

CHANGES IN THE TOURIST SERVICES IN THE ERA OF DISRUPTIVE TECHNOLOGY

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Received: February 10, 2020, Revised: July 17, 2020, Accepted: July 18, 2020

Abstract

This article focuses on the 'Changes in the Service Model for Thai Tour Guides in the Era of Disruptive Technology.' The presentation begins with a review of information collated from several experts regarding the idea of disruptive technology, and the evolution of disruptive technology as it has developed and changed our personal life and the strategies of business management. Examples of new and innovative technology that disrupted the world in the last two decades are given to illustrate the changes in our personal life, society, and work. Similarly, the tourism industry has been disrupted, and consequently, the service model for the Thai tour guides in the era of technology disruption must adapt, as tourists' behaviors have changed. The author suggests that several options exist as to the direction of change in the service model for the Thai tour guides. Further research is necessary to establish best practice and preparation for those Thai tour guides working in the age of disruptive technology. New guidelines for changes in the service model for Thai tour guides will help employees in any organization to adapt to change and reduce unemployment.

Keywords: Disruptive Technology, Era, Change, Thai Tour Guide, Service Model

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Introduction

Guided tours have been conducted since ancient times, and they have evolved and transformed through the centuries, adapting to ever-changing conditions in society. They are resilient but simultaneously open to change. One of the latest changes in guided tours is found within the sharing economy, reflecting a significant trend in tourism. The dynamics between social networks and offline technological developments, (get the original quote word for word, I can't reconstruct it) as well as by ideological claims of shared communities, sustainability and non-profit (Meged & Zillinger, 2018). The disruption of digital technology is ubiquitous. IDC research in 2019 revealed that more than 60% of global GDP would be digitized in 2022, and almost 7 trillion dollars of investment will be delivered to the IT sector. Growth in every industry requires the introduction of new solutions, additional innovations, and new ways to connect with their customers and markets. With growth opportunities, organizations need to understand the risks posed by these upcoming technologies and begin to create strategies and projects for integrating these technologies (Buccella, 2020).

Technology and innovation also disrupt the tourism industry. However, not all innovation is technological; sometimes, innovation arises in response to a problem or need. Sixty years ago, the manager of a busy hotel realized it was time for breakfast and none of the staff responsible for serving it had come to work. He decided to place a long table in the hall and layout everything the guests (formatting problem here needed to serve themselves; hence, the breakfast buffet was born. It may not have been a technological solution, but it was certainly an innovation. None the less digital transformation is affecting the tourism industry and changing the workplace and customer relationships; it is essential to understand that technology will continue to alter the workplace in ever more profound and more significant ways. Embracing innovation, companies can develop new markets, create new products, develop existing products, improve production methods, search for new resources and create new forms of organization (Martínez, 2020).



Figure 1

Source: Thairath (n.d.)

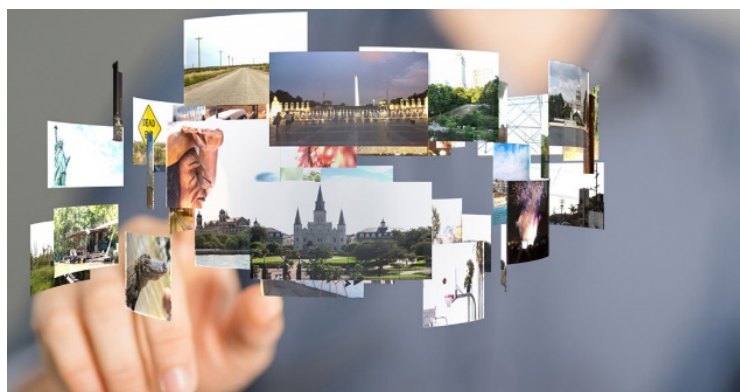


Figure 2 Technology: Disruptive Innovation in the Tourism Industry

Source: Martínez (n.d.)

In today's era of digital evolution, different generations understand the tourism environment and the various travel experiences in different ways. Some people live now, interacting with all five senses for excitement. Others prefer to share with close friends and their families, while others share on social media in real-time. Technology and integration of these patterns of behavior by the next generations is something to be understood and integrated into a new model of service for tour guides. If we take one step, we will move one yard. If we take two, we will progress two yards. Technology presents us with new realities; its progress is exponential as seen when users adopt different technologies. When we live in a time of change, we may not find it comfortable, it is not also easy when robots and artificial intelligence can replace, occupations in the tourism industry. It is the case that many jobs that are considered ordinary but necessary tend to be automated or replaced with new technology (Martínez, 2020). Tour guides need to change if they do not change their service models; the latest technology absolutely will change their workplace.

Disruptive Technology, the Technology that Changes the World

There is no commonly agreed definition of the term Disruptive Technology, but we can say that Disruptive Technology is a change of technology that creates markets and value for products and services using this technology and that it has a severe impact on or disruption to the demand/supply chain of the same product. This disruption may cause businesses using traditional technology to leave the market because of new competitive situations. Such technological changes entirely are often innovations but not necessarily so. These particular technological changes may help to increase efficiency, product quality or reduce traditional manufacturing costs. These new technologies are not necessarily at the technological frontier, but maybe technology that exists but, there are changes in specific components such as the quality, efficiency of the production process, the cost or the price that give suitable rise conditions for the adoption of preexisting technologies and prove popular in the market (Setthaphong Malisuwan, 2018).

In Thailand Disruptive Technologies influence and transform traditional economic mechanisms, through the adoption of innovations and new technologies, of digital technology, robotics, renewable energy, modern energy storage systems, the Internet of Things, Big data, and Blockchain, introduced to increase value and revenue for the industry.



Figure 3 Futuristic Technology

Source: ykai (n.d.)

To achieve results for Thailand 4.0 policy, the government must prepare and get the people ready and able to leverage the application and use of new technologies (Thanad Kaewcharoenphaisan, 2017). Bringing the government into the digital age is transformative change will open new dimensions for government 4.0 to meet the needs of a move to a digital lifestyle by Thai people in the future, conveniently and sustainably. The advancement of technology has reached a point that is radically changing our way of life, business, and the global economy. New developments such as wireless Internet, autonomous vehicles and advanced genetic technology (genomics) have the potential to change lifestyles and work. Leaders in both government and business sectors must not only be aware of what is about to happen but must also begin the preparation of the impact that will occur soon (Setthaphong Malisuwan, 2017).

Evolution of Disruptive Technology

In the past, it was believed that only faith, values, and religion could change people's lives, but just over 200 years later, humans realize that technology is a crucial factor in altering our world view and our lives very different, especially in the last 40 years technology has made the world a significantly different reality. Any society that cannot keep up with the changes will be discarded without seeing the dust. People in the western world realized the invention of printing by Johannes Gutenberg in 1439 had a profound effect on people's beliefs. Christianity spread through the publication of the Bible. Christianity spread all over the world as a result of technology. The digital technological revolution was beginning in 1969 when IT technology became a significant force for change. Changed the way of life of people. The evolution of technology does not stop, today there is a combination of technology, with IT, computers, and various branches of science being the mainstay. Today, some remarkable new achievements in technology are called disruptive technologies (Warakorn Samkoset, 2016).

Definition of 'Disruption'

Disrupt means to obstruct, hinder, or radically change from a preexisting state. Calling new technology disruptive technology is not necessarily pejorative; it is a technology that has changed many things from what they used to be. The critical point is that it affects people's livelihood, business, and lifestyle, in 1995, the term disruptive innovations were first used.

An early example of disruptive innovations was the Ford Model T, a car marketed in 1908 that became so popular that it replaced a large number of carriages in the United States, several of which were more technologically advanced and had a higher level of comfort. Whereas in Europe, the car was born 30 years before the Ford Model T, it was not a disruptive innovation because it was expensive, with few people using it. Because the Model T produced substantial societal change the horse and bus all but disappeared because of this innovation, it was indeed a disruptive innovation. The appearance of Wikipedia in the cyber world was a disruptive innovation. After all, it replaced the book series Encyclopedia Britannica, because it is free and easily accessible. Clayton M. Christensen, in the hit book *Innovator's Dilemma*, 1997, proposed that before being disruptive technologies, technology is about sustaining technology, which by increments develops to disruptive technology, finally unleashing a storm. At first, it may not be complete. However, it made a significant change (Warakorn Samkoset, 2016).

New and Innovative Technology that Disrupted the World



Figure 4 The 7 Biggest Technology Trends In 2020 Everyone Must Get Ready for Now

Source: Bernard Marr (2020)

The notion of disruptive innovations as a scientific concept in economics and social sciences was introduced by Christensen in his analysis of why some companies fail. Examples used in the tourism sector are Airbnb and Uber. Airbnb has transformed the market with a set of new benefits, mainly a minor reduction in quality and a significant decrease in price combined with easy and safe accessibility. When the Internet started about 30 years ago and now is used via smartphones it was a major (some will say radical)

innovation, by contrast, Airbnb is in itself a disruptive innovation, that is dependent on “normal” innovations fulfilling the criteria in the Oslo Manual. What will play an important role now is how new disruptive innovations will interplay with other innovative technology developments. McKinsey Global Institute, suggests 12 elements, as follows that will be of importance for the development of disruptive innovations.

(1) Mobile internet - internet technology that can be used anywhere in the world, such as laptop/smartphones, for example, remote diagnosis (Draw blood and using smartphones, measure blood glucose levels) or mobile banking, as a financial transaction move to the Internet.

(2) Automation of knowledge work. At this time, IBM has created a tool called Watson that can diagnose diseases based on information and symptoms, draft lawsuits and give legal advice on issues. Build "smart" software that can analyze the information provided.

(3) Internet of Things (IoT). IP addresses for all things from products to medicines, materials with small to minute sensors, to send information, for example, to check the quality of soil using sensors sprinkled remotely on the ground

(4) Advanced robotics - surgical robots for minimally invasive surgery and precision operations (De Vinci is a well-known name) or used in industrial plants or atomic power plant

(5) Cloud technology - data storage technology and integrated software which can help small businesses compete with the big business without having to invest high-cost computing.

(6) Autonomous vehicles, including drones, used as weapons of mass destruction for taking pictures of agricultural or forest products or water sources as well as cars, which have started to be used for some time in Europe and the United States.

(7) Next-generation genomics technology to improve gene development for treatment, as well as to develop the most beneficial species of plants and animals

(8) Next-generation storage - electric and energy storage technology such as lithium-ion batteries with high efficiency, create fuel cells to drive vehicle, as used in electric and hybrid cars

(9) 3Dprinting, 3D printing system, resulting in lower production costs, such as printing products, allowing customers to choose the right material at a cheap price also used in dentistry and medicine.

(10) Advanced materials production of new materials such as self-cleaning materials that returns to its original state, extra durable and light.

(11) Advanced oil and gas exploration and recovery, more advanced technology in exploration, drilling, resulting in more oil and gas.

(12) Renewable electricity technology to produce electricity from various sources That never runs out like generating electricity from sunlight, wind, waves, and hot springs with efficiency. There are numbers that, before 2050, there is a high possibility that the world's largest power source will be the sun.

These technologies do not stand still, and the exciting fact is that continuous (non-disruptive) technologies and innovations develop side by side with disruptive developments. It is progressive at all times, whether or not it is disruptive technologies depends on how well the affected people adapt. The critical thing to help is to have a positive attitude that it is an opportunity — not something to destroy and ready to be adapted for use. Technological and innovative changes result from research and development

in the industry. Consumer behaviors will cause the technology trajectory to move up. It may take some time for developers to make a difference. Of course, when the development and technological innovation is accessible and accepted by markets until there is a relentless change of technology and innovation that can undermine standards, standards in the market by taking over the market, according to Professor Clayton Christensen's theory.

Disruptive Technology, the Technology that Disrupted Tourism Industry



Figure 5 Augmented Reality: Introduction to the Interactive world

Source: Ananth (2018)

Disruptive Technology has entered the tourism industry and is moving high-speed parallel with traditional technological achievements. Currently, in the tourism industry, more than 50 per cent of transactional processes are digital procedures with a combination of online and offline user experiences, known as the seamless experience. This innovation results in the digital services and physical interaction in the tourism business no longer having a barrier. The user experience starts from the first page of the website, booking plane tickets or hotel rooms that anyone can manage so the users have a pleasant experience from the beginning to the end for their journey. A good experience will give a competitive advantage "Survivors are not strongest, but the ones who adapt best to the changing environment" (Charles Darwin) is an idea that describes the changing context in the digital age. Many businesses face the challenges of technology in a changing world. Although technology causes some firms to die, some also grow business, so how can Thai companies adapt and use technology to create opportunities? That is the question. We must crystallize into our concrete guidelines (Marketeer Team, 2017).

1) Disruptive Digital Innovation

Disruptive digital innovation and the sharing economy in hospitality and tourism services have been changed. The field has been of particular interest to academia recently. The concept of disruptive innovation provides alternative services and a package of benefits that are considerably smaller, simpler, cheaper and more convenient, driven by digital technology satisfying the needs of consumers. Mobile phones changed the game further, using GPS, Bluetooth and scanning technology, to provide more specific, targeted and interactive information to visitors. The sharing economy is part of the digital innovation that

creates an increased number of choices in society. According to the study by Adeyinka-Ojo and Kamariah Abdullah, there are four digital disruptive innovation platforms. Digital accommodation, digital transportation, digital shared food economy services, and digital travel planning and activities.

2) Sharing Economy in Hospitality and Tourism Context

The “Sharing economy” in hospitality and tourism is one of the economic sectors where the sharing economy has recorded tremendous growth. Homeowners or hosts share their homes with guests and tourists, drivers share their cars with riders or commuters and visitors. The goal of guests, visitors or tourists alike is to have a service delivery system that enhances sustainable tourism, authentic tourism and memorable experiences, and better value for their hard-earned money. In the accommodation sector, Airbnb is a leading platform of digital accommodation. Couch surfing, Homeaway, 9flats.com, and Stayz are also growing. In digital transportation, Uber is at the forefront of personal transport in the mobility sector. Grab, BlaBla Car, Getaround, and Liftshare are also popular. Uber and Airbnb are often viewed as creative destruction because it seems the business model of these two sharing economy platforms punctuated a stable equilibrium and transformed the labour market. Eatwith, Feastly, VizEat, Meal Sharing, Cookening, and Eat with a local.Com are listed as examples of the digital food shared economy services. In contrast, digital travel planning and activities are not only TripAdvisor and Expedia anymore. Vayable, tours by locals.com, VoomaGo, and trip4real also have their niche users. In fact, guided tours are part of a current paradigm shift that is transforming parts of our societies via the sharing economy (Meged & Zillinger, 2018).

3) Augmented Reality Transforming the Travel Sector

Augmented and virtual reality technologies are emerging as disruptive forces in the travel industry. Virtual reality (VR) and augmented reality (AR) technologies were selected by Lonely Planet as one of the trends expected to take the industry by storm. Whether igniting the travel bug with a 360-degree view or enhancing a historic trip with augmented re-enactments, this technology has the potential to completely overhaul the travel experience.

4) An Artificial Intelligence Audio Guide

An audio tour or audio guide is challenging professional tour guides. Although these electronic audio guides are not new to the tourism industry, it is gradually becoming popular among museum and art gallery visitors. In terms of advantages, audio guides are often in multilingual versions and also cheaper than personal tour guides. Cambodian tour guides for Angkor Wat, for example, are affected by the audio tour. The device enables foreign tourists to wander around the ancient site at their leisure without being hurried and rushed along by local guides. This technology disruption has raised concerns among tour guides about their livelihood. The devices may be rented by tourists or travel agents for US\$2.99 for the first month of use (The ASEAN Post Team, 2018).

Local tour guides need to cope with this disruption and adapt fast. They can no longer rely on just leading visitors to historic sites and telling stories. “Tourism is now more about rejuvenation, adventure, fulfilment, learning new skills and ‘being more of who you are’ than just ticking off places and things, and

flopping in the sun. Furthermore, experiential travel means getting access to other people's cultures, ways of life, food and environments. This trend explains precisely the concepts of Airbnb, 'belonging' or experiencing a place 'like a local'. Local guides can differentiate themselves in areas where phone apps cannot replicate. This innovation can include providing personalized services and private tours without the rush or organizing experiential tours, like tailor-made tour programmer. Not every traveler wants to go the do-it-yourself route, and excellent customer service is vital. Popular tour guides often receive glowing reviews by satisfied customers at travel sites such as TripAdvisor (The ASEAN Post Team, 2018).

Conclusion



Figure 6 Cambodia's tour guides face tech disruption

Source: The ASEAN Post Team (2018)

What is coming in tourism? What will the tourist sector have in the coming years? It is the question that all professionals in the travel industry would like to have answered. Although the future is uncertain, managers of the largest hotel groups and tour operators in the world have spoken. The entrepreneur's challenge will be to attract the talent of workers who are committed to this goal of improving customer experience. Above the standardization of protocols or the perfection in its execution, making the customer happy is what compensates, and the best way to neutralize failures or errors is to demonstrate closeness and empathy. In the business world, there are three types of clients: the guest, the client-employee and the intermediary. Furthermore, there always is a "war for talent" in the market; take care of the best.

In the tourism industry, Thai tourist guides have to understand how disruptive technologies and innovations are developing side by side with more continuous developments. In the discussions about tourism businesses, guides must understand what is happening in, for example, the tourist behaviors as well as the market trends of accommodation. We have continuous developments from general high standard hotels to specialized experiences. On the other side, we can look at Airbnb and Uber as a disruptive development, and the curriculum for teaching tourist guides must now consider the element of disruptive technologies. Based on the above reasons and curiosity, some resolution could be found by this research

project. Its results may answer the questions of 'How does the technology disrupt the service model of Thai tour guides in an age where technology is rapidly changing?

In term of research methods, mixed-methods may best suit. Questionnaires, in-depth interviews and focus-group can be employed as research tools. The quantitative data analyzed in the descriptive statistics, inferential statistics, for example, ANOVA, t-test, and Factor Analysis, Surveying and Exploratory Analysis (EFA). In contrast, qualitative data are analyzed in thematic analysis. It is also possible to continue further with research using this approach. Then the data collection must concentrate on comparing situations where we have parallel developments with continuous and disruptive technologies, for example in the accommodation sector where we can examine "normal" hotel developments with trends based on disruptive technologies like Airbnb. Consequently, the research results can be expected as follows:

1. The results can be the best practices for those Thai tour guides to follow as well as the direction of preparation for them in the era of technology disruption.
2. Understanding the background variables why tourists make different choices in the age of disruptive technology; consequently, Thai tour guides need to change their service models under the impact of technology that has changed the world.
3. RMUTK, Liberal Arts which provides education for undergraduate tourism students for many decades can also integrate this solution into the curriculum of teaching Thai tour guides
4. This solution could help the tourism business sector survives from the impact of this disruption; hence, the unemployment rate does not increase and create non-impact on society, economy and government.

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