ISYS 850 - Business Intelligence

Organizational Group Project

www.ask.com

Group 3

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Company Overview:

Garrett Gruener and David Warthen in Berkley, California founded Ask.com in 1995. Gary Chevsky created the core engine on which Ask.com works, whereas other employees built the early website around it. Ask.com's original idea was to allow users to get answers to questions posed in everyday life natural language. Ask.com, acquired in 2005, is a subsidiary company of IAC (InterActiveCorp). It is a global service provider with well over 100 million users, and ranks in comScore's top US websites in terms of traffic. Its mobile iOS and Android app has been downloaded 3 million times.

In the year 2010, due to insurmountable competition from popular search engines like Google and Yahoo, the company outsourced its web search technology and returned to its root service of questions and answers; answering old-fashioned and naturally asked question by users. In addition to these algorithmic search results, paid listings are also displayed, which is company's main revenue source. Google Inc. supplies the paid listings on the webpage pursuant to a service agreement that expires on March 31, 2016. Ask.com transmits search queries to Google, which in turn transmits a set of relevant and responsive paid listings back to Ask.com and displays it as sponsored listing. Google bills the advertiser that purchased the sponsored listing and shares a portion of the fee with Ask.com. Ask.com has about 500 employees out of which 7 work in the Business Intelligence Department. Ask.com believes that its future success depends upon its continued ability to identify, hire, develop, motivate and retain highly skilled individuals at all levels.

Ask.com generates about $100 million annual revenue and the company has a $20 million margin on the revenue it earns. A substantial portion of company's revenue is attributed to a service agreement with Google that expires soon This can adversely affect the company's business condition, financial condition and results of operation.

The organizational decision-making structure of Ask.com is Flat, but there seems to be an informal matrix structure in function as well; where different departments work with each other. For instance, the Business Intelligence team formally needs to report to the Director and General Manager. The Director and Product Manager decides on the product user interface and the General manager decides upon which kind of business strategy to follow. Search Engine Marketing (SEM) Managers takes decisions regarding which keywords to buy and other such decisions.The business intelligence team is assigned for different products and assist in giving out results on SEM, product and business strategies.

2. Balanced Scorecard

Business Strategy:

We will refer to Porter's generic strategies to analyze the level of competition within the industry and the kind of business strategy Ask.com develops to generate growth and revenue. Porter provides two different options for organizations to create strategic advantage in the competitive environment (refer to Appendix 1). Organizations can either have a low cost position (Cost Leadership) or a unique value (Differentiation) perceived by its customer.

The General Manager makes Ask.com's major business strategy decisions but the company shares its revenue model with Google, which doesn't give Ask.com more room to be cost effective. Most other firms in this space have almost similar kind of contracts with Google when it comes to sharing revenue from the fee charged to the advertiser. The factors which can have a significant impact on the ratio of profit sharing are the quality of content and search that the organization provides to users, the flow of requests from users to get information, and the friendliness and flawlessness of the web structure to provide a smooth interaction with the website. Ask.com can strategies to review its position in each of these aspects to revise its agreement with Google to achieve cost leadership. Ask.com had a differentiation point when it entered the market 20 years ago, but now since there are many different search options available in the market, there is not much room to differentiate itself from the competition. Comparatively being a small player in the industry, Ask.com cant make high investments to differentiate itself from its competition, but we can still say that Ask.com has a comparatively good algorithm for naturally asked questions, which in itself is a differentiator.

Focus strategies suggest that the companies should target a narrow target market by tailoring its marketing mix to the needs of that target market. As suggested by Porter, "The organization should gain a competitive advantage through product innovation and/or brand marketing rather than efficiency" (Competitive advantage, 1985). The focused strategy should target segments of the market where the competition is weak in order to earn an above average return on investment. But in this case, the company focuses to pitch the service to as many users as possible instead of trying to target a niche market segment, thus conforming to the focus by low cost section. The more users come across the webpages of Ask.com, the more views and clicks its sponsors and advertisers get, which in turn will yield more profits for the company.

Porter also mentions that in order to achieve success in the long term, a company must select only one of the generic business strategies. Otherwise, there is a risk of trying all and achieving none, by being "stuck in the middle", without being able to create a true competitive advantage (Oxford Learning Lab, n.d.).

Balanced Scorecard Objectives & Measures

Balanced scorecards are typically used to review and monitor tactical and strategic goals set by a company. The scorecard is best described by Kaplan and Norton, "The balanced scorecard, provides executives with a comprehensive framework that translates a company's strategic objectives into a coherent set of performance measures" (Kaplan & Norton, 1993). The balanced scorecard (Appendix 2) analyzes and reviews four different perspectives, providing objectives and measures for each.

Financial Perspective

Timely and accurate financial data will always be a priority to upper management and managers will do what is necessary to provide that information. Since Ask.com provides online search and advertising solutions, it is essential for the company to have objectives and measures that help managers review and improve the company.

The first financial objective is to maximize returns. With all companies, profit is top priority and therefore, maximizing returns is an important objective to any company. Ask.com uses margin percentage as the main form of performace measure in finance. The margin percentage of sales or profitability leads to key understandings about the company's business model as well as how successful the company is at maintaining its costs to gain an appropriate amount of sales.

The second financial objective is to increase advertising sales. The main revenue stream for Ask.com is through advertising, espicially for Google. Therefore in order to increase profits, the company needs to increase advertising sales by creating innovative new ways to display ads. The measure to track changes in this objective is the percentage change in sales. One of the best ways to determine success within the company is to measure the sales rate by examining the change from one period to the next.

Customer Perspective

Recent management philosophy has shown an increase in importance of customer focus and satisfaction in all businesses. In order to maintain and/or increase sales and profits, the company needs to invest time, money, and effort into its customers. Without effective customer relationship management, the company can lose its customers to competitors and lose out on revenue, therefore it is important for the company to invest in its customers.

The first and most important objective under this perspective is customer acquisition and retention. In order to generate sales, the company must acquire customers who are willing to purchase products and services from Ask.com. It is also just as important to retain existing customers as not only do returning customers provide continued revenue streams but it is also cheaper to retain an existing customer than to acquire a new one. The measure to best review this objective would be a customer satisfaction rating that can be calculated through surveys conducted on the company website or through email. This measure will provide statistics about how the company's products and services meet or surpass customer expectations.

The second objective is the timeliness of product or service delivery. Since Ask.com is an online company and provides all its products and services on its website, the company has to ensure timeliness of delivery in order to retain customers and improve the company image. This objective can be easily measured by page loading speed since the company is online based. The page loading speed will provide the company information about how quickly users are able to load search queries as well as advertisements, thus allowing the company to analyze how to improve its overall efficiency.

Business Process Perspective

The business process perspective refers to the internal development of the company. Measures and metrics in this section allows managers to evaluate the different sections of the company and how the business is running overall. This perspective allows the manager to measure and review the long term strategic objectives of the company.

The first objective under this perspective is to accurately, timely, and effectively collect data. With the explosion of data collection methods in recent years, many companies have started collecting as much data as possible. Therefore, It is now essential for any company to collect data accurately, timely, and effectively. This will allow the company to rely on that data for multiple purposes such as proving analyses for upper management, for use in search engine optimization, and it can also be admissible in court, The best way to measure this objective is by assessing the management information systems. Ask.com uses many systems and therefore needs to regularly monitor and upgrade the various data collection systems.

The second objective for this perspective is business growth. In order to remain a relevant company in today's market, Ask.com should set business growth as an objective in terms of increased output, customer base expansion, and new product development. The easiest measure for this objective is the net present value of the products and services that the company offers. This allows the company to analyze the present value of future products and services which can then be compared over periods.

The third objective under the business process perspective is to ensure the best organizational practices. In order to prevent any legal action taken against the company and in order to uphold the best image, all companies should ensure that the best organizational practices are observed. Currently Ask.com utilizes many applications to effectively track issues and projects on the system. This helps to ensure the best organizational practices are followed as the applications allow managers to monitor all business related issues and well as all projects that the company may embark upon.

Learning & Growth Perspective

The learning and growth perspective is concerned with how the company can sustain its ability to grow, change, and improve. In order to increase profits, companies need to grow, and in order to grow, companies need to learn and improve. Even though most businesses set profits as the top priority, the competition in the 21st century is so fierce that a company can be popular today and then irrelevant tomorrow. Therefore it is essential for any company to learn, improve and eventually grow.

The first objective for learning and growth is to achieve leading employee satisfaction. Ask.com is built upon the talent of the IT professional employees as the company is online based. Therefore it is important for Ask.com to keep its employees happy and satisfyed with their job positions. In order to evaluate this objective for review purposes, the easiest measure would be the employee satisfaction rating. Conducting regular surveys is the easiest way to find out if employees are satisfied. This also allows the manager to create other incentives such as sunday picnics or office events in order to generate happiness.

The second objective for this perspective is to ensure the best organized training. Ask.com provides essential training for all new recruits and provides instructional manuals for every tool used. In order to grow and improve the company, the employees have to grow and improve along with it; since they are the driving force of the company. The best measure for this objective, which the company currently utilizes, is month-over-month (MOM) and year-over-year (YOY) performance reviews. These measures are commonly used to evaluate employees on multiple aspects such as goals, expectations, and growth.

The final objective is to ensure continued learning of business and enterprise software. Since Ask.com is an IT company, they have extended use of business and enterprise software to design their products, monitor data collection, manage business processes, and many other various uses. In order to evaluate this objective, the best measure would be the time taken to implement new software. Since new software is being created often, companies need to update, upgrade, or even purchase new software systems regularly. Therefore this measure would be useful in determining the time taken for employees to learn new business and enterprise software.

3. Key Performance Indicators

Key Performance Indicators (KPIs) can be characterized as measures that provide managers with the most vital performance data for stakeholders to comprehend the performance level of the organization. KPIs ought to distinctly connect to the strategic objectives of the organization and subsequently help keep track of the execution of the business strategy. It is very important to design the most suitable indicators to assess performance. There are three main reasons for measuring the performance of an organization; to learn and improve, to report externally and demonstrate compliance, and to control and monitor people.

In order to measure, learn, and improve performance, it is necessary to equip employees with the information that is essential to make decisions that account for the improvements. In this context, the Key Performance Indicators can be used as a testimony to challenge judicious assumptions, inform managerial decisions, and sustain improvement.

Another purpose to gather key performance indicators is to apprise the external stakeholders and agree to external reporting regulations and information demands. In order to demonstrate compliance some reports have to produced on a compulsory basis whereas some have to be produced on a voluntary basis.

The aim of measuring KPI's, with respect to controlling and monitoring people, is to eliminate variance and improve compliance. A good KPI should be measurable, comparable, and actionable.

Search Engines generate a huge amount of data which have to be analyzed and KPI's are directly tied to the company's business objectives. The following metrics can be considered:

Financial Perspective

- Return on investment
- Cost of Infrastructure
- Domain registration costs
- Network costs determined by network demand and bandwidth usage
- Labor cost for user and technical support

Customer Perspective

- Unique Visitors
- User Engagement
- Bounce rate
- Average time on site/page

KPIs that are related to customer satisfaction:

- Customer Satisfaction
- Relationship with customers
- Quality of presentation
- Market share against competitors

Business Process Perspective

- Goal Conversion rate
- Link Activity Analytics
- Yielding pages

For the internal business perspective, it is crucial to characterize metrics aiming at providing efficient service to customers. The KPI's are as following:

- Average progress rates
- Growth in market share
- Growth in ad revenue
- Stock price appreciation

Learning and growth perspective

This perspective requires the metrics that conform with the proper training received by the employees:

- Number of development programs offered
- Average training per employee
- Number of attendees at user training sessions
- Number of users turned out successfully

4. Analysis of the state of Business Intelligence initiatives in the company.

Analytics play a major role in the business initiatives of Ask.com. The company's performance is directly related to the number of users accessing and engaging with its services. This requires the company to continuously optimize the search results and choose and buy the most engaging SEM keywords. Selection of these keywords is handled by the SEM manager. The job of a BI personnel is to analyze search data and come up with trends, forecasts and recommendations for future keywords.

The BI personnel also studies customer behavior by analyzing various metrics like engagement time, bounce rate, exit rate, click path, frequency, etc. This report is used by various teams within the organization like the SEM team, the Products team, and the Google Analytics team in order to better optimize the website. The Business Intelligence activities in Ask.com is split into three categories; Web Analytics, Data Visualization, and Monitoring. The BI department uses different tools to perform the above activities. (See Appendix- 4 for a table showing the list of BI Software used by the company).

<u>Web Analytics</u>

In this process, the company performs various analyses of the raw data collected from HTTP request data, Network level data and server generated data. Ask.com uses Google's freemium web analytics service, Google Analytics, and an in-house analytics software for its web analytics. Google Analytics is currently one of the leading tools in the market with excellent support quality, dashboard quality and accessibility.

<u>Data Visualization</u>

In order to communicate the results of the analytics process effectively with the management, the BI team needs to come up with visual graphs and charts. Ask.com currently uses Tableau for this purpose. The company is also evaluating Microsoft's Power BI for the same purpose. Data visualization is very important in any BI structure as it is the easiest way for non-technical professionals to access the information gained by business intelligence.

<u>Monitoring</u>

Whenever there is a discrepancy between the company requirements and the actual data collected from the websites, the monitoring tools alert users about the discrepancy. For example, if there are five advertisements scheduled to be posted on the company's web page and if only three advertisements show up, monitoring tools will alert the user about the discrepancy. Ask.com uses Zenoss and Seyren software for monitoring purposes. Apart from these tools, the company also makes use of PGAdmin to access raw data sources.

Strengths

The organizational structure within the BI department is extremely efficient in communicating information across the organization. The fact that the BI Analyst reports directly to the Director and General Manager provides for better implementation of BI insights. An open door policy between various departments has made knowledge within the departments accessible to everyone.This is extremely useful in the learning and growth curve of employees.

Weaknesses

The Company’s search toolbar is widely criticized for partnering with other software companies and installing itself in conjunction with the other programs. Once installed, it is difficult to uninstall it’s services. This has caused users to consider it as malware. While Ask.com’s BI department is focused on improving the web traffic within its website, it has not placed as much importance on user experience. This has led to poor conversion rates and also a user base which consists of mostly second-tier landing customers.

5. Recommendations

1) The user engagement and user retention of Ask.com needs to be improved. Rather than focusing on the number of users visiting their website, more importance should be given to Macro and Micro Conversion Rates ie, the percentage of users who complete the targeted activity.Training on social sciences and behavioral sciences needs to be implemented in order to understand these metrics.
2) Combine SEM tools and analytics data into one source. By combining these two metrics, it will make it easier for analysts to compare the company’s financial performance with the results from web analytics.
3) Complement current analytics tools with programming software. The company uses application software to perform it’s analytics. While most of them are efficient, they do not give the flexibility of working on a programming platform. Programming languages like R & SAS will give it the capability to perform more exploratory analysis.

4) Ask needs to develop it’s own search algorithm. Currently, the company is heavily dependent on Google’s search algorithm to produce results. An independent search algorithm will help the company differentiate itself from the industry’s leading competitor and also have independent access to resources.
5) Integration between the different websites owned by IAC will help the company keep users within its loop for a longer period of time. Similar websites like About.com, Dictionary.com, etc,. owned by the same corporation can be referenced in Ask.com’s website.

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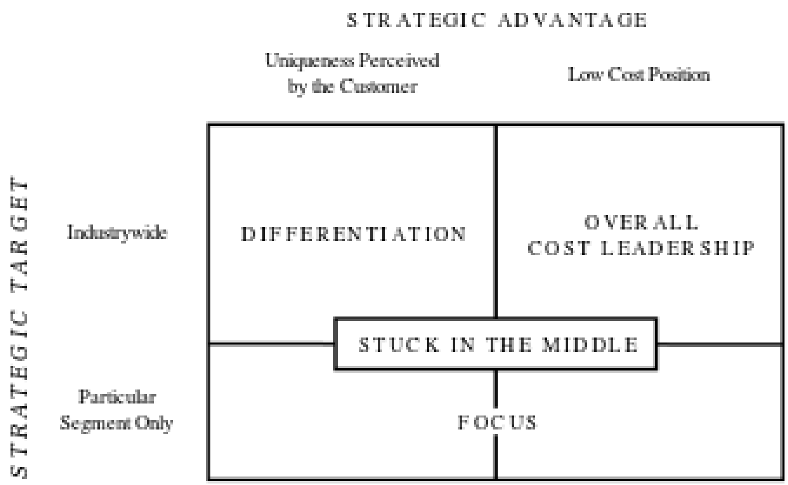
Appendix

Appendix 1

Porter's Generic Strategies



Appendix 2

Balanced Scorecard:

Perspectives	**Objectives**	**Measures**
Financial	1. Maximize returns 2. Sales growth (advertising)	1. Margin percentage 2. Percentage change in Sales
Customer	1. Customer acquisition & retention 2. Timeliness of product or service delivery	1. Customer satisfaction rating 2. Page loading speed
Business process	1. Accurately, timely, & effectively collect data 2. Business growth 3. Ensure best organizational practices	1. Assess information systems 2. NPV products/services 3. JIRA issue & project tracking
Learning & Growth	1. Leading employee satisfaction 2. Ensure the best organized training 3. Continued learning of business and enterprise software	1. Employee satisfaction rating survey 2. MOM & YOY Performance reviews 3. Time taken to implement software

Appendix 3

Key Performance Indicators

Perspectives	**Metrics**	**KPIs**
Financial	• Return on investment	• Cost of Infrastructure • Domain registration costs • Network costs determined by network demand and bandwidth usage • Labor cost for user and technical support
Customer	• Unique Visitors • User Engagement • Bounce rate • Average time on site/page	• Customer Satisfaction • Relationship with customers • Quality of presentation • Market share against competitors
Business	• Goal Conversion rate • Link Activity Analytics • Yielding pages	• Average progress rates • Growth in market share • Growth in ad revenue • Stock price appreciation
Learning & Growth	• Training	• Number of development programs offered • Average training per employee • Number of attendees at user training sessions • Number of users turned out successfully

Appendix 4

List of BI tools currently being used:

PURPOSE	TOOLS
Web Analytics	Google Analytics, Unified
Data Visualization	Tableau, Microsoft Power BI
Monitoring	Zenoss, Seyren
Accessing raw data	PGAdmin

Appendix 5

Ask.com's toolbar installation pop-up in Java's setup: