MAGICBANDS IN THE MAGIC KINGDOM: CUSTOMER-CENTRIC INFORMATION TECHNOLOGY IMPLEMENTATION AT DISNEY

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CASE DESCRIPTION

The primary subject matter of this case concerns customer-centric information technology implementation. Secondary issues examined include customer experience, innovative technology development and adoption, customer relationship management, and big data. The case has a difficulty level appropriate for junior level courses or higher. The case is designed to be taught in three class hours and is expected to require three hours of outside preparation by students.

CASE SYNOPSIS

Imagine a child watching Snow White and The Seven Dwarfs on DVD before visiting the Magic Kingdom in Orlando, Florida. Once on vacation, the child rides the Seven Dwarfs Mine Train. While on the ride, the child hears the same music played in the movie, visualizes the same characters, and smells the mine that was featured in the movie. Afterwards, the child attends a meet and greet with the Snow White princess and a couple of the dwarfs. Nowadays, with IT processes that will be discussed in this case study, Snow White can call on the child by their name if they are wearing a special RFID-enabled wristband known as a MagicBand. That personal touch and experience is something the child will likely remember for many years to come.

This case examines the Walt Disney Company's use of information technology in the theme parks, especially, the recent introduction of MagicBands at the Orland Disney World. Disney has always prided itself on being one of the best service providers in the world. They have long used the slogan "happiest place on earth" to describe their amusement parks. The introduction of MagicBands exemplifies what Disney does so well in connecting their customers to a memorable personalized experience. Overall, this case illustrates a company's application of information technology to serve a customer-centric business model.

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A BRIEF BACKGROUND OF THE WALT DISNEY COMPANY

The Walt Disney Company, commonly known as Disney, was co-founded on October 16, 1923 by brothers Roy and Walt Disney. Moving forward nearly one hundred years, Disney has grown into one of the most successful and well recognized brands in the world, with several revenue generators, including broadcasting, consumer products, motion pictures, and of course, theme parks. Disney has become a household name and provides plenty of joy for children and families of all ages. The success of Disney can be attributed to a few critical factors such as their solid customer base, successful branding, and ability to diversify into multiple industries. Their longevity is due to the fact that they continue to create happiness through magical experiences and lifelong memories. This has remained their core promise since the very beginning. In recent years, Disney vowed to be relevant to every single guest that interacts with their brand (Adamson, 2014).

Most of these magical experiences occur in Disney's two major theme parks: Disneyland in California and Disney World in Florida. Walt Disney first inquired about a theme park back in 1953. He dreamt of a location with only one entrance, off the beaten path of nearby streets, that featured custom themed rides which highlighted the storytelling more than the thrill aspect. His dream became a reality on July 1955 when Disneyland opened in Anaheim, California. Following the initial success of his first theme park, Walt Disney was motivated to expand and build a second one. His vision found a home on 30,000 acres of land just south of Orlando, Florida and would eventually be named Walt Disney World's Magic Kingdom (Niles, 2013). Walt Disney's passion and vision has led to much success and Disney is known as one of the world's top hospitality providers.

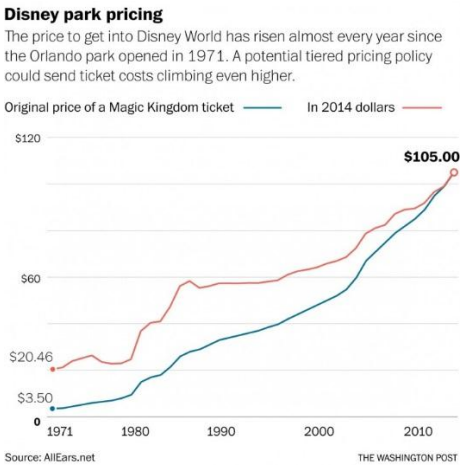
Today, creating personal touch and experience remains the centerpiece of Disney's customer-centric business model. Disney has long used the slogan "happiest place on earth" to describe their amusement parks. At the Disney theme parks, hundreds of attractions, rides, and characters exist. Disney focuses on more of a show aspect by connecting each attraction on a personal level to the parkgoers with sights, sounds, and smells that are infused into the customer's memory as part of the "Disney Experience." Given the brand recognition and unrelenting focus on customer experience, it is no surprise that Disney enjoys a strong and loyal customer following. Customers become walking advertisements and sub-consciously recommend company products and services to family, friends, and other fellow Disney consumers. Disney thrives on having a loyal customer base that will likely make return visits over and over again. This allows for Disney to have a continuous revenue stream, and very little time throughout the year where park attendance is underperforming. In addition to park attendance, Disney's loyal customers also spend generously on merchandise, dinner reservations, vacation packages, and hotel reservations. With such a loyal following, Disney is able to hold significant market share in the theme park and entertainment industry.

INFORMATION TECHNOLOGY AND CUSTOMER EXPERIENCE

Disney is a great example of a company that invests their capital in order to stay on top of the service industry pyramid. Disney commands the highest prices in the theme park industry (Figure 1 illustrates the pricing history of the Orlando park), yet continues to drive some of the highest attendance rates within the industry. This is why the Disney Experience, including both the tangible and intangible components of that experience, is imperative to the success of Disney.

Technology is a driving force in that success, and a major component of Disney's customer-centric business model.

Figure 1: Disney Park Pricing History (Source: The Washington Post)



Given the popularity of Disney theme parks, a constant point of concern for guests is overcrowding and long wait times at all of the attractions. Despite having multiple theme parks in different locations, each one is always extremely busy. Guests are faced with having to make selective decisions on certain rides or attractions that they wish to attend as opposed to indulging in them all. Many guests now utilize the FastPass+, a ride reservation system designed to moderate wait times at popular attractions. Each guest has a maximum of three passes to use within one day, and these guests often show greater satisfaction of their experience. Visitors can make FastPass+ selections up to sixty days in advance. When booking the passes, customers will either be able to choose a certain time for their reservation or Disney will suggest one to them. Similar to a restaurant reservation, it is valid for a limited time only. Thus, visitors can redeem their FastPass+ up to one hour after their assigned time. When making same day reservations at one of the FastPass+ Kiosks, visitors can only book one FastPass+ at a time and must redeem it before making another reservation. With the help of the introduction of fast passes, Disney hopes for a broader distribution of these passes among their guests.

Disney has always placed great emphasis on creating personalized experiences. One of their current goals is to cater to every single person that expresses interest in their attractions. They plan to have an effect on every guest that enters their amusement parks. With many guests spread across multiple locations, it can be quite an overwhelming task to personalize the experience of all guests and add a personal touch dimension to their Disney Experience. Along with the problems associated with the amusement parks, retail stores within the Disney parks have lagged behind in terms of the cycle of entering, buying, and documenting transactions. Customers have often complained of too high of prices and no quick way to get through a line anywhere in the park. Disney, on the other hand, was also looking for a way to meet these needs as well as gather the data necessary to process and analyze customer transactions.

Another focus area for issues within Disney hones in on the problems associated with the hotel booking, check-in, and checkout process. It can be quite the task to book an entire Disney vacation. With the millions of guests that check in and out of Disney resorts each year, it was

almost unheard of to never have to wait in line. Somehow the reservation process needed to be simplified. Even better, if Disney could identify opportunities to implement the same technology at the parks that could be applied at the hotel, that would reduce overall infrastructure cost. In sum, Disney needed to explore possibilities of technology that would benefit the hotels and theme parks simultaneously.

Customers are ultimately the key decision-makers to any service-related companies. With the Disney Experience, customers demand a compelling and unforgettable experience. They do not want to be sidelined by long wait times around the parks, merchandising stores, and resorts. In order to provide that flexibility and meet demand, Disney must decide where to go from an information technology standpoint to address the concerns mentioned. They must determine which issues are at the top of the complaint list, and how information technology can provide the infrastructure to support the magic that Disney is known for and renowned for achieving. These problems are important now more than ever because of the industry landscape that Disney plays. There is pressure on Disney to be innovative in order to maintain a competitive advantage and remain profitable. With the current financial condition of the United States and global economy, consumers are becoming more and more sensitive about how they spend their discretionary dollars. That notion requires that Disney provides the best service to match their high price points. Their reputation for continuously innovating and enhancing their theme parks only provides the visitors with higher standards and much larger expectations.

To address the problems faced by Disney within their theme park and resort operations, Disney decided to focus on several key areas of information technology: Internet of Things, Customer Interaction, and Big Data. Through these major areas, the potential solutions to problem areas can be identified and expanded on more in detail.

THE MAGICBANDS

A major area that Disney chose to focus on in recent years is the Internet of Things (or IoT). Many businesses are trying to differentiate themselves by having objects that are interconnected via technology. This could be a mobile device or any physical items that can communicate efficiently and wirelessly. A customer-facing example of IoT is using a mobile application to access a thermostat at home to control the temperature inside even when nobody is home. Another example is monitoring the number of parking spaces that are available in a given area, such as a large city, through a mobile device. There are many applications that can arise from the Internet of Things, and Disney wanted to be at the frontlines to implementing this type of technology.

In order to match Internet of Things technology to the amusement park and resort setting, Disney decided that wearable technology would be their primary objective. This would prove to be a challenging task as it entails more than simply connecting several parks and resorts elements to a mobile application. It requires designing an object that can be physically attached to a guest throughout the duration of their vacation without being obstructing. Several items were up for consideration, including wristbands, necklaces, and even Mickey Mouse ears. The product Disney went on to develop is called the MagicBand.

The MagicBand, as illustrated in Figure 2, is an exclusive product developed by Disney and released in early 2014. It relies on RFID readers at The Walt Disney World Resort to register a MagicBand (a wearable wristband) with various elements around the theme parks, retail stores, and hotels (Baldwin, 2014). “To make the MagicBand work, Disney had to wire an entire new infrastructure into its parks. Stores and restaurants needed to be outfitted with the new payment

systems. Every hotel room needed new lock systems to work with the MagicBand's RFID transmitter" (Grainer, 2015). As of late 2015, this technology was only available in the Orlando, Florida location at The Walt Disney World Resort. However, Disney is pursuing the expansion of this product in California as well as on their cruise lines.

Figure 2: MagicBands (Source: The Walt Disney Company)

Following Walt Disney's famous motto "Plus It", the company continues to be an innovator of the future. In the early years he used the quote, "Nothing of the present exists" in some of the original promotional brochures for the park (Kuang, 2015). The Orlando location in particular remains the testing site for all the new experimental prototypes. Disney wants the customers to familiarize themselves with technology that no one has even imagined yet. Their long term goal is to master the art of customer service. Utilizing the wearable technology, they now possess the great ability of turning a negative experience into a positive one through personalization. For example, if a guest has waited a long time in line the park can send them a coupon for a free ice cream cone or small gift shop souvenir. The transmitters will be able to communicate when a guest may need a little pick me up and upload some type of freebie treat onto their account. This is a major advancement in improving their customer service overall.

The MagicBands that Disney have unveiled is priced at about $13, but offer convenient and unique technology that enhances the entire Disney Experience. Containing a very simplistic build, the rubber wristbands are offered in multiple colors such as gray, blue, green, pink, yellow, orange, and red. Each has enough battery life to span over two years. Unlike most wearable or even non-wearable technology, this adds an extremely convenient benefit of never having to worry about charging the unit. The interior contains an RFID chip and a radio similar to one in a 2.4 GHz cordless phone. The band connects a guest to a system of numerous sensors all over the park. Despite their astonishing capabilities, the bands do not look very astonishing at all. It is very simplistic, a colorful center panel contained by a grayish looking border. The sizes are adjustable to fit a child's wrist or a large adult (Kuang, 2015). Disney was insistent on the design in order to make two points clear: everyone is equal within the park, and everyone is always welcome. The magic they create is almost invisible, just how Disney likes it to be. Additionally, the MagicBands are typically included at no extra charge with the purchase of a Disney vacation package or an annual pass. These MagicBands offer several positive elements to both Disney theme park employees and customers alike.

Development of the MagicBands

This section will discuss the process it took to create the MagicBands. Although the team eventually grew to beyond 1,000 people, the original idea began many years ago with just a few individuals. They were kiddingly referred to as the Fab Five - sometimes even referenced as Mickey, Minnie, Donald, Goofy, and Pluto. In 2008, the original crew received direction from Meg Crofton, the then President of Walt Disney World Resort, to remove all friction within the Disney World experience. She said, "We were looking for pain points". Focusing mainly on the consistently long wait times throughout the park, she wanted to answer the question, "What are the barriers to getting into the experience faster?" (Kuang, 2015). The associates working on the project foreshadowed the future when they envisioned Disney's ultimate future by coming back with a drawing of the Magic Kingdom without turnstiles.

The Fab Five originally drew inspiration from the then booming wearables market. They were initially fascinated by the Nike FuelBand whose capabilities included a synced heart rate monitor and a pedometer built into the bottom of your shoe, all connected to a wrist mounted display. They then brainstormed on this question: what if a product like that could be the key to unlock anything and everything that Disney has to offer at their parks. Their initial vision came to life for the first time in the spring of 2010. Many ideas were tossed around to decide what the actual object would be: a band, a lanyard, or even Mickey ears.

This entire development took place in an area of the park that resembled a studio backlot. The front windows were blackened out, and the venue appeared to be closed. Inside the building were roughly thirty or so designers as well as engineers spread out at makeshift desks. The developers wanted the design to be simplistic enough for guests to be able to learn right away. All you have to do is simply touch the circled Mickey icon on the band, when everything works the reader flashes green. If something goes slightly wrong, it glows blue.

Once the engineers had developed a prototype for the MagicBand, it was time to present their idea to the upper level executives, including CEO Bob Iger as well as Pixar board member John Lasseter. The many people working on the project created independent rooms on an 8000 square foot sound stage with fifty foot ceilings. Each one was supposed to represent the newly revamped Disney Experience. Each room was a display to portray a certain stage of the visitor's trip, perhaps where a family might sign up for their ride reservations or book a meet and greet with one of the princesses. The team wanted to show the executives what the futuristic booking system would look like and take a peek into the newly developed Disney World Experience. On a small scale, these rooms illustrated how the new infrastructure would function. Following their tour through the new futuristic experience, the executives were thrilled. The board of directors would eventually sign off on the one billion dollar cost of going ahead with the system (Kuang, 2015).

Despite receiving the go-ahead on the MagicBand project, it would take another two years of work to completely transform the original prototype into a real world model. Once that phase was completed, it took another year and a half to make the necessary adjustments within the park. The old sound stage where the product was initially developed became the new training area for Disney employees (who are always referred to as cast members). Currently, the soundstage no longer exists and hardly any evidence exists of the project ever being worked on (Kuang, 2015).

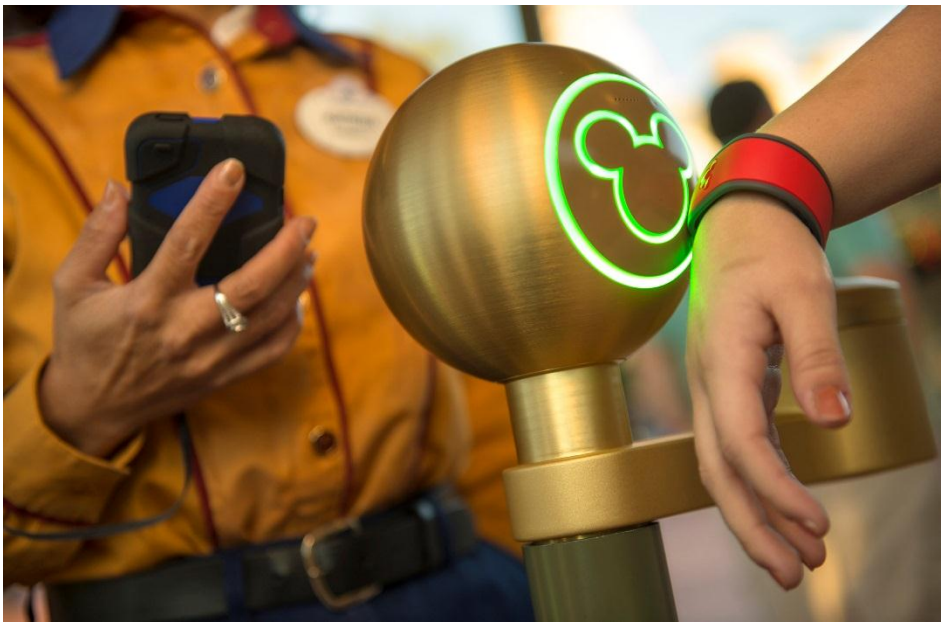
MagicBands and Customer Interaction

Disney is always looking for ways to improve its interaction with customers, and continue its positive image of creating memorable vacation experiences. The first positive aspect

that Disney and customers achieve through wearable wristbands is a personal touch point with customers. Customers can have their names or nicknames directly inscribed on the MagicBand. In addition, throughout various locations in the theme parks, park staff can know the name and location of a guest. For example, a young girl goes up to meet Cinderella at the castle in the Magic Kingdom. As she walks up to Cinderella, Cinderella's guard whispers to her and says, "This is Sarah." Cinderella then calls Sarah by name as she approaches. In addition, a family walks up for their 6:00pm reservation at a restaurant within the Walt Disney World resort. As they walk up, like magic, the hostess says, "Welcome Smith family." This is all possible through the use of MagicBands, and the RFID technology within them. After swiping the band at a kiosk, it would light up with a pleasant chime sound signifying a successful transaction. Disney is now one step ahead in catering to the needs of their consumers simply by knowing their name without having to ask.

The Internet of Things technology utilized by the MagicBands, as well as other RFID and fingerprint technology, allow the guests to have an expedited and easier entry to the parks. As shown in Figure 3, with just a touch of the wearable wristband, a guest can gain access to the theme park. This is a much more simple process than purchasing tickets at the gate, waiting in a long line to enter, and slowly gaining access to Disney attractions. For those guests concerned with the rains or water destroying their wristbands, Disney thought of that as well and made the MagicBands waterproof.

Figure 3: Park Entrance with the MagicBand (Source: The Walt Disney Company)



In addition to the effects on the theme park element of the MagicBands, the hotel processes have also been influenced by MagicBands. The locks at every hotel room in the Walt Disney World resort were outfitted to communicate with the MagicBand. By signing up in advance for the "Magical Express", the band substitutes all of the hassles with paperwork once arriving in Florida. The Express users do not have to be concerned about the luggage (after being tagged it will arrive at your specific hotel room). This allows for wireless entry into one's hotel

room with just the swipe of the wrist. This can additionally help expedite the check-in and check-out process by just activating or deactivating the MagicBands to a particular hotel room.

In addition, the customer interaction piece of information technology revolves around a newly developed rollout called MyMagic+. MyMagic+ encompasses several components that include the following: FastPass+, PhotoPass Memory Maker, My Disney Experience, and MagicBands. FastPass+ is a customer option to select up to three attractions a day, at one park location, to receive a time in which to skip the normal ride queue and get priority access to those attractions. These selections can be made up to thirty days in advance of the visit, and in some cases for sixty days in advanced (Walt Disney World, 2015). PhotoPass Memory Maker provides guests online access within their Disney accounts to digital photos taken by PhotoPass photographers at various attractions, character meet and greets, shows, and restaurants throughout the park. My Disney Experience is both the website and mobile application platform that allows customers to book and manage their Disney vacation. This includes being able to designate FastPass+ selections, make food reservations, see the displayed wait times for attractions, or even find the nearest available bathroom. There are many other features of the online and mobile platform, but it is essentially a tool for customers to view and manage their vacation experience all in one location. In essence, the MagicBand functions as the physical "key" to all of the customer service components of MyMagic+.

MagicBands and Big Data

The last focus area of IT that will be addressed is big data. Big data is essentially any large data set that can be analyzed to reveal trends or patterns about a certain market segment. Applied in particularly to Disney, with the MagicBands being able to collect various types of information about a customer, there are significant opportunities in terms of big data analysia. Disney has the opportunity to access key pieces of information such as purchase history, attraction preferences, location, and visiting preferences (Van Rijmenam, 2015). All of this information can be invaluable to a company like Disney. They are giving themselves the opportunity to discover trends within datasets to ultimately generate more revenue for Disney, all while providing a valuable service to customers.

With the rollout of the MagicBands, Disney can now track customer purchases, and even determine customer preferences. With the data available to Disney through MagicBands, they can better customize marketing messages and promotions directly to the proper customers. For example, a customer bought four dolls from a Disney park's store from the movie Frozen. Next year, Disney might be able to send a targeted email to that customer about a Frozen show that is new and exclusive to Walt Disney World Resort that coming December. When customer preferences are known, generating revenue from that customer can become a much more simplified process. Although some options on the MagicBands can be enabled or disabled, any insight into customer purchase habits or preferences may lead to increased future revenue for Disney. Additionally, Disney is adding a little bit of personal touch in the customer's mind by catering a message specifically to them.

Reception and Impact of the MagicBands

The initial reception of the MagicBands has been extremely positive. As one visitor commented on Facebook: "My family used the bands in October, we loved them. We chose our colors and names. You can even attach a spending limit to each band so you can let younger

folks spend their "own" money. It was so easy, we paid for meals, souvenirs, adult beverages, everything." Another poster praised: "We used our bands last weekend and loved them! Great going to the pools and parks with no need for a wallet or purse! Getting into your room is so much easier now even if your hands are full." Even the Disney cruise liners are starting to incorporate them into their facilities. Different airlines and professional sports organizations have approached Disney with inquiries about the new technology.

It is too early to assess the exact financial impact the MagicBands have on Disney's bottom line. The MagicBands may not have a direct immediate effect on the bottom line considering the fact that they are only currently available at the Orlando location. However, through the next few years we could expect Disney's theme park revenue to increase partly due to the rollout of MagicBands. The major objective of the bands is to have people spend less time waiting in lines. The guest schedules will now be more available to explore beyond the usual top attractions, therefore total usage of the park will improve. In the end, guests will be able to do more throughout their visit which means that they will spend more. As a result, they will have the best experience they have ever had at the Disney theme parks and will be much more eager to come back and experience it all over again.

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