

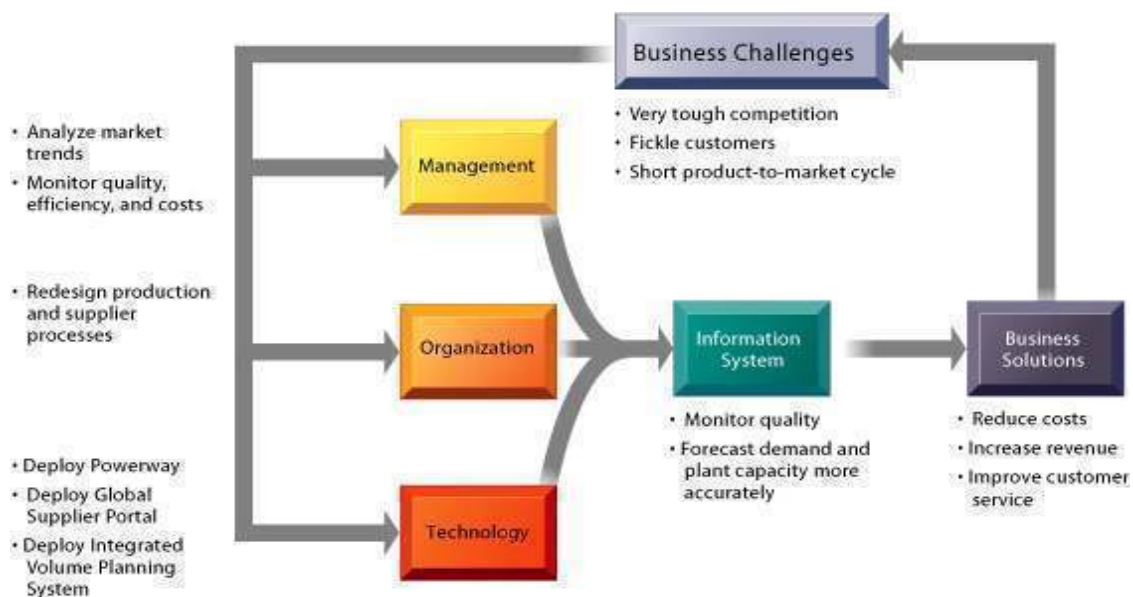
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DaimlerChrysler's Agile Supply Chain

DaimlerChrysler includes the Chrysler Group, the Mercedes and Smart Passenger Car Group, and the Commercial Vehicles unit. It operates 104 plants in 37 countries, using 14,000 different suppliers and 13,000 sales outlets in 200 countries. The auto industry is known for tough competition and fickle customers. Survival depends on bringing new models rapidly to market as economically as possible.

DaimlerChrysler studied every step in the vehicle production and sales process, starting with the first stage of vehicle design and ending with its service and repair. It then built a series of information systems that automate and streamline all of its transactions with suppliers. An Integrated Volume Planning system gathers sales data and sends them back to production planning systems and from there to suppliers so that they can adjust deliveries of parts and production to make exactly the right amount of the vehicle models that are actually selling in dealer showrooms.



A Global Supplier Portal presents a common interface and system platform that handles every type of interaction between DaimlerChrysler and its suppliers. About 6,000 DaimlerChrysler suppliers registered for this portal use it to interact with DaimlerChrysler's various business groups. DaimlerChrysler also uses the portal internally to share information among different divisions and business units.

At the earliest stages of design, the Chrysler Group and 3,400 of its suppliers use a Web-enabled system called Powerway to track parts through nine quality control "gates" before they're certified for use on production lines. In the past, quality specialists used to store thousands of pieces of paper in hundreds of binders to deal with quality issues that surfaced with the thousands of companies that design Chrysler's parts. If a drive train was an eighth inch too short, it could take up to three weeks to notify the supplier, fix the problem, and incorporate the corrected part back into the design process.

Powerway replaces paper-based processes with digital links to supplier systems. It helps Chrysler identify potential design and engineering problems before physical parts are actually constructed, so that they can be more rapidly resolved. That in turn helps Chrysler design new cars much faster-and remain competitive.

Sources: Tracy Mayor, "The Supply Chain," CIO Magazine, August 15, 2004; Larry Gould, "Effectively Managing Inventory in the Supply Chain," Automotive Design & Production, www.autofieldguide.com, accessed September 3, 2004; and www.daimlerchrysler.com, accessed September 3, 2004.w

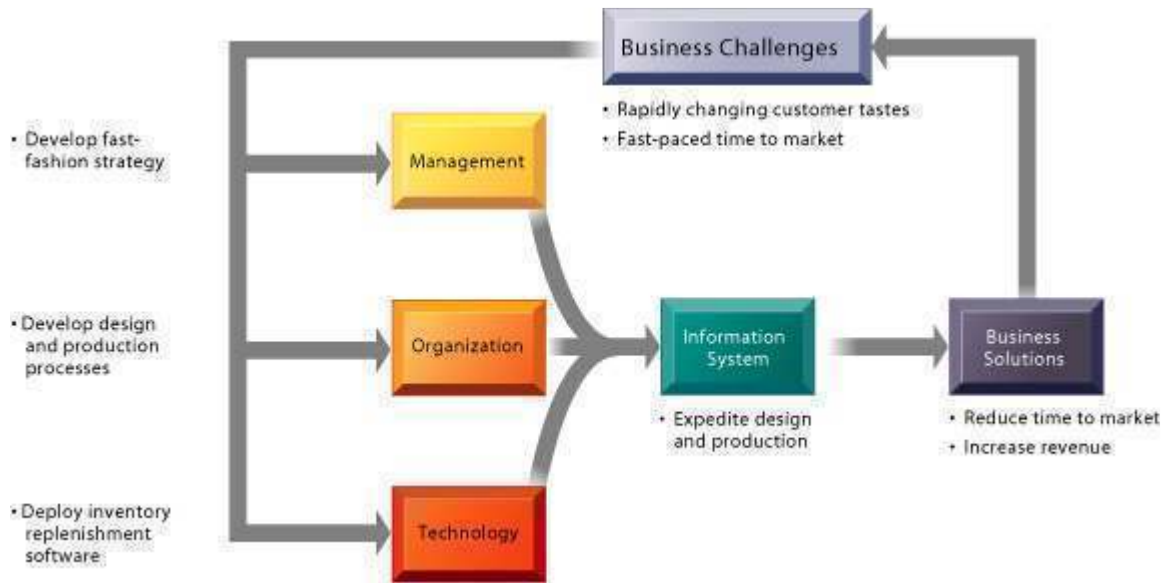
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Fast Fashion, Hot Systems

In the fast-paced world of fashion retailing, nothing seems more important than time to market. Instead of the traditional four clothing fashion seasons (spring, summer, autumn, and winter), styles now change once a month or even faster. Some women's clothing store chains get a delivery of new styles twice a month. Welcome to the world of Speed Chic.



A number of companies have adopted this strategy, including Sweden's H & M, TopShop in the United Kingdom, and Spain's Zara and Mango. Mango/MNG Holding SL is based outside Barcelona, with more than 700 women's boutique stores in 72 countries. It's noted for an eclectic mix of body-hugging styles. Now it wants to break into the U.S. fashion market and it believes its approach to "fast fashion" will help.

Bringing out a steady stream of trendy new merchandise requires flexibility and speed from design through production and delivery to the store shelf. "We know how to improvise," says David Egea, Mango's merchandising director. "To react and have what people want, we have to break some rules. And here we keep breaking them." Once garments roll off production lines, Mango relies on a proprietary inventory replenishment system to determine exactly which pieces should be sent to which stores.

Four times each year, Mango's designers meet to discuss important new trends for each of its main collections. Each collection consists of five or six smaller collections. Design teams meet each week to adjust for changing trends. After clothing and accessories styles have been decided, Mango's product management and distribution team assigns them personalities, such as trendy, dressy, or suitable for hot weather.

Once items have been classified they are sent to one of Mango's 731 stores, each of which is classified by traits such as the climate where the shop is located or whether large or small sizes sell best. Mango's inventory replenishment system makes sure the

merchandise is sent to compatible shops.

The system transmits order data to a large distribution machine on the ground floor of Mango headquarters, which is surrounded by a rotating ring of cardboard boxes on hooks. Bar-coded clothes that have just arrived from factories are scanned and placed into one of 466 store-specific slots. They then are boxed and shipped to retail stores. Mango can add new items to its stores once a week, about six times more frequently than the typical American clothing chain. Retail store managers can adjust store plans daily based on input from regional supervisors and headquarters.

Sources: Erin White, "For Retailer Mango, Frenzied 'Fast Fashion' Proves Sweet," Wall Street Journal, May 28, 2004; Kasra Ferdows, Michael A. Lewis, and Jose A. D. Machuca. "Rapid-Fire Fulfillment." Harvard Business Review (November 2004); and Cecilie Rohwedder, "Making Fashion Faster," Wall Street Journal, February 28, 2004.

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Gallo Winery Leads by Blending Business with Technology

E.&J. Gallo Winery is the largest wine producer in the world, selling 65 million cases of wine in 2003. Despite its leadership position, Gallo must be concerned about how its wines taste and also about price and service. It has other large competitors, including Allied Domecq, Kendall Jackson, Beringer Blass, Robert Mondavi, and several Australian winemakers, all of whom offer good quality wines at low prices.



How does Gallo manage to maintain its market leadership? The answer is by continually finding new ways to master the art and science of wine-making and by paying close attention to the distribution and marketing of wine worldwide. Gallo very carefully manages its production processes and relationships with suppliers.

To make sure shoppers know exactly where to find its products, Gallo implemented a product accountability system at its regional distribution centers. A complex warehouse management system coordinates production, component replenishment, inventory, and shipment, integrating with Gallo's order and transportation management systems. This system helped shorten the order-to-door cycle by 10 days. All orders are electronic, and payment is received electronically. Gallo's distributors know exactly what they are going to get by eligibility, product, and place.

To further support close relationships with distributors and retailers, a system called Gallo Edge helps retail customers such as Albertsons and Wal-Mart manage wine placement and profitability in their stores. Gallo Edge analyzes Wal-Mart's data about Gallo sales to produce a by-bottle profitability analysis so that Wal-Mart buyers can see which products are selling quickly, which aren't, and whether they are making money on products. Gallo never sees the results-the data are Wal-Mart's, but Gallo clearly benefits from providing

this service.

Gallo is updating a production control system called Gallo Wine Manager to help management evaluate the relationship between wine taste and costs. Because Gallo sells 95 different brands of wine in a variety of price ranges, from everyday table wine to very expensive wine, it wants to be able to understand the cost of each blend. This system lets winemakers see the cost impact of any winemaking recipe.

Sources: Thomas Claburn, "Recipe for a Better Winery," Information Week, September 20, 2004 and www.gallo.com, accessed September 26, 2004.

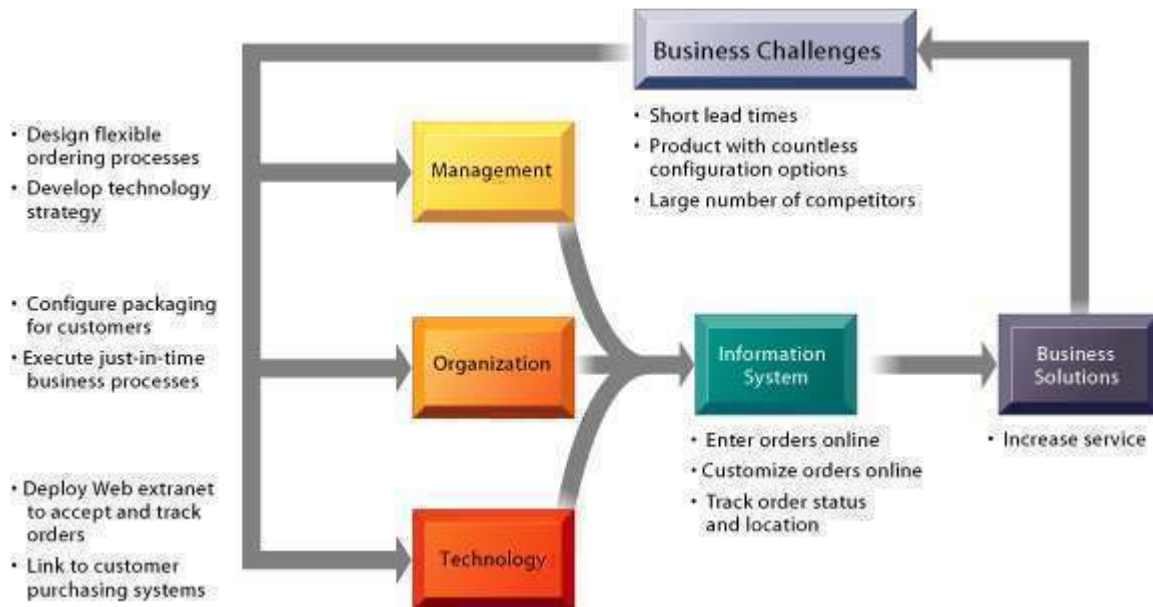
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Corrugated Supplies: The Internet Helps a Small Company Act Big

Corrugated Supplies Corporation (CSC) is a small Bedford Park, Illinois, manufacturer of made-to-order corrugated cardboard sheets for boxes, displays, and other custom packaging. CSC management has always been very forward-looking and the firm was an early leader in providing e-commerce services and customer access to its internal corporate systems to track their orders.



CSC's business does not involve multiple components and products but rather a product that has many, many different configurations-trillions of product variations are theoretically possible. As a result, many CSC orders come with special instructions, such as requests for deep scores, customized logos to be printed, or specific shipping requirements. The orders are usually small with very short lead times, and more than half needing delivery within 24 hours. Moreover, the business is very competitive: There are approximately 700 corrugators in the United States alone.

CSC uses a Web extranet for roughly 85 percent of the 600 orders it processes daily. Customers can either enter their order information into an online order form, or their purchase order systems can transmit the orders electronically to CSC without customers having to retype them into the Web site. CSC sends the customer an e-mail confirming the transaction.

CSC's Web site provides capabilities for customizing orders. If a customer wants its corrugated sheets stamped with a company logo instead of CSC's, it can specify these requirements. Customers can use the Web to transmit changes to orders before completion by clicking on an "edit" icon next to the order, even if it's in the queue for a machine. Because this ordering system is integrated with CSC's inventory system, customers can immediately see whether an order can be fulfilled. Most orders can be turned around within

24 hours.

The Web site incorporates shipping information, enabling the company to track all products as they come off the manufacturing line and are loaded into trailers or placed in a temporary inventory area. Customers can not only view the contents of the trailer but also the sequence in which items were loaded. This information helps customers direct the corrugated paper to the designated packaging machinery more quickly once it has been delivered, so they don't have to put the delivered paper in inventory and later try to locate it.

Sources: Howard Baldwin, "Thinking Big," Cisco IQ Magazine, First Quarter 2004; Wes Iversen, "Real-Time for Real Savings," Automation World, April 2004; and www.csclive.com, accessed August 26, 2004.

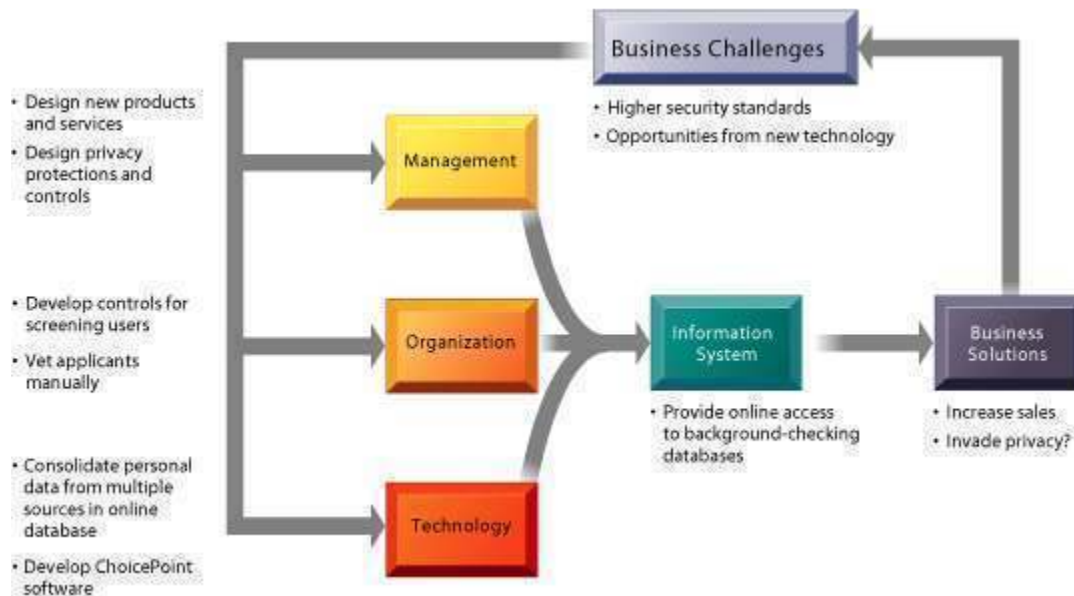
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"Attention Shoppers: Background Checks for Sale"

Many companies today require background checks of job applicants and hired employees to make sure they do not have criminal records or other problems. Commercial services are now available to help employers with this task. ChoicePoint, based in Alpharetta, Georgia, one of the largest U.S. vendors of financial, personal, and legal data, provides an array of services for employee background checks



A new ChoicePoint product called check-in-a-box sells in stores such as Sam's Club along with other software for home and small business users. It features a CD-ROM that enables users to tap into ChoicePoint's online databases, giving small business users access to data that previously were beyond their reach.

Although easy access to data for background checking is very useful for employers, it has privacy advocates very worried. Selling background checks over-the-counter could place personal information in the wrong hands. Private investigators are concerned as well, fearing that inexpensive background-checking systems could compete with their businesses. They also complain that ChoicePoint's requirement that users have a business license is not a sufficiently strong control for preventing personal information from falling into the wrong hands. "There are tons of people who have a business license who don't have a business," notes Chris Appelby, president of the Georgia Association of Professional Private Investigators.

James Lee, ChoicePoint's chief marketing officer, notes that the data provided by check-in-the-box is public information that can be found at courthouses and other government offices if individuals really wanted to find it. The system includes safeguards, including the requirement that a user supply the Social Security number and name of the person they are checking. Federal law requires employers to obtain the signed permission of job applicants before they run background checks on them. However, ChoicePoint users

only need to click on a box-it does not require that a form be presented to check to see whether it has been signed by an applicant.

ChoicePoint imposes tighter controls on users who want to search motor vehicle records and personal credit reports. Users are required to fill out and fax in a number of forms. Each application is then hand-vetted by a ChoicePoint employee, who calls the user to verify that there is a business license. The process usually takes 24 to 48 hours, with users notified by e-mail if access has been approved or denied.

Sources: Adam Geller, "High-Tech Background Checks Hit Stores," Associated Press, March 8, 2004; "Background Checks in a Box," CBSNews.com, March 8, 2004; and www.choicepoint.net, accessed May 15, 2004.

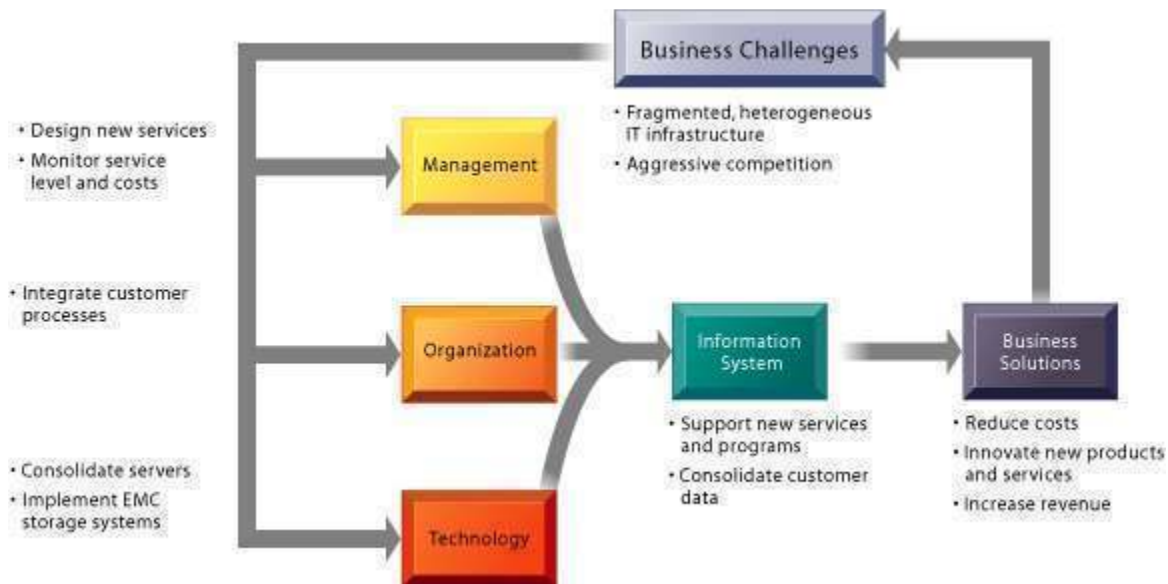
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Hong Kong's New World Telecommunications Prospers with a New IT Infrastructure

New World Telecommunications is a Hong Kong based telecommunications company that offers international calling services to 1.1 million subscribers. It also provides telecommunications services to businesses, such as private leased lines, Internet telephone, Internet-based virtual private networks, high-speed frame-relay data transmission, and online data centers.



New World's market is one of cutthroat competition. Its ability to deliver its services competitively depends on a flexible information technology (IT) infrastructure that can provide uninterrupted and smooth access to data and the ability to support new services in a very short time. New World had been storing its data on different servers, which required license fees for each and some fragmentation of data. To keep its business running and reduce maintenance costs, New World needed to integrate its storage and servers. The company also needed to integrate its customer relationship management, billing, and operational support systems so that, for example, a corporate customer could log on to a Web portal to view service usage, maintain account information, and monitor network performance.

New World Telecommunications enlisted storage vendor EMC to manage its 400-gigabyte production and billing data as well as 80 gigabytes of customer data that were residing on six Sun Solaris servers and a Hewlett-Packard (HP) Unix server. EMC updated New World's storage infrastructure to an automated storage area network (SAN) to make it easier to access data from many different servers across the enterprise.

New World was using different brands of servers: Sun, HP, and Compaq Tru64. EMC helped the company centralize its data across all these different brands of servers. New World also consolidated servers so that processing work was transferred from 107 to 70

machines.

By adopting this new infrastructure, New World has reduced system administration costs by 25 percent and has considerably enhanced its flexibility in providing new products and services. In the past, it would take the company nearly three weeks to roll out new market programs. In Hong Kong's fiercely competitive telecommunications business, three weeks seems like an eternity. According to Samuel Poon, New World's director of information technology, "Now we're able to launch a new program within two or three days."

Sources: Raoul LeBlond and Ben Worthen, "Taking IT to the Next Level," CIO Asia, January 2004; and www.nwt-009.com, accessed September 10, 2004.

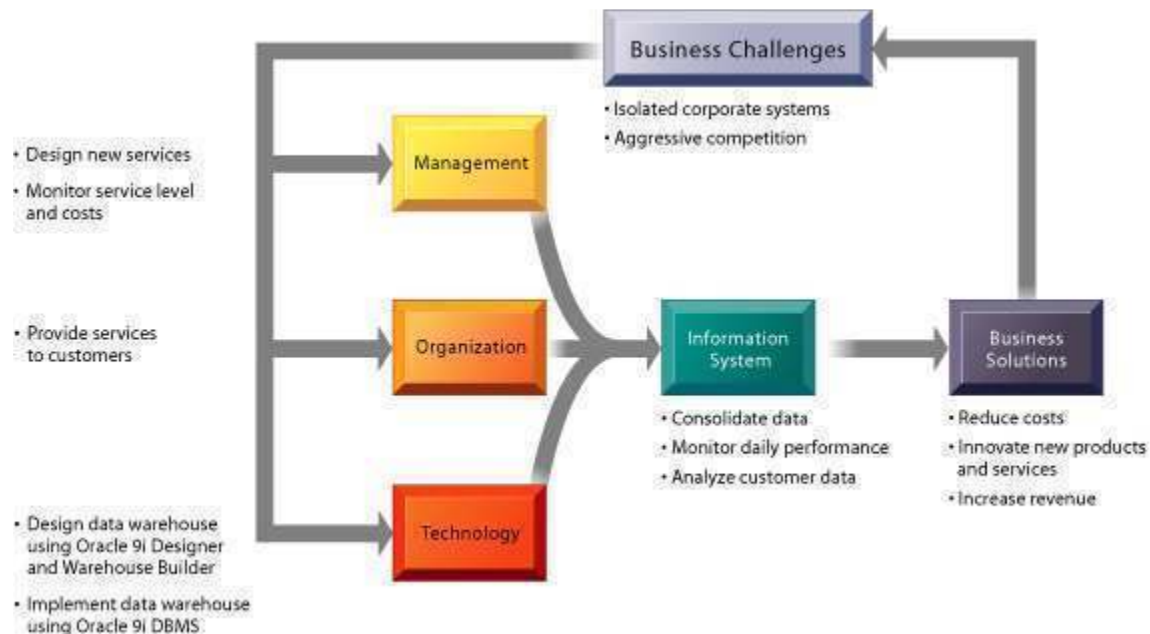
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Better Data Help Virgin Mobile Australia Win the Customer Wars

Virgin Mobile Australia is a major player in the Australian mobile phone industry. It had grown aggressively by pioneering new products and services, including a prepaid service that did not require a contract, free voice mail, and billing all calls by the second. Other competitors followed suit, leaving Virgin Mobile Australia wondering how it could maintain its competitive lead. The answer lay in making better use of the company's data.



Senior management wanted a better picture of the Virgin Mobile's customer base and how well the company was operating. This was no easy task. Virgin Mobile Australia had many different systems, each with different pieces of data that could solve only part of the puzzle. It had an enterprise system, a customer relationship management system, and systems for prepaid cell phone service as well as service that was billed to the customer each month. The company needed to develop a single enterprise-wide view of the data in all of these systems to produce "one version of the truth."

The company created a data warehouse that reorganized the data from all of these systems in a massive database to produce the company-wide information management required. The data warehouse runs on Oracle 9i database management software and was developed using Oracle 9i Designer to define the system's data model and Oracle 9i Warehouse Builder to design the data warehouse.

With the data warehouse, Virgin Mobile Australia can pull data from multiple systems together to obtain an integrated view of its customers and services. Every morning Virgin Mobile executives can check indicators such as the number of new connections made the previous day, the demographic profile of new customers, and the handsets they purchased.

Management can also find out the performance of each store and point-of-sale campaign, consumer reaction to new products and services, and customer attrition rates.

Most important, the warehouse provides data for monitoring customer usage in terms of the total minutes used each month and the revenue generated by each customer. Average revenue-per-user (ARPU) is a key performance indicator for this company to measure its success. All of this information helps Virgin Mobile react quickly to changes in a very dynamic market and improve its profitability.

Sources: Lynn Tryba, "Winning with a Warehouse," Profit Magazine, February 2004; and "Virgin Mobile Uses Business Intelligence to Achieve Rapid Expansion," www.oracle.com, accessed May 17, 2004.

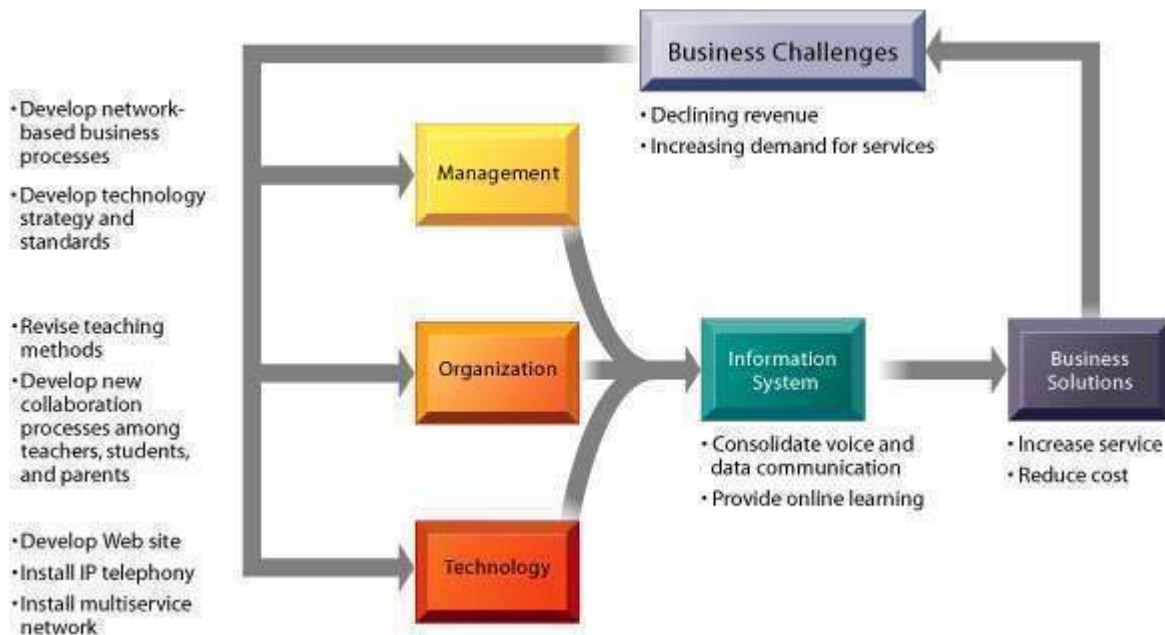
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Okanagan-Skaha School District Does More with Less Using Networking and the Internet

The Okanagan-Skaha School District in Penticton, British Columbia, is in an area blessed with "beaches, peaches, and wine." It is also an area where tax revenues and school budgets have been declining for several years while demand for information access and support services continue to grow. School administrators realized that the district's 19 schools serving more than 8,000 students had to do more with less. How could this be done? The answer: Use networking and the Internet to cut operational costs while expanding programs to schools and the wider community.



The school district had been using an expensive public telephone network and an aging data network that had cobbled together many different hardware and operating system platforms. Working with Cisco Systems and Boardwalk Communications, the school district standardized desktop hardware and operating system software and replaced its outdated data and telephone networks with a multiservice network that can run voice, data, and video applications using the Internet Protocol (IP).

The network supports Voice over IP (VoIP) technology which converts each teacher's classroom computer into a telephone that can transmit voice data in the form of packets over a data network based on the Internet Protocol. Using just a handset and a microphone, teachers can make calls from their computers without having to make a special trip to the administration office. This IP telephony system reduces the number of phone lines needed by the district from 150 to 25 and provides a uniform system for voice mail and systems administration, saving the district about \$60,000 per year.

Teachers have developed Web sites for collaborating with students and parents. For example, physics instructor Dan Bergstrom uses software to demonstrate difficult scientific

concepts so that students can make observations, take measurements, and manipulate the data to understand what is actually going on. Lecture notes are linked to lab notes, homework questions, and test questions. Students and teachers can access the district's network and all of its applications wherever they are working using a Web browser program.

The new learning environment helps students learn responsibility and time management. Each class has a Web site with its course schedule, rules and expectations, and dates for tests and assignments.

Sources: Howard Baldwin, "Thinking Big," Cisco IQ Magazine, First Quarter 2004 and "Okanagan-Skaha School District and Cisco Solutions Empower Teachers, Students and Parents," www.cisco.com, accessed April 27, 2004.

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The Boston Public Library Goes Wireless

Founded in 1848, the Boston Public Library (BPL) was the first free municipal library in the United States, the first to have a branch library, and the first to have a children's room. In recent years, BPL made history as one of the first large public libraries to offer Internet access. Now BPL is in the forefront again as an early library adopter of high-speed wireless networking.



BPL's landmark Copley Square facility and 27 other branches in Boston house 7.5 million books and serve over 2 million patrons each year. When BPL was renovating the Copley Square location, it became interested in installing a wireless network. A wireless network would not require extensive wiring, which could prove very difficult in a registered historic building that has federal restrictions on alterations. The library had a limited number of wired PCs with Internet access. A local area network (LAN) with 802.11b (Wi-Fi) wireless networking technology would provide convenient Internet access for library patrons with Wi-Fi-enabled computing devices, easing the demand on the wired PCs and also on the library's network switches. The wireless network would enable patrons and staff to access the network from anywhere within the library.

BPL enlisted Dimension Data and Cisco Systems for technical assistance with its wireless network. Working with the library staff, these companies developed a system to provide different levels of network access for staff, patrons, and children. Children logging on are automatically routed to a filtered server to prevent them from accessing inappropriate Web sites.

Dimension Data developed a plan for 70 strategically positioned wireless access points throughout the 1-million-square-foot-library site so there were no forgotten areas or spots with weak wireless signals. This created savings by eliminating the need to move or replace equipment.

Wireless network access is available throughout virtually all publicly accessible areas inside the main library. Patrons were so enthusiastic that the library extended the wireless network outside the building to include the building's exterior perimeter adjacent to the Copley Square park.

Since going wireless BPL has seen a significant jump in library membership. The number of Internet sessions is growing every month. The library is now planning to extend the wireless network into its reserve stacks so library assistants with handheld wireless devices can receive requests directly from patrons instead of requests on paper.

Sources: Amy Glynn Hornick, "Modern History," Cisco IQ Magazine, Second Quarter 2004 and www.bpl.org, accessed July 29, 2004.

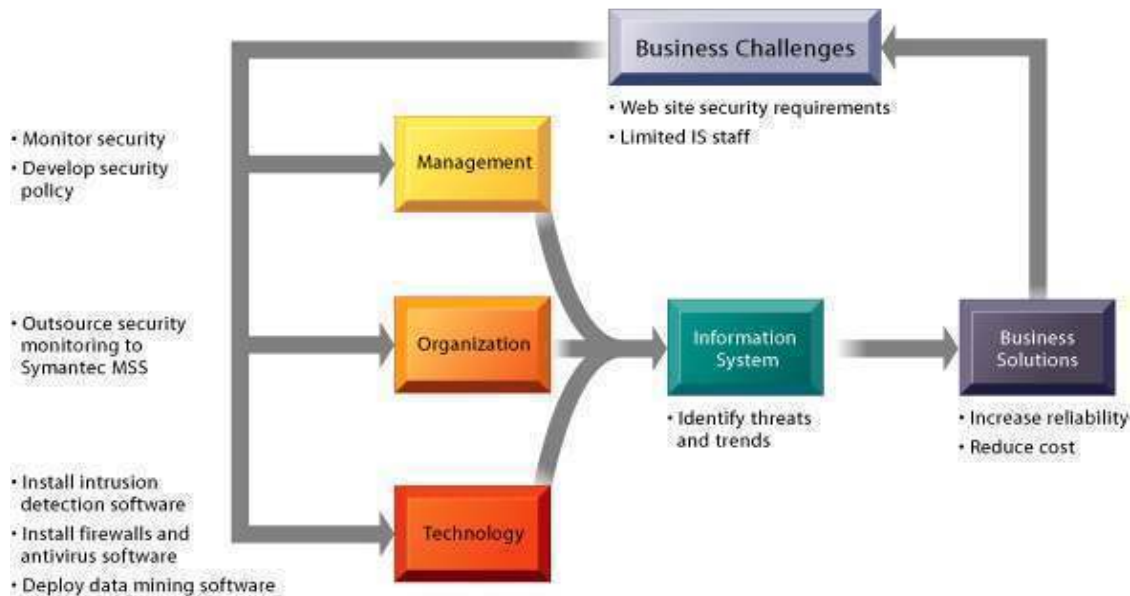
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Wesfarmers Outsources to a Managed Security Service

Wesfarmers Limited is a diversified Australian holding company for businesses in home improvement retailing, chemical and fertilizer production, building materials, industrial and safety product distribution, rail transport, and forest products harvesting, milling, and processing. Its subsidiaries include companies such as Bunnings, Blackwoods, and Kleenheat Gas.



Wesfarmers had to pay more attention to the security of its information systems when it set up an Internet banking site in early 2003 for its Landmark division supplying financial services and products for agribusinesses. People were accessing the Wesfarmers Landmark Web site 24 hours a day, seven days a week. Wesfarmers had already invested heavily in firewalls, intrusion detection systems, antivirus, and other security software, but it did not have sufficient information systems staff and resources for round-the-clock monitoring of infrastructure security.

Wesfarmers decided to outsource the management of its information systems security to Symantec's Managed Security Services, which now manages Wesfarmers's security environment remotely from an operations center in North Ryde, Australia. The service provides real-time security monitoring, enhanced reporting, and complete management of Wesfarmers's network using intrusion detection software, and it monitors Wesfarmers's firewalls. Symantec identified ways to improve Wesfarmers's security and to better manage vulnerabilities that could potentially threaten its network.

Symantec demonstrated a unique and highly cost-effective solution that uses best-practice processes and procedures. A key feature is the ability to log on to an online security portal and retrieve realtime reports that can immediately alert the company to potential risks.

Wesfarmers subsequently sold Landmark, but it decided to keep the Symantec monitoring service because it provides so many benefits. Symantec can analyze the data the system collects while it is monitoring Wesfarmers's network to identify trends and threats over time.

Data from Symantec's security monitoring logs for Wesfarmers are put in a data-mining process to identify intruders who keep coming back. And because Symantec constantly tracks new security threats around the world, it can take protective action on vulnerabilities to head off trouble.

Sources: Karen Dearne, "Wesfarmers Trusts Security to Specialists," Australian IT News, February 10, 2004; "Wesfarmers Limited Protects Its Resources with Symantec Managed Security Services," www.riptech.com/region/au_nz, accessed June 19, 2004; and www.symantec.com, accessed October 4, 2004.

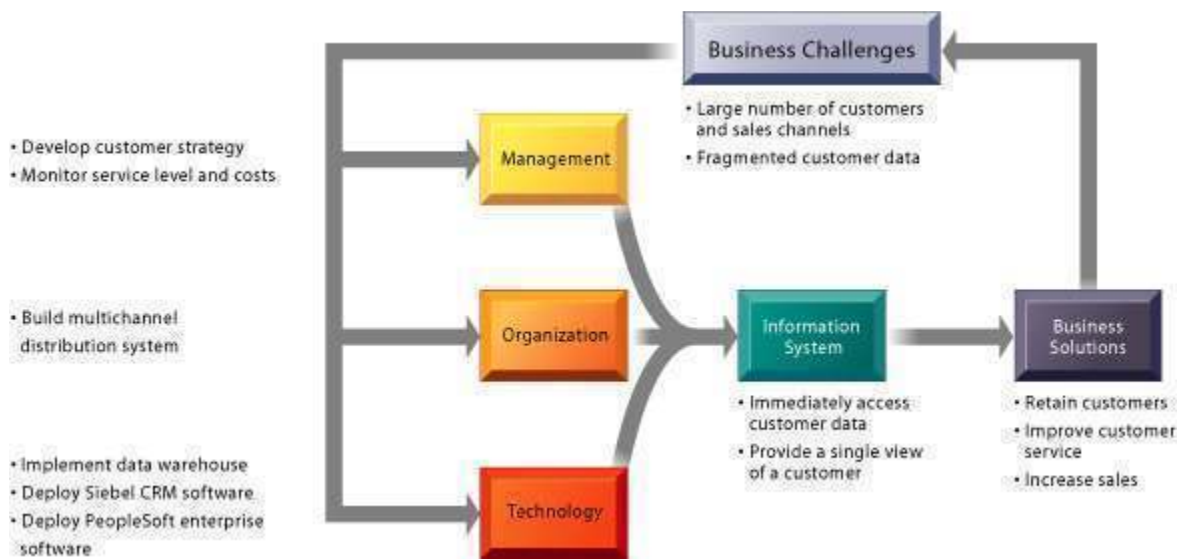
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PNC Banks on Enterprise Applications

PNC Bank is the largest business unit of Pittsburgh based PNC Financial Services Group, a diversified financial services company with more than \$60 billion in assets. It operates bank branches in Pennsylvania, New Jersey, Ohio, and Delaware as well as maintains a Web site for online banking. In addition to consumer banking services, PNC provides corporate banking, real estate finance, asset management, wealth management, and global fund services. PNC manages a broad array of customers and channels, and the bank wants to improve the service and value it provides to all of them.



The bank instituted a "Segment of 1" concept to guarantee its customers maximum personalization and information access, regardless of how they conducted business with the bank. It built a multichannel distribution system for its retail banking sector based on Siebel Systems customer relationship management (CRM) software and a data warehouse. To make sure the system worked properly, PNC carefully cleansed its customer data to eliminate incorrect addresses and multiple accounts opened by the same individual under slightly different names.

The system makes it possible to access and update customer information from any customer touch point, whether it is a bank branch, automated teller machine (ATM), telephone, or the Web. A customer transaction from any of these channels immediately enters the system and updates the customer's account data, which are maintained in a legacy mainframe hierarchical database and in Siebel's relational database. If a customer needs help, PNC service representatives can access up-to-the-minute information on that person's account, making it easier for customers to deal with the bank.

Extending the customer relationship management system to PNC's corporate customers proved more challenging. Each client company might appear as multiple clients because different groups within the same company use different financial products and services, such as cash management and corporate finance. Each product and service has its

own information system and set of sales and service specialists. This situation made it even more difficult to obtain a single view of the customer for optimal customer service. The Siebel CRM system nevertheless is able to integrate multiple account information to produce this holistic view of the customer.

Since making these changes, PNC has improved its retail customer retention rate from 91 to 94 percent, which is well above the banking industry's average retention rate of 85 percent for checking account customers.

Sources: Timothy Shack, "Banking on Customer Care," Optimize Magazine 22 (March 2004) and David F. Carr, "Bank Rolls," Baseline Magazine, March 1, 2004).

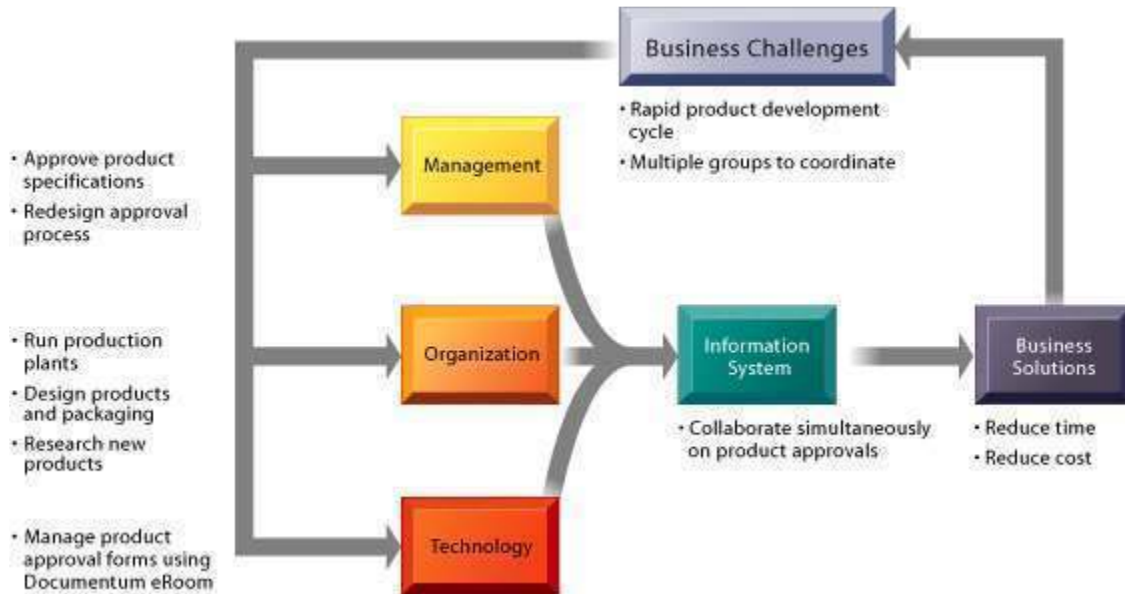
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Cott Struggles to Manage Unstructured Information

Cott Corporation is the world's leading supplier of store-brand soft drinks and juices, with beverage manufacturing facilities in the United States, Canada, Mexico, and the United Kingdom and a concentrate production plant and research and development center in Columbus, Georgia. Like other companies in its industry, Cott is under pressure to bring out new products very quickly.



Cott had been using e-mail to route product approval forms with details such as a new product's flavor formula or the artwork for a bottle label to managers of various groups involved in the product development process. Difficulties controlling this unstructured information delayed efforts to get new soda and juice products onto store shelves. Because of time lags in routing e-mail from one person to another, it took an average of 60 days for a form to obtain all the necessary approvals. People would begin various production activities before the approval was finalized in order to avoid delaying production of new beverages. But changes were inevitably required. The art department might start working on a product label based on an approval form and later learn that they needed to modify the design because of a change in equipment that affected the label's dimensions. Production of the new product might be moved to a different plant. As CIO Douglas Neary observed, "This was a major business problem that needed to be solved."

Cott solved this problem by adopting Documentum eRoom software to manage product approval forms. The software enables employees to set up online project work spaces to create and share documents. The documents are preserved in a company-wide document repository where they can be easily shared and accessed by everyone working on a new product. Each time a new product order triggers the creation of a new product approval form, the system sets up a work space for that product. Managers of various groups involved in product development can track the form, view any changes to the form, and work jointly with others on changes that affect multiple areas of production. By

managing product approval information more effectively, Cott's product approval process takes only two to three days and production is much more efficient.

Sources: Tony Kontzer, "Content Overload," Information Week, January 19, 2004; "New Product Development," www.documentum.com, accessed June 12, 2004; and www.cott.com, accessed June 12, 2004.

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Daimler's Bremen Plant Optimizes Deliveries with a DSS

The automotive plant of DaimlerChrysler in Bremen, Germany, has 13,000 employees and produces more than 800 cars per day. Each day, 70 rail cars and 500 trucks transport parts, components, and materials to the factory, which occupies an area of about 1 million square meters. This plant uses a just-in-time delivery system: All of the parts and components must be delivered to the plant's various assembly stations just at the moment when they are needed.



Nearly 20 years ago, Daimler management realized that the intraplant transport capacity was not utilized efficiently because there was no way to manage plant deliveries effectively. Once arriving at the plant, drivers moved their trucks to their loading points, not knowing if they would arrive there in the right order or if the loading point would be free. The trucks were not always able to deliver the required material during the agreed time frame. Material on the trucks might arrive too soon, or urgently needed material might not be available because the truck was waiting in line. Daimler needed a better way to make decisions about organizing its in-plant deliveries.

The company decided to use the Transportation Efficiency Support System (TESYS) to solve this problem. TESYS is a decision-support and optimization software system developed by INFORM GmbH of Aachen, Germany. It synchronizes deliveries with the capacities of loading points within the area of a plant and with the current needs of production. TESYS is currently used at multiple intermodal hubs, ports, and other logistic centers throughout the world.

When a delivery arrives at the DaimlerChrysler plant, requests for unloading are submitted to the plant's control board using either an automated order reception model or the telephone. The system optimizes the assignment, showing the shortest routes and quickest on-time completion of all transport orders. New delivery instructions are

transmitted to the appropriate driver using two-way radio. The system handles most time-critical operations automatically, although the software does allow human controllers to handle important special deliveries. Optimal use of resources cuts costs and increases the quality and productivity of the entire plant logistics system. The plant's logistics operations became much more efficient, with utilization of plant transport capacity increasing from 60 percent to 94 percent.

Sources: Hans Jurgen Zimmermann, "Online Optimization," OR/MS Today, April 2004; and www.inform-ac.com/tess/en/02_08.htm, accessed May 9, 2004.

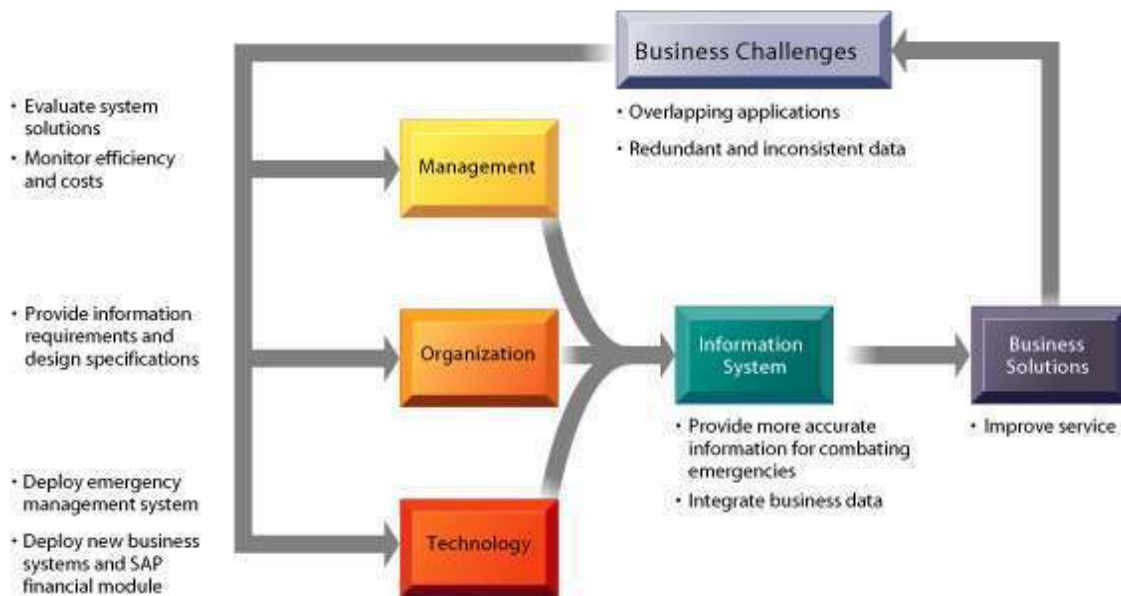
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Australia's Victoria Country Fire Authority Responds with New Systems

The Victoria Country Fire Authority (CFA) is one of the world's largest volunteer emergency services, with 63,000 volunteer members, more than 1,200 fire stations, and 850 permanent support and administrative staff in the state of Victoria, Australia. It is responsible for 2.5 million people in 980,000 homes and 150,182 square kilometers of land. In 2001-2002, CFA brigades responded to 34,139 incidents. CFA's ability to communicate effectively with its volunteer force can be a matter of life and death.



Until recently CFA was struggling to manage multiple technologies and applications with overlapping processes and functionality. These systems were maintaining a great deal of redundant and often inconsistent data that were getting out of hand. The data in CFA systems could not be trusted and were affecting CFA's ability to provide emergency management and ensure community safety.

CFA management contracted with consultants to develop a Web site called Brigades Online that provides information for volunteers and to develop more integrated business systems. The most critical project was an emergency management system, which provides mission-critical management of people and equipment for combating fires, and a supporting locality information system. The locality information system contains information about a particular location, including local risks such as the existence of dangerous goods in industrial areas, operational pre-plans, and CFA educational activities in that area.

Other important projects include new systems for finance, asset management, and human resources; interactive portals for staff and volunteers and for the community; a portal for communicating with local government authorities, utilities, and other state agencies; a performance management system; and a multimedia corporate database. CFA was able to use finance modules of the SAP enterprise system developed for another agency, the Metropolitan Fire brigade.

For each project, CFA researched information requirements, evaluated alternative solutions, reviewed business processes, and developed a business case and implementation schedule to ensure they were aligned with its business goals. Brigade volunteers as well as information systems specialists provided input on how the systems should be designed. Although not all systems could be immediately implemented, CFA emerged with a clear idea of what it needed and a strategy to move forward.

Sources: Sue Bushell, "Blazing a Strategy Trail," CIO Australia, June 2, 2004; and www.cfa.vic.gov.au, accessed September 24, 2004.

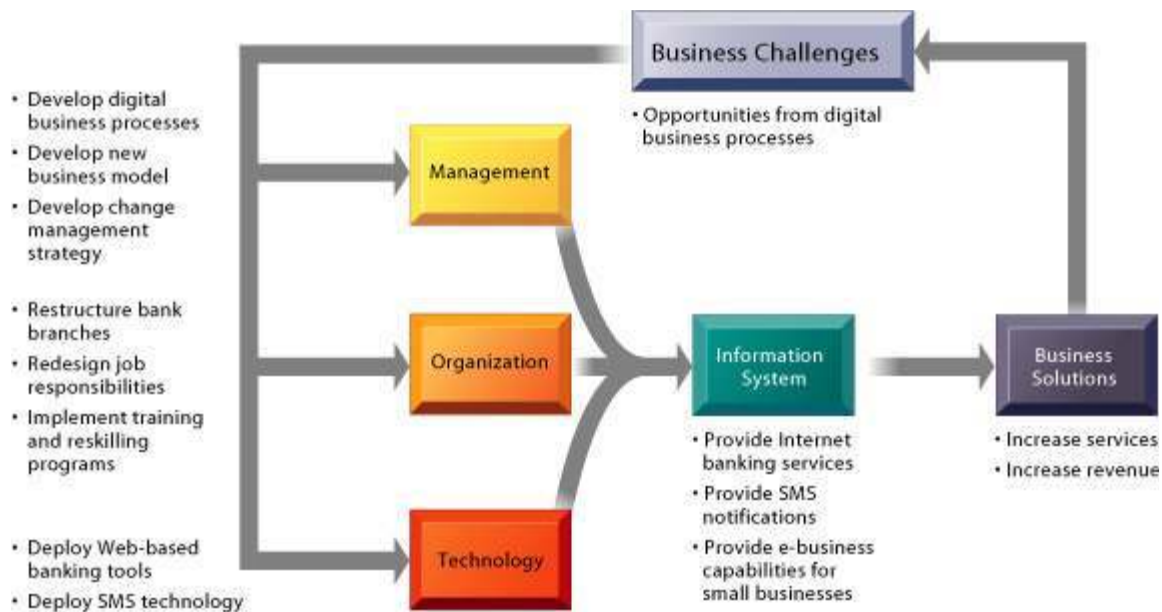
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HSBC Malaysia: Master of Change Management

HSBC Malaysia Bhd. is one of the oldest banks in the country of Malaysia. It is a wholly owned subsidiary of HSBC Holdings, headquartered in London, which is one of the largest financial services companies in the world.



This bank has been a leader in introducing Internet banking and Short Message Service (SMS) based banking in Malaysia, as well as new value-added banking services for businesses. HSBC's V-Banking (Value Banking) provides new electronic services to retail customers, whereas its automate@ HSBC initiative provides e-business and collaborative commerce technologies to local Malaysian small and medium-sized businesses.

V-Banking provides retail customers with over 30 telebanking and Internet banking services, consolidated portfolio summaries, and detailed account reconciliation. Customers can receive SMS Smart Alert notifications of returned checks, credit card payment details, and birthday greetings.

These initiatives have made the bank's business processes more digital, with 96 percent of its transactions now handled online. In changing the way the bank delivers services to both retail and corporate customers, these systems have naturally changed the way the bank works.

HSBC restructured bank branches across Malaysia to become Personal Financial Services (PFS) Centers. These PFS Centers offer 24-hour electronic banking machines with more self-service options and fewer counters manned by tellers. These counters focus more on providing personal customer service rather than traditional cash banking functions such as accepting checks and deposits. A portion of the HSBC Malaysia workforce had to change their job responsibilities from manual, labor-intensive tasks to working more closely with

customers as "personal bankers." HSBC's customer relationship management systems and call centers were enhanced to handle the new customer demand for information across a variety of touch points.

CIO Chu Hong Keong and his staff had to sell this new way of doing business to the rest of the organization. They tried to enlist support for the new business processes through meetings, demonstrations, and strategy discussions. The team ran retraining and reskilling exercises to promote more customer-oriented attitudes among banking staff. To train customers in new banking habits, Chu's group stationed V-Banking ambassadors at key branches to demonstrate how the new electronic banking services and Internet banking kiosks would save customers time and money. V-Banking succeeded because Chu and his managers understood the importance of changing the organization along with the technology.

Sources: Raoul LeBlond, "Time as a Strategic Tool," CIO Asia, March 2004; and www.hsbc.com.my, accessed July 11, 2004.

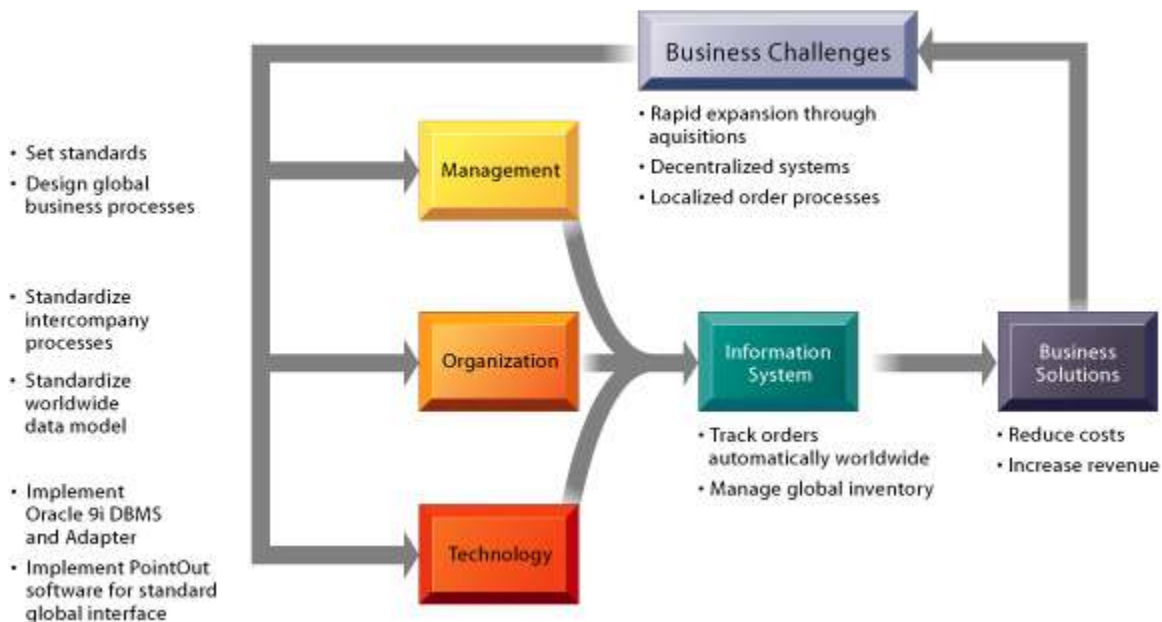
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Dräger Safety Creates a Global Supply Chain

Dräger Safety, based in Luebeck, Germany, develops and sells a wide range of safety products, including protective suits, breathing equipment, and gas detection systems. The company mushroomed from a two-person shop in 1889 to a network of more than 40 subsidiaries and is considered one of the world's most innovative safety-product companies.



As the number of Dräger subsidiaries grew during the last decade, the company was losing revenue and facing higher costs. Dräger could not rapidly take and fulfill orders among 40 companies spread across Europe, Asia, and North America. Every order had to be handled manually because each Dräger subsidiary maintained its own set of information systems. Dräger had no way to link sales, production, storage, and shipping automatically across all of its units worldwide.

For example, the company might take an order in Canada, generate a purchase order in Germany, source the product in the United States, and then ship it to Canada. The salesperson taking the order would create a purchase order on paper and mail it to a production hub. There the order would be input, assembled, stored, and shipped back to the originating sales office, which would then ship it out to the customer. This cumbersome manual system created delays and poorly managed inventory.

For a solution, Dräger selected Oracle9i Database and Oracle 9i Application Server (Oracle9iAS) Interconnect Adapter with standardized enterprise resource planning (ERP) interfaces. The Interconnect Adapter middleware enabled Dräger to link the systems from all its subsidiaries easily because it did not require programming point-to-point connections between the various systems and could connect a broad range of enterprise systems to the same data platform.

Dräger did have to standardize intercompany processes, including planning, reporting, and product and inventory management to use the common database effectively. The company also had to create a single worldwide data model with standard codes and definitions for customer items, vendor items, production orders, and bills of materials. A software program called PointOut developed by Munich software firm mSE provides a desktop data interface with the same look and functionality at each company.

Today, Dräger's entire order process is fully automated and can track orders worldwide. Dräger can centralize inventory in each region and ship products directly to customers from the closest regional warehouse. Orders that used to take weeks to fulfill can now be processed in minutes. Dräger has been able to reduce its global inventory by 40 percent, slash inventory at sales locations by 95 percent, and lower process costs by 30 percent.

Sources: Shari Caudron, "Safety in Numbers," Profit Magazine, February 2004; and www.drager-safety.com, accessed June 4, 2004.

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