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Session 4 : Customer Satisfaction Through ICT

Presenter

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Quality Strategies Toward the Customer
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**Customer Satisfaction Via
Information And Communications Technology**

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Abstract

This paper attempts to elucidate the importance of Information & Communications Technology (ICT) in Customer Satisfaction. It explores several effects which the ICT has in grooming a new landscape for doing business by organisations. Several ICT innovations are discussed in relations to providing good customer services by both types of organisations: brick and mortar as well as online businesses. In addition several causes, issues and solutions faced by organisations in attaining customer satisfaction are identified. A glimpse on a recent development in providing good services to UTM students will also be introduced. However the author concludes that the importance of the human factor in customer satisfaction is still core and can never be replaced by any technologies be it ICT.

1.0 INTRODUCTION

1.1 Definition:

Customer satisfaction depends on a product's perceived performance in delivering value relative to a buyer's expectations. If the product's performance falls short of the customer's expectations, the buyer is dissatisfied. If performance matches expectations, the buyer is satisfied. If performance exceeds expectations, the buyer is delighted. Outstanding marketing companies go out of their way to keep their customers satisfied. Satisfied customers make repeat purchases, and they tell others about their good experiences with the product. The key is to match customer expectations with company performance. Smart companies aim to delight customers by promising only what they can deliver, then delivering more than they promise. (Kotler, 2006)

Customer satisfaction is often equated to service quality. Some of the definitions of service quality are as follows:

- Service quality is determined by the differences between customer's expectations of services provider's performance and their evaluation of the services they received. Parasuraman et al., (1985, 1988):
- Service quality can be defined as "the difference between customer's expectations for service performance prior to the service encounter and their perceptions of the service received". Asubonteng et al. (1996)

- Service quality as the subjective comparison that customers make between the quality of the service that they want to receive and what they actually get. Gefan (2002)

1.2 The Importance Of Customer Satisfaction Now is More Than Before:

Up until now it is all about organisations, but now it is all about individuals. This change in focus is mainly due to the advent and prevalent use of the internet, www and mobile communications technology. The Internet and the World Wide Web have changed the human interaction landscape to a new normal.

Thomas Friedman in his best-selling book, *The World is Flat*, also concurred about the present world being different from the age before Internet. He noted that the world had undergone three eras of Globalisation, i.e. superiority and power has changed hands, initially among countries in Globalisation 1.0 to among companies in Globalisation 2.0 and in Globalisation 3.0 the playing field is open to you and I, individuals of the networked world.

For instance, a boy in Rompin, may sell his unique butterfly collections to practically anyone in the world who bids the highest via e-Bay or even via his own website. Bloggers without journalism degree can produce their own stories and command a wide range of readers (and sometimes incomes). On-site reporting using a 3G phone camera can replace expensive cameras of TV broadcasting

companies. The world has indeed become flat without borders.

The empowerment of the individuals has made them at par as the big corporations. So the competition now is not only among corporations but also against individuals. And on top of that, customers too have transformed to become empowered individuals who demand global standards upon providers of local products or services. Thus it is vital and a matter of survival for companies and governments to ensure high customer satisfaction as their value proposition.

1.3 Scope of this paper:

This paper shall look into the reasons of ICT use in customer satisfaction and examining some selected case studies around the world and various industries.

2.0 TEN FORCES THAT FLATTENED THE WORLD – A Quick Review

2.1 The Fell of Berlin Wall (Communism on 11/9/1989) and the Rise of Windows (PC Revolution beginning 1977)

Socialist countries adopting capitalism and advocating democracy. This dramatic change has brought about a new opening to the once sleeping giants. The EU has overnight 25 countries from the initial 15 country-members.

Steve Wozniah and Steve Jobs created Apple II which uses windows technology as opposed to the non-user friendly of

the DOS opened up a whole new beginning in empowering individuals to use the PC more effectively. This was further enhanced by the Internet.

2.2 The New Age of Connectivity: When the Web Went Around and Netscape Went Public

On August 6, 1991 Tim Berners-Lee designed the WWW and HTML. It is a system for creating, organising, and linking documents so they could be easily browsed over the Internet. Later on August 9, 1995, Netscape Communications went public. It's Netscape browser not only brought the Internet alive but also made Internet accessible to everyone. This event was further catalysed by the roll-out of Windows 95 fifteen days later.

Windows 95 would soon become the operating system used by most people worldwide, and unlike previous versions of Windows, it was equipped with built-in Internet support, so that not just browsers but all PC applications could “know about the Internet” and interact with it.

2.3 Workflow Software

Work flow software refers to the ability of having work processes being shared, distributed and used among others in different places without care about time zone and geographical. Examples: Wild Brain, e-Bay and Salesforce.com. Important internet standards were developed to facilitate communications among machines automatically – HTTP, HTML, TCP/IP, XML, AJAX.

2.4 Uploading

Uploading is another capability to share with others over the Internet. There are four types of uploading: community developed software (Apache, open source), wikipedia, blogging and podcasting. Uploading is thus one of the most revolutionary forms of collaboration in the flat world. Also it is a huge flattener because it responds to a very deep human longing for individuals to participate and make their voices heard.

2.5 Outsourcing

The US-India relationship resulting after the dot.com crash and Y2K events, lead towards giving Indian IT companies providing total solution for the lowest price for US companies to outsource as many functions as they can especially running the backroom operations.

2.6 Offshoring

When China officially joined the WTO in December 11, 2001, this gave a huge boost to another form of collaboration. Offshoring is when a company takes one of its factories that it is operating in one country and moves the whole factory offshore to China. China, with huge low wage workers maintains its role as a major flattening force by being a collaborator with the worldwide manufacturers on everything.

2.7 Supply Chaining

Supply chain, logistics network, or supply network is a coordinated system of organisations, people, activities, information and resources involved in moving a product or service in physical or virtual manner from supplier to customer.

Supply chaining is both enabled by the flattening of the world and a hugely important flattener itself, because the more the supply chains grow and proliferate, the more they force the adoption of common standards between companies.

2.8 Insourcing

United Parcel Service, Inc. (UPS), a package delivery company, provides specialised transportation and logistics services in the United States and internationally. It offers a range of supply chain solutions, such as freight forwarding, customs brokerage, fulfillment, returns, financial transactions, and repairs.

It has created a whole new form of collaboration and creating value horizontally. The small could act big, meaning that small companies could suddenly see around the world.

2.9 In-forming

In-forming is the equivalent of an individual's personal analog to uploading, outsourcing, in-sourcing, supply chaining and off-shoring. This is made possible with the

advent of search engines. The most famous and powerful search engines is Google (misspelling of the googol). The easier and more accurate searching becomes, the more global Google's user base becomes, and the more powerful a flattener it becomes.

2.10 Steroids – Turbocharging all the above flatteners

Four aspects that have been identified as turbocharging the above flatteners are categorically classified as digital, virtual, mobile and personal.

Digital: Faster computing power due to cheaper, faster and efficient processor chips and storage technologies.

Virtual: Breakthrough in instant messaging (Yahoo! Messenger) and file sharing (BitTorrent etc) allows users to share songs, etc.

Mobile: Breakthroughs in making phone calls over the Internet (VOIP) eg. Skype, has reduced international phone calls to local charges.

Personal: (i) Videoconferencing makes it possible for people around the world to 'sit' together. (ii) Computer graphics makes it highly visual, interactive interfaces to all sorts of applications in health care, education, science and business possible and near realism. (iii) 3G and other wireless technologies and devices allows us to manipulate, share, and shape our digital content anywhere, with anyone, and totally mobile.

3.0 CASES OF ICT BOOSTING CUSTOMER SATISFACTION

There are too many cases to quote here but the following have been selected to show a sense of diversity in the use of ICT in providing services to customers.

3.1 The Retail Service industry in the US of America

It is usual for the retail service industry to be among the first to be hit whenever there is an economic downturn. Currently this is being experienced globally including the USA. However, in a recent survey conducted by the US Retail Service Research (RSR), sales reports from many of the nation's retailers, released in early May, 2008 were surprisingly better than expected, despite the mounting economic despair. Thomas Wailgum reported in the CIO.com.

The reason for this was that retail winners seek to satisfy their otherwise frustrated customers for the longer term. They also don't merely do the same things better, but they most often do different things with their businesses. One of the features found was the emphasis on customer centricity practiced by the retailers. Seventy percent of the respondents reported that employee-facing tools and technologies had at least some priority in their strategy to drive customer satisfaction, versus only 67% in a similar study done in 2007. Also, 85% of respondents said that customer-facing tools had at least some priority in their strategy to drive customer satisfaction.

The perception and importance that winning retailers place on enabling their customers (and employees) with technology tools is evident from the survey data: 93 percent of retail winners say there's opportunity in adding customer-facing self-service technologies, versus just 33 percent of retail laggards. In addition, the laggards identified by the survey data appear to be "fighting a death spiral" against new IT-enabled technologies.

Below are the technologies deployed by the retail industries as found in the survey:

- **Modern POS Hardware and Software:** 57 percent of winners have had this in place for more than a year, versus 37 percent of average performers.
- **Customer Facing Technology Touch Points:** In use by 40 percent of winners versus 20 percent of laggards.
- **Distributed Order Management:** In use by 36 percent of winners versus 7 percent of laggards.
- **Self-Service Price Checks:** In use by 28 percent of winners versus 13 percent of laggards.
- **Contactless Payments:** Used by 15 percent of winners versus 6 percent of average performers and no (zero) laggards.
- **In-store Rewards and Coupons:** In use by 46 percent of winners versus 27 percent of laggards.

- **Cross-channel Customer and inventory Synchronisation:** Used by 20 percent of winners versus 12 percent of average performers.

3.2 Land Administration in Malaysia

The government of Malaysia through its Ministry of Natural Resources and Environment has embarked on the National Land Administration System called e-Tanah which is claimed to be customer-centric.

As an example, the concept of Single Point of Contact (SPOC) is designed to function as an entry point for all land and land-related transactions which are presented at the land office, viz:

- Customer Centric Organisation - customers' satisfaction priority.
- Single Service Counter - Process Reorientation through one stop centralised counter functionality
- Customer Service Management - assisting the public to obtain Land Office services and serve as single contact point for all businesses
- Multiple Access Channel - facilitate public to interact with Land Office, i.e. e-payment
- Integration among the systems - quick and easy retrieval of data, i.e. e-search

The development of the e-Tanah pilot system in Penang started in October 2005 and will take 2 years to be

completed. The roll-out of the system to all states in Peninsular Malaysia is approximately by end of 2008 - 2010. The public in Penang would be able to use the online system once the Final Acceptance Test (FAT) is completed in October 2007.

3.3 Winners of the 3rd Annual Customer Innovation Awards (2008)

The Customer Innovation Awards program is an annual competition, which recognises outstanding companies for their use of technology to deliver innovative customer service in highly dynamic environments.

Six of the eight companies honored this year are from Europe which included Belgacom, BT, Lekane, Philip Morris International, Sky and UniCredit Global Information Services while two are from the US and they are AT&T and Stream Energy. Each company used technology innovatively to streamline and optimise customer service. The companies were chosen for transforming their customer contact centres, increasing customer satisfaction and improving the contact centre's alignment with company business goals.

The three overall criteria that determined the award level were innovation, optimisation and improving the customer experience. The most universal thread among all of the innovators was their ability to link business issues to customer service, achieve optimisation, and treat the contact centre as a strategic opportunity. The organisations also consistently scored high in the "strategic alignment

between contact centre and customer service goals" category. The highest order is a 4-Star rank followed by 3-Star.

Details of the finalists are as follows:

- Belgacom, a 4-Star winner, is the Belgian provider in the field of integrated telecommunications services. Belgacom scored well by balancing service-to-sales conversion while optimising its customer service organisation. Belgacom used a variety of key technologies to improve the customer experience:
 - an intelligent Customer Front Door iCFD that anticipates customer needs, rather than forcing customers into an automated system that is singularly focused on cost containment.
 - Customer satisfaction increased 10 percent and, at the same time revenue generating capacity increased 3 percent.

- BT, a 4-Star winner, is one of the leading Global Communications providers, operating in 170 countries, with over 30,000 contact centre positions within the company, and more than 100,000 contact centre positions managed for its clients. BT undertook a transformational programme to improve the overall customer experience through the use of:

- An agile, global unified communication infrastructure using IP technology and the Genesys SIP (Session Initiation Protocol) Server at the core of the solution. BT was deemed outstanding in extending the boundaries of each contact centre and creating global virtualisation across all media.
 - Its customer benefits include intelligent routing that leverages the best BT resources and the integration of true blended multimedia channels.

- Lekane, a 3-Star winner, based in Finland, produces software to mobilise and expand the contact centre and support mobility. The Nordic leading telecommunications company created the contact centre to reach mobile and field service staff, while managing their availability and presence. Lekane was noted for extending access to experts outside the contact centre to streamline and optimise customer service.

- Philip Morris International, a 3-star winner, based in Lausanne, Switzerland, is the leading international tobacco company. Philip Morris, along with its partner Orange Business Services, leveraged unified communications technology to provide collaboration,

rich presence, and streamlining of employee communications.

- its optimisation capabilities utilised the Genesys Enterprise Telephony Solution (GETS), a platform which provided employees with seamless control of their desktop phones via the computer, and gave information workers the ability to access availability and presence information at their Corporate Headquarters in Lausanne, Switzerland and in branch offices in Paris, the UK, Hong Kong, and Melbourne, Australia.
- Sky, a 3-Star winner, is the UK's largest provider of Pay-TV, Telephony and Broadband products. Sky has leveraged IP telephony and virtualisation to create a solution that can dynamically route customer interactions and enable flexible changes in organisational processes.
 - Genesys SIP (Session Initiation Protocol) Server extends the contact centre across multiple sites. This allowed for a more consistent experience across internal operations and centres of outsourcing, as well as the ability to monitor the global in-house and outsourced operations.

- UniCredit Global Information Services, a 3-Star winner, is the ICT Company of one of the largest financial services organisations in Europe (UniCredit Group) with more than 40 million customers in 23 European countries and representative offices in 27 other markets.
 - Created a highly flexible IT environment that successfully met both business and customer needs across its pan-European operations, including extending customer service to its multiple branch offices by leveraging business process routing and SIP technology to serve multiple product lines, business units, and languages.

- Stream Energy, a 4-Star winner, is one of the largest privately held participants in the Texas deregulated electricity market, with roughly 300,000 residential customers. Stream Energy was best noted by the judges for its strategic use of customer service, which cut across self-service and assisted service to create a seamless customer experience. Stream Energy also created a strategic environment to bring together a wide range of multimedia, live and assisted service.

- AT&T, a 3-Star winner, is a publicly-traded, San Antonio-based telecommunications company and the largest provider of wireless in the U.S. with 67.3

million customers and 302,000 employees. AT&T scored extremely well in optimising the customer experience and using IP to enable virtualisation. AT&T's use of technology not only allowed it to extend the boundaries of the contact centre, but also created consistent business processes and was considered by the judges to be the most highly-scaled environment.

3.4 UTM's Latest Initiative to Boost Students' Experiential Learning

UTM has always been serious in providing students with the best teaching and learning facilities. The use of ICT in this area started with the widespread use of the computers as early as the early 80's. Later the use of e-Learning became a hit among the lecturers and students.

Recently, in mid 2007, UTM again became the first Malaysian university to launch its very own e-Portfolio for the students. Students are given individual storage to document and store their selected artifacts as evidences in digital formats, and also to make reflections on their learning experiences from first year to their final year.

This e-Portfolio is developed in-house by involving all stakeholders including students and academic advisors. It uses the web-based technology with workflow features that is familiar to all levels of students. Apart from this the e-Portfolio is seen as a service that empowers students to

take charge of their learning activities in campus as well as facilitating them to chart their future goals and undertakings.

It is beneficial to all the affected stakeholders. Hence, besides helping the students, this customer-centric system also supports the academic advisors in their advising capacities, the university administrators in maintaining students' performance as well as informing parents of their childrens' achievements. Potential employers can also be given access by students to facilitate them in finding the right jobs.

4.0 SUMMARY

From the above cases, several ICT technologies have been mentioned and these can be summarised as follows:

- Customer Facing Technology Touch Points, including RFID, bar code system, integrated inventory systems, etc.
- Distributed Order Management which is part of Customer Relationship Management (CRM), Supply Chain Management (SCM) and Enterprise Resource Planning (ERP).
- Self-Service Price Checks using bar code system or RFID or other sensor-based technologies
- Contactless Payments utilises wireless telecommunications and internet connectivity with receiving banks and the organisations' internal accounting systems
- In-store Rewards and Coupons which is part of data warehousing and business intelligence systems

- Cross-channel Customer and inventory Synchronisation involves sophisticated systems integration of all hardware, software and networking applications and technologies
- Dynamic Contact Centres uses a lot of unified communications and virtualisation technologies as well as Voice over Internet Protocol (VoIP)

In conclusion, critical customer self-service success factors depend upon the following:

- Remove humans from routine business processes to reduce the risk of error
- Link customers' systems directly into the organisation's to increase efficiencies
- Listen to what customers want and need
- Gear the systems to customers' level of tech savvy.

Although ICT is important, what is more important is the human touch rather than the high-tech in the customer-provider relationship after all we are humans.

Biodata

Wardah Zainal Abidin, currently an Associate Professor at Faculty of Computer Science & Information Systems, Universiti Teknologi Malaysia (UTM), Skudai. She holds a Masters of Science in Computer Science from UTM, Skudai in 1985. In 1982, she was awarded Gold Medal by IBM World Corporation as the Best Student while pursuing her Advanced Diploma in Computer Science at UTM, Skudai. She graduated in 1981 with a Bachelor of Science (Honours) in Pharmacology from Universiti Kebangsaan Malaysia, Bangi.

Her fields of specialisation include Policy Management in ICT Governance, Information Systems Education, Strategic Information Systems, Vocational Training Management and Skill based IT training & Career Development. She is also a professional member of Association of Computing and Machinery (ACM) and International Association of Software Architects (IASA), a member of Malaysian National Computer Confederation, Persatuan Linguistik Malaysia and Persatuan Penterjemahan Malaysia.

During her working years as a UTM lecturer, she also held positions in the national/international representation. Among them as an External Verifying Officer, Technical Advisor Committee (ICT) and Assessment Officer: Accreditation for Prior Achievements (JPK, Ministry of Human Resource).

Assoc. Professor Wardah was involved in various consultancy projects including “*Development of Training Manual for NOSS I-031 and Basic Instructor’s Manual*” (MLVK, Min. of Human Resource) as a Project Team Manager; Workshop on “*Occupational Analysis for the ICT Industry*” (MLVK, Min. of Human Resource) as a Facilitator; Workshop on

“Occupational Analysis for the Biotechnology Industry” [MLVK, Min. of Human Resource] as a Facilitator; “Projek Pembekalan untuk Sains, Matematik dalam Bahasa Inggeris – Fasa II” – Zon Kedah-Perlis (Time Systems Integrators Sdn. Bhd.) as a Project Manager.