



Disney: Making Magic Through Digital Innovation



An Organization that has Taken Digital to Heart

"Any sufficiently advanced technology is indistinguishable from magic." - Arthur C. Clarke

'Magic' is something that most people associate with on-stage performances. But magic can also result when digital technology is used in the right place and with the right goals. Imagine, for instance, a different kind of restaurant experience. You enter the establishment, tap your order into a device, take any seat you want, and soon after – as if by magic – the waiter appears at your chosen table and addresses you by name. Or, you want to make an impulse purchase, and all it takes is a tap of your wrist. These experiences – while reminiscent of the fictitious wave of a magic wand – are firm reality. They are very real examples of what has been made possible by a wrist-band introduced into its world-famous theme parks by Disney, an organization that has been part of the fabric of the entertainment industry for over 90 years. Technology today comes naturally to the entertainment giant. As Bob Iger, Chairman and CEO, Walt Disney Company says, "Technology is lifting the limits of creativity and transforming the possibilities for entertainment and leisure¹."

Parks are only one area where Disney is using digital technology to sprinkle some magic onto the customer experience. Walt Disney Studios recently unveiled a product – Movies Anywhere – that lets consumers discover, buy and watch films across different devices. The application allows users to digitally curate a collection of movies that they have already purchased and can redeem from their DVD collection. It also includes controls so that parents can safeguard the content for their children².

Disney's video game unit also launched a game, Infinity, which allows players to

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mix and match popular Disney and Pixar characters in self-constructed video game adventures. The game cost over \$100 million to develop. It ended 2013 as one of the top 10 best-selling games in the US and sold over 3 million starter packs globally³.

These examples from different parts of the Disney organization illustrate the company's overall strategy. Disney is using digital to engage, entertain and interact with consumers every day across its theme parks, studio entertainment, interactive media platforms and physical store.

This approach has required significant effort and commitment. It is the result of a sustained vision driven right from the top, along with significant investments in technology. The overall strategy has three pillars, which Bob Iger, CEO of Disney, summarizes as: "One: Invest most of the capital in creating high-quality, branded content and experiences. Two: Embrace technology and use it aggressively to enhance the quality of Disney's product and thus the consumer experience. And lastly, get closer to the customer by becoming more efficient as a company⁴."

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Figure 1: Disney's Magic Bands



Source: Company press release

Making Magic With Digital Technologies

Disney's technology approach was based on four goals: transforming the customer experience, driving operational efficiency, personalization using connected products, and enhanced interactivity across channels (see Figure 2).

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Using Analytics to Improve Guest Experience

Disney uses data mining to understand past behavior and preferences of individual guests. Forecasting models are used to determine the kind of vacation packages preferred by guests and help the company provide targeted hotel offers to its customers⁵. Using this model, Disney's call centre operators were able to offer families low-priced hotels available on its list, which has led to improved repeat business. This call centre analytics project paid for itself “10 times over” in the first year of operation⁶.

Disney deploys significant real-time analytics in its day-to-day operations in order to enhance the customer experience at its theme parks. One example is forecasting the waiting time for its various attractions. Disney's Fastpass⁷ means guests can avoid long queues by giving them a one-hour window when they can return to their chosen attractions without having to wait in a queue. For those waiting in the regular line, Disney runs forecasting models that predict waiting times at popular attractions, with the output displayed for guests to see. This means guests can decide whether to enter the queue, return later or take a Fastpass ticket⁸.

Figure 2: Key Digital Levers Deployed by Disney



Source: Capgemini Consulting Analysis

Taking a Data-Driven Approach to Operational Efficiency

The scale of Disney's theme-park operation is staggering. Each week, Disney has to pay more than 80,000 cast members and schedule 240,000 shifts. In the words of Juan Gorricho, Senior Manager, Merchandise Business Intelligence and Analytics, “we need the right cast members at the right place at the right time, and serving the right guest.” Following the implementation of a rule-based, on-demand technology, Disney's accuracy in managing labor resources improved by 20%. The project paid for itself in one year, just from the labor savings alone⁹.

Disney also applies analytics to streamline back-house operations. For instance, it uses forecasting models to manage its garment inventory and laundry. The forecast models ensure

sufficient garments are available for its cast members while ensuring minimum inventory levels and idle costumes on the shelf¹⁰.

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Personalizing through Connected Products

Crunching visitor data to improve the customer experience is only one part of the Disney approach. Disney's MyMagic+ initiative is a billion-dollar investment that is a combination of a website, a mobile application and a wristband that collectively allow visitors to customize their experience at a Disney park (see Exhibit 1). The initiative has involved training 70,000 employees on new technology, equipping 28,000 hotel room doors with radio frequency readers, and installing scanners at its parks, hotels, shops, and other attractions.

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The MyMagic+ initiative helped Disney accommodate 3,000 additional daily visitors.”

The 'magic' starts with the booking process for Disney's entertainment parks, where visitors can book tickets through the website or mobile applications that are available across platforms. Once the reservations are made, visitors receive a MagicBand – a wristband that is embedded with radio frequency identification (RFID) chips.

This band acts as an admission ticket, the key to the hotel room, a means of making purchases at many stores, and as a FastPass. The MagicBand – in tandem with mobile apps – give visitors a seamless experience. Using the MagicBand, guests can pre-arrange their visit for a number of attractions, including rides and events such as character meetings, parades and fireworks shows. To customize the guest experience, employees playing characters at the park can use hidden sensors within the bands to personally greet a child on his or her birthday¹¹.

These bands are part of a new “vacation management system” that can track guests as they move through the park and analyze their purchasing habits. Unlocking these trends in preferences and habits is of great value to Disney. For instance, knowing where guests have shopped – and what items they have bought – means Disney can offer guests deals that are tailored to their specific interests.

Disney's MyMagic+ is now rolled out to all resort guests staying at the company's 35,000 hotel and vacation club rooms. The company has committed to spend over \$1 billion on the initiative (see Exhibit 1 for more details). The early results are promising indeed. Disney was able to accommodate 3,000 additional daily visitors during the 2013 Christmas holiday season¹² by effectively managing advance reservations for rides that are in high demand. Over 90% of visitors

rated the band as excellent or very good¹³. In 2013, theme parks made up a third of Disney's \$45 billion overall revenue and over 20% of its operating profit. Disney attracted over 132 million guests in 2013¹⁴.

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Disney has invested over a billion dollars in its MyMagic+ technology initiative.”

Using Digital to Create New Interactive Consumer Experiences Across Channels

The commitment to deliver a superior customer experience extends beyond theme parks. Disney has strived to find new ways for its customers to digitally interact with different parts of the Disney family.

As part of that approach, Disney gave its traditional bricks-and-mortar stores a high-tech makeover. For example, the store concept includes an in-store application for guests to customize their shopping experience

(see Figure 3). Using an interactive kiosk with a touch screen, users have the ability to navigate a 3-D view of all Disney Store and DisneyStore.com products and discover the latest Disney Store news via video clips, articles, and social media feeds¹⁵. The store revamps have helped boost profit margins by 20%, with over 90% of Disney Store guests in North America and Europe saying that the new store design has brought them closer to the Disney brand¹⁶. In the UK, the results have been more dramatic. In the four years since the overhaul, stores have made \$761.6 million in revenue, which peaked at \$200.4 million in 2012¹⁷.

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Disney's store redesigns, including usage of digital kiosks, helped it boost sales and profit margins by 20%.
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Figure 3: Redesigned Disney Store



Source: Disney Store Facebook Page

Exhibit 1: MyMagic+ - A Multi-Channel, Multi-Platform Digital Experience Initiative

Disney's MyMagic+ Initiative



Source: Company website

Disney's MyMagic+ is a combination of a website, a mobile application and a wristband that collectively allow visitors to customize their experience at a Disney park. Visitors make reservations using MyDisneyExperience.com, where they can choose a place to stay, make dining reservations and schedule visit timings through FastPass+ (a system that allows guests a one hour window to return to their desired attractions without having to wait in a queue). The MagicBand has an embedded Radio Frequency Identification (RFID) chip and there are several long-range RFID readers across the park. The band can be used for a variety of use cases such as entering the park, or rides, or hotel room, or making purchases, among others. As Tom Staggs, Walt Disney Parks and Resort says, "It takes our cast members out of transactional mode with our guests and into an interaction mode".

The bands are uniquely colored and monogrammed with each family member's name so they do not get switched. Visitors can link up pictures taken at the park with their MagicBand and access them after their visit. In the future, more such revenue opportunities can be linked to the band. Disney has committed to spend over \$1 billion on MyMagic+.

Source: Bloomberg Businessweek, "Disney Bets \$1 Billion on Technology to Track Theme-Park Visitors", March 2014; Los Angeles Times, "Disney Parks chairman shows off Disney MagicBand", May 2013

How Does Disney Make Its Digital Magic?

Disney has created its digital magic using a number of key ingredients. These include strong digital leadership, a far-reaching vision, an analytics culture, and an ongoing investment in digital initiatives (see Figure 4).

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Disney’s Board of Directors include top Internet industry executives from Facebook and Twitter.
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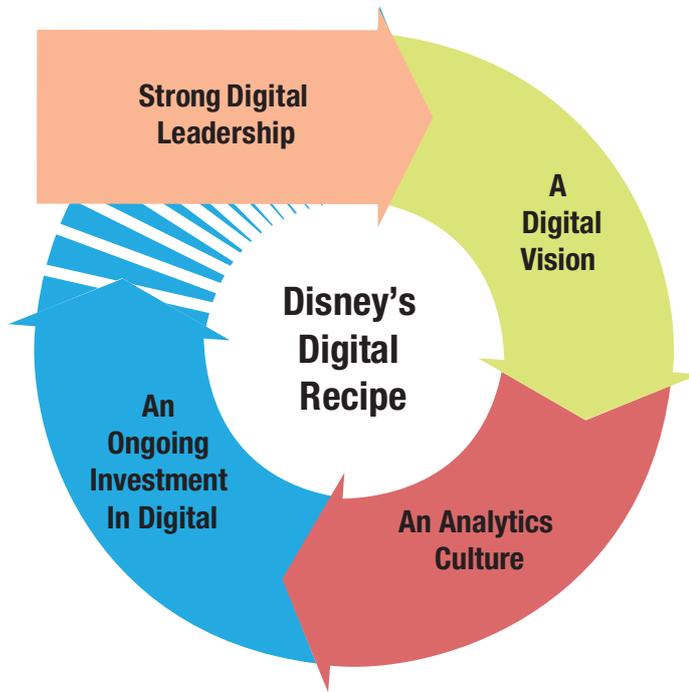
Digitally-Savvy Leadership

Our research with the MIT Center for Digital Business has clearly established that digital transformation is a top-down exercise¹⁸. It is imperative that organizations wanting to transform digitally have digital-savvy leadership, including the board of directors¹⁹. Unlike many other boards, Disney ticks all the right boxes. Its board includes Jack Dorsey, Executive Chairman and Founder of Twitter; Facebook COO Sheryl Sandberg; and former Sybase CEO, John Chen. As Chairman and CEO Bob Iger says, “The perspective he (Jack Dorsey) brings to Disney and its Board is extremely valuable, given our strategic priorities, which include utilizing the latest technologies and platforms to reach more people and to enhance the relationship we have with our customers.²⁰”

A Vision Where Technology Plays a Key Part

Disney’s CEO has always treated technology as an opportunity rather than a threat, saying, “I really believed the company should look at technology as a friend²¹”. This is the same line of thought that encouraged Disney to have

Figure 4: How Disney Delivers Magic



Source: Capgemini Consulting Analysis

significant digital talent right at the top, at the board-level. Even before the current array of tech’s great and good, Disney had Apple founder Steve Jobs on its board. This was a signal of Bob Iger’s determination to master digital, as he explained: “Businesses are challenged left and right and if we did not get on board and challenge ourselves, we were going to get swept away. So, we had to swim with the current.²²”

A Governance Structure that Drives an Organization-Wide Analytics Culture

To drive the use of analytics across the organization, Disney hosts an annual Disney Analytics & Optimization Summit. A key objective of the summit is to share new analytics project ideas and technologies within Disney and with other like-minded organizations. The event brings together people with analytical roles from across the company

with other professionals from outside Disney. The event examines the feasibility of analytics initiatives across various Disney departments and how these entities could use analytics to transform areas such as forecasting, marketing, and revenue management.

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An Ongoing Investment in Digital

Disney is clearly determined to uncover new and innovative ways of engaging and enhancing the customer experience, using cutting-edge approaches.

Disney Research, for example, is an informal collaboration between the Walt Disney Company and various academic labs. Some of the areas that the labs focus on include speech and sound processing, artificial intelligence, machine learning, data mining, materials, displays, sensors, and embedded systems. Recent research includes tactile rendering of 3D features on touch surfaces, where an algorithm can simulate surface friction of a virtual object on a touch screen²³. Another research project is using 3D Printing to produce interactive speakers of any shape²⁴. This initiative dates back as far as 2008, signaling the company's early determination to stay ahead of the curve²⁵.

Disney has also partnered with TechStars, a start-up accelerator. The idea is to identify a number of companies that will be offered access to the creative expertise and resources of Disney to create the next generation of entertainment products and experiences. The initiative was launched in June 2014 and currently encompasses 10 companies over a period of 15 weeks²⁶. Participants include ChoreMonster, a company that has a suite of web and mobile apps that make regular chores fun for kids; Tyffon, a mobile app company that boasts over 25 million total downloads; and Spherro, which makes connected toys that use a combination of robots and software to create new gaming experiences.

Disney has always been about magic, right from its inception. And now, it is an organization that is fiercely determined to use digital transformation to maintain and enhance that tradition for its customers.

And it's not an organization that is content with what it has achieved so far. In fact, it always has one eye on the future, as Bob Iger says: "Entertainment will be immeasurably enhanced with both virtual-reality experiences and augmented-reality experiences. Bringing us into created worlds and bringing created worlds into our world will fundamentally explode the boundaries of storytelling, unburdening the storyteller in ways we can't yet imagine²⁷." And as long as Disney continues to embrace

technology with such passion, they will continue to make digital magic across the world.

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- Bob Iger, Chairman & CEO, Disney

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Authors

Jerome Buvat

Head of Digital Transformation
Research Institute
jerome.buvat@capgemini.com

Subrahmanyam KVJ

Manager, Digital Transformation
Research Institute
subrahmanyam.kvj@capgemini.com

Digital Transformation
Research Institute
dtri.in@capgemini.com

Digital
Transformation
Research Institute

For more information contact

United Kingdom

Didier Bonnet

didier.bonnet@capgemini.com

United Kingdom

Jerome Buvat

jerome.buvat@capgemini.com



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