

Harrah's High Payoff from Customer Information

Introduction

Harrah's Entertainment, Inc. (or simply Harrah's) is assuming a leadership role in the gaming industry through a business strategy that focuses on knowing their customers well, giving them great service, and rewarding their loyalty so that they seek out a Harrah's casino whenever and wherever they play. The execution of this strategy has involved creative marketing, innovative uses of information technology, and operational excellence. These component parts first came together in 1997 and have resulted in many benefits, including:

- A doubling in the response rate of offers to customers;
- Consistent guest rewards and recognition across properties;
- A brand identity for Harrah's casinos;
- An increase in customer retention worth several million dollars;
- A 72 percent increase in the number of customers who play at more than one Harrah's property, increasing profitability by more than \$50 million; and
- A 62 percent internal rate of return on the information technology investments.

In the following sections, Bill Harrah's entry into the gaming industry and the customer-oriented values that he held are discussed. These values continue today and are experienced by customers in the 21 Harrah's properties across the country. Harrah's business strategy is described, focusing on the branding of the Harrah's name and customer relationship management. In order to execute their business strategy, substantial investments in information technology (IT) were required in order to integrate data from a variety of sources for use in Harrah's patron database (an operational data store) and the marketing workbench (a data warehouse). This infrastructure supports operations, offers, Total Rewards (a customer loyalty program), and analytical applications. Special attention is given to the use of IT to support "closed loop marketing." The impacts of Harrah's initiatives are discussed, along with future directions and the lessons learned.

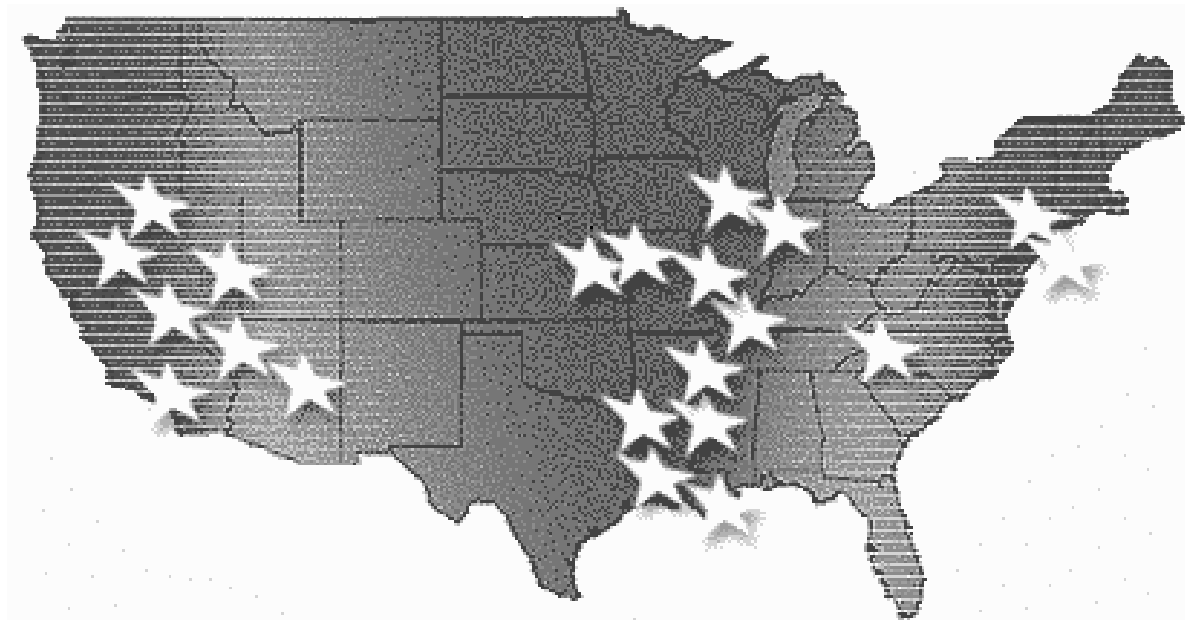
Company Background

In October 1937, Bill Harrah opened a bingo parlor in Reno, Nevada. He focused on customer comfort, running fair games, and ensuring that customers had a good time. In 1946, Harrah purchased The Mint Club, which took him from the bingo parlor business to full-scale casinos. After renovating the club, it was reopened as Harrah's Club and began the Harrah's style of casino entertainment. Harrah's was the "friendly casino," where employees knew the customers' names. In 1955, Harrah opened another renovated casino, this time on the south shores of Lake Tahoe. The gaming clubs at Harrah's Reno and Lake Tahoe were prosperous throughout the 1960s and 70s as Harrah continued to expand and improve these properties. By 1971, Harrah recognized that the practice of

going to **local bankers or competing gamblers to borrow money for supporting growth was limiting**. He took his company public and became the first purely gaming company to be listed on the New York Stock Exchange.

Bill Harrah's vision for growth was continued by Philip Satre who led Harrah's entry into the Atlantic City market and was named president in 1984. In 1993, legislation was passed that allowed gambling on **Indian reservations and riverboats**. Seizing the opportunity, Harrah's quickly expanded into these new markets, through the building of new properties and the acquisition of Showboat casinos, the Rio All-Suite Casino, and Players International. Entering the new millennium, **Harrah's had 21 casinos**, making it one of the world's largest gaming companies. Harrah's has sites in every **major U.S. market where gambling is allowed**. Figure 1 shows the various casino locations. These casinos and supporting hotels employ over **40,000 people**, serve over 19 million customers, have 11,521 hotel rooms, 92 restaurants, 36,635 slot machines, 1,075 table games, and over 1 million square feet of gaming space.

Figure 1: Locations of Harrah's 21 Casinos



Harrah's Business Strategy

The decision to expand into additional gaming markets was a critical part of Harrah's business strategy. The growth of these markets was considered to be inevitable and helpful to Harrah's and the industry. As management thought about how it could create the greatest value for its shareholders, it was decided that a brand approach should be taken. **With this approach, the various casinos would operate in an integrated manner rather than as separate properties.** This was a radical paradigm shift in the gaming industry where casino managers historically ran their properties as independent fiefdoms and marketing was done on a property by property basis. With the new approach, there would be **commonalties in the gambling experience for customers across the various casinos.** Advertising and offers would promote the Harrah's brand. There would be recognition and reward programs for customers who cross-played at more than one of Harrah's properties. Harrah's mission was to build lasting relationships with its customers.

Also motivating the strategy were the experiences of some of the new Las Vegas hotels and casinos (e.g., the Bellagio and Paris) that had invested vast sums of money in lavish hotels, shopping malls, and attractions such as massive dancing water shows and a replica of the Eiffel Tower. While these malls and attractions have been highly popular, their great costs have cut investment returns in half. Harrah's wanted to take a different, more cost-effective route that not only attracted customers, but also maintained and enhanced customer relationships.

Critical to their strategy was the need to understand and manage relationships with their customers. They believed that strong customer service relationships build on a foundation of customer knowledge. **To build this foundation, Harrah's had to learn about their customers' behaviors and preferences.** They had to understand where their customers gambled, how often they gambled, what games they played, how much they gambled, and what offers would entice them to visit a Harrah's casino. Armed with this information, Harrah's could better identify **specific target customer segments, respond to customers' preferences, and maximize profitability across the various casinos.**

A key addition to the Harrah's management team was Gary Loveman who was named Chief Operations Officer (COO). This former Harvard professor had the understanding and skills needed to analyze customer behavior and preference data and to put programs in place to capitalize on this knowledge. He helped make Harrah's customer relationship management (CRM) strategy a reality.

To generate the necessary data, Harrah's had to make a substantial investment in information technology. It had to capture data from customer touch points, integrate it around the customer, and store it for later analysis. In order to understand customers' preferences, Harrah's had to mine the data, run experiments using different marketing interventions (i.e., special offerings), and learn what best met customers' needs at the various casinos. From these requirements, **Harrah's Winners Information Network (WINet) emerged.**

WINet: Creating a Single Customer View

In 1994, Harrah's began work on WINet under the leadership of John Boushy who at the time served as Harrah's CIO and Director of Strategic Marketing. The purpose of WINet was to collect customer data from various source systems, integrate the data around the customer, identify market segments and customer profiles, create appealing offers for customers to visit Harrah's casinos, and make the data available for operational and other analytical purposes. The repository for this data uses a patron database (PDB) that served as an operational data store. It provided a cross property view of Harrah's customers. In 1997, Total Gold, a patented customer loyalty program was put in place, through which customers could earn points for their gambling activities (e.g., playing slot machines) and redeem their points for free retail products, rooms, food, and cash. The marketing workbench (MWB) was also implemented to serve as a data warehouse for analytical applications.

The development of WINet was not without problems. For example, some complicated queries on MWB, originally an Informix database, took so long to run that they never finished within the computing window that was available. NCR, which had been providing bench marking services for Harrah's, offered to run the queries on their Teradata database software and hardware. The performance improvement was so dramatic that NCR was brought in to redesign the system on NCR Teradata and NCR WorldMark 4700 UNIX System.

By 1999, PDB had increased in size to 195 GB and stored data on over 15 million customers, while MWB stored 110 GB of data. The MWB was smaller than PDB because performance problems on the data warehouse limited the amount of historical data that could be stored. At the same time that Harrah's was considering moving to NCR, a decision was made to review the data access tools that marketing used. The outcome was a switch to Cognos Impromptu and SAS. Marketing analysts at the corporate and individual property levels use Impromptu to run predefined reports and queries and to execute ad hoc queries. Analysts use SAS for market segmentation analysis and customer profiling.

Figure 2 shows the timeline for the development of WINet and Figure 3 presents its architecture. The component parts of WINet are described in the following sections.

Figure 2: Timeline for the Development of WINet

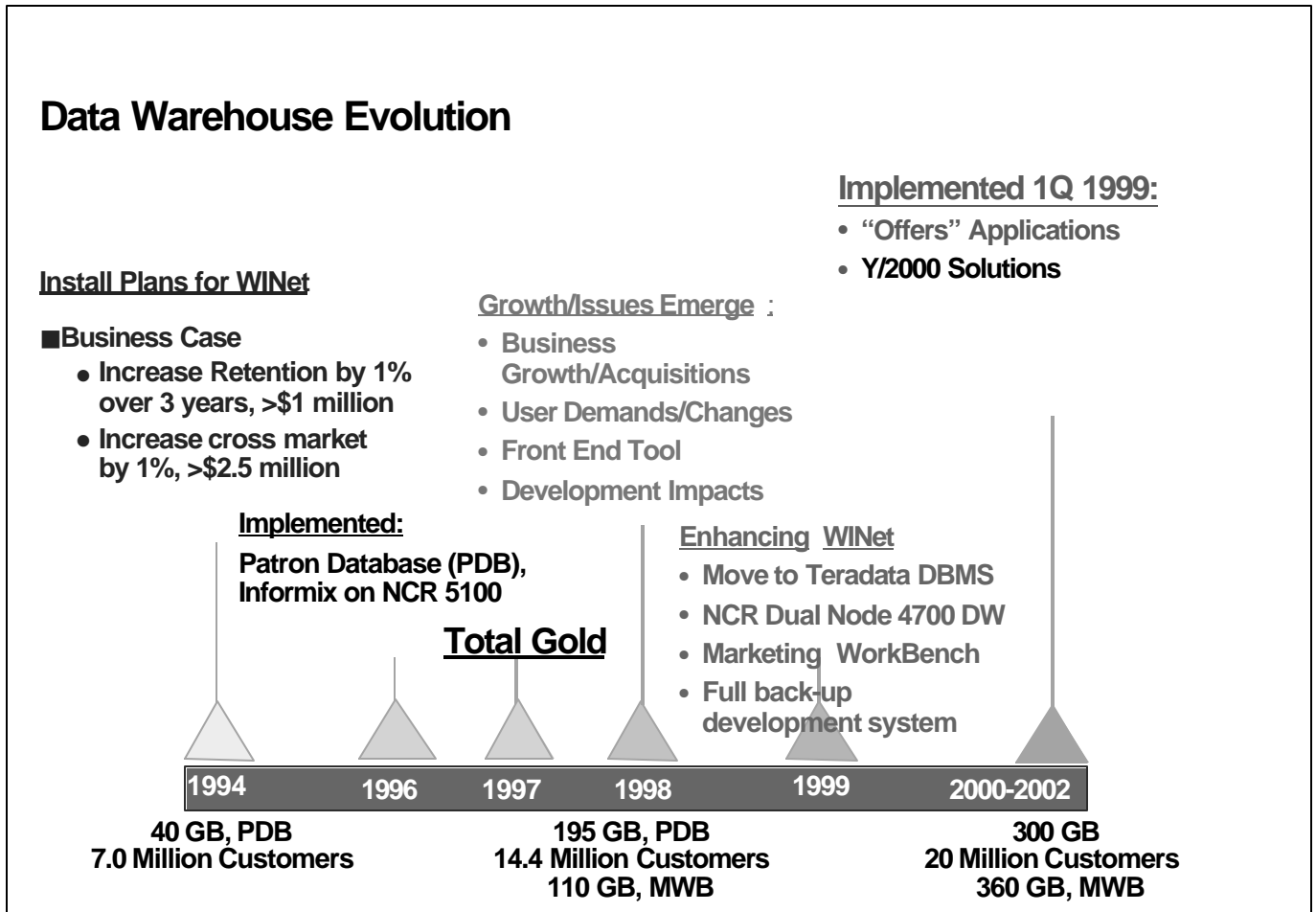
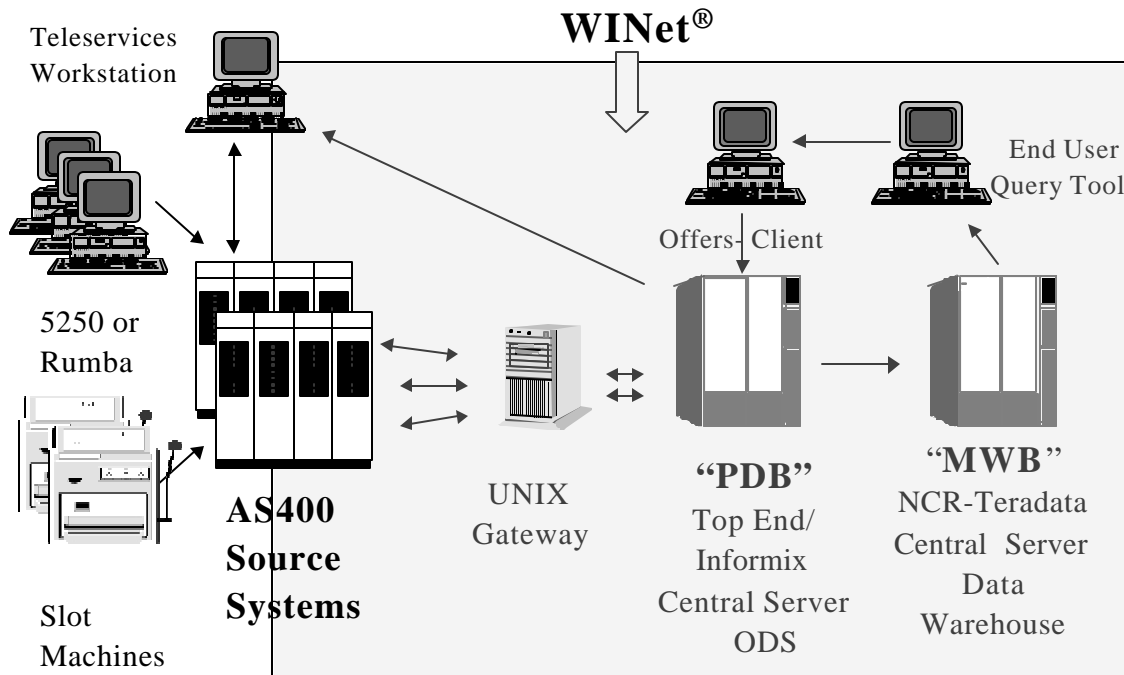


Figure 3: WINet Architecture



Data and Source Systems

Data is captured and collected from a variety of source systems. The hotel system records the details of a customer's stay, demographic data (e.g., home address), and preference data (e.g., smoking or non-smoking room). Data recorded from tournaments and special events (e.g., wine tasting weekend, slot machine tournaments) are included. Most players obtain a loyalty card (e.g., Total Gold) which they use to obtain points that can be redeemed for rewards (e.g., free meals, tickets to shows). In the case of slot machine play, the customer inserts the loyalty card into the machine and every play is recorded. With table games (e.g., blackjack), the player gives the card to the dealer and the pit boss enters into a PC networked to PDB the game played and the minimum, average, and maximum amount bet over a period of time (e.g., typically every two hours). After a customer visits a casino and is in Harrah's system, he or she is a candidate for special offers (e.g., \$50 in free chips if the customer returns within the next two weeks and plays for at least three hours). Data on the offers made and redeemed are recorded for each customer.

A variety of source systems are involved. Some of them are very specific to the gaming industry, such as the slot data system, which captures data automatically from slot machine play. Others such as the hotel reservation system are more generic and involve human data entry. The systems that require human input use IBM 5250s or Rumba

terminal emulation for data access or entry. All of the transactional systems run on IBM AS400s. Harrah's has no mainframe.

Patron Database

At the end of the day for each source system (the definition of "end of day" varies with the system), relevant data is extracted for loading into the PDB. First, however, validity and "saneness" checks are performed. Checking for a valid address is an example of a validity check. A saneness test checks whether the data is reasonable, such as the "drop" from a 25 cent slot machine (e.g., a \$1000 drop in a hour is not reasonable). Data that fail a test are placed in a suspended file and manually reviewed. At 7:00 a.m., the data is loaded into PDB from the casino, hotel, and event management systems. The load is completed and available for use by noon. In terms of source systems, no matter which casino a customer goes to, the details of every visit are captured and ultimately find their way into PDB. The data is available by customer, casino, hotel, event, gaming product, and tracked play. **Every customer is assigned an identification number, and the data about the customer are joined using the ID as the primary key.** Unless needed (e.g., such as with a promotional offer), customer names and address are not used with Harrah's applications.

Marketing Workbench

Marketing Workbench (MWB) was created to serve as Harrah's data warehouse. It is sourced from the patron database. MWB stores daily detail data for 90 days, monthly information for 24 months, and yearly information back to 1994. Whereas PDB supports on-line lookup of customers, **MWB is where analytics are performed.** Marketing analysts can analyze hundreds of customer attributes to determine each customer's preferences and predict what future services and rewards they will want. For example, Harrah's might award hotel vouchers to out-of-state guests, while free show tickets would be more appropriate for customers who make day trips to the casino. A major use of MWB is to generate the lists (i.e., "list pulls" in Harrah's terminology) of customers to send offers to. These lists are the result of market segmentation analysis and customer scoring using MWB.

Operational Applications

The Patron Database supports a variety of operational applications. For example, a valued customer may be a first time visitor to a particular Harrah's property. When the customer checks in to the hotel, the service representative can look up their profile and make decisions about how to treat the customer, such as offering free event tickets or meals. Another example is a pit boss who notes that a valued customer has been gambling heavily for a long period of time relative to the customer's profile and gives the customer a coupon for a free show.

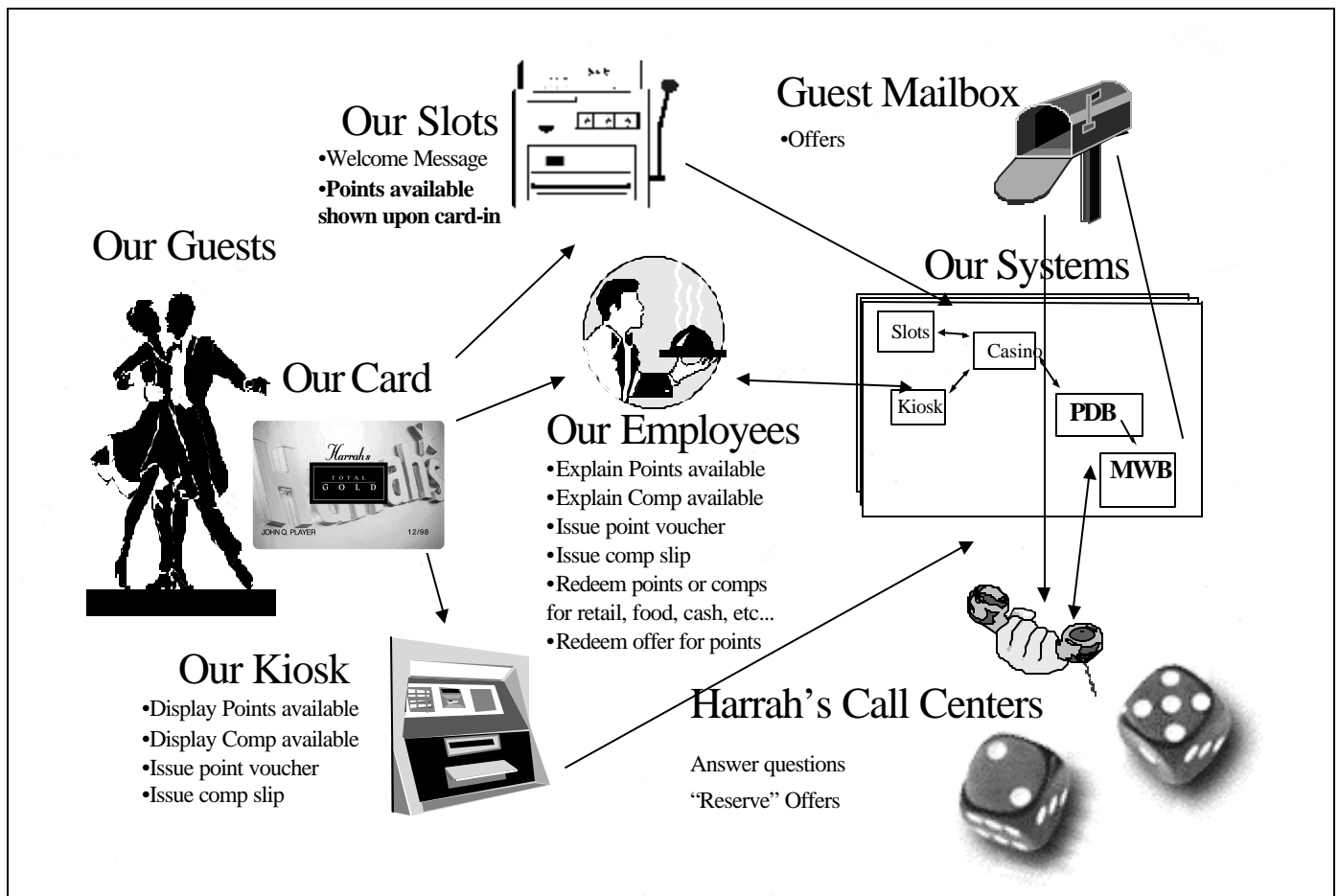
WINet Offers

WINet Offers is Harrah's in-house developed application for **generating offers to Harrah's customers**. To create an offer, a marketing analyst works with customer segments and profile data in MWB to create a list of IDs of customers who are in the targeted segment and fit the desired profile. These IDs are then fed into PDB, and then a program generates a customized mailing and offer for the customers. PDB also records whether the offers are accepted or not. The offers are also connected to hotel systems so that rooms can be reserved for customers who accept offers. Some campaigns are run on a scheduled basis while others are ad hoc. The offers can be generated at the corporate level to support the Harrah's brand or be created by an individual property (i.e., to support a mid week slot machine tournament). There are more than 20 million customer offers annually, and Harrah's tracks each offer to determine when and how offers are redeemed and how marketing activities influence customer behavior at a detailed segment level.

Total Rewards

Total Rewards is Harrah's customer loyalty program. It tracks, retains, and rewards Harrah's 15 million customers regardless of which casinos they visit over time. Total Rewards was originally introduced as Total Gold in 1997, but it was renamed in July 1999 when a three-tiered card program– Total Gold, Total Platinum, and Total Diamond – was introduced to give more recognition to Harrah's most active and profitable customers. Customers accumulate **Reward Credits (points)** based on their gaming and other activities at any of Harrah's properties. These Reward Credits can be redeemed for comps on hotel accommodations, meals, and shows and cash can be redeemed at any property. At specified Reward Credit thresholds, customers move to the next card level (e.g., from Gold to Platinum) and qualify for the privileges associated with that level (e.g., preferred restaurant reservations and seating, priority check-in at hotels). Customers can check their Reward Credits at any time by entering their card into a slot machine or kiosk or by logging in to harrahs.com . Total Rewards members are also sent offers of cash and comps for use at local Harrah's casinos and destination resorts such as Las Vegas and Lake Tahoe. Figure 4 shows a customer's view of the Total Rewards program.

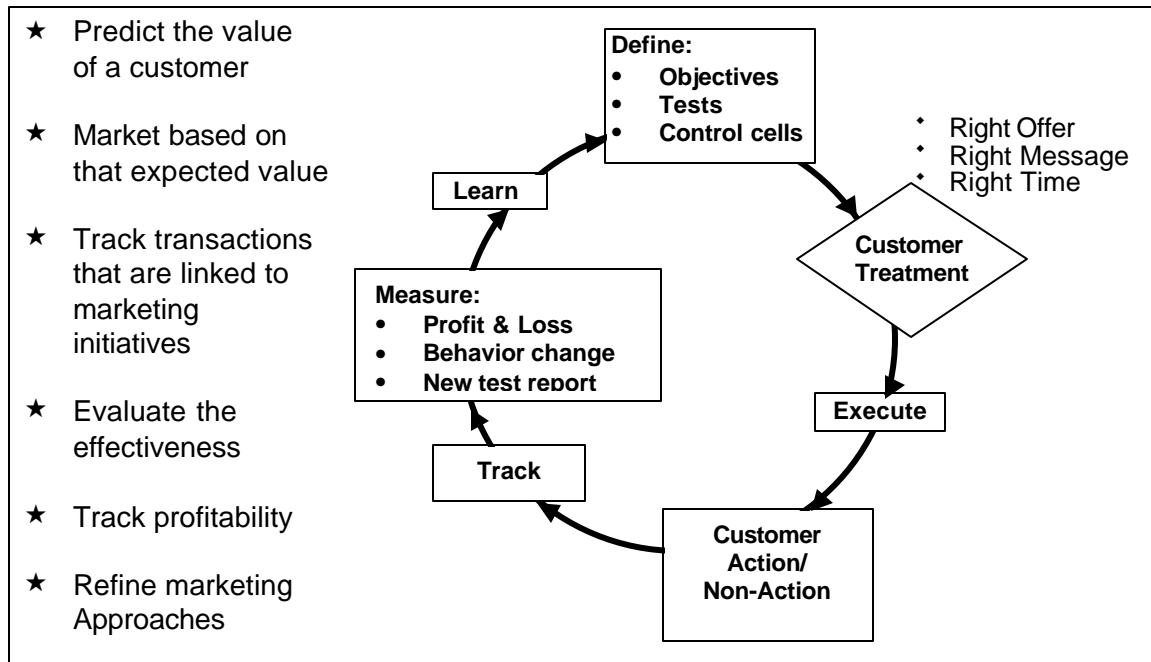
Figure 4: Customer View of the Total Gold™ Program



Closed-Loop Marketing

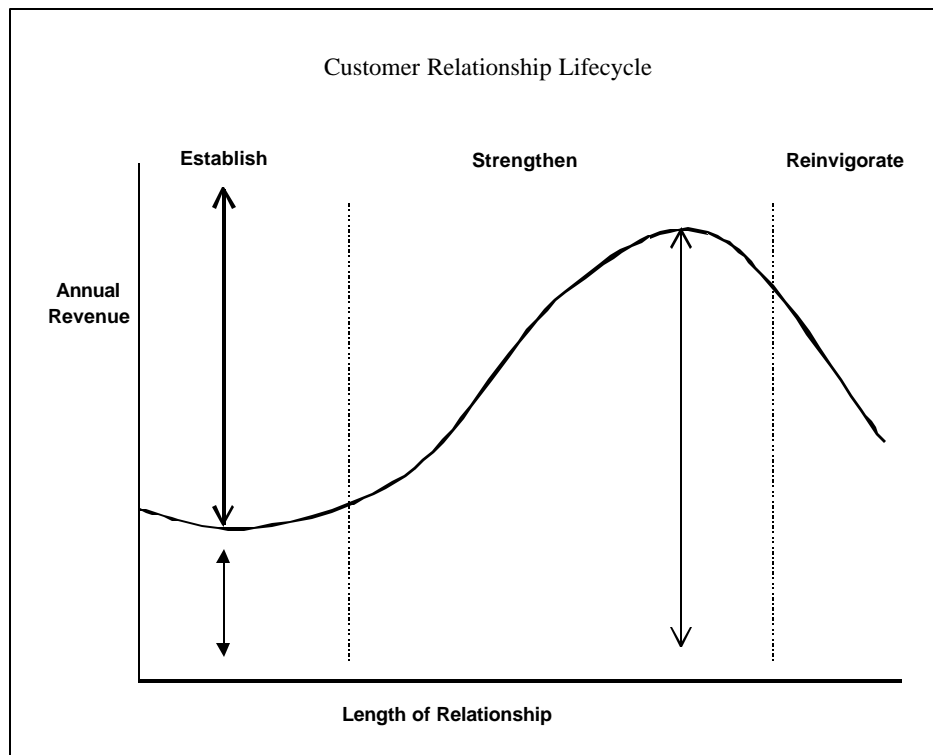
Like other casinos, Harrah's previously extended offers to customers based primarily on observed gaming worth. Over the years, intuition-based beliefs—called *Harrahisms*—developed for what did and did not work with their marketing campaigns. *Harrahisms* were never tested. With WINet, the foundation was in place for a new, more scientific approach. **Campaigns could be designed, tested, and the results retained for future use.** This data-driven testing and learning approach is called “closed loop marketing” and is shown in Figure 5. Its goal is to learn how to influence positive changes in customer behavior. Harrah's can learn what types of campaigns or treatments provide the highest net value.

Figure 5: The Closed-Loop Marketing Process



Closed-loop marketing begins with a definition of quantifiable marketing objectives, characteristics of the test procedure, and expected values of the customers selected for the test, who are divided into experimental and control groups. Based on what is already known about their gaming customers, the test campaign (customer treatment) is designed to provide the right offer and message at the right time. The selection of the customers and their treatments are based, in part, on Harrah's Customer Relationship Lifecycle Model, which is shown in Figure 6. **Customers are offered customized incentives designed to establish, strengthen, or reinvigorate the relationship depending on their positions on the customer lifecycle and the time since their last visit.** For example, a new customer might have characteristics that suggest that the customer has high lifetime potential value. Harrah's is likely to make an exceptionally generous offer to this customer in order to build a relationship. Or, an analysis of the customer data may reveal that a customer is "past due" to visit a Harrah's casino based on their previous gambling history. This kind of customer is also likely to receive a targeted message and offer in order to reinvigorate the relationship.

Figure 6: Harrah's Customer Relationship Lifecycle Model



Each customer's response to the campaign is tracked and analyzed in detail. Not only are response rates measured, but other metrics as well, such as revenues generated by the incentive and whether the incentive induced a positive behavior change (e.g., increased frequency of visit, profitability of the visit, or cross-play). Based on the net value of the campaign and its profitability relative to other campaigns, Harrah's learns which incentives have the most effective influence on customer behavior or provide the best profitability improvement opportunities. This knowledge is used for continuous refinement of marketing approaches. Literally thousands of experiments of this kind have been conducted.

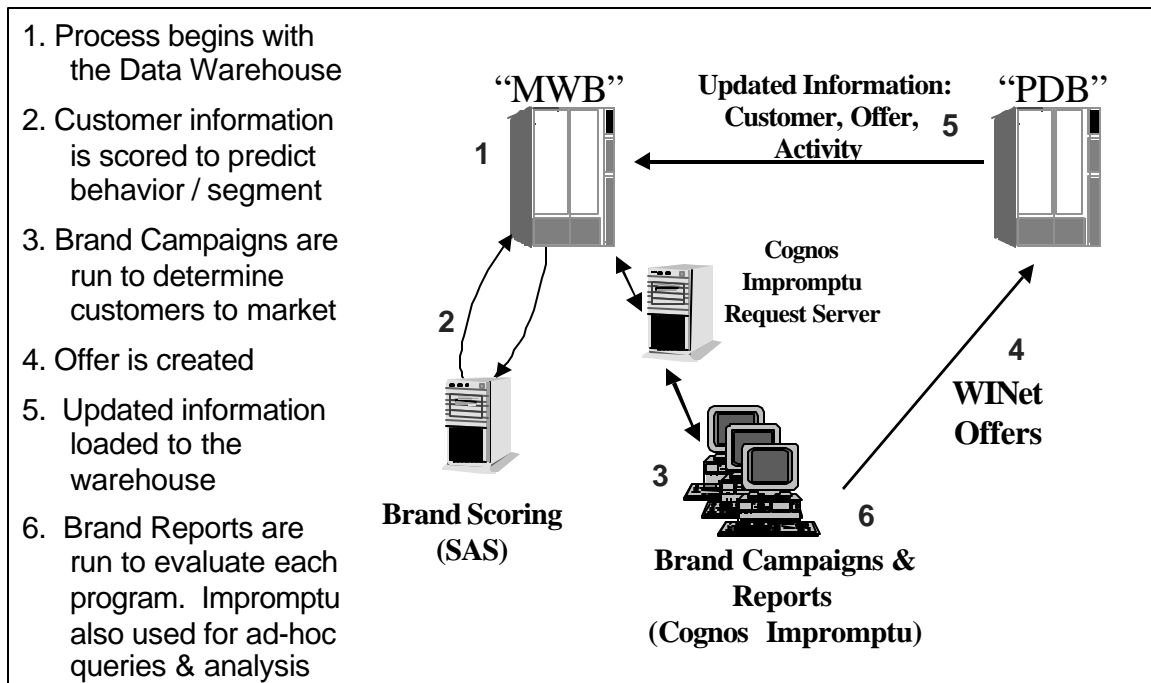
Several examples illustrate the use and value of closed-loop marketing. Two similar groups of frequent slot machine players from Jackson, Mississippi were identified for an experiment. Members of the first group were offered a marketing package of a free room, two steak dinners, and \$30 in free chips at the Tunica casino. Members of the second group were offered \$60 in chips. The second, more modest offer generated far more gambling, suggesting that Harrah's was wasting money offering Jackson customers free rooms and meals. Subsequent offers in this market focused on free chips, and profits nearly doubled to \$60 per person per trip.

Another test focused on a group of monthly players who Harrah's thought could be induced to play more frequently because they lived nearby and displayed traits such as

hitting slot machine buttons quickly (i.e., “high velocity” players). To entice them to return, Harrah’s sent them free cash and food offers that expired in two weeks. The group’s number of visits per month rose from 1.1 to 1.4.

The process and technologies that enable closed-loop marketing are shown in Figure 7.

Figure 7: Technologies Enabling Closed-Loop Marketing



The Impact

Harrah’s business strategy and the use of information technology are unique in the gaming industry and are more like the approaches taken in retail and financial services.

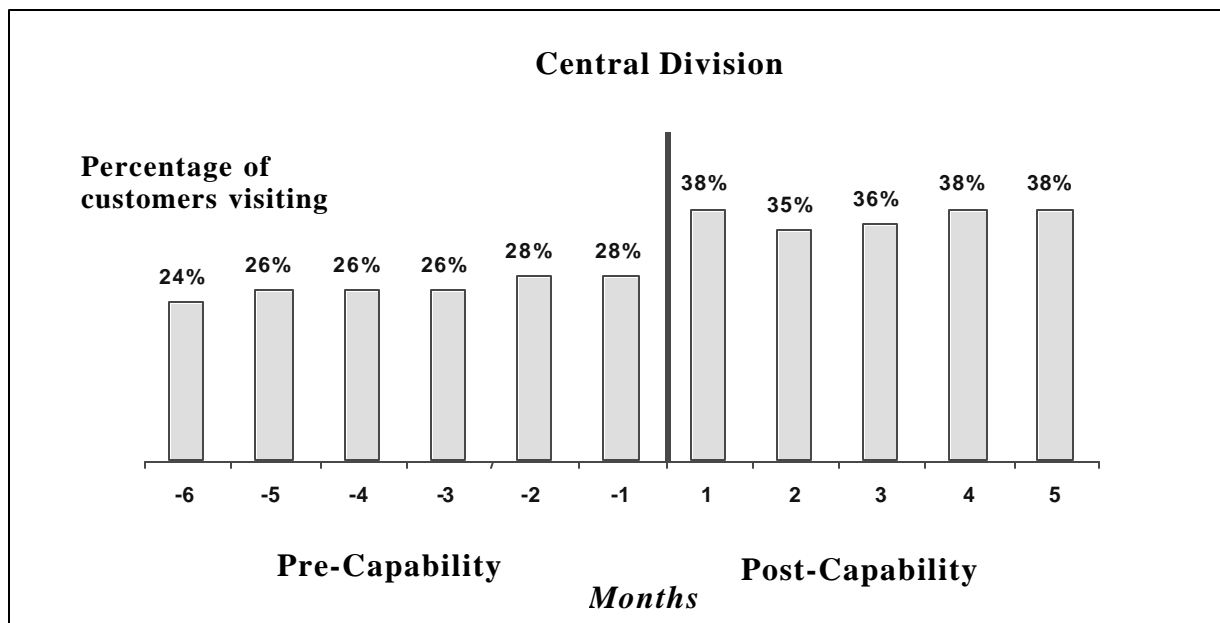
The results are impressive and other casinos are copying some of Harrah’s more discernable methods. Harrah’s stock price has risen in response to a doubling of the company’s earnings over the past year. The creation of the Harrah’s brand, Total Rewards, and cross marketing have resulted in a 72 percent internal rate of return on investments in information technology.

The effectiveness of Harrah’s closed loop marketing approach can be seen by how it has affected “same-store sales” (i.e., gambling revenues at a single existing casino). In 1999, Harrah’s experienced truly significant “same-store sales” revenue growth of 14 percent, which corresponds to an increase of \$242 million over 1998. Harrah’s grew revenues faster than their competition almost everywhere they do business – in some cases doubling and even tripling the market average of “same-store” sales.

Same-store sales growth is a manifestation of increased customer loyalty, which is driven by **three key contributors to business value**: (1) frequency of visits, (2) profitability per visit, and (3) cross-market play. Consider some specific examples of improvements in these areas.

Harrah's is successfully increasing trip frequency from a segment of customers who have historically visited its properties infrequently. Before the marketing campaign, customers visited Harrah's casinos in the central region of the country (i.e., the central division) 1.2 times per month. After customizing the offer, and tailoring the message, Harrah's is now receiving 1.9 trips per month from these same customers. And, more customers are visiting as represented by the percent of customers visiting; see Figure 8.

Figure 8: Increase in Frequency of Visits



The effectiveness of Harrah's direct mail program has been significantly enhanced. This is illustrated by a recent campaign for Harrah's property in Tunica, where Harrah's more than doubled the profitability per customer visit; see Figure 9.

Figure 9: Impact of Direct Mail Program on Profitability in Tunica, MS

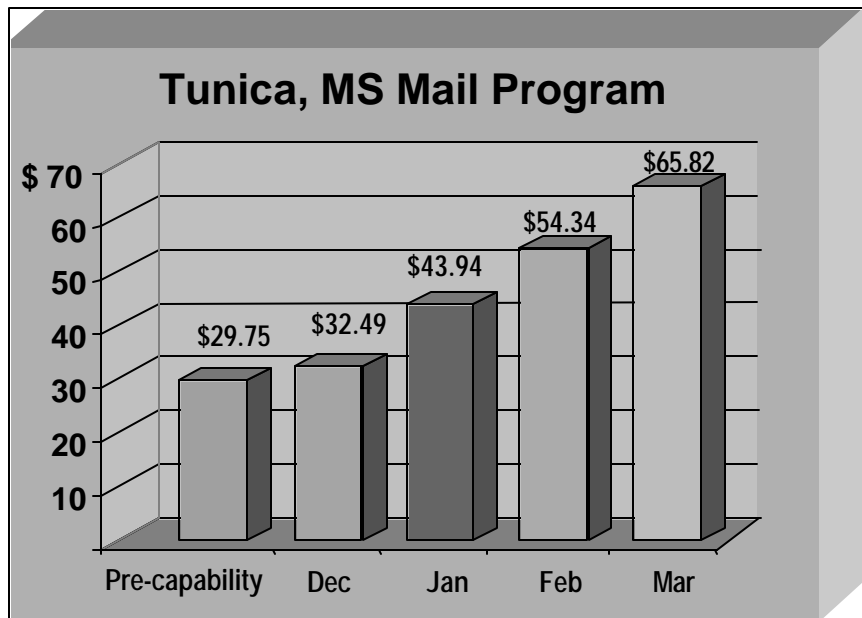
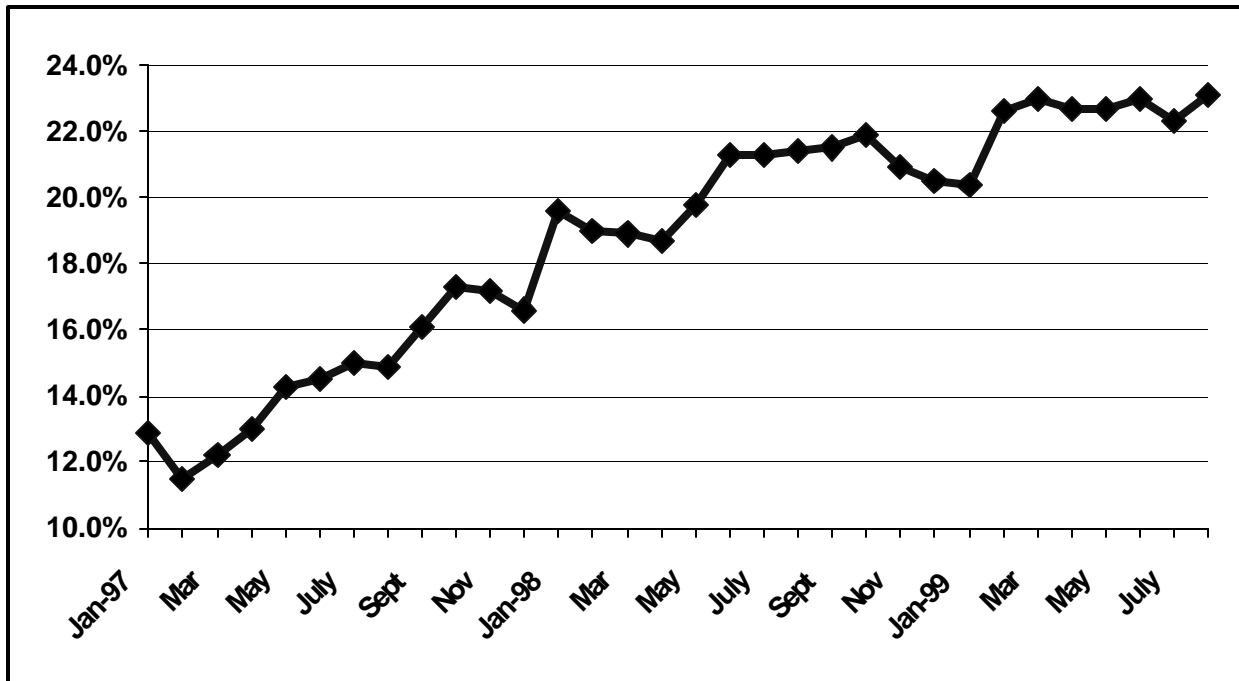


Figure 10 demonstrates Harrah's success at getting customers to play at more than one Harrah's casino. Over the last two years, the percentage of total revenues generated from cross-market play went from 13 percent to more than 22 percent. At the Harrah's Las Vegas property, the contribution to revenues from cross-market play more than doubled, growing from \$23 million in 1997 to \$48 million in 1999. This increase came during a time when room supply nearly doubled in Las Vegas with the development of new luxury casinos (e.g., the Bellagio, Venetian, and Mandalay Bay) at a capital investment of over \$3.5 billion.

Figure 10: Cross-Market Play (Aggregate)



Future Directions

The capabilities that Harrah's has developed form the basis for a sustainable competitive advantage and are the foundation for complementary segues into future growth using additional technologies and decision-making science. Future directions include:

- Harrah's will introduce a revenue management system that insures that customers are offered rooms at the right rates. This system will help Harrah's optimize the returns from its scarce room inventory. The price of the room will reflect the current and historical demand for rooms at that time of year and the customer's expected theoretical value from gambling at Harrah's casinos.
- Harrah's will extend its systems to eCRM, through advanced Internet access, networking their reach to current customers as well as acquiring new ones. All information that is currently available through non-Internet channels will be available through the Internet relationship management channel.
- Harrah's will also enhance its data warehouse to provide one source for enterprise-wide information. This enhancement will involve the addition of data about customers, product sales, financial results, and labor costs/employees. This single repository of data will allow Harrah's to analyze and understand its customers, products, and customer service in new ways. For example, Harrah's will be able to

analyze the slot machine play patterns of its most avid and profitable customers and to use this information in deciding where to place particular slot machines.

Lessons Learned

The experiences at Harrah's provide several lessons that can benefit other companies embarking on a customer relationship management initiative.

- **Link the business and warehouse strategies.** Throughout its history, Harrah's has focused on building relationships with customers. The coming together of advances in information technology and the expansion of gaming markets gave Harrah's the opportunity to use data warehousing to implement a brand strategy. A business strategy supported by data warehousing has led to fundamental changes in how the company is run and a leadership position in the gaming industry.
- **Focus on business change management and link that to the success of the project.** Because Harrah's was moving from a property to a brand-centric view of customers, there was a need for business change, not just technical changes. Strong senior executive support was key to the overall success. Also important were changes in incentive systems at the property level to reward cross-property play.
- **Have strong involvement from the business units.** Harrah's was fortunate that in the beginning of its data warehousing initiative that the same person was both the CIO and Director of Strategic Marketing. This heavy involvement by the business units has continued throughout the project. They have taken on tasks such as planning for warehouse usage, helping develop training and certification programs for new users, and developing reports for the properties to use.
- **Have a scalable architecture.** While Harrah's initial architecture was satisfactory for the patron database, it proved to be inadequate for the marketing workbench. After considerable effort to work with what was already in place, Harrah's ultimately turned to NCR to provide an architecture that would provide satisfactory response times to users' queries. Companies often fail to create a data warehousing architecture that scales to meet future needs.
- **Include short-term milestones and prototyping.** Initially, Harrah's did not use short-term milestones and prototypes. This was a mistake and contributed to problems, such as with performance on users' queries. After this experience, future phases of the project included proofs of concepts, prototypes, and quicker deliverables.
- **Manage the consulting relationship.** Since Harrah's did not have data warehousing experience, it sought external assistance. Harrah's used NCR's Professional Services group to augment internal staff. Harrah's did not

“outsource” the project, but rather, “co-sourced” it by identifying internal IT management responsible for the project and the relationship with NCR.

- **Plan for knowledge transfer and in-house expertise.** It is common for companies to hire consultants to help with their data warehousing projects. Most companies initially have little in-house data warehousing experience and consultants can move the organization more quickly up the learning curve. However, it is important to ultimately have internal data warehousing expertise. This can be achieved by hiring experienced data warehousing professionals and having a formal plan for knowledge transfer from the consultants to internal personnel. Harrah’s used both of these approaches successfully. They also utilized considerable in-house training on data warehousing.

Conclusion

Harrah’s has left little to chance. It has invested more than \$100 million in computers and software to develop what is widely regarded as the industry's most sophisticated "frequent bettor" program. With the Total Rewards program, which contains the world's largest database of casino customers, they have been able to create sustainable loyalty, a dominant competitive advantage, and insulate the business from local market volatility.

Their innovative idea was to grow by getting more business from Harrah's existing customer base. This approach was in contrast to the prevalent strategy of building ever more elaborate and splashy new casinos. Gary W. Loveman refers to their success as "the triumph of software over hardware in gaming."

The Total Rewards program has increased traffic in Harrah's casinos, and marketing programs driven by data from the warehouse are increasing retention. Keeping customers goes right to the bottom line. An increase in retention of just 1 percent is worth \$ 2 million in net profit annually. So far, Harrah's is enjoying an increase in retention of a couple of percentage points, thanks in large part to its data warehouse.

Closed-loop marketing is contributing to Harrah’s competitive advantage. According to Tracy Austin, vice president of Information Technology Development, by combining product information with customer behavior, “no one can touch us.” Overall, the data warehouse is turning up nothing but aces for Harrah's. Harrah's "gamble" on technology is paying off.

Questions for Discussion

1. Discuss the factors that drove Harrah’s customer relationship strategy.
2. Discuss whether Harrah’s business and IT strategies were aligned, and what factors contributed to or detracted from achieving alignment.

3. Discuss the integration between Harrah's patron database and the marketing workbench.
4. Give examples of how Harrah's has implemented closed loop marketing.
5. Does Harrah's have a sustainable competitive advantage? Can other companies duplicate what Harrah's has done? Discuss.
6. Discuss the privacy and security issues associated with what Harrah's is doing. Are there concerns and how can Harrah's address them?