IBM – Market Sensing

Hoang Diem Tu Cao, Lydia Chris Deivasigamani, Rojith John Stanly, Ryan Sundel
University of Technology, Sydney

Abstract
This report reviews and analyses the market sensing processes for IBM's IT services with respect to its customers, competitors and market trends. Technological advancements and growing competition with respect to the emerging trends in the IT services sector has challenged IBM to improve its market sensing, in order to maintain (and ultimately grow) its market share and profitability.

The report identifies and discusses the four phases of market sensing namely, Defining the Market, Monitoring Competition, Customer Value Assessment and Gaining Customer Feedback. Since IBM is one of the major players in the IT services sector, it is vital for IBM to be innovative and responsive to technological changes, to ideally predict the next technological wave and to develop its offerings according to the predicted scenarios.

Introduction
IBM has undergone a remarkable transformation in the past 15 years. It has become the most successful broad range solutions provider and has forgone its past image of being a struggling seller of hardware. The organization has been able to foresee the changes and seize the opportunities in the market. The remarkable achievement was obtained by connecting the dots of knowing to doing. The organization built its image on foresighted strategy and executing them in a disciplined manner. They were able to grab these opportunities by reconfiguring their existing assets and competencies. With the right approach to market sensing, IBM has been able to explore new markets and technologies (e.g., pervasive computing) as well as exploit new mature products and markets (e.g., mainframe computers).
(Harreld et al., 2006).

Background
In the early 90's IBM stock price had hit new time lows since 1983. It was written off to be company by the Wall Street analysts. Despite renewed efforts from John Atkers' the company saw 60,000 more jobs being axed. (Harreld et al., 2006). In 1993 IBM generated 27 percent revenue just from its services (software didn't exist) after Lou Gerstner took over in 1993. In
2001 IBM generated a revenue of 58 percent of its total revenue. Services and software input totaled up to $35 billion and business totaled to $13 billion. The sales depicted a massive 7 fold increase in its share price which escalated from $30 billion (in 1993) to a staggering $173 billion (in 2001). In the Mid 2000 IBM's revenue was $91 billion with 70% coming from its service and software. Since then, with Sam Palmisano as the CEO, IBM has transformed itself from computer hardware supplier to providing broad range of solutions and information technology services. (Harreld et al., 2006).

IBM is an exemplar when it comes to open systems and on-demand capabilities. Its 20 year life journey with more than 190,000 employees at present has placed it on top of the world as the most successful organizations in Broad based solutions provider. From 1990, IBM has gone from being a failure to a complete success, from being hardware to the largest successfully company in their Global Technical Services and Global Business Services units. IBM has been able to make healthy profits along diverse business in science, banking etc. Unlike its technical rivals such as Zerox, Philips and Polaroid, who have not been able to tap into their innovation benefits, IBM has successfully been able to leverage its capital intellectually into its business. (IBM, 2010).

**Present situation of IBM**

The pressing issues for IBM:

1. **Up-gradation of IT Systems and increasing online presence of companies**
   
   As the internet penetration is increasing especially in emerging markets such as India and China and more companies are increasing their presence online to cater to their customers, IBM could play an important role and should seize this opportunity.

2. **Companies want to be “green”**
   
   Companies want to reduce their carbon footprint and are serious on ‘Being green’ rather than portraying it in their company CSR and therefore want to reduce costs and maximize efficiency. And hence IBM’s design of IT products such as servers should highlight this value need of its customers.

3. **Recent acquisitions of major players in IT industry**
   
   Oracle has been on a shopping spree of companies ranging from databases, enterprise solutions, banking solutions, customer relationship management, Network intelligence and
optimization software, Insurance software to Data protection hardware and software, and the list is increasing. Though Oracle is not a direct competitor it has various companies in all verticals which could definitely threaten IBM’s advantage as a complete solutions provider especially after Oracle’s acquisition of Sun Microsystems early this year (Harreld et al., 2006).

**Study Objectives & Methodology**

**Organization Mission and Corporate Strategy**
IBM has recently rethought their company mission and values and decided to be driven by the following:

- **Commitment and drive to every client’s achievement**
- **Innovation which would revolutionize the world and the organization**
- **Accountability and trust would be maintained in all relationships**

**Study Objectives**
The goal of this case study is to evaluate and analyze the market sensing activities of IBM. In particular, assessing the past market sensing activities of IBM and how these activities led to IBM, rethinking their market offerings to add value based on the results of these activities. The study aims to evaluate all the processes involved in their market sensing activities. This includes analysis of mistakes made by IBM in relation to their market sensing activities, and the areas for improvement. The study focuses on the company’s B2B marketing.

**Research Methodology**
Market research plays a fundamental role in the business analysis process since it provides a better understanding about the environmental factors and also aids in observing the comparative positioning of IBM with respect to its competitors. Both secondary and primary research were undertaken. The former included usage of business databases such as ProQuest, Business Premier Source, and EuroMonitor. The latter included qualitative in-depth interviews with IBM personnel, specifically the company’s account management team.

**Note:** Despite the use of both secondary and primary data the non-availability of confidential and sensitive IBM information is the major limitation of this study.

**Main Findings**

**Understanding IBM**

**Drawbacks of IBM’s initial business strategy**
IBM initially was more focused on product / services offerings. IBM had Global R&D Labs which managed to bring real solutions but didn’t ‘sense’ if the market or its customers really wanted these solutions (IBM internal report, 2009). IBM was technology driven rather than business value driven. And hence IBM’s concentration on products and services was a poor starting point for successful business marketing (Ford, 2002) since:

1. Customers were not interested in innovative advanced products but were interested in how it solved their solutions and hence brought value to their operations.
   IBM’s products are simply a part of what the company supplies. Customers are interested in what products and services do for them and what problems they will solve. IBM did not step back and look how its products and services solved the real problem of customers and also failed to take effective steps of to see whether IBM’s account managers could actually solve their customer’s problems.

2. Products and services are difficult to separate
   IBM’s focus on only products made it miss out on the possibility that products could be coupled with services. What customers often want is not only hardware and software to solve the problem but also a complete integrated solution from IBM. This could have been a compelling offer and a definite competitive advantage from IBM’s perspective.

3. Complexity of IBM’s distribution networks
   IBM reaches its customers as shown in the diagram overleaf:

   ![Diagram](Fig. 1. IBM’s Distribution Network)
IBM had been a free agent who developed and implemented strategies to connect to its customers without taking into consideration the intermediaries in its distribution network and hence lost its focus in forming relationships with its intermediaries and its customers.

**IBM's Account management hierarchy**

Purchasing is a complex decision especially in B2B marketing where the number of decision makers is large, decision length time is long and complex, consequences of a wrong purchase can be a financial disaster, and the supplier switching costs are extremely large. It is not a simple process of search, evaluate and order. Purchasing also related to rationalization (how customer can do their day-to-day operations in an efficient and economic way) and development (customer wanting to upgrade its IT network/services) (Ford, 2002).

**Customer's considerations for purchasing IBM product or services:**

**Rationalization:** Rationalization represents the customer's need to carry out its day-to-day IT operations efficiently and economically. If a customer has a problem in their operations currently, they may consider changing their current IT offerings or the way it is delivered. This type of customer problem would include an unacceptable and repeated IT support failure rate.

**Development:** Problems can also arise for positive reasons, such as when a company wishes to develop its IT systems, which would require updated and higher end IT solutions which would help IBM target them as potential customers. An example of a development problem would be when a university (customer of IBM) decides to upgrade its architecture design computers by utilizing advanced design programs.

Hence, to address these customer needs IBM has a “Buying centre” that helps in making sense of them, and helps the customers to make informed decisions and also align IBM's offerings to the customer's problem (Ford, 2002). Note that the “Buying centre” is not a formal group that exists in the company, but a way to classify different roles that individuals can perform in a purchasing decision.

The Figure below overleaf illustrates the hierarchy of decision makers both in general strategic business marketing and from IBM's B2B perspective. Every decision maker at IBM is responsible for the choices that they perform in their boundary of authority.
Market sensing
Gone are the days when companies decided what goods and services customers should use. Companies now have to be receptive to what the customers want and need in order to be competitive, or in some cases even survive. Companies are now more customer oriented. And for this, the management needs to understand customers in all their diversity. Management must get a strong first hand feel for those customers in all of their diversity. Day (1994) mentions this kind of understanding as ‘market sensing’. ‘Sensing’ the needs of the customer is a skill that needs to be acquired.

Market sensing activities provide companies with greater insights on customer needs, how they are being met, and how they are changing (Calantone, Schmidt, and Song 1996; Song and Parry 1997). These insights, when combined with competitor information, enable companies to discover underdeveloped market niches and potential differentiation opportunities (Slater and Narver 1995). It is should also be noted that the market sensing ability of a company can be a rare resource. Knowledge about one’s competitors can potentially enable a company to produce a market offering which is differential and competitive in market value.
How does IBM sense new opportunities?

At the organizational level, IBM has the following processes in place:

- The **Technology Team** meets monthly and assesses the market readiness and potential of emerging technologies. This team draws on the deep expertise of IBM Fellows and Distinguished Engineers. Decisions can result in accelerated funding for a project or in its demise.

- The **Strategy Team** (See Figure 2) also known as the Account Management team at IBM, meets monthly to examine the market results of existing unit strategies as well as to explore new growth areas. Decisions can result in new market entry, adjustments to existing business plans, or complete exit from a business. This team is composed of a cross section of General Managers, strategy executives, and other key functional leaders.

- The **Integration & Values Team** is a group of 300 key leaders, selected annually by the CEO and senior executives who are considered responsible for integrating IBM through company-wide initiatives. These initiatives, known as *Winning Plays*, are corporate-wide strategic efforts (e.g. issues that require cross organization interdependence). Each initiative has assigned leaders and, often uses the “deep dive” process. Results are reported quarterly to the entire I&VT and, in abridged form, to the entire company.

- A **Deep Dive** is a structured process, typically requested by a General Manager confronting a performance or opportunity gap and staffed jointly by the operating unit and the strategy group. This is an intensive, focused process where a topic (e.g., a new technology or change in competition) is scrutinized in great detail (Harreld et al., 2006).

This process is highly analytical and fact-based. It typically results in a strategic decision to either pursue a market or technology, to change strategy, or to exit a market. Intentionally these efforts are not run to a preset time line; the work continues until all questions are answered, the decisions are clear, and the necessary adjustments to the organizational model are clearly delineated. Each of these processes helps to ensure continuous scrutiny of the competitive environment and involves line managers in this effort. The deep dives, for example, are routinely called for by Business Managers facing problems. The technology team offers a way to link technological advances with business needs. The strategy team ensures dynamic
adjustments to strategy and execution are made in a timely manner. The winning plays provide a way of communicating and focusing the organization on company-wide initiatives (Harreld et al., 2006).

**Defining the market**

IBM defines its market by choosing descriptors with the intent of pinpointing groups of companies that are of greater interest in the IT industry. IBM segments its markets into groupings of companies that have relatively similar requirements. IBM segments its markets based on the size of the business. IBM has scientists, engineers, consultants, and sales professionals in over 200 countries worldwide, meaning that they do not really need to segment their markets based on geographic segmentation. Also, IBM’s employees focus on a specific business size or segment which means that resources, knowledge and solutions can be better focused on fully and successfully satisfying each business type and segment. They have formulated a global structure where they can provide more or less the same services and solutions to all the regions worldwide and the specific regional divisions are in charge of the processes. By doing it this way, IBM can more succinctly segment their target market by focusing it on the size of the client companies, their needs and requirements, and thus better understand each specific segment in order to offer better solutions, tailor made to their needs (IBM website, 2010).

**Steps involved in Market Definition**

The process of choosing the desired segments in the IT market involves the following steps, each reliant on the expertise of the account management team member. The following table explains the B2B approach that IBM adopts (Expert interview). Each account in IBM’s business records relates to a customer (business) and hence this process is named Account based selling. The customers involved in IBM’s market definition process are broadly classified as either existing or potential customers.

Existing customers use a repeat purchase strategy. IBM has an already created account for each of the existing customers that reflects their financial status, product purchase history and other feedback with respect to its current product/service use. An existing customer could be potentially contacted for the following purposes:

1. To cater to their current problems
2. To introduce a new and updated offering
3. To provide an alternative offering if customer is unsatisfactory
To ensure IBM has sufficient information on its potential customers, it categorizes them into public (whose information is readily available) and private (whose information IBM has to find out through its sales team). Initially, a financial analysis is done on the potential customer (publicly listed) followed by an analysis on its purchase history. This step is followed by estimating the profit from the customer which is the final deciding factor before IBM’s sales team starts building its relationships (Expert Interview).

In the case of a potential company that is not listed publicly, it is a challenge for the sales team to acquire the updated and relevant information. The sales team, with the help of the Coach and Procurement Officer starts building relationship with the customer. This involves a series of the steps such as gaining initial lead through the HR Manager, or through the IT Manager. This process is followed by official presentations, and matching of customer’s demands and IBM’s offerings.

**Account Management System – IBM**

<table>
<thead>
<tr>
<th>ACCOUNT CREATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Account = Customer</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CLASSIFICATION OF CUSTOMERS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Existing</strong> - Repeat Purchase strategy</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EXISTING CUSTOMERS</th>
<th>POTENTIAL CUSTOMERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability of information (Financial and purchase history)</td>
<td>Non-Availability of information (Financial and purchase history)</td>
</tr>
<tr>
<td>Gain customer feedback</td>
<td>Target (potential) companies chosen</td>
</tr>
<tr>
<td>If service/ product unsatisfactory, an alternative offering given</td>
<td>Research on Industry website</td>
</tr>
<tr>
<td></td>
<td>Financial Analysis on chosen company</td>
</tr>
<tr>
<td>Trial version of new offering provided</td>
<td>Potential customers prioritized</td>
</tr>
<tr>
<td>Gain feedback on product trial</td>
<td>Contact information gathered</td>
</tr>
<tr>
<td>Transform trial to purchase</td>
<td>Observe purchase history with respect to technology/ product/ service</td>
</tr>
<tr>
<td>Customized solution package solution offered</td>
<td>Estimate the monetary customer value</td>
</tr>
</tbody>
</table>
Carpe Diem, The Australian Journal of Business and Informatics  
Volume 5, No. 1, 2012

### Public Listed Company

- Financial data available
- Financial Analysis
- Customer’s technology and product consumption information

### Private Listed Company

- Financial data not published
- Initial lead gained in target company
- Lead directed to IT Department
- Official presentation by *Sales Representative*
- Information gathered regarding existing technology, current expenditure, current IT problems
- Match current problems with existing product offerings
- Meet Finance Manager/ Account manager/ CEO of target company
- Profit estimated based on required offerings of customer

**Fig. 2. IBM’s Account Management System**

**Distribution networks**

IBM’s business network plays an essential part in developing relationships. Market sensing is the foundation step utilized to acquire expertise in order to collect the most relevant information with respect to its customer’s mission, strategies and demands. The figure above explains the following relationships and their vital attributes. Market sensing is mandatory to understand the variety of companies IBM should cater its offerings to, the range of relationships it should enter into and the level of difficulty it faces.

**Variety of companies:** The above explained distribution network focuses on the different types of companies that IBM sells its services to (which are very different from each other). This diversity is one of the challenges IBM faces as a result of sometimes inappropriate and unrealistic market sensing. Additionally where the customer segmentation is not accurate, IBM’s Account Managers face challenges in customer account management (due to the variety of offerings it has to customize its offerings to).

**Variety of relationships:** IBM has to offer a range of relationships with its distributors. This range of relationships is needed because the distributors are different themselves, and also because they have different relationships with their customers.
Difficulties in control: This network illustrates how difficult it is for even a very large company to determine who takes part in a network and how they should relate to each other. This may appear to contradict one of the conclusions about the first network. But although a single company has some discretion in a network, it is certainly not the only one trying to influence its development. The evolution of a network is the outcome of all these efforts, rather than the dictates of any one company.

Monitoring Competition
IBM uses competitor knowledge in crafting its own strategy, anticipating competitor’s reactions to it and in deciding what actions to take in response to competitor’s actions in the marketplace. IBM determines which set of companies to monitor based on the following checklist:

1. **Competitor Product Feature match:** The Account Manager looks at other market offerings that current and prospective customers consider as alternatives to IBM’s offerings. The companies providing those alternatives are IBM’s competitors. The product-feature match for IBM’s competitors is illustrated in the table below:

Table 1. Gap Analysis – Product Feature match

<table>
<thead>
<tr>
<th>Product Features</th>
<th>IBM</th>
<th>HP</th>
<th>ACCENTURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Center Networking</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Unified Communications</td>
<td>✓</td>
<td>×</td>
<td>×</td>
</tr>
<tr>
<td>Mobility Solutions</td>
<td>×</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Integrated offerings</td>
<td>×</td>
<td>✓</td>
<td>×</td>
</tr>
<tr>
<td>Eco friendly products</td>
<td>✓</td>
<td>×</td>
<td>×</td>
</tr>
<tr>
<td>integrated server platform</td>
<td>✓</td>
<td>✓</td>
<td>×</td>
</tr>
<tr>
<td>Virtualized Storage Infrastructure Solutions</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Expansion of application service capabilities</td>
<td>✓</td>
<td>×</td>
<td>×</td>
</tr>
<tr>
<td>Offering flexible discrete or bundled</td>
<td>✓</td>
<td>✓</td>
<td>×</td>
</tr>
</tbody>
</table>
According to the above illustrated product feature match, IBM holds a competitive advantage in terms of its unified communications, eco friendly products, expansion of application service and integrated server platform. It could be observed that there are gaps in its range of offerings namely, mobility solutions and integrated offerings which IBM could possibly develop to provide its unique offerings.

2. **Channel match:** The Account Manager analyses the competitors based on the channels they operate in. This could potentially give insights into the gaps present in the current channels IBM is using and presents an opportunity for IBM to exploit the channels that it has not developed yet.

<table>
<thead>
<tr>
<th>Channels</th>
<th>IBM</th>
<th>HP</th>
<th>MICROSOFT</th>
<th>ACCENTURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value added distributors</td>
<td>✓</td>
<td>✓</td>
<td>×</td>
<td>✓</td>
</tr>
<tr>
<td>Dedicated partners</td>
<td>×</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Full service retailers</td>
<td>×</td>
<td>×</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Independent distributors</td>
<td>✓</td>
<td>×</td>
<td>✓</td>
<td>×</td>
</tr>
<tr>
<td>Joint venture partners</td>
<td>×</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>Value added reseller</td>
<td>✓</td>
<td>×</td>
<td>×</td>
<td>×</td>
</tr>
</tbody>
</table>

According to the above table, IBM holds an advantage in terms of its Value added reseller and has a gap in terms of its Dedicated partner and Joint Venture partner.

3. **Potential Competitors from other industries:** It is the responsibility of the Account Manager to determine which companies may become competitors. These companies are not currently doing business in a market segment of interest, but may be entering in the
near future. This is the most challenging task in competitor analysis and this could be possibly achieved by relying on their R&D colleagues to monitor advances in technologies from outside the IT industry that have the potential (with further innovation) to provide entry for companies employing new technology in their market offerings.

4. **Merger and Acquisition activity**: The Account Manager need to monitor merger and acquisition activity in IT related industries that could produce business units that are formidable, potential competitors.

### Improving Monitoring Performance

From the analysis of IBM’s competitors, it is apparent that IBM could potentially improve in its Mobility Solutions and Integrated Offerings in terms of its products, and concentrate on developing their distribution channels with respect to their dedicated partners and joint venture partners. This would be the responsibility of the Account Manager with persistence, creativity, consistency of effort, and a reasonable investment of resources.

### Competitive Intelligence system for IBM

In order to improve monitoring performance, IBM has an organized approach of seeking, gathering, analyzing and interpreting competitor data. IBM had a poor competitive intelligence system which was later modified according to Michel Porter’s Competitive Intelligence system. The main information sources used in competitor analysis are:

<table>
<thead>
<tr>
<th>Table.3. Competitive Intelligence system for IBM</th>
</tr>
</thead>
<tbody>
<tr>
<td>- publications and financial data</td>
</tr>
<tr>
<td>- competitor websites</td>
</tr>
<tr>
<td>- industry websites and publications</td>
</tr>
<tr>
<td>- trade exhibitions</td>
</tr>
<tr>
<td>- press releases</td>
</tr>
<tr>
<td>- annual reviews</td>
</tr>
<tr>
<td>- professional bodies</td>
</tr>
<tr>
<td>- promotional material</td>
</tr>
<tr>
<td>- information packs</td>
</tr>
<tr>
<td>- brochures</td>
</tr>
<tr>
<td>- database searches e.g. Factiva, Lexis-Nexis, Dun and Bradstreet</td>
</tr>
<tr>
<td>- observation</td>
</tr>
<tr>
<td>- word of mouth</td>
</tr>
</tbody>
</table>

*Source: Ray Perry, Michelle Ross and Technical Information Service, 2008*

Sales Managers have the primary responsibility for the competitive intelligence function as catalysts for the whole process. IBM also utilizes benchmarking, which is the art of finding out, in a perfectly legal and aboveboard way, how IBM’s competitors undertake their IT business processes in a better way than IBM (Anderson et al., 2009).
**Recommendation for Competitive Intelligence**

IBM could make use of group productivity software in conjunction with internal computer networks (intranets) to create competitor intelligence systems. IBM could focus more on Timelining technique to predict how the future unfolds by drawing on knowledge of the steps inherent in its IT processes and how long it takes to perform each one. This will help IBM to foresee any changes in the specific time line in the near and far future (Anderson et al., 2009).

**Assessing Customer Value**

**Value assessment method**

Value assessment is a process of integrating value into market offering regards to the business to business relationship (Anderson et al. 2009). There are different approaches for assessing customer value. To illustrate, while the focus group method relies upon the customers’ perception, the whole idea of internal engineering techniques is about supplier assumption about the offering’s worth. Therefore, which measurement tool should be applied to gain better understanding about the customer’s business is the issue for IBM’s managerial level.

According to Linda Sandford, Senior Vice President of IT at IBM, the company has considered collaboration as a “key to delivering an on-demand environment”. The idea of this strategy is focusing on the firm business processes integration in order to leverage the offering’s value. Therefore, the IBM can respond as fast as possible to a customer’s demand, market opportunity and also threats.

Sanford also said by implementing an on-demand effort, IBM will be two steps ahead of customers which is especially important in the midmarket. There are four initiatives for this strategy: Total Buyer Experience, Integrated Supply Chain, On Demand Workplace & IT Enablement (Stanford, L., 2004). These approaches are utilized based on the Field Value-in-Use Assessment. Through interviews and data collection methods, IBM gathers knowledge about customers’ perspectives from their sale team with the purpose of adding value to the company’s market offering. To illustrate, Sanford stated in eWeek magazine (2007): “we went to our customers and asked what they were most unhappy with us about”. The customer’s demand or need can accordingly be responded to as quickly as possible.

In addition, benchmarking and gap analysis are other IBM’s traditional measurement tools (Knight, 2005). Basically, from research IBM can gain fundamental knowledge about what the company is offering compared to the next alternatives. Hence, a gap assessment will be
analyzed by the marketing team before handing the information to managers for further decisions.

As Patrice Knight- Vice President of Business Transformation, IBM integrated Supply Chain said by utilizing these measurement methods, the firm could confidently understand which process should be done electronically, outsourced or eliminated.

Customer Value Management
With the aim of proactively managing individual customer’s relationship as well as to maximize the firm’s profitability, IBM has implemented the “Customer Lifetime Value” model (Kumar et al, 2008). The following five phases constitute the CLV model:

Phase 1: Measurement of consumer lifetime value (CLV)
Using the CLV modeling technique, IBM estimates the value of a customer over the customer’s lifetime. While modeling the CLV, IBM identifies various factors which IBM is in control of and also which could increase the value of the customer. The modeling uses variables or factors such as past purchase activity, purchase frequency, recency of purchase, past customer-spending level, cross-buying behavior and marketing contacts.

The estimation results can then help IBM to allocate its resources for potential and current customers. Also, IBM allocated the level of marketing contact for a customer depending on the recent purchase behavior of the customer. The customer’s cross buying would also be reflected in the strategy of IBM which has been active on the customers purchasing products across several categories. For example the CLV modeling may tell IBM that while a customer has had a high frequency of purchase, the customer will not buy more products from IBM from across its various product offerings, as indicated by the red circle. And hence IBM would have to make more marketing contacts with this customer.

<table>
<thead>
<tr>
<th>Estimation Results of IBM’s CLV model</th>
<th>Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independent variable</td>
<td>Mean</td>
</tr>
<tr>
<td>Level of marketing contacts</td>
<td></td>
</tr>
<tr>
<td>Two period lagged indicator of purchase</td>
<td>4.7114</td>
</tr>
<tr>
<td>Interaction of cross buying and recency</td>
<td>-0.0149</td>
</tr>
<tr>
<td>Purchase Incidence</td>
<td></td>
</tr>
<tr>
<td>Log of lagged level of contacts</td>
<td>0.0041</td>
</tr>
</tbody>
</table>
### Table 4. Estimation Results of IBM’s CLV model

<table>
<thead>
<tr>
<th>Interaction of cross buying and recency</th>
<th>-0.0047</th>
<th>0.0074</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Contribution margin</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Frequency of purchases</td>
<td>7.3692</td>
<td>1.887</td>
</tr>
<tr>
<td>Interaction of cross buying and recency</td>
<td>-0.038</td>
<td>0.0565</td>
</tr>
</tbody>
</table>


**Phase 2: Comparing Traditional Customer Selection Metrics with CLV:**
IBM also compares the CLV results with the traditional methods known as recency-frequency-monetary (RFM) value, and Customer Spending Score (CSS).

<table>
<thead>
<tr>
<th>Percent of cohort (selected from top)</th>
<th>Customer lifetime value</th>
<th>CSS</th>
<th>RFM</th>
<th>Past customer value</th>
</tr>
</thead>
<tbody>
<tr>
<td>15 Average revenue</td>
<td>30,427</td>
<td>21,789</td>
<td>22,622</td>
<td>23,542</td>
</tr>
<tr>
<td>Gross value</td>
<td>9,184</td>
<td>6,659</td>
<td>6,966</td>
<td>7,185</td>
</tr>
<tr>
<td>Variable costs</td>
<td>107</td>
<td>114</td>
<td>110</td>
<td>104</td>
</tr>
<tr>
<td>Net value</td>
<td>9,077</td>
<td>6,544</td>
<td>6,856</td>
<td>7,081</td>
</tr>
</tbody>
</table>

**Notes:** The reported values are in dollars (expressed as a multiple of the actual numbers) per customer and are cell medians. The net result was identifying the top customers who provided the best customer value.


The customer’s score are inputed to predict the purchase behavior for the next 18 months. Then they are ranked in order based on measurement factors such as marketing contacts, purchase incidence and contribution margin. The top 15% of the list who are identified as the best targeting segment will be flagged to the marketing team.

**Phase 3: Optimal Contact Strategy:**
Based on the values derived from the CLV model, customers are segmented into different customer groups and different communications strategies are used to contact the different groups using direct mail, telesales, and email. Moreover, these marketing contact channels will be organised and controlled by separate groups in order to more widely and effectively reach the numerous client contacts.
Phase 4: Prediction of Purchase Probability of each Product Category:
The key purpose of this phase is to provide further information to the sale team to assist the latter with their strategies in order to target the right product and message to selected customers.

Phase 5: Resource Reallocation:
Customers with highest potential are aligned according to their potential with respect to the marketing resources. Customers initially segregated in two groups namely, customers who have not been contacted and customers who have been contacted previously.

IBM managers decide the marketing direction to be taken with particular customers based on the qualitative input from the sale team and also from the customer transaction records from the
procurement department (such as purchase history, gross margin data).

Assessing the distribution of customer value

- In order to adding value to the offering, IBM marketing and sale team work together to analyze their current offering

Identifying high potential customers

- Customer will be segmented into 2 groups: existing (Contacted previously group) & potential (not contacted group)
- By having an optimal contact strategy, IBM can maximize their business opportunity (and not ignore any clients).

Contact customers

- Sale team will take care of new customer lists for further business transaction
- The Optimal Contact strategy in phase 3 is implemented as a guideline

Managing customer

- Revenue as well as resources requirement from each client will be recorded by the procurement team for management purpose

Continuously reevaluate the CLV model

- Every year, the IBM managerial level moderate the model and consider further improvements as well as development

Fig. 3. CLV Model
Consequently, the Customer Lifetime Value Model is a managerial tool for IBM to gain insights into customer’s requirements and preferences in relation to offering them a better business transaction. Additionally, by having an optimal contact strategy, the company can increase their business opportunities in terms of maximizing profitability. Therefore, IBM can get an equitable return on their value delivered.

**Customer Value Research**
IBM have developed an industry-leading User-Centered Design (UCD) to understand user experiences of IBM’s hardware, software and websites and services (Vredenburg, 2003).

The customer value research is implemented in the following steps at IBM:

*Figure: Generic process overview illustrating basic questions and activities by phase at IBM*

**Source:** Vredenburg, K 2003, ‘Building ease of use into the IBM user experience’, *IBM System Journal*, vol.42, no.4, p 519.
The User Centered Design (UCD) is a mechanism through which customer changes can be detected by IBM. These processes and methods are used later to understand market, business, and user requirements, which are subsequently rigorously modeled and then engineered based on user feedback.

**Process overview:** The design process starts with the collection of relevant market definition information to answer the basic question, “Who do we think will use this offering?” This involves understanding the target markets, types of users, prime competitors, market trends, high level needs and preferences, and so forth. Next, detailed information is collected from representative users within the target markets to understand their goals and tasks to answer the question, “What are they looking for?” Following this, IBM attempts to understand how the tasks described in the prior step are currently carried out either with a competitor’s product or an analog method. This answers the question, “What else is out there?” At this point, conceptual design of the user experience starts, and early feedback is gathered from users, answering the question, “How’s this for starters?” This leads to several cycles of detailed design and user feedback through design evaluation and validation sessions, answering the questions, “Does this work?” and “What would make it better?” At the end of the development cycle, a user feedback benchmark assessment session is conducted to answer the question, “How do we stack up?”

IBM has been changing its customer value research model from the mid 1990s and to illustrate this a progression from traditional approach of customer value research to the User Centered Design approach is tabulated below:

<table>
<thead>
<tr>
<th>IBM’s Traditional Approach</th>
<th>IBM’s new UCD Approach</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technology driven</td>
<td>Business value driven</td>
</tr>
<tr>
<td>Component focus</td>
<td>Enterprise focus</td>
</tr>
<tr>
<td>Limited multidisciplinary cooperation</td>
<td>Multidisciplinary role-based work allocation</td>
</tr>
<tr>
<td>No specialization in user experience</td>
<td>Specialization in all disciplines</td>
</tr>
<tr>
<td>Some competitive focus</td>
<td>Detailed focus on competition</td>
</tr>
<tr>
<td>Development before user validation</td>
<td>Engineering of user-validated models</td>
</tr>
<tr>
<td>Product defect view of quality</td>
<td>System view of quality</td>
</tr>
<tr>
<td>Limited focus on user measurement</td>
<td>User measurement driven</td>
</tr>
<tr>
<td>Focus on current customers</td>
<td>Focus on all stakeholders</td>
</tr>
</tbody>
</table>
As a result of the change in processes at IBM, three corporate-wide positions to provide leadership for the UE program were created.

1. A Vice President (VP) communicates about the user friendly side of the corporate strategy and about the customer experience.
2. A Director of Customer Technologies who leads the integration of user friendly side of programs into the management system of IBM with the divisional ease-of-use champions, including cross-company tracking;
3. A Program Director of Corporate UCD and UE who leads the further development of UCD and UE methods provides leadership of and communication to IBM’s user experience practitioners. These

An overview of how IBM’s User Centred Design (UCD) and the Portfolio management team contribute together in the Integrated Product Development (IPD) process to finally give satisfied customers is shown overleaf.
To sum up, IBM has implemented many managerial approaches in regards to improving their market offering. The CLV model has been used as a tool for the company to further proactively manage potential customers as well as to deeply understand current customers' preferences and needs. Therefore, the company can continuously improve their business transaction’s value. On the other hand, the User Centre Design was created with the purpose of developing their internal process to make it user friendly. Both of these are the fundamental methods for IBM to improve the company’s service performance and also to leverage the brand equity from a customer perspective.
Gaining Customer’s Feedback

“Our results in revenue, profit, market share and customer satisfaction determine our success or failure..... being the best in class in customer satisfaction is not the result of any one person’s effort - it comes from leadership, focus and passion at every level of the organization” Lou Gertsner (1998)

Gaining customer feedback enables the firm to learn how well it has fulfilled its promises to customers (Anderson et al, 2009). IBM uses the above guiding principle, to hear feedback from customers about their experience with IBM i.e. customers’ expectations and how IBM measures up to them. Managing business is not just about delivering the best offer to customers but listening to their opinions is also a significant facet of maintaining the ultimate performance hence, gaining customer’s feedback can enable IBM to study how well their offering is received in terms of demand fulfillment. There are three main approaches that have been developed in relation to improving IBM’s customer service performance: the Customer Experience Program, the Technical Support Service & Product Suggestions. (IBM, 2010):

<table>
<thead>
<tr>
<th>Program</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer Experience Program</td>
<td>When customers join this program, the Customer Service team are able to collect anonymous information as well as feedback about their usage experience of IBM service. Customers have certain benefits from the program such as no personal information will be collected, no survey needs to be filled out, as well as no interruption with their work performance by the IBM sale team</td>
</tr>
<tr>
<td>Technical Support Service</td>
<td>Customers are provided with a link to the IBM technical support website. From the page, they can quickly know which departments to contact and how to ask for IBM support. Moreover, frequently asked questions are also featured to help the clients fix their problem rapidly.</td>
</tr>
</tbody>
</table>
The customer service team sends customers a link inviting their feedback on IBM services. Whenever they want IBM to improve the product or service, they simply send an email through that link to the customer service team.

The traditional way to gain customer opinion is to rely on personnel and customer service centres. IBM’s sales, marketing and market intelligence teams are the main channels for gathering customer feedback information. Furthermore, the customer service centre is also used as a key gateway to collect client comments on business products and services. In addition to the above, IBM has a formal Customer Feedback program, under which IBM designers and Product Managers have interactive feedback sessions with customers to understand and address their usability and consumability requirements (so that IBM’s customers can do their jobs more efficiently) (IBM Customer Feedback Program, 2010). These are the opportunities:

- Negotiate and decide on features, functions, and designs of new and existing products
- Test new products, tools, and websites
- Share new ideas for a better integrated experience
- Gain insights on the next generation of products and strategies before releases.
- Talk directly with IBM product managers and designers about your customer’s requirements

And what makes this program by IBM unique is:

- Feedback vs. Education: It is a two-way dialogue at the heart of the feedback track. IBM’s Product Managers and user experience professionals engage in active discussion with customers to ensure that IBM best understands its customer’s requirements and also captures their ideas to take forward for action. Small sized sessions vs. large sized sessions: dedicated entirely to focusing on customer’s needs, IBM has limited the number of participants in each session. Sessions vary in size from 1-on-1 conversations to small group discussions of no more than five people. With smaller sized sessions,
customers have the undivided attention of IBM professionals that can drive change on the customers' behalf.

**Conclusions**

IBM is branded as a technology company which is said to provide technologically advanced IT solutions for the different prevalent problems the customers (both existing and potential) experience, and also provide innovative IT solutions that potentially give first mover advantages for the companies that adopt them. Accurate market sensing is a requisite for technology companies as Technology is dynamic. It keeps evolving as the needs/ demands of consumer's changes which gives IBM a huge challenge in both being sensitive to spotting the market changes and foreseeing where exactly the market is heading.

**References**


