**** 

9B19A006

NIANTIC, INC.: *POKÉMON GO* AND THE RISE OF AUGMENTED-REALITY GAMINg[[1]](#endnote-1)

Professor Fareena Sultan and David Wesley wrote this case solely to provide material for class discussion. The authors do not intend to illustrate either effective or ineffective handling of a managerial situation. The authors may have disguised certain names and other identifying information to protect confidentiality.

This publication may not be transmitted, photocopied, digitized, or otherwise reproduced in any form or by any means without the permission of the copyright holder. Reproduction of this material is not covered under authorization by any reproduction rights organization. To order copies or request permission to reproduce materials, contact Ivey Publishing, Ivey Business School, Western University, London, Ontario, Canada, N6G 0N1; (t) 519.661.3208; (e) cases@ivey.ca; www.iveycases.com. Our goal is to publish materials of the highest quality; submit any errata to publishcases@ivey.ca. i1v2e5y5pubs

Copyright © 2019, Northeastern University, D’Amore-McKim School of Business Version: 2019-03-08

When John Hanke, the chief executive officer (CEO) of Niantic, Inc. (Niantic), learned of the phenomenal reception of his company’s newest augmented-reality mobile game, *Pokémon GO*, he must have been pleased. Not only had the game far surpassed internal company projections, it had quickly become the best-selling mobile game of all time.[[2]](#endnote-2) Nevertheless, Hanke was forced to deal with cheating applications (apps) and websites that told players where to find rare Pokémon, allowed their mobile phones to appear to be in different locations around the world, and let them immediately advance to higher levels in the game. It became Hanke’s mission to shut down these third-party developers so that the game could continue to develop according to his vision.

In late August 2016, Niantic announced that it was shutting down the cheat sites because they were overloading the company’s servers and giving some players unfair advantages. “We continue to work to ensure the integrity of the game and the health of our servers by blocking unauthorized access and at times by banning offending accounts,” Hanke wrote on the official *Pokémon GO* blog. “This includes blocking bots and data scraping operations and banning end-user accounts associated with those activities.”[[3]](#endnote-3)

Many players were outraged by the changes and flooded the App Store with enough one-star reviews to bring *Pokémon GO*’s overall rating down to two stars. The backlash intensified when Niantic removed its own “steps away” feature, which told players how far away Pokémon were. The combined effect was that players were left in the dark, particularly in rural areas where Pokémon were few and distant. Without maps to guide players to remote locations, players quickly tired of the game’s repetitive mechanics.[[4]](#endnote-4)

Some of the game’s most ardent players worried that the game was getting worse instead of better. Meanwhile, *Pokémon GO*’s popularity began to drop almost as fast as it had risen, causing some observers to speculate that the game would be gone before the end of the year.

**Background**

**Niantic Labs: A Google Company**

In 2011, Google Maps veteran John Hanke was asked to lead a new “ubiquitous computing” division within Google Inc. (Google), called Niantic Labs. “At the time that we started Niantic, wearable computing was really just kind of coming onto the scene,” Hanke explained. “So we were thinking about, what is the post cell phone world going to look like, what kinds of devices are people going to use, [and] what kind of services would be enabled by these new kinds of hardware?” However, at its core, Niantic was about advertising. “There’s tremendous opportunity there for businesses that might want to change the behaviour of people to get them to go places they wouldn’t normally go to.”[[5]](#endnote-5)

The first product launched by Niantic was a mobile app called Field Trip. Users of the app could walk around in the real world and view information about landmarks near them, including photographs, historical details, and hours of operation. Content was supplemented by more than 300 partners such as museums, tourist information centres, and tour-guide services.[[6]](#endnote-6) Field Trip also launched on Google Glass, a heads-up display mounted on futuristic-looking reading glasses.

**Augmented Reality**

Augmented Reality (AR) displayed artificial images on top of reality, while virtual reality (VR) involved creating an entirely artificial reality. AR devices were either head-mounted, hand-held, or spatial. Head-mounted and hand-held AR was achieved through “see-through” technologies such as glasses (e.g., Google Glass) or a camera lens (e.g., smartphones) that combined optical inputs with electronic inputs.

Google Glass was an early attempt to commercialize AR, and it “exploded with the kind of fuss and pageantry usually reserved for an Apple iSomething,” noted the *New York Times*. “From its unveiling in 2012, it was considered the Gadget, yearned after by everyone from nerds and chief executives, to chefs and fashionistas. It was the must-have toy that was going to set the gold standard for a new class of wearable computers.”[[7]](#endnote-7)

Only it wasn’t. At the time, what seemed like the perfect step toward AR was excoriated by tech reviewers for its abysmal battery life, software bugs, and invasion of privacy.[[8]](#endnote-8) Its $1,500[[9]](#endnote-9) price tag also meant that only a wealthy few could acquire the high-tech toy. “You can’t always predict these things,” said Hanke. “Maybe that’s the trend lesson. The fundamental trend may be valid, but you know there are going to be fits and starts along the way, and maybe that was one of them.”[[10]](#endnote-10)

Although a commercial failure, Google Glass found new followers long after it was discontinued. Boeing aircraft technicians used it to help access critical data while their hands were occupied with assembly,[[11]](#endnote-11) and medical doctors used Google Glass to connect specialists in remote locations to assist with operations or diagnostics. Dr. Peter Chai of the University of Massachusetts Medical School observed that “Consumers weren’t ready for Google Glass, but the medical community has given it a second life.”[[12]](#endnote-12) As commercial interest continued to grow, Google announced plans for an “Enterprise Edition,” popularly referred to as Google Glass 2.0.[[13]](#endnote-13)

In 2016, Microsoft Corporation (Microsoft) launched a $3,000 “mixed reality” headset known as HoloLens. Initially slated to be a consumer device similar to Google Glass, it received most of its initial interest from commercial customers. “We totally underestimated the commercial interest in this thing,” admitted Chris Capossela, Microsoft’s chief marketing officer. Commercial customers included building supply retailer Lowe’s Companies Inc., Case Western Reserve University, the National Aeronautics and Space Administration (NASA), Saab Automobile AB, and the Volvo Group (Volvo).[[14]](#endnote-14) Among the applications under development (see Exhibit 1) was HoloTour, an “immersive combination of 360-degree video, spatial sound, and holographic scenery [that] lets you feel like you’re really there.”[[15]](#endnote-15) The technology allowed companies such as Skanska AB, a real estate developer, to create “the world’s first holographic real estate leasing center.”[[16]](#endnote-16) Microsoft also partnered with Volvo to improve the customer buying experience by encouraging customers to “explore the ins and outs of their potential purchase, changing features, colors, and other options,” without having to leave the showroom.[[17]](#endnote-17)

***Ingress*: The Birth of Augmented-Reality Gaming**

Hanke’s idea for AR games was born of the frustration of seeing his children glued to television and game consoles instead of playing outside. Yet, he knew that videogames were compelling, “because games are the things that got me into programming and I didn’t want to take that away.”[[18]](#endnote-18) He elaborated:

Why can’t you build a gaming experience that takes place outside—that uses mobile phones or mobile technology? So we put our heads together and we worked on prototypes. I hired some people from Sony, from Disney, from Electronic Arts, and we started thinking about, Can we build a game that takes place in the real world? We actually built paper prototypes, tried various combinations of rules, and explored ideas. That ultimately turned into this game called *Ingress*.[[19]](#endnote-19)

Launched in 2013, when Niantic was still part of Google, *Ingress* was an augmented-reality, location-based game that overlaid a fictional world on the real world using a combination of mapping and mobile camera data. *Ingress* was never intended to reach a mass market, but was designed as a platform for augmented-reality gaming, upon which Niantic could build other games. Hanke explained:

We wanted to create something that was more targeted at gamers because we felt like we could make something that, as early adopters, they would appreciate and use, even if it wasn’t perfect, even if the technology wasn’t perfect. . . .

We build it around data, some of which came from Field Trip. So historical markers and public art are the places that are the key points of interest that you interact with in *Ingress* and in *Pokémon GO*. These things are all kind of built on one another.[[20]](#endnote-20)

*Ingress* players were members of one of two factions that sought to capture “portals” corresponding to real-life locations, such as monuments, stores, and landmarks, using data from the Field Trip app. Although *Ingress* could be played alone, the social part of the game proved to be its greatest attraction. “Collaboration and strategy planning . . . ended up being the core of the game,” explained Hanke.[[21]](#endnote-21)

*Ingress* proved far more popular than anyone at Niantic expected, eventually surpassing 13 million players. Many extolled the health benefits of outdoor gaming, a key feature that the development team had not considered. *Ingress* could be played while walking, mountain climbing, cycling, or running. One 82-year-old woman walked more than 1,000 kilometres playing the game. In online forums, players shared weight-loss testimonials and described how *Ingress* had renewed their interest in sports and outdoor activities.[[22]](#endnote-22)

Although ensuring that company servers could handle the Internet traffic generated by the game proved more challenging than originally anticipated, Niantic was able to scale up sufficiently to prevent major outages.

AR gaming also created new revenue-generating opportunities. As *Ingress* grew in popularity, advertisers began paying Niantic to have their stores turned into portals as a way to attract new customers. For instance, in France, the Paris-based commercial property developer Unibail-Rodamco’s shopping malls were used as portals.[[23]](#endnote-23) Soon, *Ingress* spread across the globe, winning over fans as far away as Japan, where many employees of the Pokémon Company took up the game.[[24]](#endnote-24)

***Pokémon GO***

*Pokémon*, a contraction of the words “Pocket Monster,” was launched in Japan in 1995 as a video game for the Nintendo Game Boy portable console. It featured the adventures of a boy who travelled the countryside collecting monsters and training them for battle against other Pokémon trainers. The game’s early success spawned a number of sequels, *manga* (comic books), and *anime* (animated films).

On April 1, 2014, a Google Maps software engineer, Tatsuo Nomura, created a prank in which Pokémon would randomly appear on Google Maps. To catch Pokémon, users simply clicked on them. Although the Pokémon prank was not a game in the true sense, some *Ingress* users commented in online social forums that Google should create an AR Pokémon game similar to *Ingress*. These comments inspired Hanke and his team to pitch the idea of an AR game to the Pokémon Company, which owned the Pokémon franchise.[[25]](#endnote-25)

Hanke flew to Japan to meet with senior executives at the Pokémon Company, conveniently located several floors below Google’s offices in downtown Tokyo. At the time, Hanke was unaware that the CEO of the Pokémon Company, Tsunekazu Ishihara, was an avid *Ingress* fan, as were numerous Pokémon Company employees and their families. When they heard that Niantic was interested in developing a Pokémon game, they embraced the project even before Hanke could pitch it to them.[[26]](#endnote-26)

Hanke believed that Pokémon was “uniquely well-suited” to Niantic’s AR gaming platform. “If you think about the lore or focus, it’s about the trainer,” he explained. “And this is depicted in the animation series and in the video game. The trainer goes out into the woods, goes out into the world, and searches for Pokémon.”[[27]](#endnote-27)

Around the same time, Niantic Labs was nearing the end of its three-year term as a semi-independent division within Google, and the company needed to decide whether to spin it out or have it join another Google division, such as the Android Mobile division. However, because Hanke wanted Niantic’s gaming platform to be available for other mobile ecosystems, such as the Apple Store, he was able to convince Google that it made more sense for Niantic to be independent.[[28]](#endnote-28)

**Niantic, Inc.**

In October 2015, Google spun off Niantic with $25 million in series-A funding (see Exhibit 2). Hanke brought with him 70 employees, selected from a team that had once numbered more than 2,000. Although Hanke had enjoyed his tenure at Google, like many talented Google employees, he had become disillusioned with the bureaucracy and oversight that limited his ability to innovate and create new products.

A lot of it is administrative people management which is fun to some degree, but when you get into HR [human resources] reviews, a lot of it is just helping people with their career, which I know is good, but it doesn’t have a lot to do with the product innovation, which was the thing that originally interested me.[[29]](#endnote-29)

Although the newly independent Niantic continued to support Field Trip and *Ingress*, its main focus was the summer 2016 launch of *Pokémon GO*. Nevertheless, Hanke admitted that without *Ingress*, *Pokémon GO* would not have been possible. “The whole infrastructure that the game runs on is the second-level technology stack that was built from *Ingress*.”[[30]](#endnote-30)

***Pokémon GO* Launch Day**

On an unseasonably cold July 6 morning, John Hanke, CEO of Niantic, boarded the San Francisco Bay Ferry for his daily commute to Niantic’s headquarters in downtown San Francisco. Everyone on the Niantic team was excited about unveiling their newest mobile game, *Pokémon GO*. Although they anticipated some minor glitches, they felt ready for any fluctuations in demand as they dedicated their entire worldwide quota of machine time to the U.S. launch.[[31]](#endnote-31)

Niantic had already launched *Pokémon GO* in Australia and New Zealand without problems. North America was next, followed by Europe and, finally, Asia. “A staged country rollout [would] keep things under control,” Hanke asserted. Then as the numbers for North America started rolling in, the team panicked. A few hours into the launch, Niantic had already used up its global machine quota. Servers became overloaded and began crashing, as users complained of bugs and interruptions. If the team didn’t do something in a hurry, the entire launch would be in jeopardy. Hanke frantically called Google CEO Sundar Pichai. When he couldn’t get through, he sent an emergency email. “Please send reinforcements!” he wrote.[[32]](#endnote-32)

Pichai directed the cloud team to dedicate more servers to *Pokémon GO*, thereby averting disaster. “I don’t know how you plan for something as strange as the way that it took off socially,” Hanke recalled. “So we just kind of played catch-up. I wish we had had everything provisioned in advance, but I know that if we had it to do over again, I’m not sure any one of us would have anticipated that.”[[33]](#endnote-33)

Due to its long history and strong following, the Niantic team knew that *Pokémon GO* would be more successful than *Ingress*. However, because they “didn’t do any advertising or marketing,” they expected to gradually “bring people on board to teach them about the game, to market the game over the course of many months.”[[34]](#endnote-34) When Hanke was later asked why the company had not done a better job of anticipating the explosive growth of *Pokémon GO*, he replied that “we would have sounded insane.”[[35]](#endnote-35) Back in Japan, Ishihara was also caught off guard by the game’s popularity, which was “100 times bigger than we expected.” Over the next few weeks, Nintendo Co., Ltd. (Nintendo), which owned 32 per cent of the Pokémon Company, saw its stock price more than double. *Pokémon GO* also bolstered sales of other Pokémon Company products, such as its core video games, movies, and merchandise.[[36]](#endnote-36)

**Consumer Behaviour Fuelled by Nostalgia**

Millennials who grew up with the original Pokémon games were largely responsible for the massive surge in *Pokémon GO* players during the first few weeks after the launch, accounting for nearly 90 per cent of the downloads from the Apple and Google Play stores.[[37]](#endnote-37) As a teenager, *New York Times* reporter Mike Isaac was never swept up by the Pokémon craze of the late 1990s in the same way as many of his friends. “And yet as a 31-year-old reporter for the *New York Times*,” he said he found himself “running wild—with thousands of others—through the streets of San Francisco.” Isaac continued:

I can’t help admitting, somewhat reluctantly, the fun I had wandering around my city, catching these goofy monsters and talking to other people about how to do it. Even though I didn’t play much as a kid, Pokémon is a cultural touchstone of my youth, something that stoked a sense of nostalgia—and something I suddenly became invested in.[[38]](#endnote-38)

“To us millennials, the early days of videogames and the internet are nostalgic,” noted Spanish-American actress Nathalia Ramos. However, she also placed importance on the sense of community with other players:

For the first time in over decade and a half I found myself in a park, running around like a child, catching Pokémon and making new friends. For that hour my parent’s voices reminding me of the dangerous world we live in disappeared. I forgot I wasn’t supposed to talk to strangers, or hang out in public places after dark. In that moment, I could feel that I was a part of something special. It was the first time in my adult life that I felt a true sense of community. I felt connected to my neighbors and my neighborhood. Our generation has Facebook friends on every continent, yet we have never met our next-door neighbors.[[39]](#endnote-39)

Psychologist Clay Routledge believed that the social and nostalgic aspects of the game connected people through “shared memories” of an earlier period in their lives.[[40]](#endnote-40) However, nostalgia and social interaction alone could not explain the explosive growth of *Pokémon GO*. In fact, *Pokémon GO* was just one of many nostalgia-based product launches in 2016; others included superhero films, cereal mascots, and flip phones.[[41]](#endnote-41)

According to Oxford Internet Institute psychologist Andrew Przybylski, *Pokémon GO* was successful because it created new experiences that combined the elements of the original game series with a unique mobile-based social experience. It meant that players could not only reward themselves with more Pokémon but also share those experiences on their favourite social media sites. Snapchat, Instagram, Facebook, and Flickr became inundated with screen-captures and photographs of players standing next to Pokémon, Pokémon in unusual locations, and tips on where to find rare Pokémon. “The modern era has trained people for playing *Pokémon GO*,” observed Przybylski.[[42]](#endnote-42)

On the other hand, many advanced players preferred to disable augmented reality, which made it more difficult to capture Pokémon. One gaming site had this suggestion:

Do yourself a favor and tap the button at the top right of the screen the next time you enter a capture sequence.

Doing so replaces the background with a generic woodland environment, which not only makes everything clearer, but it also forces the creature to remain focused in the center of the screen instead of flitting about.[[43]](#endnote-43)

**The Business Model**

In its first two weeks, *Pokémon GO* generated more than $250 million in revenue, primarily through in-app payments for items such as Pokéballs and lures.[[44]](#endnote-44) The game also set a record as the fastest to surpass $500 million in revenue, reaching the milestone in only 60 days, compared with *Candy Crush Saga*’s 200 days and more than 400 days for other popular mobile games such as *Puzzle* *&* *Dragons* and *Clash of Clans*.[[45]](#endnote-45) *Clash of Clans,* by Finnish game developer Supercell, had been one of the most successful mobile games to date, earning nearly $1 billion on $2.3 billion in revenues in 2015. It was also one of the few games that experienced steady year-over-year growth, posting revenues of $101 million in 2012, $892 million in 2013, and $1.5 billion in 2014. Other mobile games were more ephemeral, often declining as fast as they had risen.[[46]](#endnote-46) “For games, on average it takes just two months for the app’s monthly users to decline to 50 per cent of their lifetime peak,” observed Craig Palli, chief strategy officer of Fiksu, a mobile app marketing company:

One of the most popular games over the last two years, *Candy Crush*, reduced its 2014 forecast after reporting lower-than-expected second-quarter revenue.

This caused some unwarranted hand-wringing in the press about the future of mobile games.

While it may be newsworthy for a juggernaut like *Candy Crush* to see falling revenues, it’s actually nothing new.[[47]](#endnote-47)

Niantic hoped that continually improving the game and adding new features would make *Pokémon GO* as enduring as *Ingress* or *Clash of Clans*. To fund that growth, Niantic created different types of revenue streams but relied primarily on in-game purchases.[[48]](#endnote-48)

Players acquired virtual goods using the game’s own virtual currency, known as Poké Coins. These could be earned by completing various in-game actions, such as defending a gym from other players, or they could be purchased. Defending a gym earned a player 10 Poké Coins. Alternatively, players could purchase Poké Coins at a value of one coin per U.S. cent. Players who spent $5.00 or more received bonus coins, with larger bonuses for larger purchases[[49]](#endnote-49) (see Exhibit 3).

At *Pokémon GO*’s peak in mid to late July 2016, downloads of the game reached an estimated 27 million per day, with revenue topping out at $16 million per day (see Exhibit 4).[[50]](#endnote-50) On average, revenue for mobile games was approximately 10 cents per day per user, while more popular games such as *Candy Crush Saga* generated as much as 23 cents per day per user.[[51]](#endnote-51) Niantic believed that *Pokémon GO*’s per-user revenue was low compared with that of other popular games, but with the number of users expected to pass 1 billion by the end of the year, the company focused more on volume. “We don’t turn the knobs up on the in-app purchase in the way that some products do,” Hanke explained. “We’re trying to be more user friendly I guess in that sense. But it monetizes well.”[[52]](#endnote-52)

In Japan, Niantic partnered with McDonald’s to create important game sites as a way to supplement revenues and rely less on in-app purchases. Hanke noted:

My belief is that the sponsored-location model is a better business model for games.

The idea with real world games was to build an advertising model that is deeply tied to the way the game itself works . . . so it doesn’t break the flow of the game. It doesn’t feel like something is grafted on. That’s what we’re trying to do and it will provide a complement to in-app purchase. In-app purchase will be the majority of the revenue, but it does take some of the pressure off of us to squeeze hard on the purchase side, which would be detrimental to the game.[[53]](#endnote-53)

Despite the clear benefits of sponsored locations, Niantic was reluctant to enter into business partnerships, particularly if it involved in-game advertisements or commercial logos overlaid on game maps. “We don’t want to have too many commercial locations in the game because the original spirit of it was, get out and discover these interesting [things]. . . . If there is one thing we learned from Google, it is to go light on [the advertising].”[[54]](#endnote-54)

Estimating costs for mobile game hosting often proved difficult as it depended on factors that were hard to predict, such as the amount of time users spent in the game, resource utilization, and so on. Andrew Boring, a systems engineer with cloud-hosting company SwiftStack, estimated that game hosting could cost between 5 cents and 25 cents per user per month. However, he also noted that “many users won’t use all their allotment, so you can under provision and oversubscribe as part of your model if you plan for rapid capacity changes. You’ll also receive discounts as your usage increases, so you achieve per unit cost savings as your usage increases.”[[55]](#endnote-55) At the same time, *Pokémon GO*’s heavy use of geolocation and mapping meant that its server utilization costs were likely to be more expensive than those of many mobile games.

The explosive growth of *Pokémon GO* also proved problematic as distracted drivers caused crashes, and landmarks were overrun with players. After crowds gathered in the Holocaust Museum in Washington, the museum director pleaded to have it excluded from the game. Niantic was also criticized for having Pokémon in churches, cemeteries, and memorials.[[56]](#endnote-56) By using the geographic data from Field Trip and *Ingress* to create Pokéstops and Pokémon gyms, the company had inadvertently drawn crowds to sacred and hallowed sites. Within the first few months after the game’s launch, Niantic faced numerous lawsuits claiming damages for injuries and trespass, although legal experts did not expect them to have a major impact on the company’s earnings.[[57]](#endnote-57)

**Building on the *Ingress* Platform**

At its launch, *Pokémon GO* was at best a “minimum viable product.” Nevertheless, Niantic had no desire to create an AR version of the original Nintendo console game. Instead, it originally planned to emulate and replicate the key features and gameplay mechanics of *Ingress*. Hanke explained:

It will change and evolve quite substantially over the next few years. If you want to predict the future, you can look at the past. A lot of what we’re doing with Pokémon, we learned through three years of hard work with *Ingress*: building up that community around the world, maturing that technology. . . . The group gameplay and the events for *Ingress* are really the lifeblood of that game. You can expect to see things like that in *Pokémon GO*. This type of game lends itself well to people coming together for big events that are part competitive, part social, part just a big party. They’re a ton of fun. They solidify the user base.[[58]](#endnote-58)

For instance, one of the first *Ingress* features planned for *Pokémon GO* was linking distant teams together. “To be successful, you have to be part of a team,” explained Hanke. “You have to work with people locally and you have to know players in other cities and then that expands globally. So in Europe, people in Germany and Russia and the U.K. and Italy are all cooperating together.”[[59]](#endnote-59)

*Ingress* also had regional events where players gathered in the tens of thousands to compete in teams, participate in activities, purchase merchandise, and interact with developers and other fans (see Exhibit 5). Niantic planned to replicate these types of events for *Pokémon GO* with Pokémon walks in major cities. “It’s a great way to retain your players over time and keep them interested in the game.”[[60]](#endnote-60)

**China**

Ishihara hoped to grow the user based by expanding into mainland China. However, the game relied on Google Maps and Google Services to function, and both were unavailable in China. Although some computer-savvy users found ways to bypass what was known as the “Great Firewall of China,” Niantic still needed to supply essential geographic data.[[61]](#endnote-61)

Meanwhile, at least one Chinese clone of *Pokémon GO* had already appeared. *City Spirits Go* was launched in China in March 2016, while *Pokémon GO* was still undergoing beta-testing in Japan. *City Spirits Go* was not an AR game in the true sense; instead, it displayed creatures on a three-dimensional-map image. However, in other ways, the game was nearly identical to *Pokémon GO*. And similar to Niantic, the Quanzhou, Fujian–based developer supported itself by offering in-game purchases that ranged in price from a few cents to nearly $100.[[62]](#endnote-62) Although its revenues were unknown, *City Spirits Go* quickly rose to the top of the mobile gaming charts in China.[[63]](#endnote-63)

**New Features**

One of the first accessories for *Pokémon GO* was a $30 watch-like device that vibrated or lit up when players were near Pokémon. Players simply tapped the device, known as *Pokémon GO* Plus, to capture nearby Pokémon. Niantic also planned to introduce smartwatch integration so that players would not need to constantly stare at their phones. Over the longer term, the company hoped to introduce glasses with a heads-up display. However, unlike Google Glass, Niantic’s AR glasses would be inexpensive and unobtrusive. Such a device could be paired with *Pokémon GO*, *Ingress*, or any other AR game supported by the company. Hanke hoped AR glasses would eventually supplant virtual reality (VR) glasses:

It is the direction that I think is far more interesting and promising for technology and, really, for humanity, than VR, for example, because you know in a VR situation, you’re isolating yourself from everything around you and entering this completely virtual space. [AR glasses are] designed to enhance the things you do as a human being: being outside, socializing with other people, shopping, playing, having fun. AR can make all those things better and I think when we eventually get there, the technology is significantly more challenging than VR, because of the need to register reality. . . . And I think the opportunity there is a really big one, not only for gaming, but it will be the next big transformative step in technology.[[64]](#endnote-64)

The success of *Pokémon GO* brought AR gaming to mainstream audiences, including game developers. As more independent developers pitched ideas to Niantic, Hanke envisioned an ecosystem of AR games built around Niantic’s gaming platform:

We will be working closely with these people because the technology is something that we probably know better than anyone else on the server side, in terms of how to make it work. But games are an interesting thing; you can’t corner the market on creativity. So there are a lot of great ideas out there and great teams out there; our goal is to enable them with our unique real-world technology and the data, but to really let other people with great vision drive those projects forward and add to what we’ve done: not to just copy the mechanics of *Ingress* or *Pokémon GO*, but to take that even further and add new elements to it. . . . I think that there’s a lot of room for this genre of games to continue to grow.[[65]](#endnote-65)

Many *Pokémon GO* players complained that the game bore little resemblance to the original Nintendo console game. At the very least, they wanted to be able to trade between players and engage in battles with other players and “wild” Pokémon. “Battling is a category that we do best at Pokémon,” Ishihara observed. However, “it’s important to really carefully consider any feature that may increase the difficulty and raise the barrier to entry for more casual users.”[[66]](#endnote-66)

**Combatting the Cheats**

Shortly after the gamed launched, online social forums began to discuss ways to circumvent its rules. A Reddit group called Silph Road discussed hidden attributes of various Pokémon so that players could determine which creatures were the strongest and most valuable. It also detailed requirements for advancing as a trainer and provided other details about the inner workings of the game, many of which players could use to advance more quickly.[[67]](#endnote-67)

Members of another Reddit group were able to access raw game data that allowed them to publish detailed maps of the locations of various Pokémon. This initially required some familiarity with computer code, but more user-friendly instructions gradually began to appear. Players who were frustrated by the lack of rare Pokémon in their locations could use the map cheats to locate desired Pokémon. However, using the software was a violation of the game’s terms of service, so players who did so risked being banned from the game.[[68]](#endnote-68)

By August 2016, sites like Pokévision.com began publishing easy-to-use maps of Pokémon. Later that month, *PC World* magazine published a guide to the best map cheats. Mark Hachman, *PC World* senior editor, wrote:

Numerous maps are available, but here are the best *Pokémon GO* maps. The first, at Pokecrew.com, zeroes in on your location and begins showing what Pokémon might be nearby. And if you happen to live in the Boston area, you’re in real luck: a sweet Google Map known as Gotta Catch ’Em All happens to list all the locations local players have found, complete with a list of rare and ultra-rare Pokémon. A separate Google Map pegs Pokémon locations in Seattle and Tennessee. Pokemapper also provides a worldwide look at Pokémon locations, but without the sophistication of other sites.[[69]](#endnote-69)

The Pokémon maps encouraged taxi drivers to offer Pokémon collection rides. *Pokémon GO* Streetcars in Manchester, England, had 12 Pokémon cars that could be hired for £20[[70]](#endnote-70) per hour. “Quite a few of our staff play Pokémon,” explained Naveed Arshad, director of *Pokémon GO* Streetcars:

We had the idea that we could use it as a marketing gimmick and it’s just exploded. . . .

I’ve only just started, I’m on level four. . . .

We’ve got specific Pokémon drivers. They’re on level 18 or 20, they know everything.

[We also use] live Pokémon maps on Google that tell you where the Pokémon are.[[71]](#endnote-71)

Similar services, often operated by freelance drivers who were also Pokémon players, appeared in other cities around the world. Molly Fitzpatrick, senior editor of New York–based Fusion, explained why she hired a driver to help her catch Pokémon:

I hatched three eggs, caught about a dozen Pokémon—a total that would be much higher if my app had worked properly, or if I had been more focused on hunting than talking—and visited more Pokéstops than I could count. But the company alone was well worth the cost.

This is the truth about *Pokémon GO*: It’s not about finding Pokémon. It’s about finding other people. The game is better played in a group than as an individual—in part because you can share the attractive powers of lures and pool information about recent Pokémon sightings, but primarily because it’s simply more fun that way.[[72]](#endnote-72)

In August 2016, Niantic announced that it was banning all third-party access to its mapping data. Niantic’s chief marketing officer, Mike Quigley, believed that there was no other option. “They were just crushing us on the server side,” he said.

I won’t say it’s a no-win situation but it’s a tough balance. You’ve got to keep fans happy but you also have to keep the core product accessible.

Some of the server outages back in July were a punch in stomach. For us, for fans, for The Pokémon Company too—it’s not a good signal for their brand. We’re very close to them and we have to do right by the brand, by our players and Niantic. That’s why we had to make some of those hard decisions like blocking third-party sites. It’s difficult but ultimately it’s the right thing to do for the life of the product.[[73]](#endnote-73)

Many players quit the game because they eventually became bored with the repetitive nature of collecting Pokémon in the wild. Moreover, without maps showing nearby Pokémon, users became frustrated with the randomness of the game. “This is likely to alienate players, especially if done with little explanation,” observed Mark Humphery-Jenner of the University of New South Wales:

Some commentators have branded the game “broken.”

In *Pokémon GO*’s case, the feature in question was “Pokémon tracking.” A core aspect of the game is that it creates a virtual representation of the player’s real-world location, which is then populated with Pokémon characters for players to collect by walking around. But to catch Pokémon, players need to know where they are—and without Pokémon tracking, players are left wandering aimlessly and relying on luck to find them.[[74]](#endnote-74)

Despite the growing chorus of discontent, Niantic was intractable. No matter how many times Hanke was asked the question, “When are you going to include battles?” the answer was always the same. “It’s something that will probably make its way onto our road map.”[[75]](#endnote-75)

Shortly after blocking third-party mapping sites, Niantic announced that it was also banning rooted or jailbroken phones in order to prevent GPS (Global Positioning System) spoofing, a technique that allowed players to virtually teleport themselves anywhere in the world to catch rare Pokémon and gain other advantages. Many players complained that Niantic was punishing players who had legitimate reasons for rooting their phones.[[76]](#endnote-76) One study estimated that more than a quarter of Android users rooted their phones, mostly for legitimate purposes such as installing backup software; improving battery life by removing unneeded, preinstalled apps; and gaining early access to software and security updates.[[77]](#endnote-77)

Despite Niantic’s efforts, new cheating software appeared on an almost daily basis (see Exhibit 6). PokeGOD, for instance, could play the game virtually, allowing players to catch Pokémon without leaving their homes. Some players complained that Niantic was not doing enough to crack down on cheaters.

**Fad or Phenomenon?**

Prior to the launch of *Pokémon GO*, the term “Pokémon” was already a more popular search term in Google than any mobile games had been at the height of their popularity.[[78]](#endnote-78) When the game was launched, that popularity surged to unprecedented levels, only to decline at an almost equally steep rate (see Exhibit 7). In response, some observers proclaimed the rapid demise of the game. One was New Zealand sociologist Robert Bartholomew, who exclaimed, “Mark my words; if the history of fads and crazes is anything to go by, *Pokémon GO* will not last long. While 2016 may turn out to be the American Summer of *Pokémon GO*, it will likely be gone by the year’s end.”[[79]](#endnote-79) He predict that the game was not only “fading fast,” but would soon “go the way of *Flappy Bird*, *Fruit Ninja* and *Candy Crush*.”[[80]](#endnote-80)

Technology columnist Phil Owen was even blunter in his assessment of the game. “There was never any question that the popularity of ‘*Pokémon GO*’ would fade pretty quickly,” he asserted, “because it requires too much of a time investment for casual players to keep at it for long. The real question, instead, was whether it would be able to sustain a substantial core base of users over a long period.”[[81]](#endnote-81)

However, even if the direst predictions were to prove accurate, Bartholomew believed the new genre that Niantic had created would have staying power long beyond Pokémon: “*Pokémon GO* will likely go down in history as the game that started the new augmented-reality movement on a global scale, in the same way that *Pong* and *Pac-Man* ushered in new eras in video games.”[[82]](#endnote-82)

Meanwhile, even as downloads continued to decline, revenues stabilized at a respectable $2 million per day in September.[[83]](#endnote-83) At the same time, the Niantic team breathed a collective sigh of relief. After an exhausting summer, they welcomed the respite and the opportunity to be “a little more thoughtful about the next set of features.”[[84]](#endnote-84)

For Hanke, *Pokémon GO* and *Ingress* were part of a greater mission to enlighten the world about the benefits of AR and AR games. The Niantic team believed that, unlike traditional games such as *Angry Birds*, *FarmVille*, and *Candy Crush*, which enjoyed massive surges in popularity only to die out months or years later, *Ingress* and *Pokémon GO* would be around for many years. As *Ingress* reached its four-year anniversary, for instance, it was more popular than ever. Hanke believed this difference came down to one factor: the human need to socialize. In his view, playing AR games was less like playing traditional video games and more like playing league sports. Baseball or bowling, for example, drew people together, not only to compete with each other but also to socialize.

**CONCLUSION**

As the wish list for new features continued to grow, Niantic’s complement of 70 programmers, staff, and engineers found themselves barely able to support the existing game features. Much of their time was spent blocking cheat sites, fixing bugs, and planning events. Until they could hire additional staff, they needed to prioritize new features. They also wondered what to do about the cheat sites that took a heavy toll on the company’s servers when they accessed maps and data, but were popular with players who found the game’s rules and limitations to be repetitive and boring.[[85]](#endnote-85) “These superfans are tired of doing battle with Niantic itself, when they argue that they’re just trying to help make the game experience better,” explained author and tech journalist Paul Tassi:

But the fact remains . . . that the game still does not have an effective tracking system now three months after launch. . . . Many regions [of the world] have *never* experienced *Pokémon GO* with a fully working tracker, which is a shame, because there was no better experience in the game than being able to hunt for a specific rare Pokémon in the wild that showed up on your radar. But with the old, broken system and the new one which only works half the time, that experience is hard to replicate.[[86]](#endnote-86)

Others were frustrated that *Pokémon GO* lacked many of the most popular features in the original Nintendo console games. United Kingdom–based technology journalist Rob Price admitted that he was initially obsessed by the game. But as a millennial who grew up with Pokémon, he lamented the lack of features from the original games. “Aside from outward appearances, the app has few of the elements that made the original ‘Pokémon’ games such smash hits,” he complained:

You can’t trade Pokémon with other players. You can’t battle other players (you’re forced to leave your Pokémon in “gyms,” where they are controlled by the computer in battles). You can’t even battle wild Pokémon before you catch them; you’re forced to just throw Pokéball after Pokéball and pray.[[87]](#endnote-87)

As Niantic faced a growing chorus of discontent, it considered its options. *Pokémon GO* could continue to evolve in the pattern of *Ingress*, with teams and live events, or Niantic could abandon its plan and create an entirely new gaming experience that focused on features, such as battles and trading, found in the original Pokémon games.

Should Niantic expand to meet the anticipated demand of AR gaming, or should it partner with third-party developers, including “cheat” developers who were popular with players but had violated the company’s terms of service? Some of those developers had earned significant revenue from their “services,” while Niantic incurred most of the costs.[[88]](#endnote-88)

Finally, what options should Niantic explore in its efforts to find ways to fund its unanticipated growth: additional funding rounds, more in-app purchases and advertising, and/or additional commercial location partnerships with companies such as McDonald’s Japan?

**Exhibit 1: Microsoft HoloLens “Mixed Reality” Applications**

**Actiongram Beta**

Actiongram delivers an eclectic mix of holograms that enables new forms of storytelling. Stage your own video creations by moving, resizing, rotating, and recording these holograms in your home, and then share those videos with your friends. Coming soon.

**HoloStudio**

Build 3D in 3D with natural gestures and movement, using holographic tools modeled from tools in the real world. Create holograms of your own design and turn them into physical objects with 3D print compatibility. Get a hands-on understanding of how users interact with 3D content.

**Skype**

Educational and instructional moments are more effective when you can show as well as tell. Skype for HoloLens lets your contacts see what you see and draw on their screens to place holograms over physical objects in your view. See how holograms can help people communicate in new ways.

**HoloTour**

Get up out of your seat to explore the beauty of Rome or uncover the secrets of Machu Picchu. Easily move around your real world and naturally interact with elements of the tour. An immersive combination of 360-degree video, spatial sound, and holographic scenery lets you feel like you’re really there.

**Young Conker**

Guide a playful, pint-sized hero through your world in an ever-changing adventure game that highlights the fun of playing in mixed reality. Levels change and adapt to your environment, so you can play the same level in different rooms for a unique experience every time.

**RoboRaid**

In this mixed reality, first‑person shooter, use gaze and gesture to target enemies and dodge incoming fire using natural movements. Spatial mapping turns each room into a unique game level, while spatial sound lets you use the entire room to play—even the spaces behind you.

Source: “Mixed Reality Apps for Microsoft HoloLens,” Microsoft Corporation, accessed October 14, 2016, www.microsoft.com/microsoft-hololens/en-us/apps.

**Exhibit 2: Niantic, Inc. Funding**

**Funding Rounds 1 and 2: $25 Million**

|  |  |  |  |
| --- | --- | --- | --- |
| **Date** | **Amount/Round** | **Lead Investor** | **Investors** |
| February 2016 | $5 million/Series A | Alsop Louie Partners | 5 |
| October 2015 | $20 million/Series A | — | 3 |

**Investors (8)**

|  |  |
| --- | --- |
| **Investor** | **Round(s)** |
| Alsop Louie Partners | Series A (Lead) |
| Cyan Banister | Series A |
| Google | Series A |
| Lucas Nealan | Series A |
| Nintendo | Series A |
| Pokémon Company | Series A |
| Scott Banister | Series A |
| You & Mr Jones Brandtech Ventures | Series A |

Note: All currency amounts are in US$.

Source: Compiled by case authors based on data from “Niantic,” Crunchbase, accessed September 23, 2016, www.crunchbase.com/organization/nianticlabs-google#/entity.

**Exhibit 3: acquiring PokÉ Coins**

**How to Get Pokémon GO Coins by Buying Them**

|  |  |
| --- | --- |
| **Price** | **Number of Coins** |
| $0.99 | 100 |
| $4.99 | 550 |
| $9.99 | 1,200 |
| $19.99 | 2,500 |
| $39.99 | 5,200 |
| $99.99 | 14,500 |

**How to Get Pokémon GO Coins by Winning Them**

|  |  |
| --- | --- |
| **Action** | **Coins Given** |
| Control or defend a gym. | Get 10 Pokémon GO coins every 21 hours. |
| Visit the in-game Store, tap the shield icon (upper right). | Claim the coins you’ve earned for defending a gym. |
| Catch Pokémon. | Earn candies and Stardust to power up and level up your Pokémon, making it easier to defend gyms and get more Pokémon GO coins. |
| Reach Level 5. | Must be level 5 to defend a gym and get Pokémon GO coins. |
| Fight battles in friendly gyms. | Successful battles raise your gym’s prestige value and keep you in control and earning Pokémon GO coins. |
| Defend 10 gyms for 21 hours. | Get 100 Pokémon GO coins. |
| Defend 9 gyms for 21 hours. | Get 90 Pokémon GO coins. |
| Defend 1 gym for 21 hours. | Get 10 Pokémon GO coins. |

Source: Created by the case authors using data from Tom Gerencer, “How to Get Pokémon GO Coins: 2 Ways,” MoneyNation, August 19, 2016, accessed October 5, 2016, https://moneynation.com/how-to-get-pokemon-go-coins/.

Exhibit 4: *Pokémon GO*—Estimated Downloads and Revenues

Source: Created by case authors based on data from “Analysis of Pokémon GO: A Success Two Decades in the Making,” Newzoo Insights, September 30, 2016, accessed October 4, 2016, https://newzoo.com/insights/articles/analysis-pokemon-go/; Luke Kawa and Lily Katz, “These Charts Show That Pokemon Go Is Already in Decline,” Bloomberg, August 22, 2016, accessed October 5, 2016, www.bloomberg.com/news/articles/2016-08-22/these-charts-show-that-pokemon-go-is-already-in-decline.

**Exhibit 5: *Ingress* Gathering—Saint Paul, Minnesota, May 28, 2016**

|  |  |
| --- | --- |
|  |  |

Source: Photos by Paul Joel Hancock, Flickr, accessed September 24, 2016, https://flic.kr/p/GMcZaT; https://flic.kr/p/HDPYEq; https://flic.kr/p/HvoyZy; <https://flic.kr/p/HAz3x8>. Reproduced under Creative Commons License: https://creativecommons.org/licenses/by-nd/2.0/.

**Exhibit 6: Third-Party App Developers—*Pokémon Go* Assistance, November 1, 2016**

**Websites**

* Pokécrew

This site found and displayed Pokémon in the user’s area in a list format (e.g., Pokedex number and type). Users could list their own Pokémon sightings to keep information up to date.

* Pokéfind

Users could sort Pokémon into types (e.g., water, ground, poison, and so on). An evolution calculator could determine a Pokémon’s combat power after it had evolved.

* Pokémapper

This crowd-sourced Pokémon-finding app was created by OpenRide (similar to Uber). This map was populated by people all over the world and gave up-to-date Pokémon news.

* Mapokémon

This crowd-sourced map showed the locations of stops and gyms. Users could rate whether or not the reported pins were real or fake, improving the map’s accuracy.

**Applications**

* PokeGear GO

In this simple design and concept, Pokémon were displayed on a map, and the user had access to a full Pokédex. Users could also search for nearby Pokémon by name.

* GoRadar

This app used the same general concept as PokeGear Go, but GoRadar also allowed users to filter out search results on the map. For instance, if users did not want to see Pikachu, they could choose to remove all Pikachus from the map. This app also allowed users to set alerts/notifications if they came close to specific Pokémon.

* Poke Radar

This 99 cent App store program used a crowd-sourced data collection method to display how much longer the Pokémon were expected to remain in a specific location. The Poke Radar Prediction feature collected data from nearby *Pokémon GO* players to predict possible Pokémon locations.

**Related Apps with Different Purposes**

* Lure Squad

Business owners could register PokéStops nearby and the locations of their stores (e.g., coffee shops). They could then offer rewards for anyone who dropped a Lure Module (a module that attracted Pokémon to a Pokéstop for 30 minutes). They offered the rewards because when Pokémon were attracted to the location, other *Pokémon GO* users would follow.

* RazerGo

This app was a chat room for *Pokémon GO* users in a specified radius. Users could choose the radius and then join public chat rooms, start group chats with friends, and send direct messages.

Source: Compiled by case authors based on data from Pokécrew, accessed September 17, 2018, www.pokecrew.com; Pokéfind, accessed December 12, 2018, https://pokefind.co/evolution.php; Pokémapper, accessed September 17, 2018, https://pokemapper.co; Mapokémon, accessed December 12, 2018, https://mapokemon.com; *PokeGear GO—Live Radar Map and Pokedex for Pokemon GO,* v. 1.0.7 (Trylis LLC, 2016), iOS, accessed December 12, 2018, https://pokegear-go-live-radar-map-and-pokedex-for-pokemon-go-ios.soft112.com/; GoRadar, iOS, accessed September 17, 2018, https://goradar.io; *PokeRadar For Pokémon GO*, v. 2.0 (Bilal Mirza, 2017), iOS 8.0 or later, accessed December 12, 2018, https://itunes.apple.com/us/app/pokeradar-poke-radar-go-map-vision-for-pok%C3%A9mon-go/id1139163855?mt=8; Lure Squad, accessed September 17, 2018, https://luresquad.com; RazerGo, accessed September 17, 2018, https://go.razerzone.com/#public.

**Exhibit 7: Google Trends Comparison for Popular Mobile Games**

**Normalized Data of Relative Search Popularity over Time**

Source: Created by the case authors using data from Google Inc.

**endnotes**

1. This case has been written on the basis of published sources only. Consequently, the interpretation and perspectives presented in this case are not necessarily those of Niantic Inc. or any of its employees. [↑](#endnote-ref-1)
2. Jeff Grubb, “Pokémon Go Rockets to the Top of the App Store—And It’s Already Making Bank,” VentureBeat, July 7, 2016, accessed January 7, 2019, https://venturebeat.com/2016/07/07/pokemon-go-rockets-to-the-top-of-the-app-store-and-its-already-making-bank. [↑](#endnote-ref-2)
3. John Hanke, “An Update on Pokémon Go Account Bans,” Pokémon Go, August 29, 2016, accessed October 6, 2016, http://pokemongolive.com/en/post/update-082916/. [↑](#endnote-ref-3)
4. Samuel Gibbs, “Pokémon Go Players Outraged after Maps Shut Down by Game Update,” *Guardian*, August 1, 2016, accessed January 7, 2019, www.theguardian.com/technology/2016/aug/01/pokemon-go-maps-shut-down-game-update-tracking. [↑](#endnote-ref-4)
5. “Guest Speaker Interview with John Hanke, CEO - Niantic, Inc. | UC Berkeley Executive Education,” YouTube video, 33:58, March 30, 2016, posted by “berkeleyexeced,” accessed September 13, 2016, https://youtu.be/xc87zvIr0vk. [↑](#endnote-ref-5)
6. Ibid. [↑](#endnote-ref-6)
7. Nick Bilton, “Why Google Glass Broke,” *New York Times*, February 4, 2015, accessed December 11, 2018, www.nytimes.com/2015/02/05/style/why-google-glass-broke.html. [↑](#endnote-ref-7)
8. Ibid. [↑](#endnote-ref-8)
9. All currency amounts are in US$ unless otherwise indicated. [↑](#endnote-ref-9)
10. “Guest Speaker Interview,” op. cit. [↑](#endnote-ref-10)
11. Mike Elgan, “Google Glass Strikes Back,” Computerworld, August 20, 2016, accessed October 14, 2016, https://www.computerworld.com/article/3109502/wearables/google-glass-strikes-back.html. [↑](#endnote-ref-11)
12. Laura Petti, “Google Glass Not a Flop in the Emergency Room, Doctor Says,” CNBC, July 5, 2016, accessed October 14, 2016, www.cnbc.com/2016/07/05/google-glass-not-a-flop-in-the-emergency-room-doctor-says.html. [↑](#endnote-ref-12)
13. Elgan, op. cit. [↑](#endnote-ref-13)
14. Todd Bishop, “Microsoft Marketing Chief on HoloLens: ‘We Totally Underestimated the Commercial Interest,’” GeekWire, April 5, 2016, accessed October 14, 2016, www.geekwire.com/2016/microsoft-marketing-chief-hololens-totally-underestimated-commercial-interest/. [↑](#endnote-ref-14)
15. “Mixed Reality Apps for Microsoft HoloLens,” Microsoft Corporation, accessed October 14, 2016, www.microsoft.com/microsoft-hololens/en-us/apps. [↑](#endnote-ref-15)
16. Bishop, op. cit. [↑](#endnote-ref-16)
17. Kirsten Korosec, “Volvo Wants to Use Microsoft’s Sci-Fi Glasses to Sell Cars,” *Fortune*, November 20, 2015, accessed October 14, 2016, http://fortune.com/2015/11/20/volvo-microsoft-hololens/. [↑](#endnote-ref-17)
18. “Behind the Scenes of Pokémon Go (John Hanke, CEO, Niantic),” Recode Decode, hosted by Kara Swisher (podcast), 55:43, in Eric Johnson, “New Pokémon GO Features in the Works: Events, Trading and Maybe Battling,” Recode, September 19, 2016, accessed September 22, 2016, www.recode.net/2016/9/19/12965348/pokemon-go-trading-events-battling-niantic-john-hanke-recode-podcast. [↑](#endnote-ref-18)
19. “Guest Speaker Interview,” op. cit. [↑](#endnote-ref-19)
20. “Behind the Scenes,” op. cit. [↑](#endnote-ref-20)
21. “Guest Speaker Interview,” op. cit. [↑](#endnote-ref-21)
22. Zevach, “Ingress Helping Me Lose Weight,” Reddit/Ingress, accessed September 21, 2016, https://www.reddit.com/r/Ingress/comments/25fis3/ingress\_helping\_me\_lose\_weight/. [↑](#endnote-ref-22)
23. Paul-Emile Graff, “Ingress (Google) se met à jour: (re)découvrez le jeu avec notre reportage,” Clubic, September 24, 2014, accessed September 15, 2016, www.clubic.com/jeu-video/actualite-729337-ingress-re-decouvrez-jeu-reportage.html. [↑](#endnote-ref-23)
24. In 2014, Japan ranked as the third country, in terms of the number of *Ingress* players. [↑](#endnote-ref-24)
25. Travis Andrews, “Pokémon GO: The April Fools’ Joke That Became a Global Obsession,” *Washington Post*, July 13, 2016, accessed September 22, 2016, www.washingtonpost.com/news/morning-mix/wp/2016/07/13/pokemon-go-the-april-fools-joke-that-became-a-global-obsession/. [↑](#endnote-ref-25)
26. “Behind the Scenes,” op. cit. [↑](#endnote-ref-26)
27. Ibid. [↑](#endnote-ref-27)
28. Ibid. [↑](#endnote-ref-28)
29. “Guest Speaker Interview,” op. cit. [↑](#endnote-ref-29)
30. Ryan Mac, “‘Pokémon GO’s’ Creator Answers All Your Burning Questions (Except That One About Finding Pokémon),” *Forbes*, July 28, 2016, accessed September 24, 2016, www.forbes.com/sites/ryanmac/2016/07/28/pokemon-go-creator-john-hanke-answers-all-your-burning-questions/#23ec090a23ac. [↑](#endnote-ref-30)
31. “Behind the Scenes,” op. cit. [↑](#endnote-ref-31)
32. “John Hanke of Niantic Labs has Pokémon Plans at Disrupt SF,” YouTube video, 23:01, posted by “TechCrunch,” September 13, 2016, accessed September 24, 2016, https://youtu.be/tpMPSt3vPlM. [↑](#endnote-ref-32)
33. Ibid. [↑](#endnote-ref-33)
34. Ibid. [↑](#endnote-ref-34)
35. Matt Weinburger, “The CEO Behind Pokémon GO Emailed Sundar Pichai for ‘Reinforcements’ as Players Overloaded the System,” *Business Insider*, September 13, 2016, accessed September 23, 2016, www.businessinsider.com/pokemon-go-niantic-google-servers-2016-9. [↑](#endnote-ref-35)
36. Takashi Mochizuki, “Pokémon to Create Games for Nintendo’s Next System,” *Wall Street Journal*, September 20, 2016, accessed September 24, 2016, www.wsj.com/articles/pokemon-to-create-games-for-nintendos-next-system-1474371834. [↑](#endnote-ref-36)
37. Marina Villeneuve, “How Millennial Nostalgia Fueled the Success of ‘Pokemon Go,’” *Seattle Times*, July 20, 2016, accessed September 30, 2016, www.seattletimes.com/business/how-millennial-nostalgia-fueled-the-success-of-pokemon-go/. [↑](#endnote-ref-37)
38. Mike Isaac, “Times Reporter Descends into Pokémania,” *New York Times*, July 12, 2016, accessed September 30, 2016, www.nytimes.com/2016/07/12/insider/how-pokemon-go-augmented-a-reporters-reality.html?\_r=0. [↑](#endnote-ref-38)
39. Nathalia Ramos and Derek An, “The Nostalgia Behind Pokemon Go,” *Huffington Post*, July 21, 2016, accessed September 30, 2016, www.huffingtonpost.com/entry/the-nostalgia-behind-pokemon-go-co-authored-by-derek\_us\_578ff065e4b0a86259d0a16e. [↑](#endnote-ref-39)
40. Lisa Eadicicco, “Psychology Experts Explain Why ‘Pokemon Go’ Is So Addictive,” *Time*, July 12, 2016, accessed September 30, 2016, http://time.com/4402123/pokemon-go-nostalgia/. [↑](#endnote-ref-40)
41. Matthew Dunn, “Why We Love Nostalgia and How This Influences Consumerism,” New Zealand Herald, October 10, 2016, accessed January 7, 2019, www.nzherald.co.nz/business/news/article.cfm?c\_id=3&objectid=11725823. [↑](#endnote-ref-41)
42. Chris Baraniuk, “The Psychological Tricks Behind Pokemon Go’s Success,” BBC Future, July 11, 2016, accessed September 30, 2016, www.bbc.com/future/story/20160711-the-psychological-tricks-behind-pokemon-gos-success. [↑](#endnote-ref-42)
43. Chris Carter, “Pokémon Go Advanced Strategies: Turn off AR,” Polygon, July 16, 2016, accessed December 2, 2016, www.polygon.com/pokemon-go/2016/7/19/12229694/turn-off-ar. [↑](#endnote-ref-43)
44. Madhumita Murgia, “‘Pokemon Go’ Crosses $250 M in Revenues Since Launch,” *Financial Times*, August 12, 2016, accessed September 23, 2016, https://www.ft.com/content/2dd63522-5fdf-11e6-ae3f-77baadeb1c93. [↑](#endnote-ref-44)
45. Sarah Perez, “Pokémon GO Becomes the Fastest Game to Ever Hit $500 Million in Revenue,” TechCrunch, September 8, 2016, accessed November 11, 2016, https://techcrunch.com/2016/09/08/pokemon-go-becomes-the-fastest-game-to-ever-hit-500-million-in-revenue/. [↑](#endnote-ref-45)
46. Ewan Spence, (2015), “‘Clash of Clans’ Developer Supercell Reports $829 Million in Revenue and a Desire to Support the Finnish Community,” *Forbes*, June 1, 2015, accessed January 7, 2019, www.forbes.com/sites/ewanspence/2014/02/12/clash-of-clans-developer-reports-829-million-in-revenue-and-a-desire-to-support-the-finnish-community/#6cdd2646bd5a. [↑](#endnote-ref-46)
47. Craig Palli, “Rise and Fall: The Numbers Behind the Lifecycle of Mobile Games,” Pocket Gamer, October 30, 2014, accessed November 11, 2016, www.pocketgamer.biz/comment-and-opinion/60228/the-numbers-behind-the-lifecycle-of-mobile-games/. [↑](#endnote-ref-47)
48. Taylor Stanton, “Poké Power: Pokémon GO Has More In-Game Buyers Than the Rest of the Mobile Gaming Market,” Rakuten Intelligence, April 25, 2018, accessed January 7, 2019, http://www.rakutenintelligence.com/blog/2016/poke-profits-game-purchases-pokemon-go-accounted-half-entire-mobile-game-market-launch-weekend. [↑](#endnote-ref-48)
49. Tom Gerencer, “How to Get Pokémon GO Coins: 2 Ways,” MoneyNation, August 19, 2016, accessed October 5, 2016, https://moneynation.com/how-to-get-pokemon-go-coins/. [↑](#endnote-ref-49)
50. “Analysis of Pokémon GO: A Success Two Decades in the Making,” Newzoo Insights, September 30, 2016, accessed October 4, 2016, https://newzoo.com/insights/articles/analysis-pokemon-go/. [↑](#endnote-ref-50)
51. Sarah Perez, “Pokémon GO’s Retention Rates, Average Revenue per User Are Double the Industry Average,” TechCrunch, July 15, 2016, accessed October 4, 2016, https://techcrunch.com/2016/07/15/pokemon-gos-retention-rates-average-revenue-per-user-are-double-the-industry-average/. [↑](#endnote-ref-51)
52. “Behind the Scenes,” op. cit. [↑](#endnote-ref-52)
53. Mac, op. cit. [↑](#endnote-ref-53)
54. “Behind the Scenes,” op. cit. [↑](#endnote-ref-54)
55. Andrew Boring, “How Do You Calculate Server Costs per User for a Social Networking Type Platform Where Storage for Each User Would Max Out at 2GB a Month/500MB a Day?,” Quora, November 8, 2012, accessed November 11, 2016, www.quora.com/How-do-you-calculate-server-costs-per-user. [↑](#endnote-ref-55)
56. Rose Leadem, “How Cemeteries, Police and the Holocaust Museum Are Coping with Pokemon Go Fever,” *Entrepreneur*, July 13, 2016, accessed January 7, 2019, www.entrepreneur.com/article/279010. [↑](#endnote-ref-56)
57. Chauncey Alcorn, “One Man Is So Annoyed with Pokémon GO Players on His Property That He’s Suing,” *Fortune*, August 2, 2016, accessed November 11, 2016, http://fortune.com/2016/08/02/pokemon-go-lawsuits/. [↑](#endnote-ref-57)
58. “John Hanke of Niantic Labs,” op. cit. [↑](#endnote-ref-58)
59. “Behind the Scenes,” op. cit. [↑](#endnote-ref-59)
60. Ibid. [↑](#endnote-ref-60)
61. Ben Gilbert, “‘Pokémon GO’ Still Isn’t Available in the Biggest Mobile Game Market in the World—Here’s Why,” *Business Insider*, August 25, 2016, accessed September 24, 2016, www.businessinsider.com/pokmon-go-not-available-in-china-because-of-google-2016-8. [↑](#endnote-ref-61)
62. Matt Kamen, “China Cloned Pokémon GO—Before It Was Officially Released,” *Wired*, July 14, 2016, accessed October 7, 2016, www.wired.co.uk/article/china-cloned-pokemon-go-before-it-was-officially-released. [↑](#endnote-ref-62)
63. Daniel Van Boom, “Pokémon GO Clone Tops App Charts in China,” C|Net, July 11, 2016, accessed October 7, 2016, www.cnet.com/news/gotta-clone-em-all-chinas-top-free-app-right-now-is-very-pokemon-go-esque/. [↑](#endnote-ref-63)
64. “Behind the Scenes,” op. cit. [↑](#endnote-ref-64)
65. Ibid. [↑](#endnote-ref-65)
66. Takashi Mochizuki, “Pokémon to Create Games for Nintendo’s Next System,” *Wall Street* *Journal*, September 20, 2016, accessed September 24, 2016, www.wsj.com/articles/pokemon-to-create-games-for-nintendos-next-system-1474371834. [↑](#endnote-ref-66)
67. Stan Schroeder, “This Is the Most Detailed Cheat Sheet for Pokémon GO So Far,” Mashable, July 20, 2016, accessed October 6, 2016, http://mashable.com/2016/07/20/pokemon-go-stats-chart/. [↑](#endnote-ref-67)
68. Tony Merevick, “Pokémon GO’ Cheat Reveals the Exact Locations of Pokémon on Google Maps,” Thrillist, July 20, 2016, accessed October 6, 2016, www.thrillist.com/news/nation/pokemon-go-map-cheat-displays-exact-pokemon-locations. [↑](#endnote-ref-68)
69. Mark Hachman, “New Pokémon GO Maps Show You Where to Catch ’Em All,” *PC World*, August 30, 2016, accessed October 6, 2016, www.pcworld.com/article/3095714/software-games/new-pokmon-go-maps-show-you-where-to-catch-em-all.html. [↑](#endnote-ref-69)
70. £ = GBP = Great Britain pound; US$1.00 = £0.81103 as of December 30, 2016. [↑](#endnote-ref-70)
71. “Manchester Taxi Firm Will Drive You around the City to Catch Pokemon,” BBC Newsbeat, July 29, 2016, accessed October 6, 2016, www.bbc.co.uk/newsbeat/article/36922942/manchester-taxi-firm-will-drive-you-around-the-city-to-catch-pokemon. [↑](#endnote-ref-71)
72. Molly Fitzpatrick, “I Hired a Stranger from Craigslist to Take Me Pokémon Hunting in His Car,” Splinter, July 13, 2016, accessed October 6, 2016, http://fusion.net/story/324706/pokemon-go-hunting-drivers-for-hire/. [↑](#endnote-ref-72)
73. Tom Phillips, “Pokémon GO Developer Wants It to Last as Long as World of Warcraft,” Eurogamer, November 11, 2016, accessed November 14, 2016, www.eurogamer.net/articles/2016-11-10-pokemon-go-developer-finally-opens-up-about-its-rocky-launch-but-bright-future. [↑](#endnote-ref-73)
74. Mark Humphery-Jenner, What Went Wrong with Pokémon GO? Three Lessons from Its Plummeting Player Numbers,” The Conversation, October 18, 2016, accessed November 3, 2016, http://theconversation.com/what-went-wrong-with-pokemon-go-three-lessons-from-its-plummeting-player-numbers-67135. [↑](#endnote-ref-74)
75. Gabe Gurwin, “One-on-One ‘Pokémon GO’ Battles Could Be in the Works, Niantic CEO Says,” Digital Trends, September 14, 2016, accessed October 12, 2016, www.digitaltrends.com/gaming/pokemon-go-one-on-one-battles-rumor/. [↑](#endnote-ref-75)
76. Paul Tassi, “‘Pokémon GO’ Is Purging All Rooted and Jailbroken Devices from the Game to Curb Cheating,” *Forbes*, September 11, 2016, accessed October 7, 2016, www.forbes.com/sites/insertcoin/2016/09/11/pokemon-go-is-purging-all-rooted-and-jailbroken-devices-from-the-game-to-curb-cheating/. [↑](#endnote-ref-76)
77. Kristijan Lucic, “Over 27.44% Users Root Their Phone(s) in Order to Remove Built-In Apps, Are You One of Them?,” Android Headlines, November 13, 2014, accessed October 7, 2016, www.androidheadlines.com/2014/11/50-users-root-phones-order-remove-built-apps-one.html. [↑](#endnote-ref-77)
78. One exception was in November 2011, when *Pokémon* tied with *FarmVille* in search-term popularity. [↑](#endnote-ref-78)
79. Robert Bartholomew, “‘Pokemon Go’ Fad Will Be Gone by Christmas,” *Psychology Today*, July 12, 2016, accessed September 24, 2016, www.psychologytoday.com/blog/its-catching/201607/pokemon-go-fad-will-be-gone-christmas. [↑](#endnote-ref-79)
80. Hayley Tsukayama, “Pokémon GO and the Lifespan of Fads in the Internet Age,” *Washington Post*, August 31, 2016, accessed September 24, 2016, www.washingtonpost.com/news/the-switch/wp/2016/08/31/pokemon-go-and-the-lifespan-of-fads-in-the-internet-age/. [↑](#endnote-ref-80)
81. Phil Owen, “The Backlash against ‘Pokemon GO’ Has Begun,” Wrap, August 1, 2016, accessed September 24, 2016, www.thewrap.com/backlash-pokemon-go-pokevision-and-other-trackers-shut-down/. [↑](#endnote-ref-81)
82. Bartholomew, op. cit. [↑](#endnote-ref-82)
83. Randy Nelson, “Pokémon GO’s First In-Game Event Boosted Its Revenue 133%,” SensorTower (blog), October 31, 2016, accessed November 3, 2016, https://sensortower.com/blog/pokemon-go-halloween-event-revenue. A Halloween event in which Niantic offered ghost Pokémon saw a temporary increase in revenue to $4.6 million per day during the last week of October 2016. [↑](#endnote-ref-83)
84. Eric Johnson, “New Pokémon GO Features in the Works: Events, Trading and Maybe Battling,” Recode, September 19, 2016, accessed September 22, 2016, www.recode.net/2016/9/19/12965348/pokemon-go-trading-events-battling-niantic-john-hanke-recode-podcast. [↑](#endnote-ref-84)
85. Seamus Byrne, “Confessions of a Pokemon Go Cheat,” C|Net, September 12, 2016, accessed October 12, 2016, www.cnet.com/news/pokemon-go-cheat-confessions/. [↑](#endnote-ref-85)
86. Paul Tassi, “‘Pokémon GO’ Shouldn’t Be Killing Scanners until It Has Its Own Tracking System,” *Forbes*, October 10, 2016, accessed October 12, 2016, www.forbes.com/sites/insertcoin/2016/10/10/pokemon-go-shouldnt-be-killing-scanners-until-it-has-its-own-tracking-system/. [↑](#endnote-ref-86)
87. Rob Price, “Why I’m Quitting ‘Pokémon GO’: It’s a Buggy Game with Bad Mechanics,” *Business Insider*, July 21, 2016, accessed October 7, 2016, www.businessinsider.com/why-im-quitting-pokemon-go-buggy-game-with-bad-mechanics-2016-7?r=DE&IR=T. [↑](#endnote-ref-87)
88. Paul Tassi, “The Pokevision Team Now Has 12 Million Players across Zombs.io and Spinz.io in a Month,” *Forbes*, July 13, 2017, accessed January 7, 2019, www.forbes.com/sites/insertcoin/2017/07/13/the-pokevision-team-now-has-12-million-players-across-zombs-io-and-spinz-io-in-a-month/#7ba38bd51fd0. [↑](#endnote-ref-88)