and use applications to buy products.

- Channel and cross-channel analysis and campaign applications that measure and analyze the success of the Internet as a sales, marketing, and services channel.

- Supply-chain analysis applications that let the organization work with trading partners in optimizing the product supply chain to match the demand for products sold through the Internet

- A simple and integrated e-intelligence Web interface to give internal and external Web users and applications secure, managed access to the organization's business information, applications, and services

- Demand-driven business intelligence gathering and analysis, and real-time decisions and recommendations as consumers and clients interact with e-business systems via the Internet.
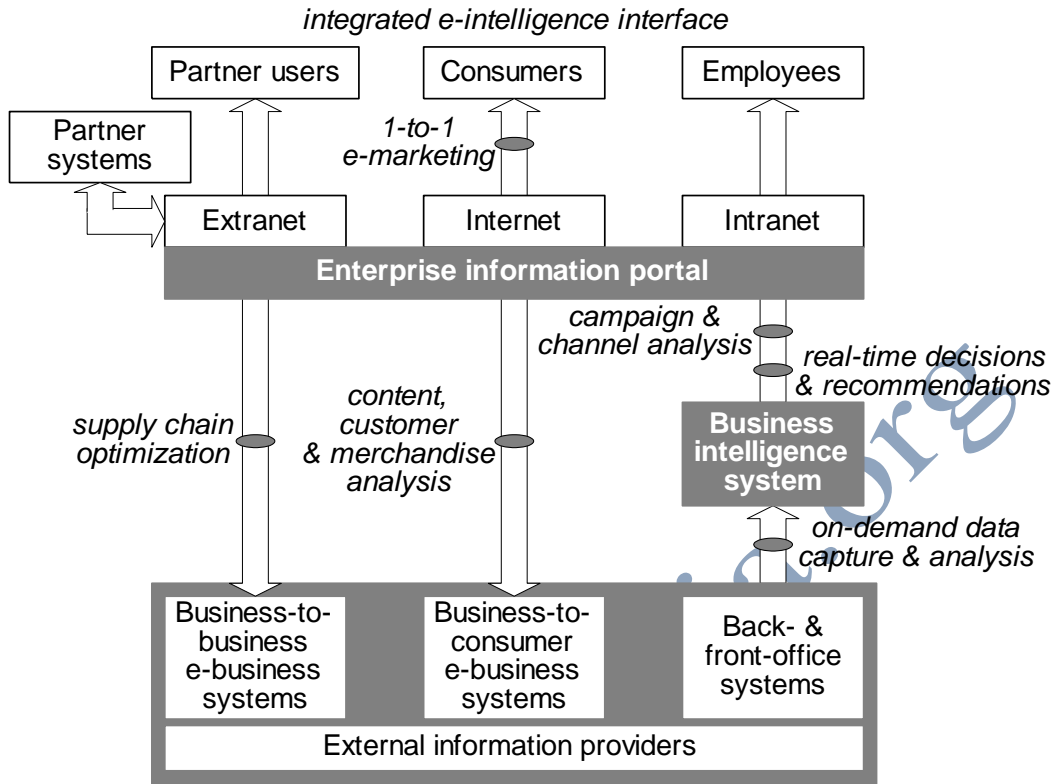
integrated e-intelligence interface

| Partner users | Consumers | Employees |

| Partner systems |

1-to-1 e-marketing

| Extranet | Internet | Intranet |

Enterprise information portal

campaign & channel analysis

real-time decisions & recommendations

supply chain optimization

content, customer & merchandise analysis

Business intelligence system

on-demand data capture & analysis

| Business-to-business e-business systems | Business-to-consumer e-business systems | Back- & front-office systems |

External information providers

Figure1.E-Intelligence Processing

FRAMEWORK FOR E-INTELLIGENCE

Figure 2 introduces a business and technology framework for constructing an integrated e-intelligence operating environment. The framework has two key components: a business intelligence system and an EIP.
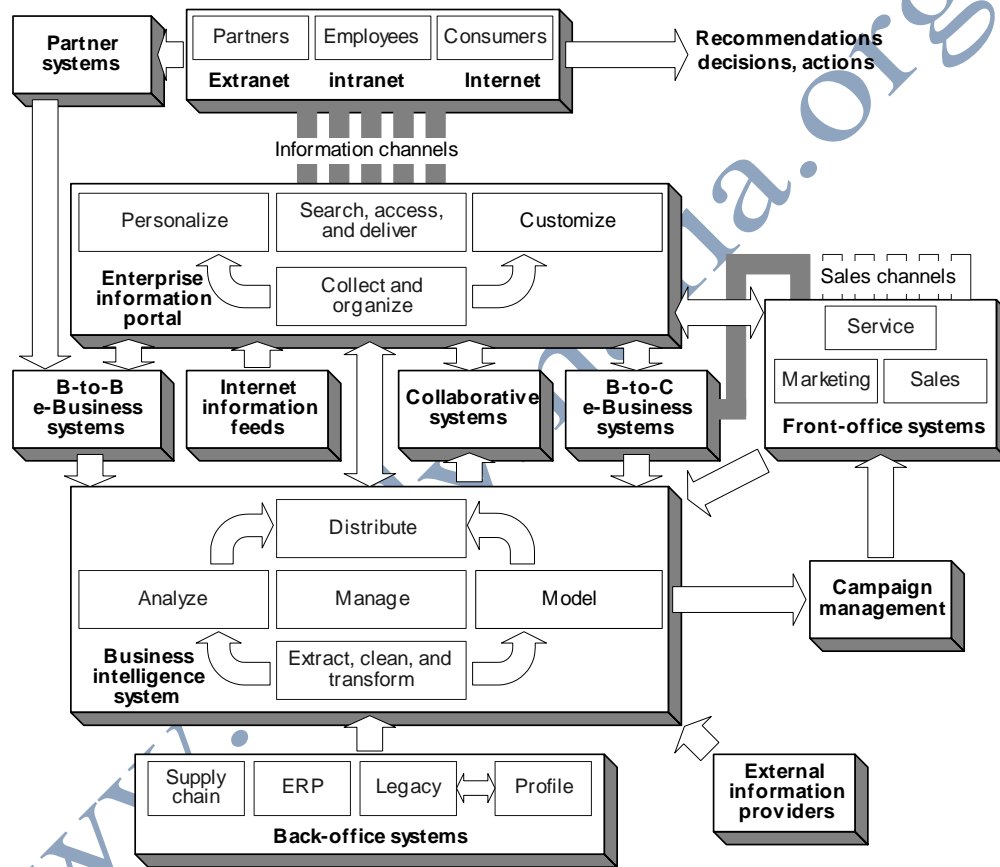

Figure2: E-Intelligence Framework

Business intelligence processing (Figure 3) involves using extract-transform-load (ETL) tools or in-house developed applications to extract data from source back-office operational systems (ERP, supply-chain management, and legacy applications, for example), and then transforming and integrating the extracted data into useful business information for

corporate decision-making. Usually, enterprises would store this business information in a data warehouse.
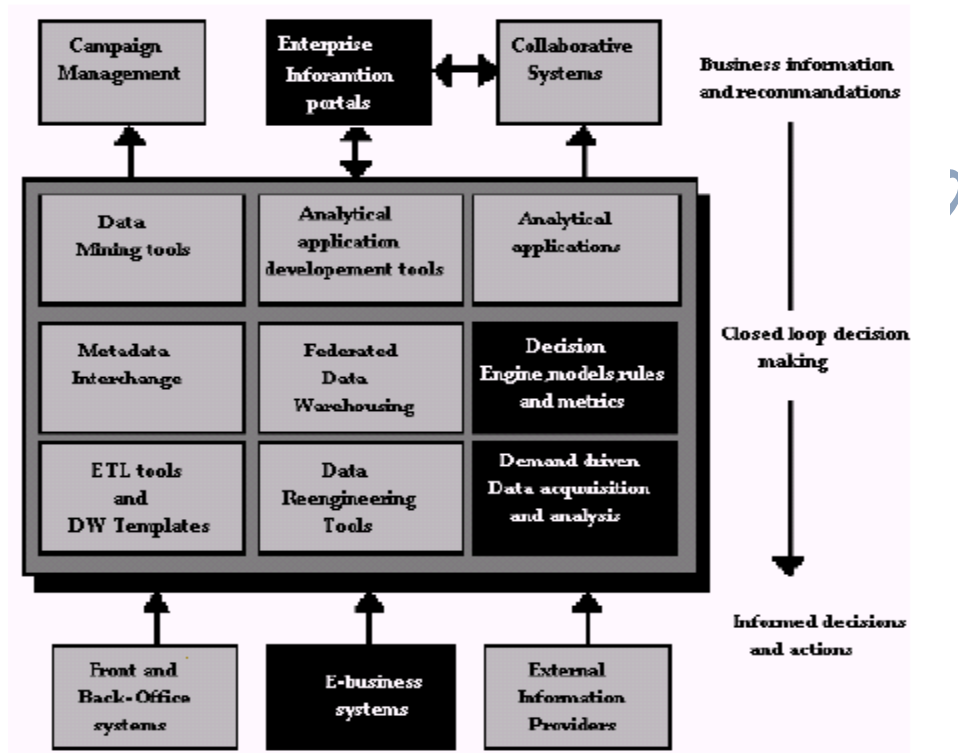

Figure 3 Features of an enhanced business intelligence system for e-business.

With a data warehouse, decision-makers can use online analytic processing (OLAP) tools and analytic applications to analyze the information about current business operations and identify ways of reducing costs and increasing profits and revenues. This analysis typically comprises the following steps:

- Track key performance indicators (KPIs) to monitor trends and detect changes in business patterns. This process may include, for example, monitoring sales and profits or the progress of a new sales campaign.

- Analyze in detail when and why a particular KPI changed.

- Model potential business improvements to determine their impact on business; for example, run financial business models or use a data mining tool to profile and segment customers for a new sales campaign.

- Modify business operations to incorporate the decisions and actions made as a result of business-intelligence processing.

A business intelligence system gives its users the business information they need to make informed business decisions. These decisions often result in changes to back-office operations—for example, the introduction of new products or changes to product pricing. These decisions (and associated actions) are typically made by users interacting via collaborative processing documents such as email and presentations. When e-business is involved, this ad hoc, manual approach to "closing the loop" from business intelligence systems back to operational systems is too slow, and faster, more automated methods are required to support e-business operations.

An enterprise could also use the output from a business intelligence system to drive front-office operations. One component that plays a pivotal role here is a campaign management application, which uses business information to develop and manage new marketing campaigns. These campaigns may draw on a variety of sales channels, including direct sales, direct mail, outbound call centers, email, fax, and kiosks; e-business systems offer an additional sales channel.

business intelligence system to supplement existing corporate customer and marketing data in areas such as competitive and marketplace analysis.

Information flow from back- and front-office operational applications, to business intelligence and collaborative processing systems, and back to operational systems can be thought of as a closed-loop information supply chain. To obtain a complete and accurate picture of a company's business operations, users must be able to access that complete information supply chain. EIPs are emerging as a potential solution to this problem.

An EIP (see Figure 4) gives the organizations internal users a single Web-based interface to business information and to the applications that produce business information, regardless of where they reside.

A user can personalize the information and applications viewed through an EIP to match the requirements and authorization level of each business user, whether an executive, business analyst, or clerical assistant. An EIP also customizes information and application access to suit the user's role. For example, an EIP could give a business analyst in a marketing department a view of the information required to launch a new marketing campaign. This information could include analyses of customer profitability and past campaigns stored in a business intelligence system, marketing collateral managed by a collaborative processing system, and competitive marketing data contributed by an external information provider.
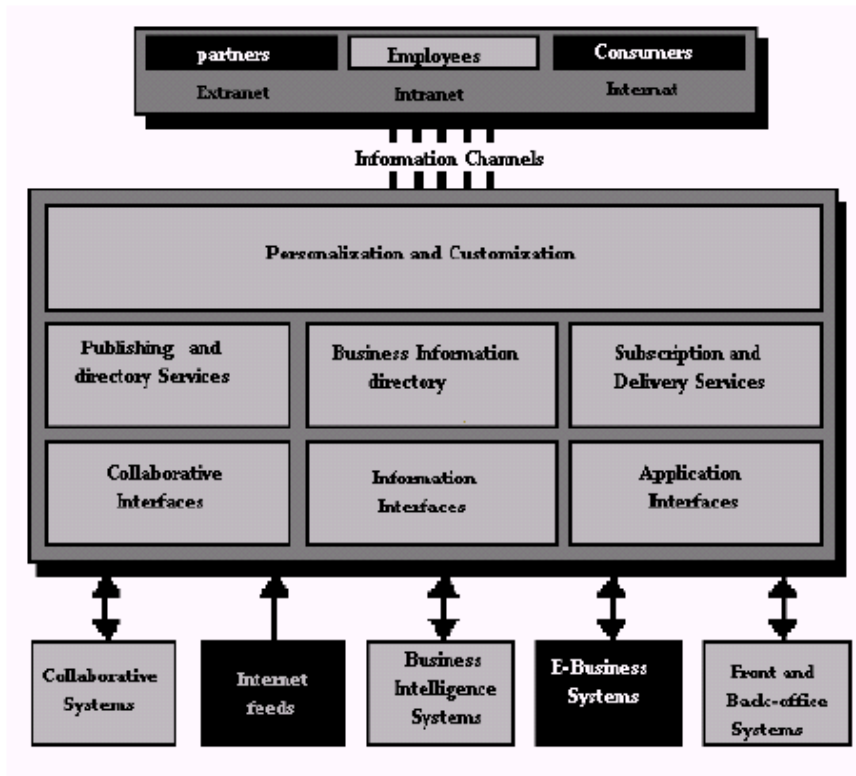
Figure4:An Enterprise Information Portal for E-business

Impact of E-Business

The Web is truly a valuable source of business information. Information stored on Web servers on the public Internet are a potential data source for a data warehouse, or at least can be accessed from an EIP. Furthermore, as corporations begin using Internet commerce sites as sales and

marketing channels, the associated business-to-consumer e-business systems become an additional source of information for business-intelligence processing. The source data here may be stored in conventional database and file systems, but may also come from Web server logs or even the Web clickstream as users interact with e-business applications. Thus, business intelligence systems not only need to be able to extract new types of data, but also handle the potentially huge data volumes involved.

When data in business-to-consumer systems is extracted to the data warehouse, business users can analyze it using OLAP tools and analytic applications. This analysis is a crucial step in the optimization of e-business operations and the evaluation of the Internet as a sales channel.

Using the Internet as a sales channel offers significant benefits; for example, products can be brought to market much faster and at a much lower cost. Selling through the Internet, however, is very competitive, and the organization must be able to react rapidly to consumer requirements and changing marketplace conditions. Four key success factors are involved here: The enterprise must optimize its product supply chain to match consumer demand; it's business users have to make business decisions more rapidly, possibly in real time; service and support are key differentiators; and because of the high rate of technology change, the e-intelligence system must have an open, scalable infrastructure.

Optimizing the Product Supply Chain

The challenge in any consumer environment is to satisfy consumer demand without incurring the costs of oversupply (excess inventory). If an organization is typical, it has been using business intelligence systems and their

Associated data warehouses for years to analyze sales data and optimize product supply and inventory. The enterprise can apply these techniques equally well when selling products through Internet commerce servers. One obvious advantage of the Internet is that it consists of a single virtual storefront, which is easier to manage and supply than multiple physical stores. The low entry cost of employing the Internet as a sales and marketing channel, however, is creating a more competitive environment and forcing retail prices down. This price pressure in turn forces companies to fine-tune their profit margins and product supply chains. One way to rapidly and efficiently do so is to let business users and external trading partners tap the internal closed-loop information supply chain described here. With this approach, the company can share business information and work cooperatively to reduce costs and optimize profit margins.

The simplest approach to supplying business information to end users in trading partners is via an EIP. With an EIP, the enterprise can customize, personalize, and control the information flowing among trading organizations across corporate extranets, or even the Internet. An EIP is also useful for controlling information flow between clients in nonretail situations. An insurance company could, for example, let key clients view and analyze claims history information via an EIP, and then, if appropriate, use the EIP to switch from the

business intelligence environment to the e-business environment to modify insurance coverage.

Realtime Decision-Making

Closing the loop between business intelligence and operational systems has traditionally been done manually using collaborative processing documents. However, in the e-business environment, a manual approach to decision-making can be inadequate, in which case a more dynamic and automated process is required. One example here is that the enterprise may want to dynamically control the Web pages displayed to potential e-business customers. The decisions in this situation could be based on parameters such as the buying power of each customer and the types of products in which they may be interested. Another example is where the customer expects an immediate decision when using the e-business application. This situation could occur, for example, when a customer applies for a new credit card or requests a credit upgrade. The competitive nature of the Internet requires companies to react immediately to such requests or risk losing the customer to a competitor.

This need to make rapid decisions leads to the notion that our business intelligence systems must operate in real time. This realtime requirement, however, has several "flavors." Returning to the credit card example, assuming that a customer requests an upgrade to a platinum credit card, he or she has been with the financial institution for one year, and that the decision to upgrade the customer is based on a three-year return on investment (ROI). To make this decision, the e-business application will need to determine the existing one-year ROI of the customer, and predict—based on the customer's profile—the likely remaining twoyear ROI. To do so, the e-business application will need to do two things:

- Access data warehouse summarized data in real time to retrieve the one-year ROI for the customer, calculate in real time the one-year ROI from detailed warehouse data, or extract in real time the required data from operational systems

- Profile the customer and run a business model that predicts a two-year ROI in real time for a customer with that profile. In some cases, the business model itself and its associated business rules may have to be built or modified in real time.

E-Intelligence Infrastructure

Given the large number of users and amount of data involved in e-business processing, this infrastructure must provide good performance, reliability, and scalability if the organization is to survive in this highly competitive approach to sales, marketing, and support. Also, given the high rate of change in this area, the framework must support industry standards where they exist and be open so that organizations can plug in different vendor products as their requirements change.

An e-intelligence system not only enables business intelligence techniques to be applied to the e-business environment, but also adds capabilities not currently available in the traditional business intelligence environment: namely, realtime analysis and decision making.

CONCLUSION

Presently the internet and e-Business are growing at an astonishing rate. As the size of the internet increases its reach and thus its business potential also increases. There will be tremendous competition an all dotcom companies to stay ahead. In such a fiercely competitive marketplace e-Intelligence solutions will become a necessity to stay ahead. Future e-Intelligence techniques will be aimed at optimizing whole web content depending on users.

REFERENCES

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