

Dell Online

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Background (General Facts) Dell is a computer corporation recognized for manufacturing computer systems through parts assemble. In 1983, Michael Dell saw an opportunity in using IBM compatible computers for a new assembly line that can be sold to local businesses. The idea as explained by Michael Dell, in an interview with Joan Magretta[1], is that in the early days of computers' manufacturing, companies had to be able to produce every part of the system. As the industry matured, companies started to focus on single parts and to become specialized in creating items that can be assembled with other parts to prepare a computer. As a result, Dell understood that to have a competitive edge in the market, they needed to focus on activities that drive sales instead of putting capital in producing items that other manufactures are already creating. In the 1990's, the computer market revolved around desktops, notebooks, and network servers. Dell competed with high-end machines from IBM, HP, and Compaq with a product line that provided value-priced systems for consumers and highly reliable networked systems for business. In the late 90's, around 40% of households owned a pc in the US. On the contrary, from the business side, around 80% of the companies still had old server and desktop machines. Management had to approve purchasing orders, which resulted in only 2.2% of servers' sale in comparison to the total purchases for desktop PCs in 1996. In order for Dell to achieve \$7.8 billion from sales in the late 90's, it had to skip over the traditional channels of using retail or value-added resellers (VARs) to sell directly to the consumers . The "direct-model "or as Michael Dell comments on how his new employees call it "The model" is not that all powerful system. It is simply a way for Dell to cut on the standard supply chain cycle and deliver goods directly from the manufacturer to the customer. They created partnerships with several suppliers such as Sony, Intel, and others to deliver goods effectively at the time of the order to Dell's plant where the assembly took place. The delivery and shipment were outsourced through a dedicated service that also insured delivering the monitors directly from the supplier at the same time. Mr. Dell talks about how suppliers are benefiting from the fact that Dell buys more items from the suppliers keeping no inventory and only requesting faster delivery upon orders. In 1996, Dell capitalized on the growing number of customers who are using the Internet and launched its online store at dell.com. The online venture then proved to be the most appropriate sales channel that matched the supply chain direct model implemented by Dell. In its path to compete in the market, Dell had to provide additional services such as DellPlus that enabled Dell to install commercial software packages, DellWare which provided hardware and software from other vendors, and after sales and on-site support services. These actions, as described by Michael Dell, required establishing more partnerships, which Mr. Dell describes as a process of "trial and error". The integration with partners was changing as the technology is evolving and many vendors go volatile while others remain sold. Furthermore, looking for an IT company to build the online store brought in very few players, which made Dell accept the overhead of developing the portal in-house.

[~~pagebreak~~] **Enterprise Architecture Issues** Supply Chain Management: The purchase and number of transactions that Dell took in required a properly configured and concise business process. In-sourcing: To meet the demand of the market some parts of the process required the services of other companies that can be in partner with Dell. Quality Assurance: The computer industry is a very dynamic one, which makes quality products stand out when faced with technology-oriented consumers. Business Automation: As Dell advanced into online markets, its sales staff feared from losing their jobs in favor of automated sales transactions. Dynamic Industry: The technology industry requires closely monitoring consumers' trend to maintain a low gap between the point of demand and the point of supply. **Analysis Supply Chain Management** Supply Chain Management (SCM) aims at integrating all corporate activities to improve relationships at all levels (internal operations, supplier networks, and distribution channel) to meet the competitive edge and satisfy the customer (Al-Mashari and Zairi 2000)[2]. In order to build an effective and complete business process that supports SCM, information among all business partners need to be shared. Information sharing through the Internet reduce the gap for business-to-business (B2B) commerce by enabling seamless integration with enterprise processes among partner corporations (Archer 2006)[3]. Dell developed its internal business process by creating production cells that start assembly at the point of order. It also established an internal information system to make the details of the products under production electronically available to all parties within the chain. To manage the

supply of computer parts, Dell maintained close relationships with their suppliers and logistics providers to make their vendors manage the inventory system while Dell focused on product assembly (Kumar and Craig 2007)[4]. In addition, Dell used enterprise technology to make their database and methodologies available to the supplier to understand how Dell works. On the consumer side, orders made through the phone or online through dell.com produced a tracking code that the consumer can use to track the status of his or her order at any time through the phone or on Dell's website. **In sourcing** Organizations worldwide are benefiting from the specialized services offered by various companies. In the shipping and transport arena, companies Like UPS (United Parcel Service) and DHL stand out as masters in their industry. UPS and DHL have established offices and transportation vehicles all across the world. They provide business services through in-sourcing which enables them to be part of the internal business process of companies (Marcum 2007)[5]. To a company like Toshiba for example, after-sales support service would require shipping the damaged computer to and from the consumer's side. For that, UPS would say, "Look, instead of us picking up the machine from your customers, bringing it to our hub, then flying it from our hub to your repair facility and then flying it back to our hub and then from our hub to your customer's house, let's cut out all the middle steps. We, UPS, will pick it up, repair it, and send it right to your customer" (Friedman 2006)[6]. Dell understands that it need not compete unless it would get the advantage in the market. Michael Dell says that one should evaluate the competition field and pick the best one. In that context, after-sales services were contracted with firms who are specialized in that field and can be contacted directly through the integrated supply system to fulfill the requests of the consumers. Furthermore, shipping is handled through multiple shippers to deliver systems to consumers or to resellers across the world. In addition, Dell has saved the overhead cost of monitors' delivery by requesting shippers to deliver from the monitor's supplier directly to the consumer at the same time.

[**-pagebreak-**] **Quality Assurance** In a competitive arena, companies seek to have an advantage through means that are not necessarily related to price. Constraints against outsourcing due to excessive decentralization within organizations can have a negative impact on the value chain process. Combing various options and being open to diversification would support in increasing the speed-to-market and enhancing the quality of products (Ernst 2000)[7]. Dell has an operational facility in Penang Malaysia, which places Dell at a central position near to where most suppliers actually have their factories. Orders for goods come directly to Penang center through the integrated suppliers' logistic centers (SLCs) chain[8]. The Penang center sends emails to suppliers requesting the parts that will be assembled based on the customer's order. The entire model was efficient enough to require no more than 36 hours from order to shipping. In terms of quality of service, Dell has won numerous awards for highest quality. In spite of that, it continues to find means to increase the efficiency of its products. Michael Dell suggested that reducing the human interaction with hard drives during assembly would decrease its failure rate. As a result, the reduction of the number of "touches" dropped the failure rate to 20%. **Business Automation** The general attitude from individuals and employees within organizations is that automation through information systems complicate their internal processes, and might result in cutting down the number of staff (Khatibi, V.Thyagarajan and Seetharaman 2003)[9]. There are several psychological and behavioral problems associated with reluctance to change, which appear to impede the growth of E-commerce. On the other hand, retailers no longer think their web sites are simply an added benefit for their customers since the ROI (Return on Investment) percentages from online websites have far outweighed their bricks-and-mortar counterparts (Casey 2004)[10]. For that reason, the staff involved in the traditional sales process requires training to embrace new technologies and to learn how they can benefit from it. For Dell online store the response from the consumers was huge, however, at first the sales representatives feared that the online website would reduce the number of sale deals they closed. To overcome this, Dell introduced the cost saving model showing how the online store would support sales representative close more deals and at the same time would produce cost effective results that would have a positive ROI on the business. **Dynamic Industry** Customer relations management (CRM) is a very vital competency that was born from the amount of transactional sales deals through call centers. The process of understanding customers goes through the initial phase of collecting data then analyzing trends and eventually building a knowledge base that will drive the profitable relationship (Liew 2008)[11]. Organizations' use of CRM models is an attempt to get firsthand knowledge that would improve marketing effectiveness, bring more personalization, and build brands among other objectives based on the nature of the business (Anderson, Jolly and Fairhurst 2007)[12]. Michael Dell model is based on keeping no inventory, in order for Dell to maintain that they focused on segmenting their customers into scalable businesses that

can be analyzed for their level of demand. Sales executives at Dell used communication skills to elicit information from customers that would further support the demand forecast initiatives at the company. In addition, Dell sent surveys to customers to further understand the satisfaction level with the services provided by Dell and modify its product line and services accordingly. Furthermore, Michael Dell discussed how regional meetings in various countries invited potential customers to further enrich the relationship and give room for comments and feedback about Dell's services. On top of all that, Dell strived to provide information for its customers to help them make proper choices for their IT requirements and gain privileged information about new and upcoming technologies. Dell invested in developing a web portal in the form of "Premier Pages" for high-end customers and another for small to medium businesses at Dellmarketplace.com[13]. Both sites aim at providing information to customers and establishing a single point of access for customers' IT service requirements. [-pagebreak-]

Conclusions Dell is simply a success story; it shows how one can gain market advantage by simply understanding what brings value to customers. No one, even Michael Dell himself when he started, thought that people would enjoy customizing their PC orders and wait patiently as the order makes its way back to their homes. Some studies talk about how people challenged the initial delivery estimates provided by Dell to see if they were met. The level of expansion Dell strived to achieve brought in problems as with any growing business. However, by adapting techniques such as In-sourcing and mutual benefit partnerships it reduced its potential staff from 80,000 to only 15,000. Dell also was aware of factors that would hinder its supply chain. For example, they maintained a multiple list of shippers as not to be affected by unexpected delays and organizational issues. In addition, they understood the importance of developing their own enterprise systems in-house to control all the variables and maintain their business processes. This is one of the best case studies in the IT industry. I believe the level of commitment Dell showed in the model he created is inspiring. On the editorial side, I believe more highlights on the internal infrastructure of Dell's network would have helped in building an understanding of how the supply chain actually worked. Did they use CRM modules, ERP, SCM, or a combination of all? How did Dell secure its information link with its suppliers, were all of them mature enough when it came to Information systems? **Recommendations** Organizations should focus on value adding activities like establishing online portals for their customers. Businesses should conduct frequent surveys to measure the level of service they provide and work on enhancing their products. Organizations should decentralize and enable expansion through global techniques such as out-sourcing and in-sourcing. Building internal enterprise information systems is the most effective methodology for information and knowledge sharing. Establishing multiple touch points with customers, strengthen the relationship and increases satisfaction levels. Meeting global quality standards is the only way to get an advantage in a competitive arena. Internal organization assessment and training is vital to maintain the high spirit of employees and increase their productivity. Management support and funding is a key element in the success of any information system implementation. **References** Joan Magretta , "The Power of Virtual Integration: An Interview with Dell Computer's Michael Dell." *Harvard Business Review* 76, no. 2 (Mar/Apr 1998): 72-84, 13, 2. Majed Al-Mashari and Mohamed Zairi, "Supply-chain re-engineering using enterprise resource planning (ERP) systems: an analysis of a SAP R/3 implementation case." *International Journal of Physical Distribution & Logistics Management* 30, no. 3/4 (2000): 296-313 Norman P. Archer, "Supply chains and the enterprise" *Journal of Enterprise Information* 19, no. 3 (2006): 241-245, 242 Sameer Kumar and Sarah Craig, "Dell, Inc.'s closed loop supply chain for computer assembly plants." *Information Knowledge Systems Management* 6, no. 3 (2007): 197-214,18. Marcum, Jennifer. "In-Source or Outsource?" *BioProcess International*, June 2007 Thomas L. Friedman, *The World Is Flat* (New York: Farrar, Straus and Giroux, 2006), 168. Dieter Ernst, "Inter-Organizational Knowledge Outsourcing: What Permits Small Taiwanese Firms to Compete in the Computer Industry?" *Asia Pacific Journal of Management* (Springer Netherlands) 17, no. 2 (August 2000): 223-255, 248 Friedman, *The World is Flat*, 516 Ali Khatibi, V.Thyagarajan, and A. Seetharaman, "E-commerce in Malaysia: Perceived Benefits and Barriers." *Vikalpa: The Journal for Decision Makers* 28, no. 3 (Jul-Sep 2003): 77-82, 6. Bernadette Casey, "Online Monday blacker than in-store Friday." *DSN Retailing Today*, December 13, 2004: 13-13,0. Chor-Beng Anthony Liew, "Strategic integration of knowledge management and customer relationship management." *Journal of Knowledge Management* 12, no. 4 (2008): 131-146. Anderson, Joan L., Laura D. Jolly, and Ann E. Fairhurst. "Customer relationship management in retailing: A content analysis of retail trade journals." *Journal of Retailing & Consumer Services* 14, no. 6 (November 2007): 394-399, 6. Alorie Gilbert, "Dell Online Marketplace Targets Small Businesses." *Electronic Buyers' News*, October 2, 2000: 58, 0.