

The Impacts of Technology Information Management and the Walt Disney World Experience

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Walt Disney World Resort is an entertainment company located in Lake Buena Vista, Florida home to four theme parks, two water parks, twenty-seven themed resort hotels, nine non-Disney hotels, multiple golf courses, a camping resort, and various other entertainment options including Disney Springs and ESPN Wide World of Sports Complex all sitting on the 27,258 acre property. Walt Disney World opened on October 1, 1971 and since then has had an estimated total of 1,347,096,000 visitors from all over the world, about 52 million annual visitors (1). With millions of guests (the terminology used to refer to Disney Parks and Resorts visitors) traveling to experience what this entertainment company has to offer, expectations are extremely high and have become increasingly more demanding, forcing Disney to adapt new technologies and develop a robust system infrastructure to manage all its guests and offerings.

In order to provide better services to guests and better anticipate future trends, in February of 2011, Disney World Resort unveiled a one billion dollar project to implement “New Generation Experience” (NGE), an RFID (radio frequency identification) technology that would allow different systems to communicate throughout the parks and resorts providing and collecting information about a guest’s vacation, whether it is a one-day visit or multi-day visit. In 2013, this project was renamed MyMagic+ during its integration into the parks and is still the current system being used today. MyMagic+ was created to solve the “pain points” guests’ experienced and eliminate “barriers to getting into the experience faster” by updating technologies to include the rising popularity of smart phones at the time (2).

Before further delving into the specific offerings of MyMagic+ and its impact on guests, it is important to understand Disney’s business philosophy of selling *experiences*.

Even though Disney sells tangible goods, whether it is admission to the theme parks, character themed merchandise, or food, the reason the company is able to charge so much money for these offerings and still have millions of visitors each year is because people want to experience the magical stories that Imagineers (name given to the artistic and technical teams that create the physical and digital structures that are used to tell the stories) have carefully crafted. Walt Disney has always been first and foremost a storyteller allowing him to be the visionary needed to make Disney World Parks and Resorts a reality. It's the stories that are told at the theme parks and resorts, rooted in the tales of our favorite Disney movie characters, that allow us to participate and become a part of these stories while also making our own memorable stories. Our memories are closely linked to our feelings. Good experiences produce good feelings, which in turn create good memories. Memories are far more valuable than any one thing a person can own. Think of a valuable item you own - the reason why it is valuable is because it is associated with specific memories and serves as a reminder of those feelings and experiences.

Recognizing Disney's perfected art for selling experiences, authors Joseph Pine II and James H. Gilmore used Disney's Theme Park and Resort Company as their basis to explain the emerging business trends of closely coupling products and services with good experiences. They published their findings in the Harvard Business Review as *Welcome to the Experience Economy* to explain the newest driving force in the economy. The four stages of economic progress in chronological order are the agrarian economy, followed by the industrial economy, then the service economy, and presently the experience economy. (One could also make the argument that we are currently in the shared

economy, but I personally think the shared economy heavily relies on the experience economy – however my reasoning for this is beyond the scope of this paper.) The value of the experience economy can be no better explained than in the following excerpt from the article.

“While prior economic offerings- commodities, goods, and services- are external to the buyer, experiences are inherently personal, existing only in the mind of an individual who had been engaged on an emotional, physical, intellectual, or even spiritual level. Thus no two people can have the same experience, because each experience derives from the interaction between the staged event (like a theatrical play) and the individual’s state of mind” (3).

Since good experiences are highly personal and need to be individualized, it’s inevitable that a digital system must be created to manage all of Disney World’s offerings and make personalization accessible, hence the development and implementation of MyMagic+.

MyMagic+ is divided into four main sections: MagicBands, PhotoPass Memory Maker, My Disney Experience, and FastPass+. MagicBands are the physical device that guests wear on their wrist that is used to gain access to anything connected to their vacation plan. Using RFID technology, the classic Mickey Mouse symbol on the MagicBand is used to access information by tapping the symbol to other objects that also contain the Mickey Mouse symbol. Implementations of this technology include using the MagicBand to open your specific hotel room, as a credit card to purchase items (a four digit pin number is required for purchases above \$50), as tickets to enter the theme parks, to collect pictures taken on rides or at character meet and greets (this is the PhotoPass Memory Maker and the extent to which it will be covered in this paper), and last but not

least it is used to access fast passes for rides and attractions (attractions referring to non-ride options including but not limited to shows, character meet and greets, and exhibits) (2).

Fast passes serve as a virtual queuing system that is basically a reservation for rides and attractions. With the FastPass+ feature, you can select up to three rides or attractions within a single park based on availability and then designate specific times that you want to go to the ride in order to skip the longer stand by line. Fast pass line entrances usually take you to the front of the line and require you to only have to wait anywhere from five to thirty minutes (depending on the time of year and the popularity of the ride). Before FastPass+, there was a paper system for virtual queues only available for rides. To access a fast pass for the ride, you would need to walk to the ride location and locate the ticket boxes, insert your plastic cards that served as park admission, and would then receive a print out paper ticket with a return time of when you could return and actually go on the ride. The paper ticket system released return times for the rides in chronological order, so the earlier you got to the ride, the earlier in the day your return time was. If you got to the paper ticket system after noon, your fast pass return time would be close to park closing time or you wouldn't get a ticket at all because they would run out. This was very common for new and popular ride. When Toy Story Mania first opened, fast passes would usually run out within an hour of the park opening.

When interviewing Kristina, an avid Disney vacationer, about her experience with the paper fast pass system, she expressed strong feelings of dislike for this system for two main reasons. The first reason was that the paper passes “died” quickly, meaning they easily got lost or destroyed from water or tears. The second reason was that when they

would arrive at the park, her dad would have to run over to the paper fast pass distributors while she and her family stayed behind doing other things in a more relaxed nature. She felt that her dad running ahead defeated the purpose of the family staying together on vacation and enjoying each other's company. Kristina mentioned her family always arrived later in the day at the parks, but made no direct comment about the decreased availability of fast passes.

Based on these comments, these are some of the "pain points" that Disney Imagineers had recognized themselves and knew they needed to change. It's clear to see that paper fast passes did not favor families with young children even though this is Disney World's target audience. Families with young children struggle to get to the parks early in the morning because of all preparation required for traveling such as packing a diaper bags, snacks, toys, strollers, etc. In addition, young children have a small window of patience, so if parents are unable to get fast passes to bypass the long lines, their children would easily become irritated from waiting so long. Furthermore, it is inevitable for young children to need afternoon naps, requiring families to leave the parks after several hours. Based on this, giving families options to better plan ahead were all the more reasons to transition to the MyMagic+ system and the specific FastPass+ offerings.

With FastPass+, paper tickets were eliminated along with running to and from fast pass distributors. This digitalized system allows vacationers to book ride and attraction reservations anywhere from sixty to thirty days in advance. However, this new system adds an extra layer of restrictions that the paper system didn't have, guests can choose no more than one reservation from certain categories, meaning that you cannot have fast passes for the two most popular rides within the same theme park. While this makes

sense for Disney to imply these restrictions for crowd control, it puts adolescents and adults at a disadvantage because they typically want to use their fast passes to experience the most number of rides possible instead of using it to meet a character or see a show (however there is no statistic to back this claim, it's what I observed from own personal experiences visiting the parks and examining the age demographics of those waiting in line).

In addition to the imposed hierarchy of ride classifications, FastPass+ enables guests to be in the virtual queue for character meet and greets and shows. In my personal opinion it is understandable that families with young children would value a virtual queue to interact with characters, since newer, popular characters like Anna and Elsa have had 120-minute wait times and as I mentioned before, that's a long period of time to keep a child entertained and remain patient to see someone they love and admire. Furthermore, children have a more limited number of rides to go on due to height restrictions, so they should have the option to bypass non-ride lines. However, I think fast passes for shows like the nighttime fireworks display is unnecessary- I don't want to say unfair- but it reserves some of the best viewing spots for those with fast passes, so vacationers then have to decide whether they want to forgo a fast pass for a ride/character and use it to ensure a good firework viewing spot.

Based on this information so far, it definitely seems that Disney World vacationers have a lot of options and a lot of planning to do before they even get the park. While vacationers definitely have more options to plan and personalize their vacation experience to better ensure that the things they really want to and experience are more than likely guaranteed, it leaves little spontaneity for when you're actually on vacation. If

you can reserve fast passes starting as soon as sixty days in advance, that means you have to have already made purchased all your park tickets and pre-determine which parks you want to go to when, and then decide what rides you want to ride at what time before even physically arriving at Disney World (2). If this much advanced planning is required, then if you decide “last minute” per se to spend a day or two at the theme parks, in my opinion it’s hardly worth the money you will be spending. By this point fast passes for popular rides will already be depleted so you will spend more time waiting, which means less time doing and experiencing the majority of offerings. (On a side note, I vacationed with my family to Walt Disney World in July of 2017 and we had booked our fast passes 3 months in advance and tried to reserve a fast pass for the new Avatar ride, but they were already all taken. When physically at theme park 3 months later, we arrived thirty minutes before the park opened and still had to wait over 2 hours for the 4-minute ride.) Therefore, while MyMagic+ does offer advanced personalization and seem to provide vacationers with greater control over their experiences, I think this new system actually gives Disney more control to manage guests’ vacation, and this can be attributed to the era of data driven decision-making.

Big data is the key to conducting successful business in today’s global market. Not only does Disney have to manage information on a digital platform via the My Disney Experience application (available only on the app store and on Google play – so if you don’t have access to the app, navigating through your vacation will be extremely difficult and you will have to find kiosks throughout the park to access your information) that allows visitors to access FastPass+, PhotoPass Memory Maker, maps of the parks, wait times, show times, and dinning reservations- Disney also has to physically manage

the flow of guests. Disney World's Magic Kingdom theme park has a high tech command center hidden beneath Cinderella's Castle that manages the flow of people throughout the park (the command center's existence predates MyMagic+). By analyzing real time data on flat screen TVs, people within the command center can observe the population density of specific areas of the park. For example, if there is long wait time for the Pirates of the Caribbean ride, the command center can make the decision to release more boats in order to serve more people at a faster rate or perhaps send a character like Donald Duck to interact with the people in line and distract them from the frustration of waiting. Another example is if Frontierland, located in the back corner of the park, is highlighted red because of large crowds, the command center can schedule for impromptu performances by its various music ensembles in Tomorrowland, on the opposite side of the park from Frontierland, to redirect and disperse dense crowds. Good crowd control alleviates the pressure on ride and food services as well as the frustration the guests might be experiencing.

As a result of the new system, since MyMagic+ utilizes RFID technology and each guest is wearing their personal RFID tag, Disney essentially knows where its guests are at all times, taking the abilities of the command center to the next level. Referring back to fast pass reservations, since they can be made anywhere from thirty to sixty days in advance, Disney can then predict the flow of crowds within the parks thirty to sixty days in advance. Therefore, since there are thousands of people visiting the parks daily, each generating thousands of data points solely based on location and the tapping of Magic Bands to various mickey symbols communicating with databases to "approve" actions (for example meaning that the system needs to check and make sure that a guest

trying to go in the fast pass line actually has a reservation), a vast library of data and information is created and used to predict future trends.

When I asked Kristina about her opinions on Disney collecting her data, she responded positively towards being surveyed because it was consensual and she was made aware of it. When I asked her if she was aware that Disney was tracking her location while wearing the MagicBand, she was shocked and made uncomfortable. I continued to explain the location tracking technology was used to manage crowds and analyze traffic patterns to create better experiences for guests, and she responded with wanting this information to be made available to her so she knows what areas to avoid herself. She also showed strong feelings towards wanting to be more informed of these data collection methods and what exactly her data was being used for. She expressed concern for her data being sold to other companies Disney is partnered with.

Data privacy is a real concern and one I don't have an answer for in regards to how Disney protects its guests' data. When I researched privacy and security measures on the Disney website, the answers I found were generalized and what I expected (5). Most of this collected data is used behind the scenes and isn't made available for the public, but a recent examples of active sharing of private information was experienced on my recent vacation. While waiting in line to ride Aerosmith's Rock 'n' Roller Coaster, there were digital concert themed posters hanging on the wall, and when my dad and I walked past, the poster changed displaying his name and our hometown (not the street number or state). At first we were both really impressed thinking 'this really is magic!' but we soon realized with the RFID tags in the wrist band and having our address linked with our My Disney Experience App we questioned just how much Disney was actually keeping track

of. Another example was when we rode the Seven Dwarfs Mine Train, our photos taken during the ride were almost immediately sent to our Disney Experience App without us having to touch our bands to the image viewer at the end of the ride. This is most likely due again to the RFID technology mixed with facial recognition technology. I feel these two examples are just the beginning of what is to come and this is Disney's way of testing the technology before implementing it on a wider scale.

With that being said, Disney is always innovating, working towards creating the next best technology to create these unforgettable experiences. MyMagic+ is one of my personal favorite information systems because it is brilliant. It is a ubiquitous solution to those “pain points” that guests were experiencing with the paper system and is able to integrate all major aspects of a person's vacation with one piece of hardware and only one application to navigate – it's simply good design. It certainly does allow guests to have better park experiences despite some of the more negative impacts such as the lack of awareness on data collection methods and the lack of privacy on individual's data. Successfully selling experiences and doing so through data management and analysis for such a large company is no easy feat. I'm excited to see what is next to come, and who knows, maybe I'll even have the opportunity to help develop the next system.

Works Cited

- (1) "Walt Disney World." *Wikipedia*, Wikimedia Foundation, 14 Mar. 2018, en.wikipedia.org/wiki/Walt_Disney_World#Disney's_Magical_Express.
- (2) "MyMagic ." *Wikipedia*, Wikimedia Foundation, 12 Mar. 2018, en.wikipedia.org/wiki/MyMagic .
- (3) HPine, B. Joseph, and James H. Gilmore. "The Experience Economy: Past, Present and Future." *Handbook on the Experience Economy*, pp. 21–44., doi:10.4337/9781781004227.00007.

This article discusses how the economy is driven by experiences and is valued more than any good or service that is currently being offered. The progression of the the economy in chronological order begins with the agrarian, then the industrial, followed by the service, and then resulting in today's experience economy. The authors highlight how Walt Disney Theme Parks and Resorts has been a model for the experience economy for decades now, but this new way of conducting business is finally branching beyond the theme park industry.

- (4) Barnes, Brooks. "Disney Tackles Major Theme Park Problem: Lines." *The New York Times*, The New York Times, 28 Dec. 2010, www.nytimes.com/2010/12/28/business/media/28disney.html.

This article discusses Walt Disney World's hidden command center and how Disney Imagineers, such as Phil Holmes, are able to analyze data generated by the guests in real time in order to control crowds, eliminate wait times, and provide the best experiences possible to guests.

- (5) "Magic Kingdom Park Hours." *Disneyworld.disney.go.com*, disneyworld.disney.go.com/faq/my-disney-experience/my-magic-plus-privacy/.