

Optical disc and hd dvd essay

[Business](#), [Industries](#)



Disruptive and transformational technologies typically appeal to segments of the market that are undeserved, and not to the main stream of the market (Shane, 2009). These technologies have the ability to make traditional tools and processes obsolete virtually overnight.

In this paper I use Netflix as an example of a disruptive technology and Toshiba- NEC's HD-DVD as transformational technology. I begin with a discussion of disruptive technology. Afterwards, I will speak on the success of Netflix; explain the disruptive and shifting technology created once it sustained itself in the market. I then provide a review of transformational technology and explain the transformational change to HD-DVD and the failure to capture and sustain a place in the market. I conclude by comparing and contrasting a successful Netflix and failed HD-DVD format, looking at techniques and key issues that provided success or failure and the lessons learned from them. Disruptive technology is a term coined by Clayton Christensen.

Christensen believes that incumbent firms were unable to adopt radical new technologies were often the firms that created them. In order for disruptive technology to be viable for a business, the technology must become sustaining in the market. New startup companies will develop potential disruptive technology because they lack a customer base and cater to the fringe market. A potential disruptive technology is Netflix. According to their 2011 Annual Report, Netflix Inc.

is the world's leading Internet subscription service for enjoying TV shows and movies where subscribers can instantly watch unlimited TV shows and

movies streamed over the Internet to their TVs, computers and mobile devices. In the United States subscribers can receive standard definition DVDs and their high definition successor, Blu-ray discs (collectively referred to as “ DVD”), delivered quickly to their homes (Netflix, 2011). Reed Hastings and Marc Randolph, Netflix Incorporated founders, were hopeful technology entrepreneurs itching to find the next big idea. These men aspired to build a company that specialized in renting and selling DVDs over the Internet. The concept was great, however these men wanted to create a market niche that set them apart from other video rental companies (Netflix, Inc History, n. .). To this end, Hastings and Randolph used radical innovation to develop a marketing strategy that helped sustain a competitive advantage over other companies within the industry. Netflix was able to sustain their competitive advantage because of the barrier to entry and first mover advantage.

“ Barriers to entry are unique industry characteristics that define the industry – barriers reduce the rate of entry of new firms, thus maintaining a level of profits for those already in the industry” (Lima, 2006). Through proper management Netflix developed a strategy of Internet streaming, convenient customer service, and a virtual organization to deliver it cheaply and flawlessly (Halal). For a monthly subscription fee starting at \$7. 99, Netflix presents the convenience of ordering media online and by mail, without the penalty of late fees. Customers can make a few clicks with the computer mouse or the television remote and watch the latest action movie or TV show. In an effort to ensure that customers aren’t waiting for an

extended amount of time in between DVD rentals, Netflix has multiple regional shipping centers spread across the United States.

“ Upon receiving the old DVD back from a customer, a new one from the customer’s rental queue will ship. 95 percent of customers receive their DVDs one day after shipping” (Bakke, n. d.). Netflix created a successful business model by providing a service that allows customers to keep DVD’s for a longer length of time. Bassamboo(2011) states, “ The longer Netflix allows customers to keep discs, the more profitable the company could be. In an interview, Hasting gives 7 reasons why Netflix is successful: (1) Know what kind of company you are; (2) Time your opportunity; (3) Choose the right niche; (4) Have good relationships with content providers; (5) Price the product well; (6) Promote creativity from within; and (7) Test a lot (Kim, 2011).

With these 7 key points to success Netflix disrupted the industry by undercutting the incumbent’s business model and forcing the firms to recreate a business model to stay competitive without losing revenue or customers. Netflix also recognized the growing trend in customer behavior and shifting consumer behavior patterns. Netflix has shifted more of its business to streaming movies straight to your home and mobile gadgets. A lot of other powerful corporate interests, though, are converging on this spot – a fundamental change in the way people consume entertainment. Netflix has been disruptive since its inception in 1997.

That year, Reed Hastings, a former Peace Corps volunteer who has a master’s degree in computer science from Stanford, received a \$40 video

late fee and thought, “ There has to be a better way. (Kang, 2011).

Transformational technology like disruptive technology also appeals to market needs, using existing technology to improve their technology it can move up market to target the desirable main stream market. To gain ground in the market the technology must control the dominant design and the technology standard to succeed in the market with new innovation, if not it has great potential for failure. High definition (HD) DVD's are a transformational technology failure. HD was an emerging technology that delivered clear, more detailed picture and improved sound quality to a television set.

“ As commercial HDTV sets made their debut in the mid-1990s, it was discovered that there was no way to record or play back HD content” (Carbonara, 1990). In August of 2002, Toshiba -NEC proposed the next-generation optical disc format HD DVD (Williams, 2008). HD DVD (High – Definition/Density DVD) transformed the way we view digital media in the early 2000's.

It was predicted that the HD DVD would be the successor to the standard DVD format. As the creator of the successor to the standard DVD format, Toshiba created a paradigm shift phasing out the standard DVD which played at 704 pixels by 480 pixels and introduced HD DVD which plays at 1920 pixel by 1080 pixels (“ The difference between,”). The HD optical disk held up to 15GB on a single side and produced a crisp picture for in home entertainment. The HD DVD Promotion Group was a group of manufacturers and media studios formed to exchange thoughts and ideas to help promote

the format worldwide (Rapid Response Team, 2006). With marketing and management Toshiba convinced companies such as Paramount Pictures, Universal Pictures, Warner Bros. Pictures, HBO and New Line Cinema to announce support for the HD DVD format. This shift in technology, with the help of HDTV, moved in-home entertainment to new heights.

Toshiba-NEC were able to capitalize on the market meeting the needs of the PC - industry - driven - optical - drive business and the next generation DVD media (“ Toshiba and nec,” 2002). As Toshiba-NEC and its supporters pushed HD-DVD, Sony’s Blu - ray also had a big push dividing the market and forcing consumers to make a choice between the two formats. Silva says HD-DVD did miss the boat on some opportunities that would have helped to make it succeed with many consumers. Toshiba and NEC had parity - or better with Blu - ray. HD DVD player hit the market first and in just 3 to 6 months had just as many titles as Blu - ray despite not owning a movie studio like Sony.

Toshiba was also too timid with their early shipping and pricing (Harris, 2008). With an industry and consumers hanging in the balance of a format war, HD DVD states, “ As consumer confusion and indifference of a lackluster high- definition software sales, Warner Bros. announced it would stop supporting HD-DVD by June 2008, and the company would release HD titles only on Blu-ray Disc. This was followed by news of Netflix phasing out support for the format, and Best Buy’s decision to recommend Blu-ray Disc over HD DVD in its retail locations and to remove HD DVD players as part of its ongoing “ HDTV advantage” promotion. Finally, retailer Wal-Mart announced that it would be supporting only Blu-ray Disc by June 2008”.

With no financial backing or support from retail and Sony being able to continue investing money, the placement of the Blu-ray in the Playstation 3 is what officially made HD-DVD a failure. The Playstation 3 gave consumers a console that put Blu-ray in every home opening the door for consumers to purchase Blu-rays with the gaming console. This marketing move helped out sell the competition. Toshiba-NEC failed in comparison to Netflix, in one major area; studio support. Studios didn't care which format won as long as they were selling product. Here is where Netflix had the advantage. Netflix started as a DVD renting company but to build a library Netflix needs studios to provide content. If a studio decides not to license its content to Netflix directly, Netflix would simply go out and purchase copies of the DVD retail.

Renting out your legally-purchased copy of a DVD isn't copyright infringement, there was nothing the studios could do. Toshiba-NEC unlike Sony could not produce in-house content to place on their HD format. Relying on studio support Toshiba-NEC like Netflix gained ground on the market until studios back out on the format. Although Toshiba-NEC appealed to the wallets of the industry, management was too timid in pushing product and forcing out the competition.

Netflix tools to success are the 7 key points stated earlier: (1) Know what kind of company you are, (2) Time your opportunity, (3) Choose the right niche, (4) Have good relationships with content providers, (5) Price the product well, (6) Promote creativity from within, and (7) Test a lot. Reed Hastings also knew that one day the Netflix model would have to change. Netflix did not start as a streaming media service; Hasting timed technology

and capitalized on an opportunity to transition into streaming media. Netflix set a standard for exploding market in movies and videos – much like the way Microsoft set the standard for desktops. Toshiba – NEC used a forecast model technique, this should a change in the market towards a new optical media HD. Not knowing a stiff competition was making the same steps, Toshiba-NEC failed to use creativity to corner the market.

I believe Toshiba-NEC failed due to the overall factor Sony made the Blu – ray player a part of the Playstation3 console which opened the door to HD gaming and movies. Overall, Netflix and Toshiba both had radical innovative ideas. Netflix was able to Conner a market that had not been touched by any other, as Toshiba found itself in a standards battle with Sony. Shane says technical standards enhance customer adoption by making any products more functional. I think the lessons here is to know your company, create the standard, and don't hang on if losses loom.