CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

This section reviews the literature related to the research areas. The study explores the definition of a Disaster and Pandemic, Pandemic situation, Business Continuity Management (BCM), the benefits of BCM, Business Continuity Planning during the Pandemic, business resilience and finally Risk Management or Disaster from an Islamic Perspective.

2.2 Definition of a Disaster and Pandemic

According to the Institute of Risk Management (IRM), the definition of risk is *the combination of the probability of an event and its consequence* (Hopkin, 2017). The consequence can range either negative or positive. Whatever the scenario is, all these events can be parked under one common term, called a 'disaster'. According to the Oxford Learner's Dictionaries online, "disaster" means "*an unexpected event, such as a very bad accident, a flood or a fire, that kills a lot of people or causes a lot of damage"*. (Oxford Learner's Dictionaries, 2022b) Meanwhile, the definition of a 'pandemic' from Oxford Learner's Dictionaries online is "*a disease that spreads over a whole country or the whole world"* (Oxford Learner's Dictionaries, 2022c). A portal called WebMD is a medical team, that works closely with more than 100 nationwide doctors and experts. They defined 'pandemic' as a "*disease outbreak that dissemination beyond countries or continents*". It involves more people and grabs more lives than an epidemic (MD, 2022). WHO declared

COVID-19 to be a pandemic when it turned into a serious disease and it was disseminated promptly beyond a wide area (MD, 2022). To detail, WHO declared COVID-19 on 11 March 2020 a global pandemic (Cucinotta & Vanelli, 2020). During the press conference at that time, Dr. Tedros Adhanom Ghebreyesus as WHO Director-General informed, "*that over the past 2 weeks, the number of cases outside China increased 13-fold and the number of countries with cases increased threefold*". Ministry of Health (MOH), Malaysia via their website defined 'pandemic' as *the occurrence of diseases with the number of cases exceeding the normal rate occurring in many countries and regions around the world and involving large populations* (MOH, 2022b).

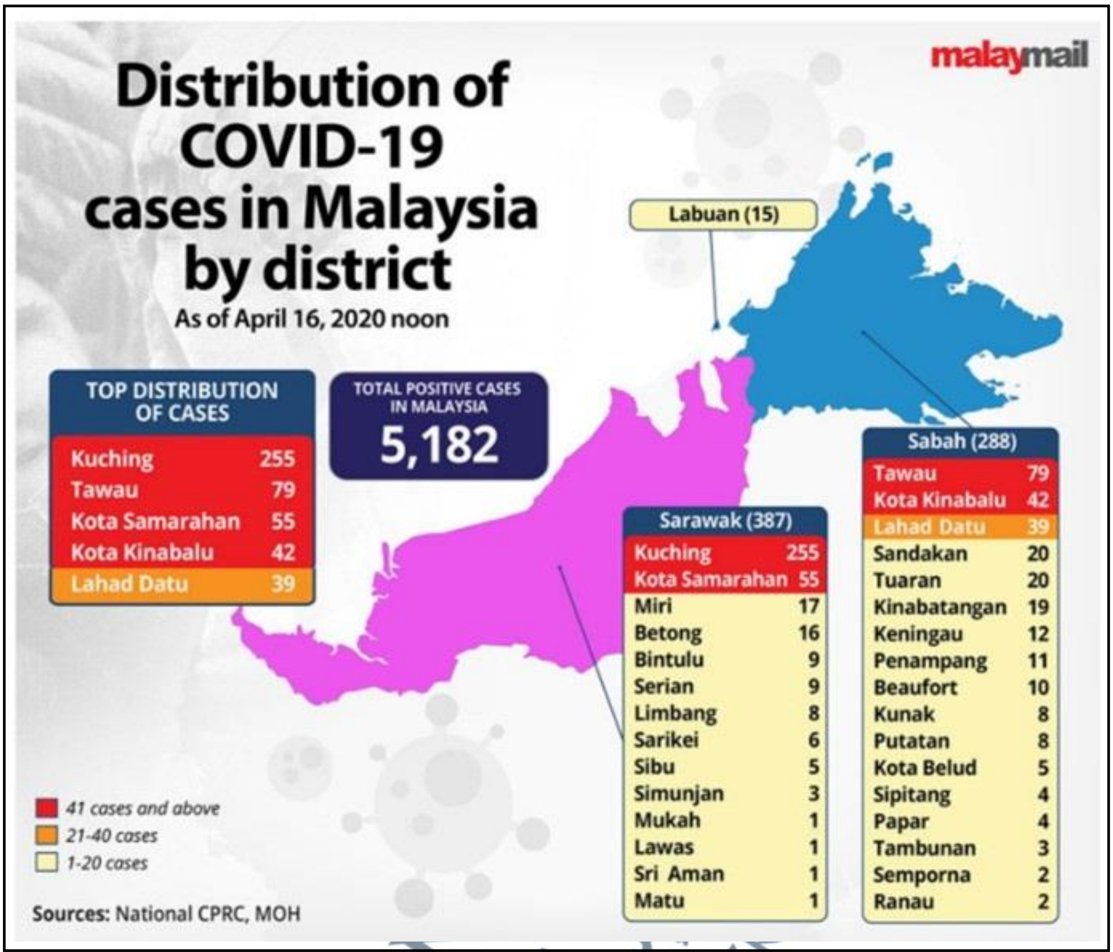
2.3 Pandemic Situation

The COVID-19 disease has eventually spread throughout the whole world. The greatest infectious disease outbreak to hit Malaysia is the COVID-19 pandemic since the Spanish Flu of 1918 which killed 1% of the population or 34,644 people in British Malaya at the time. The Nipah virus eruption killed 105 Malaysians in 1999. Meanwhile, in 2003, the outbreak of SARS claimed only 2 lives. So far, the COVID-19 pandemic ongoing has claimed over 100 Malaysian lives (Hashim et al., 2021). To date, the COVID-19 has claimed more than 36,000 Malaysian lives. The COVID-19 cases in Malaysia have two waves. The 22 cases that occurred from 25 January until 15 February were the first wave, with no decrease and full recovery of all cases. In the beginning, the 27th of February was the second wave in progress. There were cases in several clusters and the biggest was at the Sri Petaling Tabligh cluster. The infection rate was 6.5% and increase to 47% of cases in Malaysia at that time (Hashim et al., 2021).

Afterwards, other clusters emerged from internal mass gatherings plus imported cases for those who were coming back from abroad.

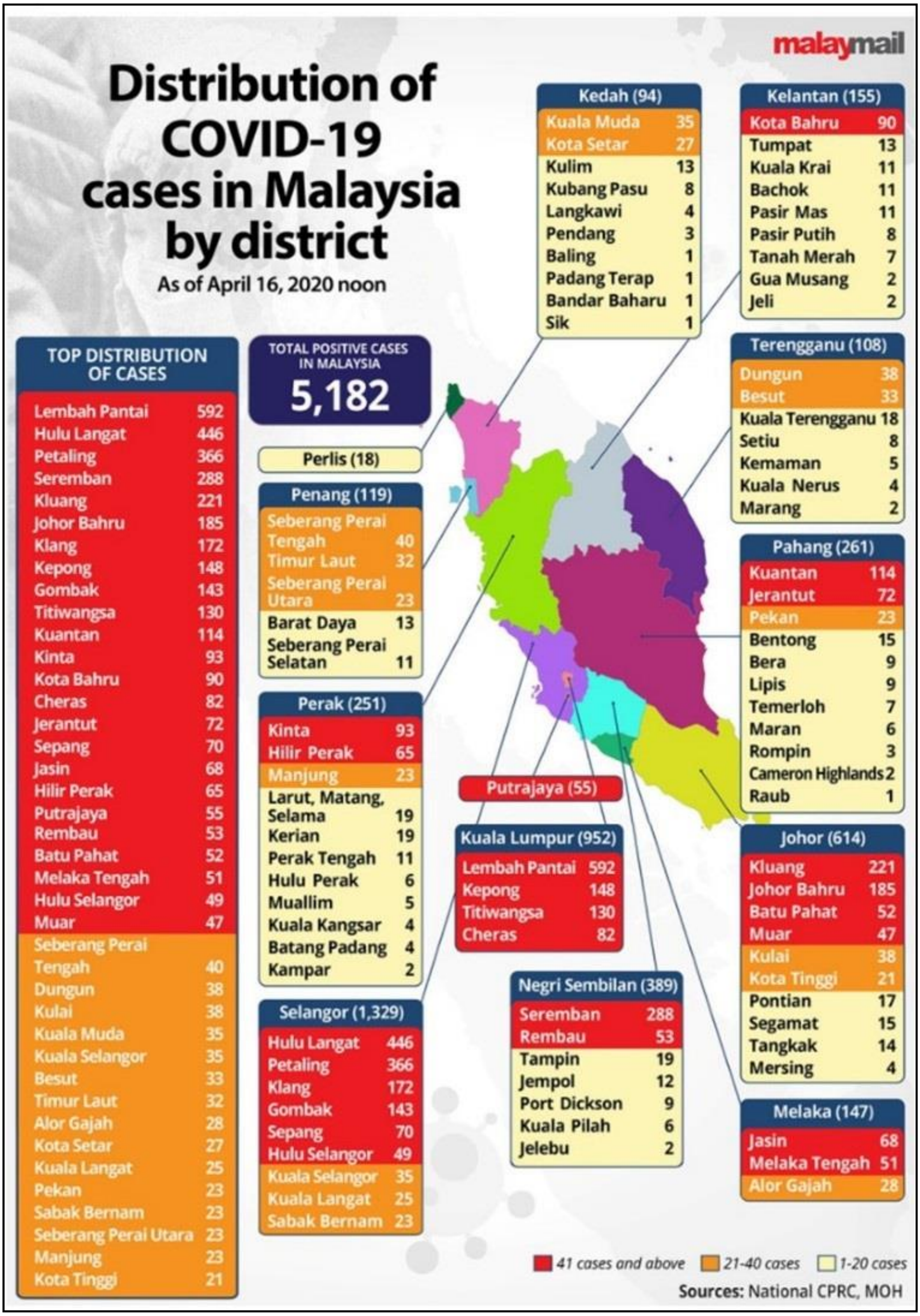
The 4th of February 2020, is the date that the first Malaysian citizen was confirmed with COVID-19. A man aged 41 years old had returned from Singapore. He was reported to have symptoms of cough and fever. He then was detained at Sungai Buloh Hospital, Selangor. On the 6th of February 2020, the first female Malaysian aged 40 years old was reported positive for COVID-19. From the record, she had never travelled to the infected areas. Nonetheless, she was a younger sister of a man aged 41 years old who was positive virus (Elengoe, 2020).

The COVID-19 pandemic caused an abnormal interruption of societies globally and systems, claiming over 1.7 million lives until December 2020 (Schmid et al., 2021). The pandemic caused a layer of inequality to the whole of society. However, generally, the organization faces challenges in terms of finance, operations and manpower in running the business. Therefore, this will result in either downsizing or closing down their workforce or operations. Under this topic, this study only discusses the impact in terms of the country and economy. Figures 2.1 and 2.2 show the distribution of COVID-19 cases in Malaysia.



Source: Hashim et al., (2021)

Figure 2.1: Distribution of COVID-19 cases in Malaysia as of 16 April 2020 in Borneo

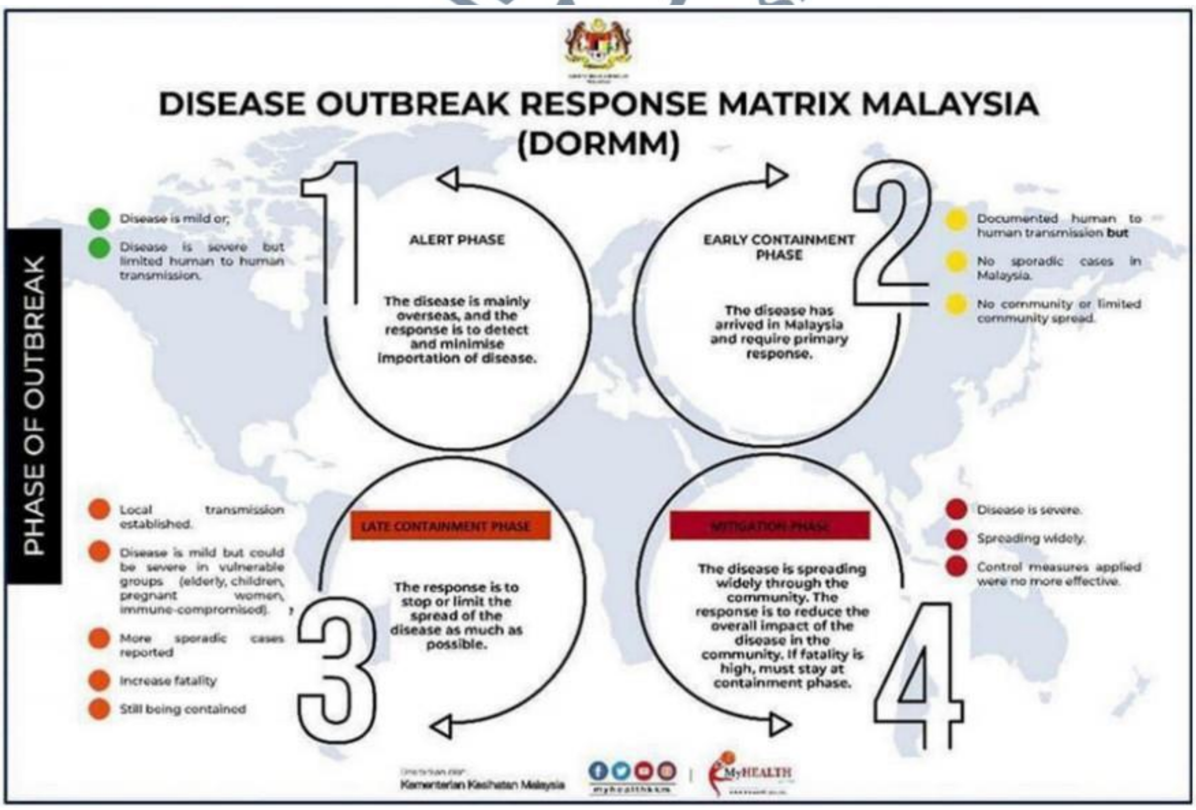


Source: Hashim (et al., 2021)

Figure 2.2: Distribution of COVID-19 cases in Malaysia as of 16 April 2020 in Peninsular Malaysia

2.3.1 Impact of a Pandemic on the Country

In Malaysia, when the confirmed positive cases exceeded 533 on 16 May 2020, the government through the Prime Minister introduced the Movement Control Order (MCO) (Figure 2.2). In addition to that, the Social Distancing was running together for 14 days (from the 18th to the 31st of March 2020), to curb the spreading of the virus (Elengoe, 2020). The government restricted people from travelling to COVID-19 affected areas or other states since 18th March 2020. To buy essential goods, only one person per family can leave the home. Malaysia recorded a total of 900 cases on 19th March 2020, which ranked the first in Southeast Asia country and the fourth-highest number of cases in Asia (Hashim et al., 2021).



Source: Hashim (et al., 2021)

Figure 2.3: Disease Outbreak Response Matrix Malaysia

Malaysian government through the Ministry of Health (MOH), have prepared a comprehensive plan for the impact of this pandemic. This comprehensive plan encompassed a few key points including: (Hashim et al., 2021)

1. Enhanced screening and inter-agency collaborations at entry points (such as at airports and seaports).
2. Designation of hospitals and laboratories nationwide as "treating" and "sampling" centres.
3. Empowering the public health surveillance system through active case detection and robust contact tracing.
4. Bolster sampling at health clinics and hospitals.
5. Adequate stockpiling of personal protective equipment (PPE) and medications needed.

Contact tracing has become the main pillar and essential action to control virus transmission. This tracing was not only among the family members but also applied to places or shops visited by each case. To make it easier, the government also developed a system using a handphone application, to support COVID-19 outbreak management. It is known as MySejahtera. Almost Malaysian citizens have to download this application for daily activities such as going to work, entering the premises, either shops or masjid, train, taxi and others.

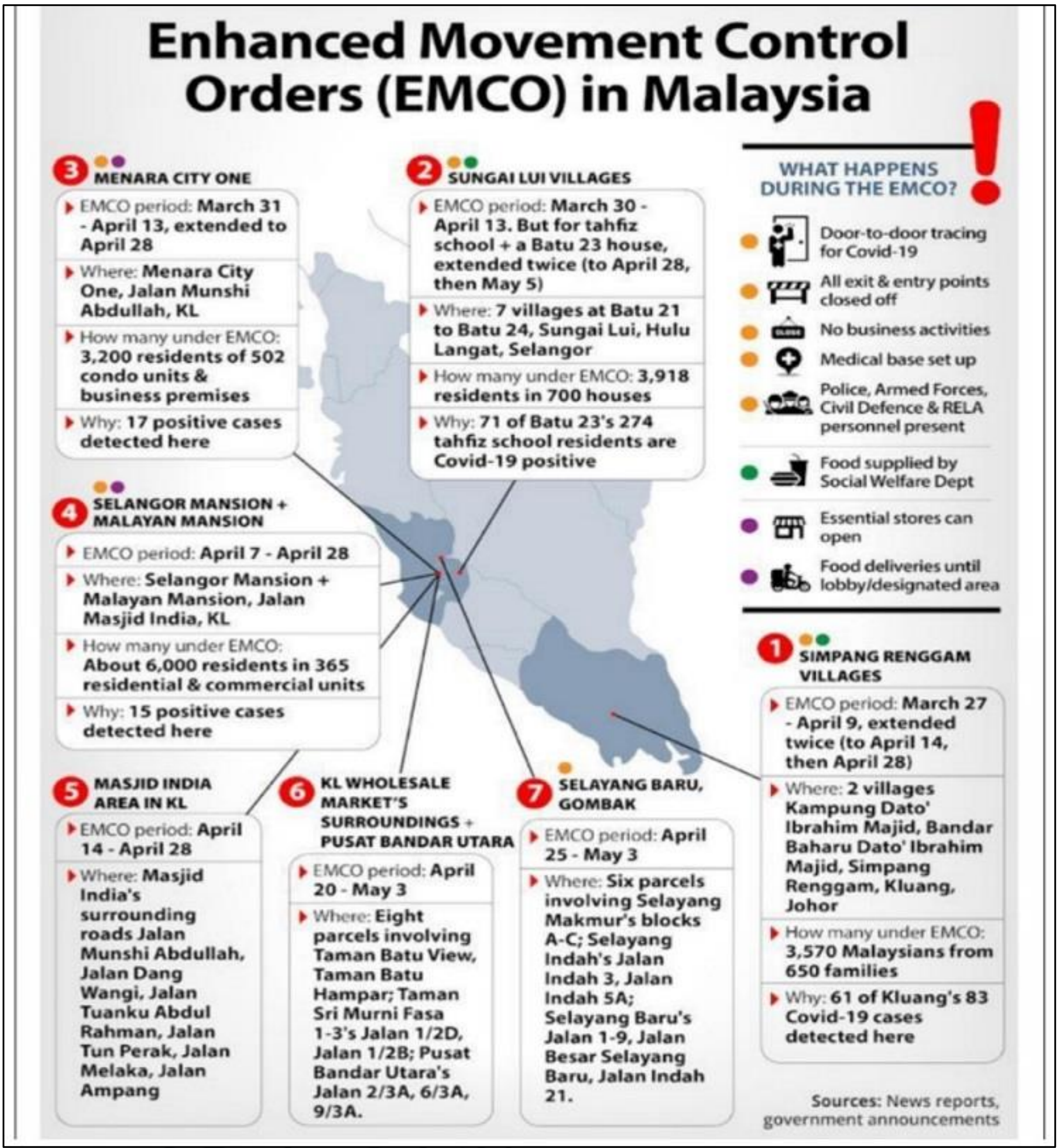
The Malaysian government had imposed the actions below to prevent and curb the outbreak of the epidemic from rapid and widespread COVID-19. There are (Elengoe, 2020):

- Avoid spreading false information regarding COVID-19.

- Avoid handshaking.
- Avoid touching eyes, mouth or nose.
- Avoid travelling to COVID-19 affected areas or countries.
- Cover mouth and nose with a disposable tissue or flexed elbow when coughing or sneezing.
- Maintain physical distancing of 1 metre.
- Mass gatherings have been stopped.
- Stay at home if immunocompromised or has comorbidities.
- Screen for COVID-19 after a person returns from a foreign country.
- Self-isolate at home for 14 days upon return from overseas if symptomatic.
- Wash hands frequently with soap and water or an alcohol-based hand sanitiser.
- Wear a face mask and gloves.

Phase 2 of MCO was extended from 1st to 14th April 2020. Then subsequently phase 3 was implemented from the 15th to the 28th of April 2020. Then another 2 weeks for phase 4 MCO starting from 29th April – 12th May 2020. Hence, a total of 8 weeks was intended for the lockdown period or MCO. Nonetheless, the MCO was transformed into a conditional MCO (CMCO), starting on 4th May 2020. as announced by the Prime Minister during Special Labor Day on 1st May 2020. The CMCO is due to the recognition of the fractional opening of the economic sector. The CMCO keep continued before the coming 9th of June 2020. Later on from 10th June until 31st August 2020, the activation of recovery MCO (RMCO). During RMCO, sectors such as tourism, education, economics, hospitality and religion are reopened. However, it will be strict to the standard operating procedures (SOPs). Except for approved travel, the international borders are maintain still closed. On 28th August 2020, RMCO was extended until 31st December 2020 as per announced by the government (Hashim et al., 2021).

The implementation of this MCO is in line with the provisions of the law as stated in Act 342, Prevention and Control of Infectious Diseases Act 1988, under Section 11(2). Whereby "*the Minister may, by regulations made under this Act, prescribe the measures to be taken to control or prevent the spread of any infectious disease within or from an infected local area*" (Prevention and Control of Infectious Diseases Act 1988 (Act 342), 1988).



Source: Hashim (et al., 2021)

Figure 2.4: EMCO in Malaysia

Table 2.1: Phases of MCO in Malaysia

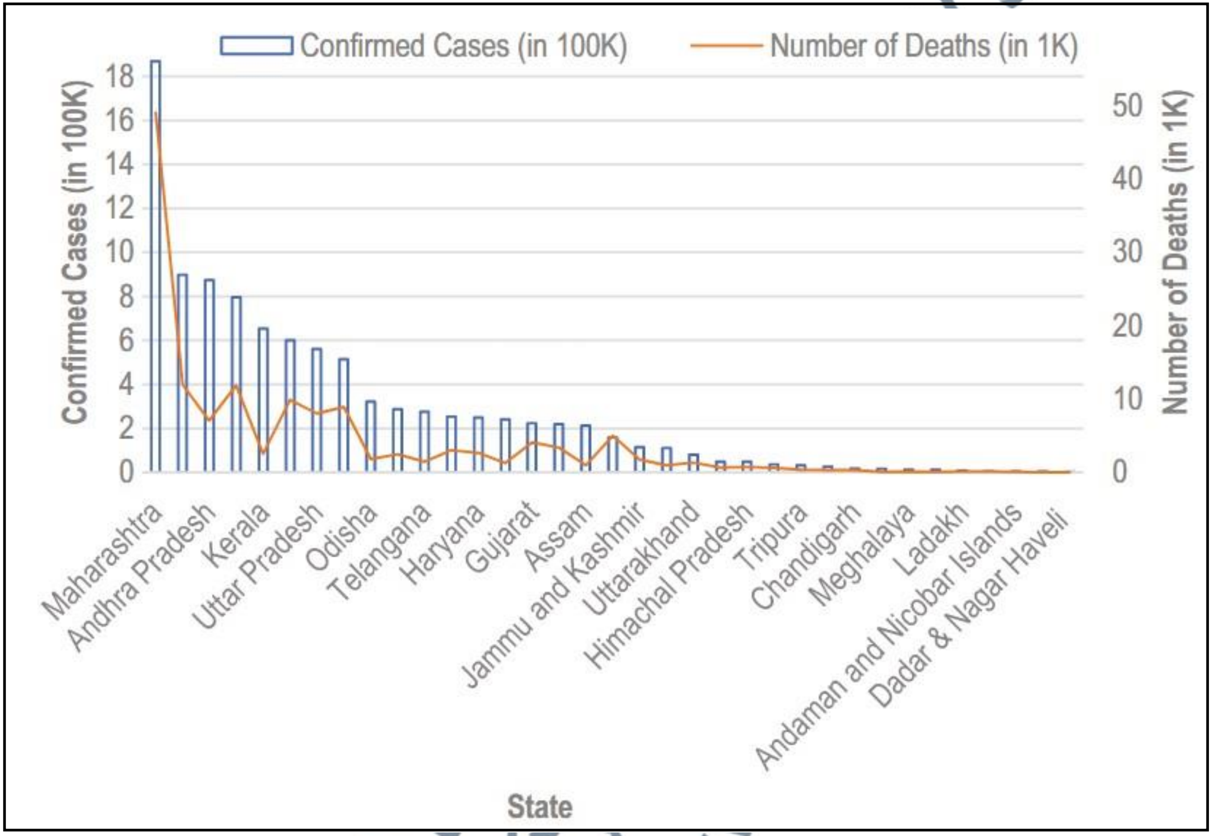
Phases	Duration
I – MCO	18 March 2020 - 31 March 2020
II – MCO	01 April 2020 - 14 April 2020
III – MCO	15 April 2020 - 28 April 2020
IV – MCO	29 April 2020 - 03 May 2020
V – Conditional MCO (CMCO)	04 May 2020 - 11 May 2020
VI – Conditional MCO (CMCO)	12 May 2020 - 09 June 2020
VII – Recovery MCO (RMCO)	10 June 2020 - 31 August 2020

Source: Razak & Kamarudin (2020)

For the global issues, the WHO declared a global emergency at the end of January 2020, when many countries were affected such as Germany, Canada, Singapore, Japan, India, Russia, Sweden, Philippines, Spain, the UK, the US, Australia, Vietnam and United Arab Emirates (UAE) was reported the first case in a week of January. The figures of the contaminated people expanded aggressively throughout the world. Taiwan, France, Egypt and Japan encountered their first case on 13-14 February 2020. Globally until 17 February 2020, there were 1873 people dead with 73,332 infected people (Kumar et al., 2021).

Thus, it is a greater mysterious day in history regarding this virus. This week, the COVID-19 virus started to spread out globally and hits so many countries around the world such as Qatar, Iraq, Bahrain, Kuwait, Norway, Oman Pakistan, Asian countries, Brazil and Greece. The implementation of the lockdown was the start of thinking by most countries at this time (Kumar et al., 2021). In the meantime, India has become the third-highest country after the US and Brazil and has the largest number of confirmed cases in Asia for infected COVID-19 patients. However amazingly, India has the smallest death percentage in the world with 2.41% as of the 23rd of July 2020 and is calmly declining (Akriti et al., 2021). It is very crucial to stabilize the position if there are no vaccines in place. India holds level 3 and in the category of greater than or equal to 10 case categories, based on information from WHO. This is positive due to cases of numbers being under control.

Later on, the quarantine and lockdown were declared by the Government of India for all the passengers who came from outside India. Below are the number of death and confirmed cases from the state-wise analysis in India:



Source: Kumar (et al., 2021)

Figure 2.5: Number of death and confirmed cases in India

The migrant workers went jobless and street vendors deteriorate a big loss due to a deficiency of jobs and food insecurity when the Indian government began the lockdown. Without jobs they were moving through a famine period and had no shelter, thus they are willing to return to their home country. The government assisted the migrant workers via announcing many packages and schemes. A relief fund of Rs. 1.7 lakh Crore has been released by the Finance Minister with the purpose of daily wage earners, providing food security and direct cash transfer for migrant workers (Akriti et al., 2021). To energetically deal with a crisis, we require resilience. To effectively exploit the moment it presents, we require an apportion (and often new) organizational innovation, entrepreneurship and capabilities (Liu et al., 2020). Resilience requires not only psychological readiness for tackling a global health crisis but also organizational support and system-level preparation. The research reveals that both individuals and organizations enable to build resilience and develop effective coping strategies, for occupational contexts can play an important role (Liu et al., 2020).

At the beginning level, South Korea (hereafter Korea) was facing a huge crisis of the COVID-19 pandemic. At one point, Korea was the second-largest number of confirmed cases in the world. In an extension of that, the Korean government managed to decrease the spread of the virus and implemented the best efforts to avoid a second wave of infections. Their government together with the merchants took innovatively preventive action (such as drive-through testing) and products (such as testing kits) which can be utilized around the world (Liu et al., 2020). To make them more sustainable, many Korean producers took the chance to restructure and reconsider their global supply chains. Both the business and governmental sectors see shining growth convenience in non-contact industries. These included online education, remote support solutions and telecommunication. With that, entrepreneurship, resilience and strategic agility will pursue a vital role in earning value from these moments while prevailing over disaster (Liu et al., 2020).

There is no denying that the COVID-19 pandemic outbreak caused a heavy impact on the tourism, trade and economic industries. At the same time, sports activities were also affected such as squash's Asian Team Championship, SUKMA Games 2020 (for Malaysia) and Summer Olympics 2020 were suspended until 2021. But certain sectors remain open such as finance, transportation, delivery of goods and medical.

2.3.2 Impact of a Pandemic on the Economy

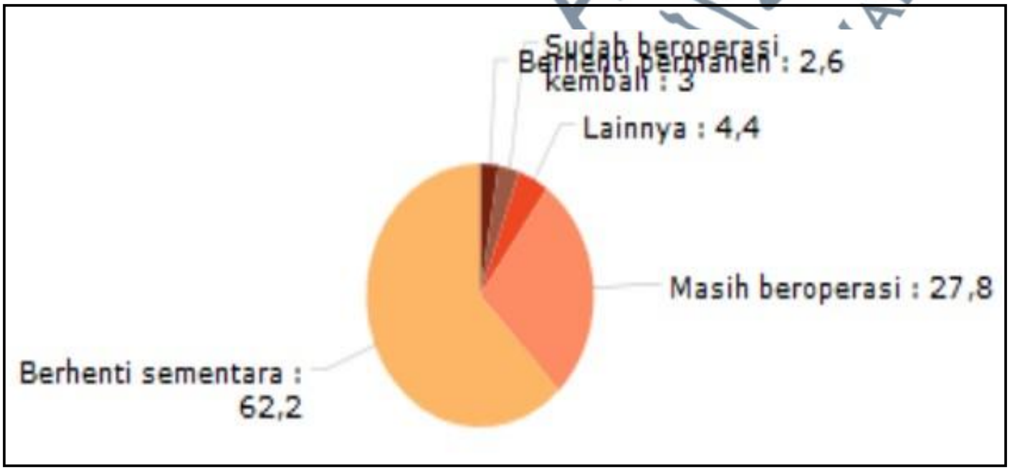
The present impacts of the COVID-19 pandemic and historic disruptions have forced organizations to locate tools to preserve their operations and secure resilience. During the COVID-19 pandemic, in Brazil, the labour market of the social and economic crisis was pushed 83.5% into a state of vulnerability. Alike with essential policies, it is estimated that at least 26 million workers (over one-fourth of the economically active community) will unable to access any reward: (Prates & Barbosa, 2020)

- Right to a significant withdrawal from their workers' fund (Length-of-Service Guarantee Fund).
- Whether unemployment insurance or EBI (Emergency Basic Income).

Brazil was already suffering from the COVID-19 pandemic like many other developing countries. A low improvement or reconstruction from the year 2015–16, an economic crisis in a company with a virus epidemic the new virus epidemic combined to establish the improved disturbance. Brazil had rapidly rising inequality, 40% informality, 5% hidden unemployment due to discouragement and 12.6% unemployment at the beginning of the year 2020. In the year 2015 crisis, the bottom half of the social pyramid never ended (Prates & Barbosa, 2020).

In Korea, by implementing corporate social responsibility initiatives, companies can enhance their contribution and reputation to alleviate the negative impacts of the global health crisis. For example, many Korean multinationals have embarked on protecting employees in developing countries with weak medical infrastructure and providing support to secure the supply of medical devices. In summary, entrepreneurship, resilience and strategic agility will pursue to play a key role in catching value from these moments while overcoming the confrontation (Liu et al., 2020). Meanwhile, the supply chain processes that actively affect business continuity due to COVID-19 are immensely disturbed. In European regions, China and US, shutting down factories affects employment ratios and business mobility. Primarily, due to a dramatic shift from the conventional supply chain to the online system, business managers observed the disruption in the supply chain. Business sectors in multiple dimensions have been affected by crises abruptly, in this manner (Rumman, 2022).

Based on data from the International Labor Organization (ILO), in May 2020, 65% of the business world in Indonesia stopped their company operations due to the effects of COVID-19. Refer to the pie chart below:



Source: Kusumastuti (2020)

Figure 2.6: Company stops operations due to pandemic

As many as 2.6% of companies are known to have permanently stopped their operations. And as many as 62.6% have also stopped temporarily and 3% have resumed operations. The ILO says the potential for small companies (less than 10 employees) to go bankrupt is three times greater than for medium and large companies (more than 50 employees) (Kusumastuti, 2020).

In Malaysia, there is a preliminary study in the construction industry on business continuity strategies during post COVID-19 pandemic. As common knowledge, the construction industry is among the most severely affected by the pandemic. The projects have been postponed or suspended due to financial difficulty to continue funding the projects, national lockdown or the spread of the virus among construction workers (Gamil et al., 2022). When the construction projects were suspended, the impact caused the project's slow execution time and cost overruns. Therefore, the stakeholders in this industry need to start a new methodology plan for operating construction activities. Several construction companies are aware to switch the new approach to doing the project action. Thus, the attempt is proposed to frame the plan. However, a question arises on the validity or strength of the plans.

Thus, broad and clear guidelines are required to present place and secure all the activities on site and adhere to the government guidelines. Utmost contractors have a problem carrying out new projects due to fluctuations in material prices, the uncertainty of the projects plans and the availability of the workforce. To strengthen and restore this industry and prepare for any mysterious elements in the future, planning a new strategy is very important in addition to reactivating the industry to normal.

Business continuity strategies refer "*to the process by which the construction companies create specific plans, processes, policies and resources to respond to critical interruption of the business. And it is a holistic approach to identify any potential risks that would interrupt the sustenance of business and developing strategies and plans to respond to any incidents and safeguard the business against disasters*" (Gamil et al., 2022). This definition is not much different from the BCM definition. Part of risk management is to ensure that the company always continues operations and situations. There are several advantages to initiating business continuity strategies for the organization to react to any unprecedented, especially in keeping the company away from any vulnerable incidents and managing the risk and menace to the business activities. Table 2.2 below shows a chronological analysis study on the literature review on COVID-19 and the construction industry.

Table 2.2: Chronological analysis study on literature review on COVID-19 and the construction industry

Main study variables	Methodology approach	Main findings	Key recommendations	Reference
Modelling spread of coronavirus in the construction industry and found	Case study	The construction sector is among the highest spike of coronavirus cases	1. Use of automation in construction projects such as robots to reduce human interaction and offsite construction practises such as prefabrication 2. The authors also suggested real-time monitoring of the workforce using the internet of things (IoT)	Afkhamiaghd and Elwakil (2020)
Effect of the pandemic in the construction industry	Quantitative and qualitative study	The findings showed that the industry has been drastically affected, especially for residential and commercial development	Rethinking a robust relationship with the suppliers	Shibani *et al.* (2020)
The effects and prospects of COVID-19	Quantitative	The study disclosed the main effects of the pandemic was to workflow and supply chain, workforce anxiety	The application of modern procurement planning, virtual work and minimization of human contact on-site	Ogunnusi *et al.* (2020)
Knowledge of construction practitioners about COVID-19	Quantitative	Construction practitioners are unsure about the transmission of the virus, practitioners are satisfied with the governmental contingency measures, reinforcing the use of personal protective equipment and practising social distancing	Recommended the assessment of COVID-19 impact on productivity and advised to introduce adequate strategies	Zheng *et al.* (2020)
Impact of COVID-19 in Oman construction industry	Case study	The study found the most negative impact of the pandemic are contractual problems, lack of supplies, labour burden and economic impact	The authors suggested more research on global statistics to analyze the current situation of the construction industry	Al Amri and Marey-Pérez (2020)
The impact of the pandemic on the Jordanian construction industry and engineers	Quantitative (online survey)	The finding shows that design engineers were able to work remotely with acceptable efficiency; however, site engineers were not able to work due to the lockdown and minimal activities were resumed concerning health regulation	Major strategies were suggested to the Jordanian authority to take immediate actions to rejuvenate the economy and cope with the new norms of project execution	Bsisu (2020)

Main study variables	Methodology approach	Main findings	Key recommendations	Reference
Force majeure and impact of the pandemic on the Nigerian construction industry. The impact of contractual laws	Quantitative (online survey)	The findings show that the pandemic has a great effect on the Nigerian construction industry and has hindered the continuation of ongoing projects besides the impact on project completion and law of contract causing majeure force	The study recommended that the stakeholders should render a claim with leniency and reliving from Majeure events and a review of contracts is suggested to mitigate the challenges that appeared during the pandemic	Kabiru and Yahaya (2020)
Impact of COVID outbreak on construction contracts	A qualitative approach	The findings demonstrated that the COVID-19 pandemic constitutes a force majeure event. Force majeure is a provision in the contractual civil law that allows the party to stop the contract obligation if something happens beyond control and continuation becomes impossible or illegal	The study suggested activating the clause of force majeure in the construction project contracts to avoid potential dispute. The study also proposed a force majeure decision model to support parties in activating their force majeure provision	Hansen (2020)
COVID-19 safety majors and their implementation and challenges in the construction site cases in South Africa	A qualitative research approach	The main challenges were the ignorance of COVID-19 threat, short supply of safety equipment, lack of sanitization	The study recommended some preventive measures to the stakeholders to minimize the safety implementation challenges	Amoah and Simpeh (2020)
Early impact of the pandemic in the American CI, impact on occupational safety, lessons learned, mitigation strategies	Qualitative approach (telephone interviews)	The main reported impacts are delay on projects, materials shortage, reduction in productivity rate and material price fluctuations	The study suggested proper risk management measures to improve safety and reduce project risks. The authors also proposed that safety training is required to teach the workforce on COVID-19 related measures	Alsharef *et al.* (2021)
Impact of COVID-19 and response mechanisms	Interviews with 20 contractors	The study identified the impact of the pandemic and classified that as operational and financial	The study suggested immediate financial aid and stimuli should be introduced by the authority	Zamani *et al.* (2021)

(*continued*)

Main study variables	Methodology approach	Main findings	Key recommendations	Reference
COVID-19 disruptions and responses within the Nigerian CI	Qualitative research approach	The study found that the major disturbance was within the transportation problem, project abandonment, delay, increase of materials cost, reduction of work time, shortage of workforce. However, the response was properly taken by health-related measures such as taking temperature onsite, no entry for unauthorized personnel, sanitizing and use of personal protective equipment	The study recommends reshaping the construction by embracing advanced technology and innovation such as digital technology. The study also advised that companies need to prepare to make the right move to thrive amid the pandemic. Application of building information modelling and 3D printing and automation	Osuizugbo (2021)

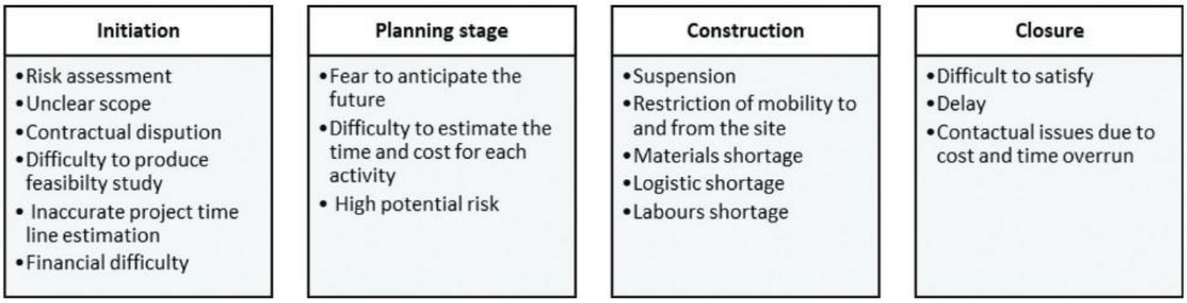
Source: Gamil et al., (2022)

From the findings, it contains 4 different types of strategies. There are:

- Health and practice
- Technology
- Operational
- Legal and governmental strategies

The importance of protocols on-site by adjusting current working procedures and introducing COVID-compliant operating procedures are the topmost ranked strategy from these findings. Second is immediate government stimuli such as financial and loans and maybe another incentive. The third is online technology for virtual conversation and meetings and the advantage of digital. Fourth is the revision and comprehensive study of the health directive for suitable construction actions (Gamil et al., 2022). However, they added one more rank strategy, namely the digital transformation of work for number fifth.

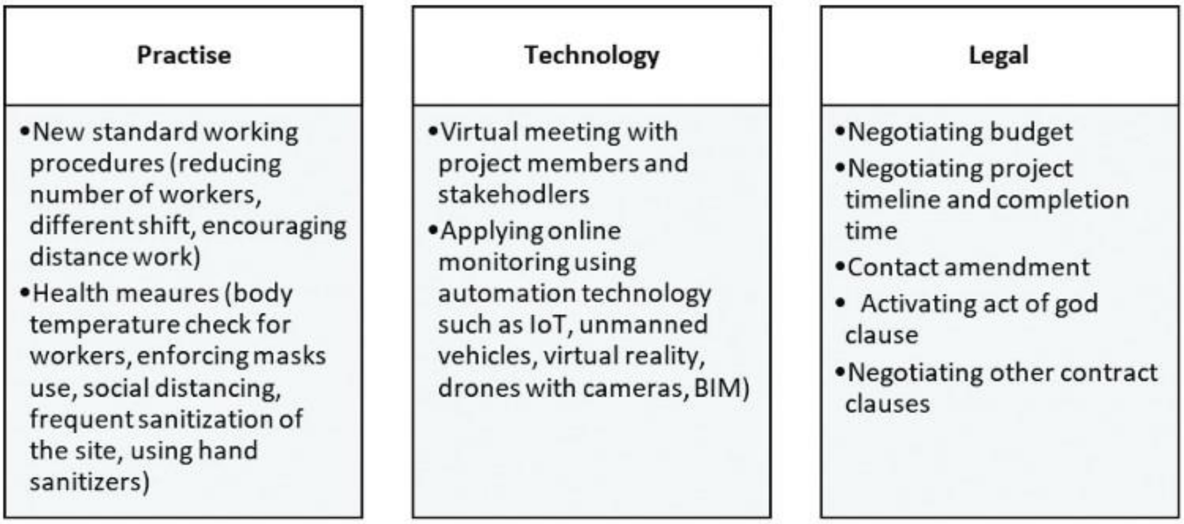
Length of the severity of the pandemic on the Malaysian construction firms. Due to the pandemic, it is directly impacting major projects, based on the article from Gamil et al., (2022) which interviewed 16 construction experts. Especially projects have been started but unfortunately, construction matters have to be suspended and sooner will be high costs due to being unable to perform the work. The first expert quoted, "the construction sector needs to introduce health guidelines that are possible to comply even by our labours". The second expert highlighted the issue of contractual conflict as "our project plans have been drastically changed and that requires an understandable discussion among the project stakeholders taking into consideration the impact of the lockdown and materials price fluctuations". Figure 2.7 below is the summary of an element of severity issues incited by the pandemic.



Source: Gamil et al., (2022)

Figure 2.7: Summary of an element of severity issues incited by the pandemic

Acknowledgement to manage the project working during the catastrophe. When conducting this research, Gamil and his team asked the experts how they managed to sustain any projects working while the authorities proposed a few regulations on standard operating procedures and mobility. At the same time, they also asked about efforts taken to handle the challenges and risk ally with the pandemic at construction. Response from the experts, that a few projects were executed in different stages. For the project at the initiation stage, the utmost of the work along with the adoption of distance meetings, planning and design and quantity surveying was conducted remotely. Despite the restriction of mobility, the transformation into digital work has assisted to continue work. Whilst running the project under construction, most of the companies accepted the special standard working procedures and new norms, which are acknowledged by the health directive from the authority (Gamil et al., 2022). The contractors could negotiate the costs and project timeline that was blocked due to the regulations, for the projects at the final stage. Figure 2.8 summarises measures of the action taken to new measures and the restrictions.



Source: Gamil et al., (2022)

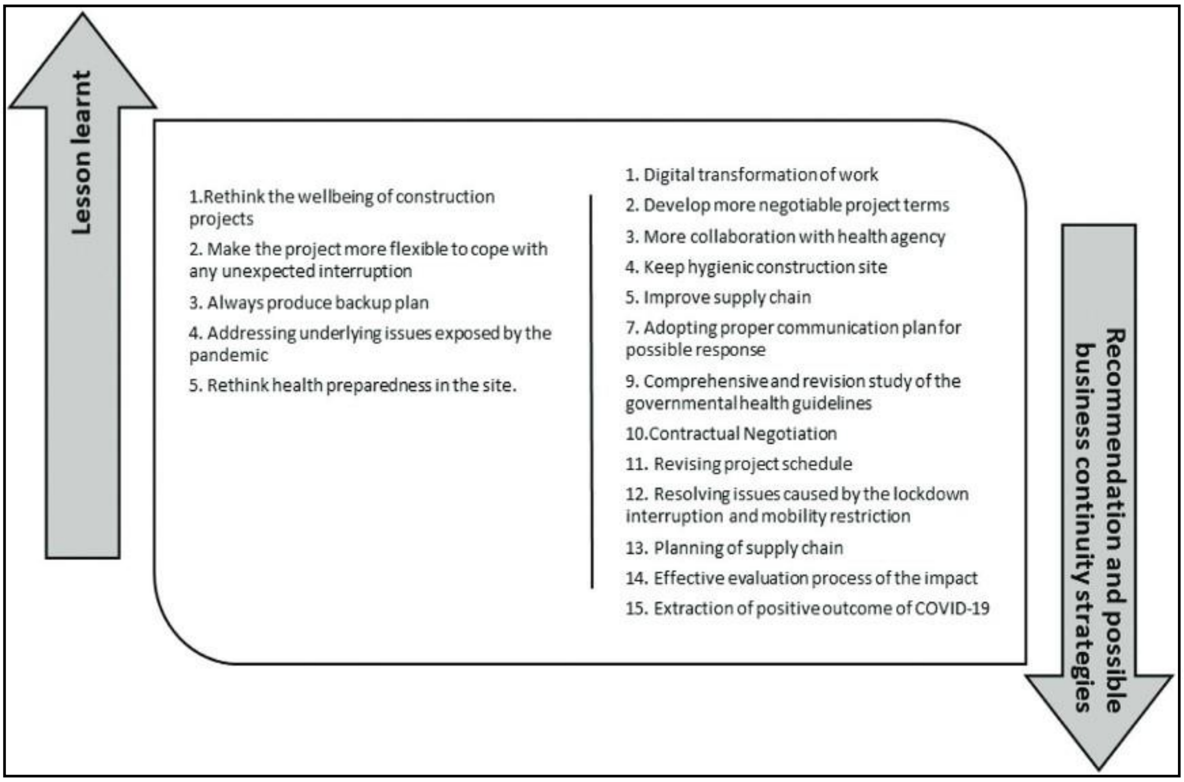
Figure 2.8: Measures are taken to keep the project running

The government's action to fight the pandemic response. Several guidelines have been issued to the construction industry and the public by the government via the Ministry of Health (MOH). Several guidelines have been issued to the construction industry and the public by the government via MOH. Possibly practice and received continuous updates on the health guidelines that are consistent with demand in the construction site, according to the experts. Facilitating the bureaucracy, expediting the work process and approvals through online communication are among some extra support to the companies by the government (Gamil et al., 2022). The project contestants try to keep the project improving steadily but with some postponement, in regards to affirmatory the plans developed for the projects. To point out that, expertise fifth mentioned, "the government need to provide financial support to the affected stakeholders to maintain their work and be able to pay salary to the employers". However, the number six expert focal point on the act of the authority to backing the industry with personal protective equipment and health guidelines that are necessary to fight the virus. It quoted as "the government by the health ministry needs to supply masks and non-contact thermometer if not free then will subsidized support to make it available at the job site" (Gamil et al., 2022).

The shock on the supply chain and goods show and price. The supply chain was affected badly for constructions like wiring, plumbing and other goods were shortfall due to the closedown international supply and trading, according to the experts. Worse when the goods are internationally imported. Due to the difficulty of mobility among cities and the shortage of goods, the construction specialist was forced to postpone many activities. The cost of logistics and goods is expanded then the impact fall to the global cost of the construction (Gamil et al., 2022).

The performance of digital transformation. Experts mentioned that the usage of digital transformation has assisted to continue the virtual meetings to retain everybody updated on the work progress and job remotely. The degree of digital transformation needed enhancement to combine the task onsite with the potential wireless communication that will frequently counterpart the construction process and transform that towards digital for desirable activities (Gamil et al., 2022).

Potential business continuity strategies, lessons learnt and recommendations. From the crisis, there are so many lessons learnt and the most important is to revise the approach to the construction industry, according to the experts. These are related to the risk assessment and operation should be according to reconstituted and build projects, shaking the business opportunity and agility to cope with any unprecedented events that could interrupt the plans. The trouble of COVID-19 has discovered several hidden controversies or points that happened in the construction industry. Therefore, this is an opportunity to highlight that controversy and take appropriate action (Gamil et al., 2022). Figure 2.9 below concise the lessons learnt and recommendations from COVID-19.



Source: Gamil et al., (2022)

Figure 2.9: Lessons learnt and recommendations from COVID-19

2.4 Business Continuity Management

To overcome all unpleasant matters such as disasters, crises and incidents, Business Continuity Management (BCM) is most regularly known as the best practice or most effective program to implement, precisely for organizations to resume their operations (Charoenthammachoke et al., 2020). As an analogy, let's say an individual, will aim to minimize or prevent any type of damage to their property via implementing varieties of methods such as takaful coverage, alarms, camera security, hired security guards, keeping contact number roofing and plumbing. In the context of an organization, the implementation of BCM is the most appropriate tool for this issue. Whilst, DRI International, a professional organization which is running a professional course, define BCM as a "*management process that diagnoses threats, risks and vulnerabilities that could concussion continued operations"* (International, 2022).

Companies worldwide have adopted widely the BCM program. Based on the experiences of numerous potential disasters, incidents and disasters, this program was supposed to be a sophisticated framework. The disaster in the past has been highlighted in Chapter 1 such as London Bombing (7 July 2005) and the WTC attack (11 September 2001). The number of people facing disasters has been increasing dramatically in the last 50 years. People often characterize these events as catastrophic activities by humanity, such as marine litter, industrial waste, deforestation and others (Charoenthammachoke et al., 2020).

Expertise in BCM matters, Dr Goh Moh Heng from BCM Institute (BCMI) in Singapore, defined BCM as "*an organization-wide discipline and a complete set of processes that identifies potential impacts which threaten an organization*" (Heng, 2020a). Dr Goh added that it can provide a capability for an effective response that safeguards the interests of its major stakeholders and reputation. An article from the Journal of Disaster Research defined BCM as a "*management process based on a risk and business impact assessment to build organizational resilience*" (Sapapthai et al., 2020). The field of BCM has gained world recognition through the International Organization for Standardization (ISO). ISO has recognized BCM by awarding a certificate named ISO 22301: 2012. This proves that BCM is highly regarded by the world community. This history of BCM will be discussed further in Section 2.4.1 under the subtitle The History of BCM.

An article journal written by Naser and Hammad has cited the definition BCM from ISO 22301. Based on ISO 22301, BCM was defined as a "*management process that is used to ensure that operations continue and that products and services are delivered at predefined levels, that brands and value-creating activities are protected and that the reputations and interests of key stakeholders are safeguarded whenever disruptive incidents occur*" (Naser & Hammad, 2020). An article from by Taurai Muparadzi and Letwin Rodze, defined BCM as "*roots in disaster recovery planning and over time it has evolved to become a strategic management concern*" (Muparadzi & Rodze, 2021). Because ISO is an international standards body, this research will use interpretations from it. So it can be concluded that among the key points in this interpretation are the *management process, operation continues, delivered at a predefined level, reputation* and *safeguarded*. These 5 elements are the key points in the definition of BCM. All of the above interpretations focal point to the importance of BCM in emphasis or interest in constructing and developing business resilience against disaster and disruption. To simplify it, the definition can also define as a crucial apparatus management strategic mechanism that is capable to assist in securing the survivability of any business in times of interruptions.

Meanwhile, Business Continuity Management System (BCMS), is a "*management system for BCM. It establishes, reviews, operates, implements, monitors, improves business continuity and maintains*" (Heng, 2020b). While the interpretation from ISO 22301:2012, under Societal Security BCMS Requirement, clause 3.5, the definition is similar to Dr. Goh Moh Heng. BCMI website has cited this definition from

ISO 22301. It’s defined as “*part of the overall management system that establishes, reviews, operates, implements, monitors, improves business continuity and maintains*” (Heng, 2020b).

BCM was originally intended to back up data in the Information Technology (IT) field. This is particularly true in industries such as banks, hospitals and takaful. The industry needs data storage to be more secure and as evidence in cases where it is legal. This is how Disaster Recovery Planning (DRP) emerged. Later on Business Continuity Planning (BCP) appeared. These DRP and BCP histories will be discussed in the next Section, under 2.4.1. DRP and BCP are a subset of BCM. The principal intention of the BCM discipline is to prepare contrasting reaction plans by organizations that may safeguard themselves from both external and internal risks (Schmid et al., 2021).

Amir Avatefipour, (2018) in his thesis, cited information from Publicity Available Specification saying that making BCM an umbrella activity. The figure is shown below:

Source: Amir Avatefipour (2018)

Figure 2.10: BCM umbrella activities

Figure 2.10 shows the merger of a large spectrum of management and business disciplines in both the public and private sectors to be more resilient, including risk management, technology recovery and crisis management. In addition, it should not be finite to IT disaster recovery alone (Amir Avatefipour, 2018). Thus, it is clear that the discipline of knowledge under the BCM umbrella is so broad. Also, its importance cannot be denied anymore. The BCM intends "*to proactively avoid operational interruptions in critical business processes with socio-technical solutions*" (Jarvelainen, 2020). According to Tomasz Ewertowski, based on a literature review, the word "BCM" is more often compared to "BCP". This is because BCM is a proactive, constant process and dynamic. While BCP is a "planning", it will be started and will finish the process (Ewertowski, 2022). The selection of the components is very important to ensure the management team is capable to set their policy, marketing strategy, business resilience and adapting to rules and regulations from the regulatory body. During a pandemic or crisis occur, an organization certainly wants its business to be continuity running with a certain level of acceptance and resilience. Therefore, from the description of BC, it triggers an important message to be a concern which is to safeguard the interests of the company and key stakeholders.

2.4.1 The History of BCM

In the first place, the establishment of BCM was firmly linked with crisis management, a business essential concept with obligations at all layers of the organization (Auzzir, 2018). In addition, the main goal of BCM practice is to prepare contrasting feedback plans by which the organization may secure itself from external and internal risks (Filipović et al., 2018). Organizations can be facing a broad mixture of crises ranging from real crises such as loss of utilities (telecommunications and power supply), external criminal crises (hijacker), information crises (data breach and hacker), personal crises (large-scale staff death) and natural disaster (storm, landslides and flooded). From these crises or events, an organization must address these issues and find out the solutions, to continue their business. Within 3 years after a disaster, up to 70% of businesses will fail, essentially owing to the damage to business records (Hopkin, 2017). Whilst, BCM has undergone several phases of evolution that focus on business needs and environmental turbulence (Saed Hijjawi & Al-Shawabkeh, 2017).

Brahim Herbane, a most popular writer on the evolution of BCM article and whose article has become a reference for many researchers, stated that there are 4 phases in BCM evolution (Herbane, 2010). There are:

- Emerging Legislation Phase (Mid-1970s to mid-1990s)
- Emerging Standard Phase (Mid-1990s to 2001)
- The Post 9/11 Phase (2002 to 2005)
- Internationalization Phase (2006-2010)

2.4.1.1 Emerging Legislation Phase (Mid-1970s to mid-1990s)

The first phase is more on the existence of the law. The multiple laws in the US such as the Flood Disaster Protection Act of 1973, US Foreign Corrupt Practices Act (FCPA) 1977 and the Office of Comptroller of Currency's Banking Circular BC-177 in 1983. All these acts played their own rules when developing solution plans before the construction of BCM. For example, Flood Disaster Act and FCPA were a foundation in the shaping of the introduction of the Disaster Recovery Plan (DRP) and BCM in an organization (Dominguez, 2016). While the role played by the US Expedited Funds Availability Act, 1989 and the Office of Comptroller of Currency's Banking Circular

BC-177, 1983 had given birth to the Disaster Recovery (DR) and Business Continuity Plan (BCP) in US banks (Dominguez, 2016). After that in the 1990s, various laws emerged to further strengthen the efforts to resolve unpleasant events, availability of critical processes and control the safeguard of demanding assets as per below (Herbane, 2010):

1. Office of Management and Budget Circular A-130 (1993)
2. Health Insurance Portability and Accountability HIPAA (1996)
3. Telecommunication Act (1996)
4. Executive Order 12656 (1998)
5. Gramm-Leach-Bliley Act (1999)

2.4.1.2 Emerging Standard Phase (Mid-1990s to 2001)

During the second phase, there was so much awareness of standards and predominant development to guide the BCM process. In the opening, BCM was just an element of the standards. Nonetheless, over the years, it took a further essential role. Information System Audit and Control Association (ISACA) presented a new framework called Control Objectives for Information and Related Technology (COBIT) and the IT Governance Institute (ITGI) in the year 1996. The main objective of COBIT is to link business objectives with IT goals (Dominguez, 2016). In the United Kingdom (UK) with an entirely different context, *Joint service publication 503 – BCM* (Ministry of Defence, 2000) regulated detailed direction on the usage of the Ministry of Defence's good practice and continuity management policy following prevalent British Standards (more newly the BS25999 standard) (Herbane, 2010).

This is coupled with the developments of codes, standards, procedures and training under the National Fire Protection Association's (NFPA) 1600 *Standard on* *business continuity programs and disaster/emergency management* created in its character as a non-profit organization. These practices were for both international organizations and the US (Herbane, 2010). This standard was set as guidelines in 1995 however, it become a standard in 2000, delivering together BCM and emergency management.

The standards introduced in this period can be observed in two notable characteristics, as highlighted by Herbane (2010). First, the standards present in this period are indicated as part of the modernized and revised rather than replaced. Second, via the application of ISO/EIC standards, the local standard is now converted to the international standard. For example, *BS 7799 Information Security Management* (2000) transform to *ISO/EIC 17799*. In this embodiment, BCM has been one of the essential nominal fundamentals of the standard. Availability management as one of its IT service transmission processes and service continuity was included in *BS 15000 IT Service Management* by British Standards Institution in 2000. Then it was reproduced to the international standard *ISO/IEC 20000 Information technology–service management* (Herbane, 2010).

2.4.1.3 The Post 9/11 Phase (2002 to 2005)

The event of September 11 presented businesses, other organizations and governments with one of the larger sensitive catastrophes they have ever faced, due to the combination of death and loss of life, loss of customers, denial to enter the office and lost of suppliers, facilities and information system (Herbane, 2010). The psychological impact, economic, human losses and interruption of critical services were some of the main ramifications of these attacks (Dominguez, 2016). From the perspective of the heightening psychological impacts and large human losses, the aftermath of September 11 made aware the organization of re-evaluation of business continuity and disaster preparedness.

It was found that in a short time, some customers have activated their BCP, at a high frequency of business inside the WTC building. This highlights the challenges faced by business recovery centre service providers. (Herbane, 2010). The introduction of regulations and guidelines for organizations operating within the public authorities, utilities, stock exchanges and financial services sector, driven after the post-September 11 scenes can be characterized by a notable acceleration. As a result of increasing standardizations and regulations, people become more aware of BCM and organizational resilience turn into an important interest (Dominguez, 2016).

Among the regulations and standards that emanate from the USA are, the Federal Financial Institution Examination Council *Business Continuity Planning booklet*, National Association of Securities Dealers Rules 3510/3520 plus New York Stock Exchange Rule 446 and National Institute of Standards and Technology Special Publication 800 Series. The condition characteristic of each of these is that user or member organisations should acquire a demonstrable disaster recovery/business continuity process, with minimum safeguards for a highly interlacing category in terms of technology and commerce (Herbane, 2010).

At this phase, not only does the US government develop standards and regulations but others countries developed as well. Such as the Australian Prudential Regulation Authority's, *Business Continuity Management Standard* (2005), Hong Kong Monetary Authority's, *Supervisory Policy Manual TM-G-2: Business Continuity Planning* (2002) and Bank of Thailand's *Strategic Risk Manual: Risk Assessment and Information and Technology System Department* (2003) (Herbane, 2010).

2.4.1.4 Internationalization Phase (2006-2010)

During this phase, a new enthusiasm drives beyond compliance with the current standards and regulations. It is discovering new practices to achieve business resilience. The internationalisation phase is remarkable by the opening of guidelines and standards that transcend national boundaries or industry (Herbane, 2010). The guidelines and standards that have come up in the internationalisation phase recognise the concern or emphasis of participation in harmonising the quality and nature of practices and organisations in crisis responses within them. Herbane (2010) highlighted in his article that during this phase, two essential progress allowed internationalization:

1) National standards became international standards.
2) International organizations took an improving role in outstanding this breakout.

The existence of internationalization of these standards has been seen as a new roadmap for organizations to accomplish international certifications. During this period, one of the most famous standards that arose was BS 25999. In 2006, it was circulated by the British Standard. This standard assists the organizations to open raising a holistic BCM approach. Later on for plenty of years, it was a common standard for BCM (Dominguez, 2016). The summary of these phases is depicted below:

Period:	Drivers:	Practice:	Nature of Progress:
Mid-1970s → mid-1990s	Emerging legislation	Disaster Recovery Planning ↓ Business Continuity Planning	Development ↓
Mid-1990s →2001	Emerging standards	↓ Business Continuity Management	↓
2002 → 2005	Acceleration and focus	↓	Diffusion ↓
2006 → 2010	Competing standards and breakout	↓	Standardisation?

Source: Herbane (2010)

Figure 2.11: The development of BCM

2.4.2 Standardization of BCM

The emergence and increase of new cyber threats as well as major natural disasters have caused BCM to be given new momentum. The terminology "resilience" started to get a lot of attention and implications for business continuity experts. Therefore, a new standard has emerged to supersede BS 25999, which is ISO 22301 (Dominguez, 2016). The emergence as a segment of the strategies of the method or blueprint for business continuity is the extension of the new trend, which have a great effect on organizational resilience (Amir Avatefipour, 2018).

ISO 22301 was released in 2012 by International Standard Organization (ISO). Published on 15 May 2012. The full official name of this standard is ISO 22301:2012, Societal Security – Business Continuity Management Systems – Requirements. Based on the ISO official website, this standard is more confident to handle disruption of any type, will assist organizations disregarding of their size, activity or location and be better improved. "*Incidents can disrupt an organization at any time and applying ISO 22301* *will ensure that organizations can respond and continue its operations*" (Elizabeth Gasiorowski-Denis, 2012). In other words, ISO 22301: 2012 is the first international standard that focuses on business continuity only.

ISO 22301: 2019 is the latest standard for BCM. The full official name is ISO 22301: 2019, Security and Resilience - Business Continuity Management Systems – Requirements, which is the world's first international standard for maintaining and implementing competent BCP. It facilitates an organization to have an extra quicker recovery and a more effective response, products and the organization's bottom line and thereby reducing any impact on people (Clare Naden, 2019). Essentially, ISO 22301 is focused on "what" an organization necessary to take toward attention to for a BCM-related implementation to how accordingly the organization responds to these 3 vital topics: (Amir Avatefipour, 2018)

a) Project versus the program
b) Program scope
c) Management engagement and organizational alignment

Nonetheless, it does not demonstrate or describe "how". The approach of ISO 22301 uses a different clause to BCMS as a recurring process. In the situation or background of BCMS, basically, it applied the Plan–Do–Check-Act (PDCA) that enables organizations to go over an integrated process of improvements, planning and reviews (Dominguez, 2016). The PDCA model is to review, establish, monitor, maintain, implement, plan, operate and regularly grow the effectiveness of an organization's BCMS, which is applied to International Standards. Thus, this will safeguard or establish a grade of consistency with more management systems standards, for example, ISO/IEC 27001 (Information security management systems), ISO 14001 (Environmental management systems), ISO 9001 (Quality Management Systems), ISO

28000 (Specification for security management systems for the supply chain) and ISO/IEC 20000-1 (Information technology — Service management), thereby integrated implementation, supporting consistent and procedure or transaction with relevant management systems (ISO Committee, 2019).

2.4.3 The BCM Planning Methodology

The process of BCM involved so many terminologies. Therefore for better understanding, the list of terminologies will be stated table below:

Table 2.3: Terminologies in BCM discipline

Terms	Description
Business Continuity Plan (BC Plan)	Comprises clearly defined, documented procedures and information for use when a disaster occurs.
Business Continuity (BC)	Aim to safeguard the interests of an organization and its key stakeholders by protecting its critical business functions against predetermined disruptions.
Business Continuity Management (BCM)	An organization-wide discipline and a complete set of processes that identifies potential impacts which threaten an organization. It provides a capability for an effective response that safeguards the interests of its major stakeholders and reputation.
Business Continuity Management System (BCMS)	A management system can be expressed as the processes, procedures, organizational structure and resources by which an organization deploys to reduce and eventually eliminates non-conformity to specification, standards and customer expectations most effectively and efficiently.
Business Continuity Planning (BCP)	A process of developing prior arrangements and procedures that enable an organization to respond to an event in such a manner that critical business functions can continue within planned levels of disruption. The end result of BCP is the BC Plan.
Business Impact Analysis (BIA)	A phase within the BCM planning process. It is the process of analyzing the effect of interruptions on the business operations of all business functions. BIA should identify all critical functions of the business.
Cold Site	A fully constructed business environment minus the computer hardware. It is an environment in which a new facility can be built from scratch.

Crisis	A critical event that may impact an organization's profitability, reputation or ability to operate.
Crisis Communication (CC)	A form of communication designed to protect and defend an organization when facing a public challenge to its reputation.
Disaster	A sudden unplanned event that causes great damage or serious loss to an organization. It results in an organization failing to provide critical business functions for some predetermined minimum period.
Disruption	An interruption of normal business operations or processes can range from short-term to long-term unavailability.
Disaster Recovery (DR)	The ability of an organization to provide critical Information, Communication and Telecommunication (ICT) capabilities and services, after it had been disrupted by an incident, emergency or disaster.
Emergency	A sudden, unexpected event requiring immediate action due to its potential threat to health and safety, the environment or property.
Emergency Operations Centre (EOC)	A physical or virtual facility site from which the response team exercises direction and control in an emergency or disaster.
Emergency Response (ER)	The reaction to an emergency or incident and its focus is to protect human life and key organizational assets.
Hot Site	An alternate facility in another location, it can sustain business operations and absorb the additional workload almost immediately, when the primary site is inaccessible to enter.
Incident Response (IR)	An expedited reaction to an issue or occurrence.
Plan Development (PD)	A phase within the BCM planning process. It is to determine the procedures for notifying the right people and assessing the operational impact. It is also developed specific steps for minimizing the risk of an outage and restoring normal operations after the outage. The output from this step is the BC Plan or DR Plan.
Risk Management (RM)	The ongoing process of assessing the risk to the mission/business as part of a risk-based approach is used to determine adequate security for a system by analyzing the threats, vulnerabilities and selecting appropriate, cost-effective controls to achieve and maintain an acceptable risk.
Warm Site	Provides an environment and basic infrastructure to enable the facility to be reinstated before its absence becomes critical to business survival.

Source: Heng (2013)

In addition, business continuity is business as usual and it is not a takaful policy. In other words, "*it is about the ability of organizations to cope with threats and maintain* *resources available and operations in place*" (Galbusera et al., 2021). Business continuity includes diverse technologies, from physical to computerised, from singular to cohesive ones and from older to newer (Filipović et al., 2018). To implement the BCM program, seven (7) pillars must be gone through as a BCM process. These 7 pillars are also known as the BCM body of knowledge (BOK) The figure depicted below:

Source: Institute (2016)

Figure 2.12: Seven Pillars of BCM Planning Methodology

The details are as table below:

Table 2.4: BCM Principles Descriptions

No	BCM Principles	Descriptions
1	Project Management	It begins with the justification of the program assuming that it is not mandated by and supported by upper management. When the idea for the program is conceived by a lower-level manager, it could become

		Sisyphean labour to get management to devote the necessary resources to establish a BCMS. This is why it is often suggested that a top management (i.e., Executive level) sponsor is recruited to help shepherd the commitment to the program. Once the program is approved and funded, a person to lead the program is selected and policy and procedure are developed.
2	Risk Analysis and Review (RAR)	▪ Examine internal and external risk events and impacts (qualitative and quantitative) that can affect the critical operation's continuity. ▪ Using Risk Analysis (RA), Business Impact Analysis (BIA), and Cost-benefit analysis (justification for initial treatments to prevent or reduce the effects of risks and potential losses).
3	Business Impact Analysis (BIA)	▪ Examine the impact on the organization (assesses the potential impact of loss from an internal perspective), qualitatively and quantitatively, due to a disruption of business operations and processes. ▪ BIA must be conducted on a periodic and systematic basis to assess the impact of losses if the corresponding business operations and processes are disrupted because of proposed changes.
4	Business Continuity (BC) Strategy	Examine the possible strategies for maintaining the operation of Critical Business Functions (CBFs). This should cover pre-incident preparedness, response and recovery.
5	Plan Development (PD)	Examine the BC plan(s) which is an action plan that guides the response and recovery actions of the organization when a disaster occurs. It includes an emergency response to stabilize the situation following a disaster, the setup and operation of an Emergency Operations Centre (EOC) and specifies CBFs to be recovered within their established Recovery Time Objectives (RTOs) and Recovery Point Objectives (RPOs) when a disaster occurs. RTO is the period in which functions must be recovered after a disruption has occurred and RPO is the point in time at which systems and data must be recovered after a disruption has occurred.
6	Testing and Exercising	▪ Ensure that the BC plan drawn up and implemented by the organization is viable and workable. ▪ Tests are intended to verify the capability of the BC plan to attain specified objectives or established criteria.

		▪ Exercises are intended to train and condition BC team members to improve their coordination and performance in executing the BC plan. Exercises also serve to highlight any weaknesses in the operation and effectiveness of the BC plan by establishing generic corrective actions if the result falls below the assessment criteria.
7	Program Management	▪ Examine the ongoing efforts and activities of the organization to maintain the effectiveness of its BCM. BCM involves a firm commitment to the organization's efforts and resources to safeguard the interests of its key stakeholders, reputation, brand and value-creating activities continuously. Assessment of an organization's BCM efforts should therefore be dynamic. ▪ The BC plan is operated by a staff of the organizations. Staff in the organization should be familiar with the plan via appropriate awareness and training programs before any test/exercise of the plan. Periodic and systematic training and awareness programs should be conducted to familiarize employees with the operation of the BC plan.

Source: Leni & Sui (2017); Tucker (2015)

In disaster, threats can be natural or man-made. Natural such as typhoons, fog, heavy rain, flood and others. Man-made such as civil unrest, building catching on fire, power failure, cybersecurity attacks and many more. Those who are assigned the overall responsibility for coordinating the organization's BCM program is called BCM Coordinator. He/She is the subject matter expert (SME) in the organization's BCM coordinator (Institute, 2016).

Under Project Management, the top management has already set up the main committee to implement the BCM programme. These committees or teams will determine the roles and responsibilities, policies, limitations, operations, risks, critical departments and different parties that are related to these projects before presenting them to the top management or board of directors (BOD). They also need to identify these roles:

- Organization BCM Coordinator
- Business Unit (BU) BCM Coordinator
- Executive Management (Senior Management)

The selected department will send their representative as a BCM Coordinator, to be trained. The selected department will go through all the processes of BCM principles, starting from number 2 until 7. All the representatives will submit their PD to the main committee for evaluation and brainstorming. This is how the BCM Planning Methodology works and produces the documentation.

2.5 The Benefits of BCM

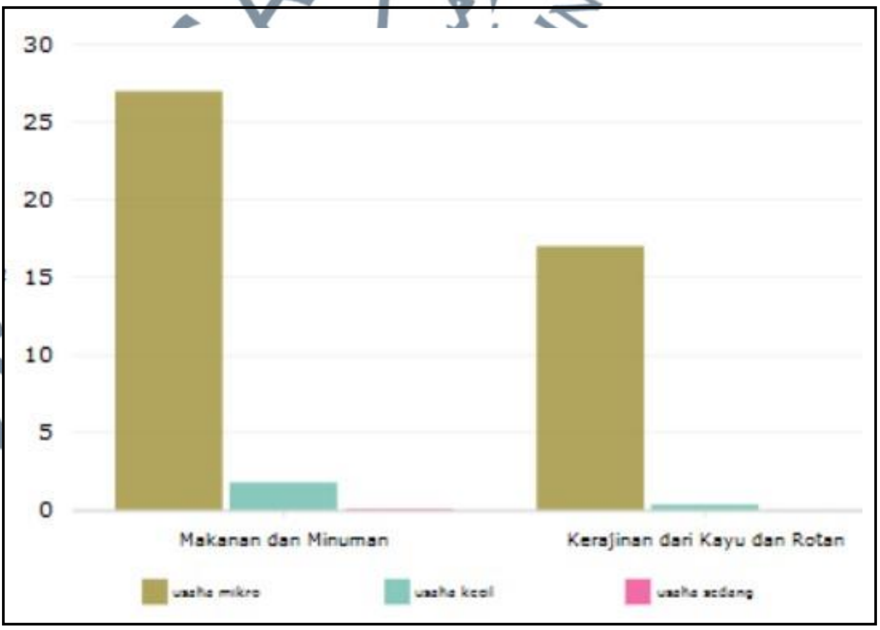
Below are the benefits of BCM: (Institute, 2016; Muparadzi & Rodze, 2021)

- Fulfill interested parties, legal and regulatory requirements.
- Improve organizational process resiliency and operational robustness.
- Protect the organization against potential threats.
- Enhance the confidence of investors, shareholders and customers.
- Minimise impact and losses (quantitative or qualitative) due to disruptions in operations.
- Expand the scope of BCM from value preservation to value creation, thus making BCM more holistic and strategic.

2.6 Business Continuity Planning during Pandemic

As stated in Table 2.3, Business Continuity Planning (BCP) is "*a process of developing prior arrangements and procedures that enable an organization to respond to an event in such a manner that critical business functions can continue within planned levels of disruption. The end result of BCP is the BC Plan*". This section will review the usage of BCP during the pandemic COVID-19. In the BCM discipline, BCP is parked under pillar number 5, which is Plan Development (PD). The BCP aims to preserve an organization's work. This is how the department or an organisation documented their contingency plan or BCP.

In Indonesia, a study had done by Kusumastuti (2020) on *The Influence of the Covid-19 Pandemic on the Existence of MSME Businesses in Maintaining Business Continuity Management (BCM)*, to study the impact of the pandemic on the current Micro Small Medium Enterprises (MSME) while using BCM. The impact of a COVID-19 attack was really bad when data that explains the proportion of MSMEs affected by the tourism sector to national MSMEs. The information below explains that tourism is the sector most affected by COVID-19. The Indonesian Institute of Sciences (LIPI) projects that one of those affected by the tourism sector is MSMEs, especially in the food and beverage (F&B) business unit. For information, the total loss from the tourism sector reached US$ 2 billion with a decrease in aircraft growth by 0.013%, accommodation provision by 0.008% and food and beverage by 0.006%.

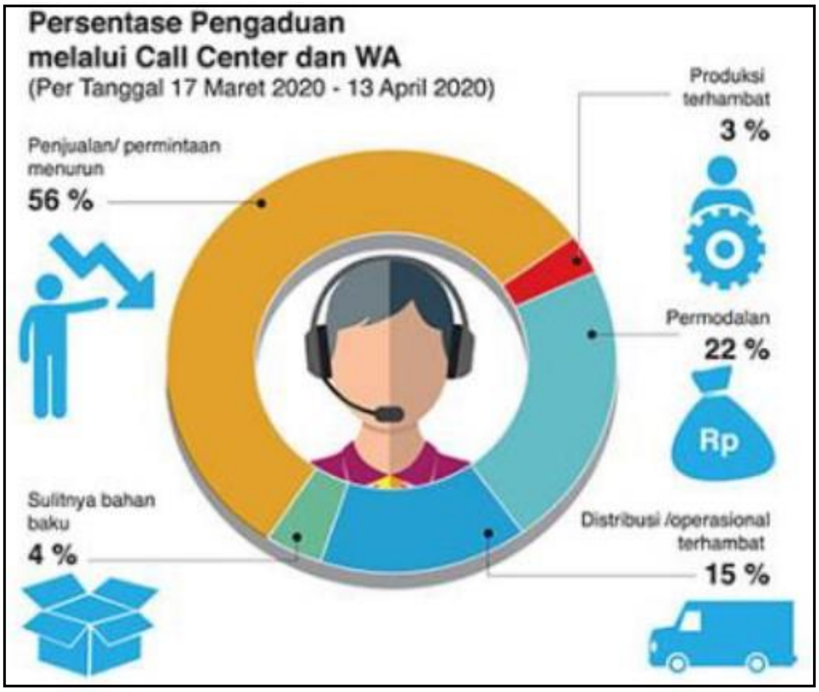


Source: Kusumastuti (2020)

Figure 2.13: Proportion of MSMEs in the tourism sector

The presence and spread of COVID-19, whose existence is in the external environment and is uncontrollable of the company, is considered to contribute to determining the survival of a business entity. Jakarta is the capital city of the country as well as the centre of business turnover in Indonesia, which is stated as the epicentre of COVID-19 in Indonesia, has implemented social distancing, work from home (WFH) and large-scale social restrictions (PSBB) policies for local government officials, companies, the education sector and reducing the intensity of public transportation. Based on the descriptions above, he explained how the influence of the COVID-19 pandemic on the existence of MSME businesses in maintaining BCM.

Some companies that pay attention to market trends and product innovation try to adapt to online applications. The impact of the COVID-19 pandemic is felt directly by the sustainability of SMEs in decreasing productivity. Based on the survey results, as many as 36.7% of respondents admitted that there were no sales. Furthermore, as many as 26% of respondents admitted that there was a decrease of more than 60%. On the other hand, only 3.6% experienced an increase in sales. Based on complaints through the call centre and Whatsapp (WA) from 17 March to 13 April 2020, the Ministry of Cooperatives and SMEs received complaints from MSME players, it is known that the biggest obstacle that 56% complained about was the decline in sales or market demand (Kusumastuti, 2020).



Source: Kusumastuti (2020)

Figure 2.14: Percentage of Complaints via Call Centre and WhatsApp

Therefore, the solution "BCM" was given by the Indonesian government to overcome these problems. Several mitigation programs for MSMEs, aim to revive the economy of affected MSMEs, by providing various facilities and types of financial assistance simultaneously to strengthen and sustain the business. There are:

- The stimulus for the purchasing power of MSME/Cooperative products.
- Direct Cash Assistance (BLT) for ultra-micro and micro businesses.
- Micro business interest restructuring and subsidies.
- Interest restructuring for cooperatives.
- Shopping movement at the neighbouring shop.
- Pre-employment card
- Relaxation and tax refunds.
- Masks for all.

The government's step in overcoming the tax deficit due to the economic slowdown is through the e-commerce sector. E-commerce is one of the startups that has reaped the blessings of the COVID-19 pandemic. Policies to study, work worship at home, and encourage everyone to make transactions online to meet their needs (Kusumastuti, 2020). The use number of digital services in Indonesia has increased during the COVID-19 pandemic, one of which is e-commerce. As many as 69% of consumers switch to using this service to buy their daily needs. The use of digital wallets has also increased by 65%, as a means of purchasing transactions. Furthermore, digital services in the health and education sectors have increased by 41% and 38%, respectively.

E-commerce is projected to continue to increase during the pandemic, especially in several types of products. Before the COVID-19 outbreak, e-commerce was able to attract consumers in Indonesia. E-commerce is one of the main drivers that makes Indonesia the country with the largest digital economy value in Southeast Asia reaching $40 billion in 2019 and is predicted to increase to $130 billion by 2025 (Kusumastuti, 2020).

Source: Kusumastuti (2020)

Figure 2.15: Increase in sanitation (left) and F&B product (right)

Similarly the case in Malaysia. A total of 97.4% of traders in Malaysia are SMEs. SMEs should have a contingency plan to face any business challenges, especially natural disasters, said the CEO of Small and Medium Enterprises Corporation (SME Corp) Malaysia, Rizal Nainy. He added SMEs should have a contingency plan to face any business challenges, especially natural disasters, said CEO of Small and Medium Enterprises Corporation (SME Corp) Malaysia Rizal Nainy. Rizal added, therefore, that SME traders need to have a mentality to prepare (Bernama, 2022). As mentioned in a study above in Indonesia, among the worst industries that effected by COVID-19 were transportation and tourism. Both of them are interrelated. When the international border was closed, nobody can afford to fly. For example in Malaysia, flying domestically such as Sabah and Sawarak, required strict conditions to fill in before can be approved. The hospitality and travel industry in general and airlines in precise, are in difficulties where the world's commercial aircraft have been grounded by more than 60%. The International Air Transport Association (IATA) predicts that the COVID-19 catastrophe will see airline passenger incomes decline by US$314 billion in 2020, which would speak to a 55% decline compared to 2019 (Albers & Rundshagen, 2020). There is not just insufficient time for feedback planning and organization during beyond disasters like the COVID-19 pandemic, but also classical response strategies are inadequate.

An expression of the following is the issue that airlines are readjustment to their owner governments repeatedly in many main economies: (Albers & Rundshagen, 2020)

- The US government committed to a $25 billion bailout package.
- In Europe, the Dutch, French, German and Italian governments are handing out billions of Euros to their national airlines, even under the auspices of the European Commission (EC).

- South Korean state-owned banks will provide $971 million to support Korean Air.

Exceptional measures will not prevail forever, yet even extraordinary crises only last for a limited time span. So at the same time, possibility societies will resume this as a “new norm” as frequently mentioned surrounding them. Team Albers is of the view that assuming in the post-Covid-19 era that airlines will not return to the national transport administration or state-owned company status, the measures taken at this time will have an impact on the industry emerging from the crisis and post-crisis. Therefore, airline companies need to have a properly documented BCP in order to sustain their business and operations with limited options. The table below is the list of definitions of strategic crisis response that have been used by airlines in Europe and around the world. The 3 types of most popular strategies frequently used by airlines are:

- Retrenchment
- Persevering
- Exit

The description of each type of these strategies can refer to in Table 2.5 below.

Table 2.5: Strategic crisis categories description

Category	Explanation
Retrenchment summarizes measures that aim at substantial cost/overhead and/or asset reductions.	These measures tend to be effective as instruments of short-term survival of the organization through the crisis and “may even be the only perceived way forward in the short run” (Wenzel et al., 2020, p. V13). However, the long-term effects of this type of response strategy tend to be more ambiguous, ranging from opening up renewal opportunities to “irrevocable damages such as the loss of synergies that retrenchment measures entail” (Wenzel et al., 2020, p. V13).
Persevering refers to measures aiming to preserve the status quo of the organization and its activities.	Examples include debt financing or the consumption of slack resources. In general, it is considered effective as a response strategy, particularly in the medium run.
Innovating refers to strategic renewal of the organization during the crisis.	This response may turn out to be an important move in long-lasting crises that tend to provoke “irrevocable traces in the business landscape that render a return to the previous order impossible” (Wenzel et al., 2020, p. V13).
Exit refers to the discontinuation of an organization’s activities. It can be either a forced outcome of an unviable business setting or a strategic response to crisis.	This includes possibilities of freeing up committed resources for future business opportunities. Therefore, “an exit is not necessarily a manifestation of business failure *per se*” (Wenzel et al., 2020, p. V14).

Source: Albers & Rundshagen (2020)

These three types of strategies can be considered BCP for the airlines. There is nothing much the airlines can do when all the governments around the world imposed a lockdown or MCO and the international border is closed. They are suffering, in addition, nobody knows when this pandemic will be ended and can their BCP really assist them ? This is among the questions that need to be explored. For example Research Question 2 (RQ2), "*What is the big challenge when running the BCM program during a pandemic*" and RQ4 "*Does implementation of the BCM program during the uncertainty pandemic relevant*" ? will be asked during gathering data with respondents.

Table 2.6 below specifies and maps these strategies for the issue of European airlines' feedback on the pandemic.

Table 2.6: European Airline's responses to the pandemic

Response category	Corresponding findings/airline prevalence
1) Retrenchment *Substantial cost/asset reduction*	*75 news items in total*
Short-term orientation	All European airlines grounded their fleets more or less completely due to the imposed travel restrictions. Almost all airlines announced job cuts and/ or reduced work patterns in accordance with the respective national policy schemes to maintain employment. → More or less all European airlines
Long-term orientation	• Air France (brings forward A-380 retirement; restructure domestic network with less flights and more LCC Transavia) • Austrian Airlines (reduce fleet by 25%, management by 30%) • Brussels Airlines (reduce fleet by 30%) • EasyJet (cancel aircraft orders, slim fleet) • Helvetic Airways (stopped growth strategy) • Lufthansa (deep cuts into future fleet, grounding A-380s probably permanently, reposition 20% smaller)
2) Persevering *Safeguarding status quo*	*37 news items in total*
Financial	Most European airlines have sought government aid through grants, loans at preferred conditions/state guarantees, or subsidies. → Most European airlines
Position	• Alitalia (Italy's plan to safeguard nationalized airline as springboard for relaunch of Italian economy; continue codeshare with Delta Air Lines) • Ryanair (committed to drive price competition after crisis)
3) Innovating *Strategic renewal*	*16 news items in total*
Crisis-specific	• Austrian (reconfiguring aircraft for cargo) • Icelandair (reconfiguring aircraft for cargo) • Lufthansa (LH Technik offers cargo conversion) • Sun Express (switch aircraft to freight operations) • Swiss (reconfiguring aircraft for cargo)
Longer term	• Aeroflot (plans to open Europe-Asia transfers) • Air France-KLM (transatlantic joint-venture with Delta Air Lines and Virgin Atlantic) • British Airways (UK-Australia joint venture with Qatar Airways) • IAG (remains committed to takeover of Air Europa) • Volotea (plans 40 new routes for summer) • Wizz Air (plans to enter new markets in Europe, increase scale of Abu Dhabi venture, intends to grow ancillary business)
4) Exit *Discontinuation of activities*	*11 news items in total*
Failure	• Air Italy (ceased operations) • AtlasGlobal Airlines (filed for bankruptcy) • Braathens (filed for court administration) • CityJet (entered local equivalent of Chapter 11) • Flybe (gone into administration) • Norwegian Air Shuttle (pilot and cabin crew subsidiaries filed for bankruptcy in Denmark and Sweden)
Withdrawals	• British Airways (could pull out of LGW permanently) • LOT (giving up bid for Condor) • Lufthansa (close Germanwings subsidiary) • Virgin Atlantic (exit base at LGW)
5) Resume	*9 news items in total* Airlines re-introduce flights and/or increase schedules for summer 2020 onwards, returning to (still considerably modified) flight operations at least on the continent.

Source: Albers & Rundshagen (2020)

From this table, we could see majorities of European airlines had done massive job cuts and/or work patterns for their survivor. Retrenchment was the most popular mode of mechanism tool. Air France, Austria Airlines, Brussels Airlines, Easy Jet, Helvetic Airways and Lufthansa were no exceptions to this action. Some airlines had to reduce their fleet by 25% and 30%. Easy Jet had to cancel the aircraft orders and change to slim the fleet. As mentioned earlier, the government had to bailout their national carrier during this pandemic. For retrenchment mode, it consists of 2 types, short-term and long-term orientation. From this table, Ryanair from Ireland had been bailout and committed to driving price competition after a crisis. Meanwhile, Alitalia from Italy, planned to safeguard nationalized airline as a springboard for a relaunch of the Italian economy; continue codeshare with Delta Air Lines. This is parked under persevering mode. Based on this table, we could view and predict the BCP for each airline is not far different as a way out of the COVID-19 crisis.

For example, there are so many airlines that made innovations to their operations such as Austrian, British Airways, Air France, Swiss and others. The *exit* categories have 2 types, *failure* and *withdrawal*. Throughout the observation period, the *exit* response was almost the same. *Exit* is referring to the discontinuity of the services or activities. It also refers to industries as strategic moves to free up committed resources or downscaling operations or to pull out of certain markets, instead of not limited to closing the entire business. Lastly, the *resumption* started at the end of April when developing supposed that at least a few of the aviation requirements surrounding Europe would be restored (Albers & Rundshagen, 2020).

Based on this information, roadmap and flow, we can predict here that the airline industries will make more or less the same pattern for their contingency plan, in order to survive, by hoping this pandemic will be ended as soon as possible. This is due to limited selection and restricted laws imposed by an international bodies such as WHO and the government. Those who didn't have any BCP will be left out or have to start over. Consequently, it enables them to interrupt their supply chain and operations. What about the BCP in different industries or environments ? Let us review this kind of matter. A study done by Margherita & Heikkilä (2021b) found consistency in their matches to four interrelated tasks and continuity planning during COVID-19. The four interrelated tasks such as *prevention, awareness, knowledge management* and *remediation*. In the case of aviation, can be similar to prevention (*innovating*) from bankruptcy, remediation (*retrenchment*) by reducing manpower and awareness (*resume*), for the summer of 2020 onwards, airlines reintroduce flights and/or increase schedules.

Nowadays, companies or institutions are compelled to design resilience in contrast to various practices that menace the persistence of their business operations. Business continuity serves as a strategic organizational facility and also approximates flexibility or resilience. 50 world-leading corporations to respond to the pandemic have been undertaken for this study. Content analysis of web pages, LinkedIn posts of companies dedicated to the epidemic and the first response of 50 Fortune Global 500 companies were presented in in-depth analysis by this group of researchers. To measure their revenue level, they used the 2019 Fortune Global 500 ranking. This is an annual ranking of the top 500 corporations worldwide. They treated that perform as a well-diversified group of organizations operating in different countries (such as Germany, UK, Russia, US and Saudi Arabia) and continents for the first 50 companies plus with various industries (such as food distribution, telecommunication, automotive, energy and others). World-leading companies such as Samsung Electronics, Toyota, Apple, Amazon, BP, Allianz, AT&T and others.

They managed to capture a framework regarding this study. There are 5 organizational activities in this framework. However, this study will only touch on item number 4, *Leadership and Change Management*, because it has related to the BCM and pandemic. The framework as per Figure 2.16 below:

Source: Margherita & Heikkilä (2021b)

Figure 2.16: A framework of response actions for COVID-19

To acknowledge details pertinent to *Leadership and Change Management* level, kindly refer to table below:

Table 2.7: Sub-areas and related actions to be taken

Sub-areas	Company actions (alphabetical order)
4.1. Emergency and continuity management	1. Access lines of government/bank credit to support continuity plan 2. Acquire authoritative epidemiological and economic outlook/data 3. Articulate a detailed company response plan 4. Build leadership and response teams who can proactively manage risks 5. Define issue map and handling/management mechanisms 6. Define, activate and test business continuity and recovery programs 7. Freeze capital expenditure and reallocate funds to where most needed 8. Identify a pandemic and emergency coordinator or team 9. Perform stress tests on key resources and working capital requirements
4.2. Post-emergency vision and value creation	10. Align business leaders and conduct roundtable exercises 11. Define a portfolio of post-emergency actions 12. Develop positive scenarios and maintain the trust of people in the future 13. Establish robust emergency communication plans 14. Identify opportunities for new value creation beyond the crisis 15. Share CEO talks to ensure stakeholders about company preparedness

Source: Margherita & Heikkilä (2021b)

Based on Table 2.7, from Sub-areas 4.1 *Emergency and continuity management*, kindly focus on the next column, under 'Company actions', numbers 1, 3, 4, 6 and 8. The most applicable for BCP is number 6 and 8. Focus also on Sub-areas 4.2 *Post-emergency* *vision and value creation*. In the column Company actions, look at numbers 11 and 14. These findings are a way out for the firmness of the company during the pandemic season. These are the findings from 50 world-leading corporations from various continents and countries. At the same time, they have been recognized by Fortune 500 Global, as an organization that has its class. The attentions parts of these findings are:

- In order to continue their business, these worldwide organizations have to use BCP during the COVID-19 pandemic.
- The BCM team must be created first before implementing BCP activities, based on seven pillars as mentioned in Figure 12.
- As mentioned earlier, BCP must be documented and will be a guide during a disaster or calamity. This can be seen when a framework of response actions for COVID-19 (Figure 13) exists.
- Fully support from top management or stakeholders for implemented BCM will be determined the direction and success of the organization.
- Based on Figure 7, the usage of BCM is quite widespread. Under one umbrella, it covers such as Risk Management, Disaster Recovery, Facilities Management, Health and Safety, Emergency Management, Crisis Communication and many more.
- The usage of BCP during the COVID-19 pandemic has been tested try and error before it becomes a guide.

Therefore, from Table 2.7, *Sub-areas 4.2 Post-emergency vision and value creation*, BCP enables to play an essential role in value creation. This value creation should be mandated by the top management. Preservation of current value and generating opportunities for organizations to go beyond the simple business continuity of the business crisis generated by the COVID-19 outbreak. A combination of transforming supply chain trends necessary to redesign corporate processes and customer has indeed stimulated their definition of strategies and actions able to generate new business value (Margherita & Heikkilä, 2021b).

Services for a connected city, the evolution of the organization toward a mobility company that provides resources and the transformation of the company's business model for the CASE (Connected, Autonomous, Shared, Electric) era, soon after its president announced Toyota started to face the COVID-19 emergency. Toyota had maintained jobs and increased investment in electric car R&D, even as the company had reduced production due to COVID-19. By improving virtual interactions with customers who can explore and make purchases in virtual showrooms via WhatsApp video, Facebook Live, webchat or phone, it is able to create new customer-related value by introducing new car models to the market. To make sure that the company can supply fuel, energy and vital petrochemical feedstocks uninterrupted, BP has robust business continuity plans in place. In the retail section, BP has expanded sanitation procedures and encouraged the public to implement social distancing while also taking alert parts such as eliminating the trade of open food goods. BP has also initiated socially responsible action by freeing fuel to emergency services vehicles, such as helicopters and ambulances and supporting governments and partners with donations. Employed by high-tech companies, the US government and leading universities, BP's Center for High-Performance Computing have been used for the exploration or analysis of COVID-19. These new collaborations have a new paradigm of extended collaboration (with industries, countries and cities) and provided the basis for a strategic renewal aimed at creating new value (Margherita & Heikkilä, 2021b).

Therefore, the rise of COVID-19 urges firms to systematically implement BCM practices by adopting new tactics to lead changes in the business environment and eliminate outdated strategies. As a result, business enterprises are concerned with implementing responsive business continuity measures to face future situations with prepared strategies and mitigate crises with advanced planning. Modern entrepreneurs highlight the practice of BCM to improve the capability of businesses to keep uncertain crises with better corporate governance, alternative strategies for each operation to advance performance efficiency, marketing innovation, cost-effectiveness in troublesome situations and disruptive supply chains (Rumman, 2022).

2.7 Business Resilience of an Organization

Oxford Learner's Dictionaries online defined resilience as "*the ability of people or things to recover quickly after something unpleasant, such as shock or injury*" (Oxford University, 2022). Meanwhile, Păunescu (2020) describe organizational resilience refers "*an organization's proficiency in keeping its capabilities at a stable level despite the challenging business environment in which it activates*". She also added that "*BCM provides a framework for building organizational resilience and the capability for an effective response in the face of internal or external threats*". ILO determine resilience as "*the organizational ability or capacity to maintain basic functions during and after an undesirable event within an appropriate time frame and with as few adverse effects as possible*" (Mirjana Galjak et al., 2022). An article journal by Goran Janaćković, Dejan Vasović and Vesna Nikolić during the online 17th International Conference Proceeding on BCM and Safety stated resilience as "*the danger, such as the occurrence of a known or unknown adverse event, the consequences of the occurrence of an adverse event, the estimated uncertainty of the event or the consequences, the knowledge based on which it is claimed that the description of resistance is appropriate, as well as the capacity of protective barriers that affect the* *level of consequences*" (Mirjana Galjak et al., 2022). Meanwhile, Auzzir, (2018) mentioned that resilience concern considers various shocks that push toward innovations and unexpected changes (Auzzir, 2018). In the business background, it stated the "*capacity for an enterprise to survive, adapt and grow in the face of turbulent change*".

The end intention of a solid BCM is to allow it to resume or continue operations under adverse or abnormal conditions and make the organization more resilient to potential threats. Currently, in order to effectively address the various risk issues of security readiness and survivability, the constant changes in their business environment require organizations to find practical responses. In addition, in order to find a balance point between efficiency and resilience, organizations are constrained by changes that are driven by business models that create the need for continuous improvement of efficiency through optimization of resource use and minimization of waste (Păunescu, 2020). Thus, Păunescu stated in her study, which she cited from Mohammed et al., 2019, "*organizational resilience also helps to distinguish the company's key strong and weak aspects and then to establish essential matters with respect to BCP*" (Păunescu, 2020). Originally, the concept of organizational resilience was used to describe the need to respond to changes in the business environment. Therefore, qualities such as agility, adaptability and flexibility to change after changes in the environment had to be emphasized. Further, the focus has been amended to disruptive disasters and events due to disasters can be the key to failure or success or due to effective management during a crisis (Mirjana Galjak et al., 2022). In the meantime, British Standard Institution (BSI) defines organizational resilience as stipulated in standard BS 65000 as "*the ability of an organization to anticipate, prepare for, respond and adapt to incremental change and sudden disruptions in order to survive and prosper*" (BSI, 2022). It breaks away from risk management close to an extra holistic perspective of business success and health. Not purely survives for the long period but also prospers, that is the one of a resilient organization. It is also ready for the future (BSI, 2022).

2.7.1 Role of Stakeholders

Including the government, NGOs and private, there are so many previous studies that have investigated the role of stakeholders in managing disasters for Small and Medium Enterprises (SMEs), as stated in a dissertation by Auzzir, (2018). As the main stakeholder either in Government-Link Companies (GLCs) or government-affiliated companies, the government should play a significant role in dealing with disasters or SMEs. It is deniable, that BCM requires commitment from the top management of an organization (Jarvelainen, 2020). In Malaysia, any serious calamity including a pandemic or flood disaster will be parked under the category *Arahan 20,* under Prime Minister Department (Majlis Keselamatan Negara, 2016).

Meanwhile in the UK, under Civil Contingencies Act 2004, all the local governments are required to produce disaster management guidelines for SMEs via their websites (Auzzir, 2018; Cabinet Office, 2013). However, providing funds and allocations specifically for disasters is the most essential for the government. Without financing, no training can be provided, the disaster victims cannot be compensated and no framework can be established. It is tough for the governments of developing countries to begin all these responsibilities when dealing with financial constraints. Therefore, the best party that must participate in the private sector companies. To assure that innovative specialized results for disaster risk reduction are a core business, the role of the private sector varies from creating a corporate community interface and corporate social responsibility activities. Disaster management is such as government projects.

Therefore, the participation of private actors is crucial to conveying improved services to the community (Auzzir, 2018).

A study has been done earlier before on the BCM concerns problem. This study involved the public sector and high rank in the public sector, for example, senior management, which is not creating business continuity plans, does not have sufficient continuity controls for ICT or does not implement appropriate continuity risk analyses (Jarvelainen, 2020). The significance of continuity issues sounds raised in the public sector, after major natural disasters. With the best researcher's knowledge, there is no discussed the role of different stakeholders in BCM of the public sector (Jarvelainen, 2020). A study done by Jarvelainen (2020) stated that "*IT management also discussed the role of top and middle management, users, experts and external service providers*". Jarvelainen's team get 16 interviews with respondents from the government, municipalities, higher education institutions and research organizations in Finland.

They identify five particular stakeholder groups. There are top management, middle management, users, external service providers and IT experts. However, this research will not provide all information on these stakeholders. Jarvelainen, (2020) added engagement from top management was important for IT managers. When Jarvelainen's team conducted the interviews, top managers needed the reports to be actually not only a formality and regular BCM reporting but studied as well. Interviewees wondered in case of management appreciated the concern of IT service continuity if top management did not desire continuity planning or reporting. In order for organizational commitment and "selling" of this BCM agenda to be sometimes necessary, support from top management was therefore considered important.

Middle management was the next stakeholder group. Occasionally routine reporting was targeted for an Information System Security (ISsec) or special IT task force consisting of top and middle management was informed. However, it was only when the chairperson of the task force treated it as essential or important. The significance of BCM was not aware sometimes by middle managers. Reveal by some interviewees mentioned there are the head of departments have the notion that BCM is “someone else” responsibility. In organizations, the role of middle management was varied. Other IT managers are considered valuable companions in the task forces plus the middle managers. This is based on the data set (Jarvelainen, 2020). An essential for planning was the role of top management. Plans were not written if they had not required planning. The maintenance of the plans would be regular when the management was interested in continuity. Jarvelainen (2020) stated, “*the role of internal stakeholders was not so significant as actors, but their assistance was sometimes needed, support was welcomed and occasionally, in interruptions, they had to be informed*”. Table 2.8 below is the list of stakeholder roles in 5 different groups. Again Jarvelainen claims at the best knowledge, there are no stakeholder groups responsible for BCM has not been published yet. Therefore, these problems could be declined and resilience increased when all stakeholders play their roles.

Table 2.8: The Roles of Different Stakeholders

Practices	Top management	Middle management	IT experts	Users	External service providers
Risk analyses		Sometimes discussing in taskforces	Executing		Sometimes executing
Continuity planning and plan maintenance	Support or not	Sometimes executing	Executing		Sometimes executing
Communication in crises	Towards media if larger incident and possible risk to reputation	Informed if effects to their operations	Towards users, management and service providers	Informing about incidents and reading information about them	Towards IT experts
Training			Executing	Participating	
Testing	(Back-up recovery creates awareness)	(Back-up recovery creates awareness)	Executing	(Back-up recovery creates awareness)	Executing and participating in planning
BCM Reporting	Reading	In taskforces	Writing and reading		Writing

Source: Jarvelainen (2020)

2.8 Risk Management or Disaster from Islamic Perspective

In Al Quran, there are a few verses related to risk management or disaster. This shows that Islam dates back to the time before western or non-Muslims discovered this knowledge. Below are the lists:

2.8.1 Surah Yusuf 12: Verses 46-49

“[He said], "Joseph, O man of truth, explain to us about seven fat cows are eaten by seven [that were] lean, and seven green spikes [of grain] and others [that were] dry - that I may return to the people; perhaps they will know [about you]”.

[Joseph] said, "You will plant for seven years consecutively; and what you harvest leave in its spikes, except a little from which you will eat. Then will come after that seven difficult [years] which will consume what you saved for them, except a little from which you will store. Then will come after that a year in which the people will be given rain and in which they will press [olives and grapes]”.

Ibnu Katsir interprets verses 46 until 49 as it's coming to you fertility & rain for seven years straight. Yusuf interpreted seven cows as seven years old because cows were used to process the land to produce crops that were green wheat (verse 46). Then Yusuf told them whatever their crops were in those seven fertile years, keep them in the grain for more durability & less damage. Except it is only necessary for them to eat & it should also be careful not to overdo it. So that they can use it during the seven years of hardship after the end of spring (verse 47) (Katsir, 2008).

Then comes the difficult seven years that is, in a dream, seven lean cows eat seven fat cows. During the year they will spend all the food collected during the spring season except for a few that are kept. Yusuf told us of the years of the hardship of dry soil & not growing crops at all (verse 48).

Then Yusuf brought good news. This is the year that will bring the blessing of successive rain with ample rainfall & fertile soil for cultivation. They can squeeze grapes as usual in the past (verse 49) (Katsir, 2008).

The knowledge of risk management was rooted in Islam first. Through Surah Yusuf, Allah symbolically explains the importance of mastering this knowledge and how knowledge is used for business continuity in times of adversity. Therefore, as Muslims, we cannot run away from studying and mastering it so that this treasure will continue to flourish in the minds of the *ummah*.

2.8.2 Maqasid Shariah

Islam is the way of life or in Arabic, it is called *Addin*. Therefore, whatever we eat, the way we live, do business and so on, must be in line with the way of Islam. The important point here is, that business continuity is part of *Addin* or in other words, it is part of Maqasid Shariah. This view is also in line with a study done by Ruslang, Muslimin Kara and Abdul Wahab under their article name *Etika Bisnis E-Commerce Shopee Berdasarkan Maqashid Syariah Dalam Mewujudkan Keberlangsungan Bisnis* (Ruslang et al., 2020).

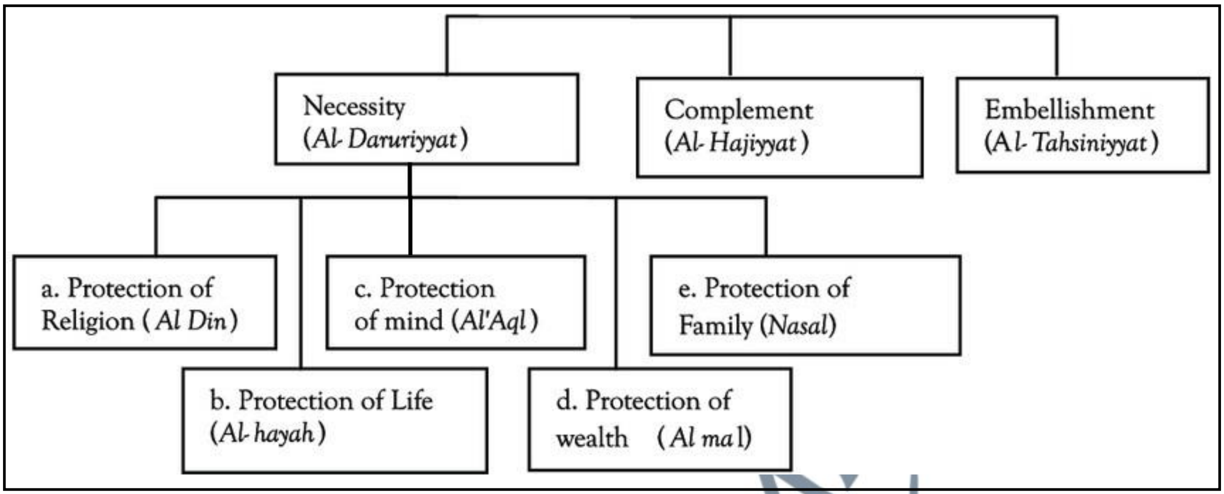
The word *maqasid* from a linguistic point of view is the plural of the word *maqsad* which means; a straight path, intentional, a goal, fair or a middle (Kholish et al., 2020). While *shariah* comes from the word *syar'a* (Arabic). Shariah is wisdom and the law disclosed by Allah Almighty. Its purposely for the accomplishment of prosperity for each human in life in the world and the hereafter (Kholish et al., 2020). Thus in simple words, *maqasid shariah* is the meaning and purpose required by *shariah* in legislating a law to guarantee the welfare of mankind. It also has its importance in measuring and considering something to guarantee the benefits and reject the bad (Komunikasi Korporat MAIS, 2022).

The aims of *maqasid shariah* are for the betterment of people's lives and protection from any difficulties, evil elements and the realisation of the people's welfare (Gwadabe & Rahman, 2020). There are 3 divisions of *maqasid shariah*. There are:

- Al-Daruriyat (necessities)
- Al-Hajiyat (needs)
- Al-Tahsiniyat (luxuries)

Kholish (et al., 2020)

In this case, only will be highlighted on *Al-Daruriyat* (necessities). There are 5 elements in *maqasid shariah* as per the figure below:



Source: Siddiqui et al., (2019)

Figure 2.17: List of Maqasid Shariah elements

When businesses get stuck due to a pandemic, they will run a business continuity plan in order to sustain and resiliency their operations. For example, from offline to online, from 30 staff to 10 staff and from working at an office to working from home (WFH). In the case of entrepreneurs, two benefits which can refer to *maqasid shariah* are the protection of family or descendants (Nasal) and the protection of wealth or assets (Al-mal) (Bahri et al., 2019). These can be classified as a continuity of business ventures. Two main points must be fulfilled in realizing business continuity, namely blessing and profit. As a result, business results will grow with profit (Siddiqui et al., 2019).

2.9 The Background of AirAsia Organization

Based on their website, the history of AirAsia (AK) airlines can be divided into four categories and the snapshots as below: (AirAsia Group Berhad, 2020c)

- 1993 – 2005 (Early days)
- 2006 – 2010 (Ready for take-off)
- 2011 – 2015 (Flying high)

- 2016 – present (Now everyone can fly)

<u>1993 – 2005 (Early days)</u>

The history originally AirAsia was established by DRB-Hicom, a government-owned conglomerate starting on 8th September 1993. When Datuk Kamarudin Meranun and Tony Fernandes bought AirAsia shares for RM1, a Sales & Purchase Agreement (SPA) between Tune Air Sdn Bhd and DRB-Hicom was signed. It gained 99.25% equity from Hicom Holdings, equal to 51.68 million shares for RM1 (USD 0.28). This purchase was implemented on 5 September 2001. Below is the original aircraft of AirAsia and the transformation to a new logo.

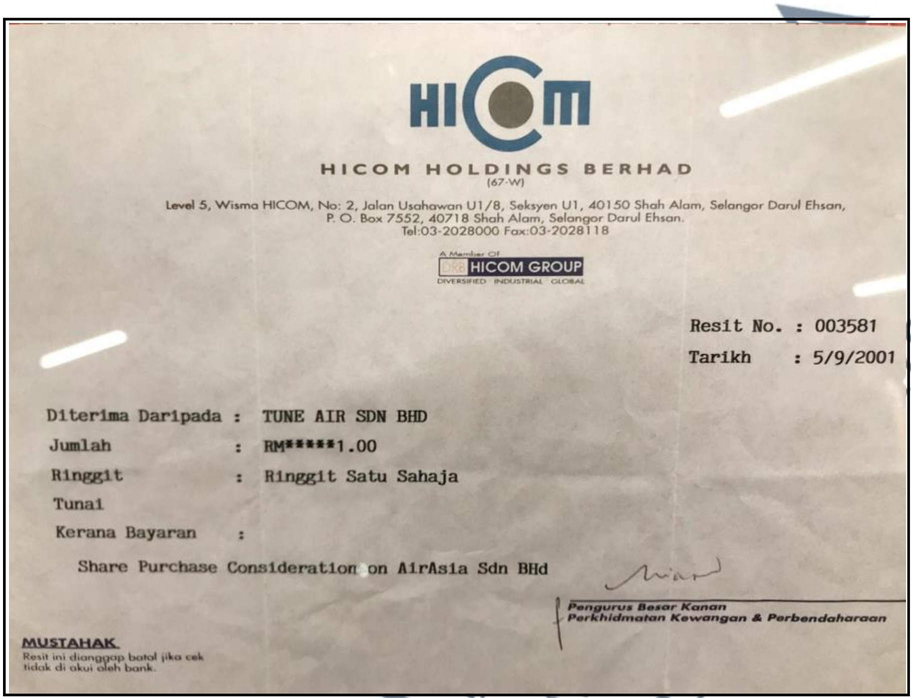
Source: AirAsia Group Berhad, (2020a)

Figure 2.18: The original aircraft of AirAsia from DRB-Hicom

Source: AirAsia Group Berhad, (2020a)

Figure 2.19: The original logo (left) and a new logo (right) of AirAsia

Figure 2.20 shows the certificate of SPA of the shares between DRB-Hicom and Tune Air Sdn. Bhd. In addition to that event, the first press release has been launched on 12 December 2001, when Tune Air took over AirAsia and become Malaysia's second national carrier.



HICOM

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Resit No. : 003581
Tarikh : 5/9/2001

Diterima Daripada : TUNE AIR SDN BHD
Jumlah : RM*****1.00
Ringgit : Ringgit Satu Sahaja
Tunai
Kerana Bayaran :
Share Purchase Consideration on AirAsia Sdn BHd

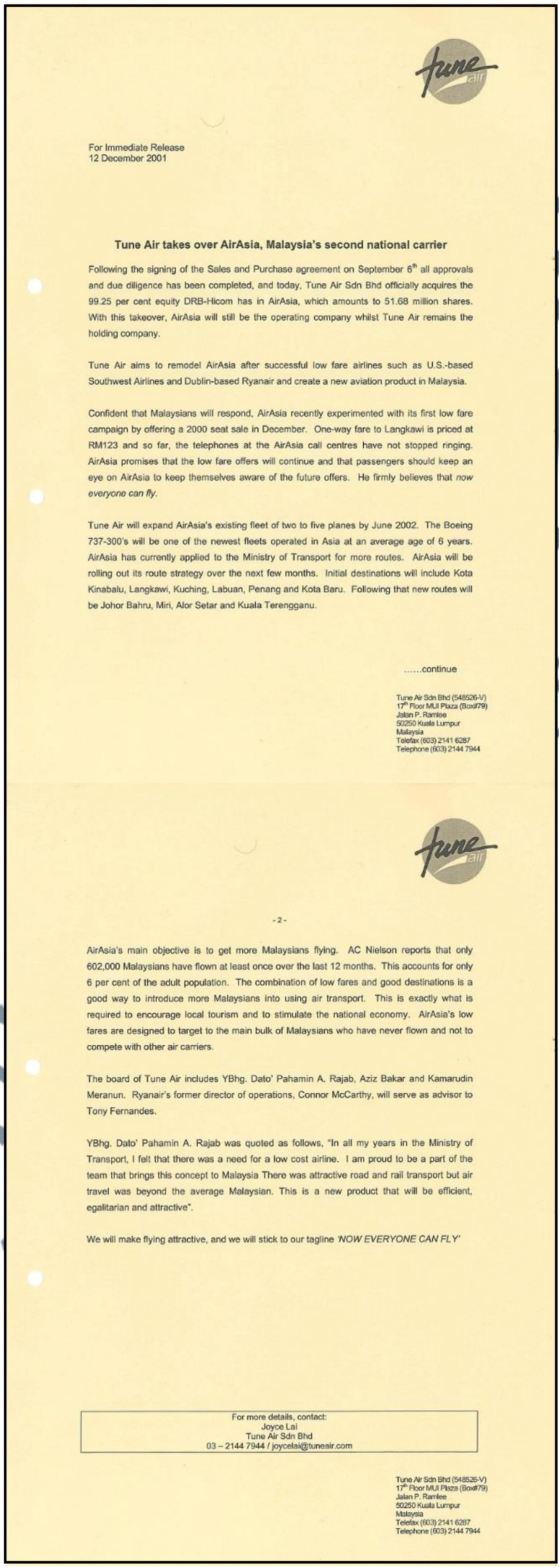
Pengurus Besar Kanan
Perkhidmatan Kewangan & Perbendaharaan

MUSTAHAK
Resit ini dianggap batal jika cek tidak di akui oleh bank.

Source: AirAsia Group Berhad (2020b)

Figure 2.20: Tune Air purchase shares from AirAsia DRB-Hicom

Figure 2.21 is the snapshot of the first press conference from Tune Air. In this press conference, this airline stressed the aim to remodel AirAsia after successful low-fare airlines such as Dublin-based Ryanair and United States-based, Southwest Airlines and create a new product aviation in Malaysia. It added, AirAsia recently experimented with its low-fare campaign by offering a 2000 seats sale in December. Their Call Centre have not stopped ringing when AirAsia offered a one-way fare to Langkawi at the price of RM 123.00, as stated in the press conference release. Tune Air will expand AirAsia's existing fleet of two (2) to five (5) planes by June 2002. The Boeing 737-300's will be one of the newest fleets operated in Asia for an average of 6 years, based on the press conference information (AirAsia Group Berhad, 2020a).



For Immediate Release
12 December 2001

Tune Air takes over AirAsia, Malaysia's second national carrier

Following the signing of the Sales and Purchase agreement on September 6th all approvals and due diligence has been completed, and today, Tune Air Sdn Bhd officially acquires the 99.25 per cent equity DRB-Hicom has in AirAsia, which amounts to 51.68 million shares. With this takeover, AirAsia will still be the operating company whilst Tune Air remains the holding company.

Tune Air aims to remodel AirAsia after successful low fare airlines such as U.S.-based Southwest Airlines and Dublin-based Ryanair and create a new aviation product in Malaysia.

Confident that Malaysians will respond, AirAsia recently experimented with its first low fare campaign by offering a 2000 seat sale in December. One-way fare to Langkawi is priced at RM123 and so far, the telephones at the AirAsia call centres have not stopped ringing. AirAsia promises that the low fare offers will continue and that passengers should keep an eye on AirAsia to keep themselves aware of the future offers. He firmly believes that *now everyone can fly*.

Tune Air will expand AirAsia's existing fleet of two to five planes by June 2002. The Boeing 737-300's will be one of the newest fleets operated in Asia at an average age of 6 years. AirAsia has currently applied to the Ministry of Transport for more routes. AirAsia will be rolling out its route strategy over the next few months. Initial destinations will include Kota Kinabalu, Langkawi, Kuching, Labuan, Penang and Kota Baru. Following that new routes will be Johor Bahru, Miri, Alor Setar and Kuala Terengganu.

......continue

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AirAsia's main objective is to get more Malaysians flying. AC Nielson reports that only 602,000 Malaysians have flown at least once over the last 12 months. This accounts for only 6 per cent of the adult population. The combination of low fares and good destinations is a good way to introduce more Malaysians into using air transport. This is exactly what is required to encourage local tourism and to stimulate the national economy. AirAsia's low fares are designed to target to the main bulk of Malaysians who have never flown and not to compete with other air carriers.

The board of Tune Air includes YBhg. Dato' Pahamin A. Rajab, Aziz Bakar and Kamarudin Meranun. Ryanair's former director of operations, Connor McCarthy, will serve as advisor to Tony Fernandes.

YBhg. Dato' Pahamin A. Rajab was quoted as follows, "In all my years in the Ministry of Transport, I felt that there was a need for a low cost airline. I am proud to be a part of the team that brings this concept to Malaysia There was attractive road and rail transport but air travel was beyond the average Malaysian. This is a new product that will be efficient, egalitarian and attractive".

We will make flying attractive, and we will stick to our tagline *'NOW EVERYONE CAN FLY'*

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Source: AirAsia Group Berhad (2020a)

Figure 2.21: The first AirAsia Press Release after taking shares from DRB-Hicom

Then AirAsia has been officially taken over by Tune Air on 8 December 2001. However, AirAsia was facing a bird strike en route Kuala Lumpur - Kuching by aircraft with registration number 9M-AAB (9Mike - Alpha Alpha Bravo). To avoid any flight cancellations, their only other remaining aircraft, with registration number 9M-AAA, have to fly 24 hours non-stop for 7-10 days. On 6 January 2002, the third AirAsia's Boeing 737-300 with aircraft registration 9M-AAC (9Mike - Alpha Alpha Charlie), was their first iconic red and white AirAsia livery. This aircraft was flown from the US to Sultan Abdul Aziz Shah Airport in Subang (AirAsia Group Berhad, 2020a). The figure is shown below.

Source: AirAsia Group Berhad (2020b)

Figure 2.22: Third aircraft with the first iconic red and white AirAsia livery

AirAsia moved one step when it become the first airline to facilitate credit card disbursements for telephone bookings formed via its Call Centre on 1st March 2002 and on 10 May 2002, the online booking ticket via www.airasia.com has been introduced. The first destination for international flights is in Phuket, Thailand has been launched on 12 November 2003.

Source: AirAsia Group Berhad (2020d)

Figure 2.23: First international flight to Phuket

To ensure their network well grow, on 17 December 2004, AirAsia signed a Memorandum of Understanding (MOU) with Airbus to purchase 100 A320s (AirAsia Group Berhad, 2020a).

<u>2006 – 2010 (Ready for take-off)</u>

To improve aviation safety in Southeast Asia, AirAsia hosts the first EU-Malaysia civil aviation safety conference to promote closer ties between the European and Asian Aerospace industries plus regulatory authorities on 26 April 2006. (EU – European Union). Their business operation was an increase again when Datuk Kamarudin Meranun and Tan Sri Dr. Tony Fernandes released the launch of AirAsia X, a revolutionary long-haul, low-cost airline along the tagline, ‘Now everyone can fly xtra long’ on 5 Jan 2007.

Source: AirAsia Group Berhad, (2020d)

Figure 2.24: ‘Now everyone can fly xtra long’

Thus, their business become positive and expandable whereby 100 more Airbus 320 aircraft have been acquired by AirAsia on 8th January 2007. Resulted on 30 July 2007, AirAsia has been awarded *2007’s Asia’s Best Low-Cost Airline* by Skytrax (AirAsia Group Berhad, 2020a).

Source: AirAsia Group Berhad (2020d)

Figure 2.25: 2007's Asia's Best Low-Cost Airline awarded by Skytrax

A total of 225 A320s were ordered by AirAsia, which made it the biggest operator in the world of the A320. Then on 7 October 2008, AirAsia said goodbye to the last Boeing 737-300 aircraft at our Malaysian operations. They are operating now with 100% of Airbus aircraft in Malaysia. The figure below is symbolic of 100% usage of A320.

Source: AirAsia Group Berhad (2020d)

Figure 2.26: 100% operating with Airbus in Malaysia

Their business operations and services continue to increase over time. This was proven when once again, AirAsia was awarded an international award by Skytrax on the 1st of April 2009. For the first time, Skytrax names AirAsia as the 'World's Best Low-Cost Airline'.

Source: AirAsia Group Berhad (2020d)

Figure 2.27: Awarded World's Best Low-Cost Airline by Skytrax

2011 – 2015 (Flying high)

This international recognition has certainly given positive results to AirAsia's reputation and image. From the operations, administration and marketing team, everyone is full of enthusiasm and high dedication to advance the company. Resulted, within one day, AirAsia sets a new sales record with 725,795 seats sold, on the 21st of September 2011. In addition, on 13th December 2012, another 100 Airbus 320 has been confirmed in order by AirAsia. David Cameron the British Prime Minister, witnesses the signing of agreements between President & CEO Airbus, Fabrice Brégier and Tony Fernandes (AirAsia Group Berhad, 2020a).

AirAsia also experience its dark moments. On 28th December 2014, Flight QZ 8501 crashes into the Java Sea en route from Surabaya to Singapore, marking the greatest tragedy in AirAsia history. All 166 passengers and crew onboard perished.

#Pray for QZ8501. This is the first time their air crashed with all dead. However, AirAsia is still not compromised with safety and security matters. On 12^{th} May 2015, International Air Travel Association (IATA) Operational Safety Audit (IOSA) Registration has been obtained by AirAsia X.

<u>2016 – present (Now everyone can fly)</u>

For the 8th year running, AirAsia is named ‘Asia’s Best Low-Cost Airline’ and ‘World’s Best Low-Cost Airline’ by Skytrax, on 12^{th} July 2016. To ensure their operations are tip-top with the latest technology, in Asean, AirAsia becomes the first airline to fly the Airbus 320neo aircraft. It saves up to 666 litres of fuel per flight when attractive fuel efficiency by 16 -20% (AirAsia Group Berhad, 2020a).

Source: AirAsia Group Berhad (2020d)

Figure 2.28: Airbus 320neo

AirAsia has called the staff ‘Allstars’, to boost their spirit and inspiration. In addition to that, on 7^{th} November 2016, Allstars finally move into their new home, namely RedQ (short for RedQuarters), their new corporate base in Malaysia, after lodging as tenants in Subang Airport, KLIA and Low-Cost Carrier Terminal (LCCT). Later on, a sweet memorable has been achieved whereby, for the 11th consecutive year, Skytrax names AirAsia as the 'World's Best Low-Cost Airline' on 18th June 2019. The management of AirAsia has been upgrading its business operations. This was proved when teams up with parcel delivery player, EasyParcel and Gobi Partners to invest in regional e-commerce, RedCargo Logistics is officially renamed as *Teleport* on 16th July 2019 (AirAsia Group Berhad, 2020a).

Then our country was hit by the pandemic COVID-19 in the year 2020. Thus, on 23rd January 2020, *all flights to Wuhan from Phuket, Bangkok and Kota Kinabalu have been suspended*. Then on 28th March 2020, following strict measures to counter the COVID-19 crisis, AirAsia announces the temporary suspension of all D7 and AK flights. With scheduled domestic flights in Malaysia, AirAsia returns to service stronger. In compliance with the regulations, strict social distancing protocols and health controls are in place.

Source: AirAsia Group Berhad (2020d)

Figure 2.29: Strict social distancing protocols and health controls are in place

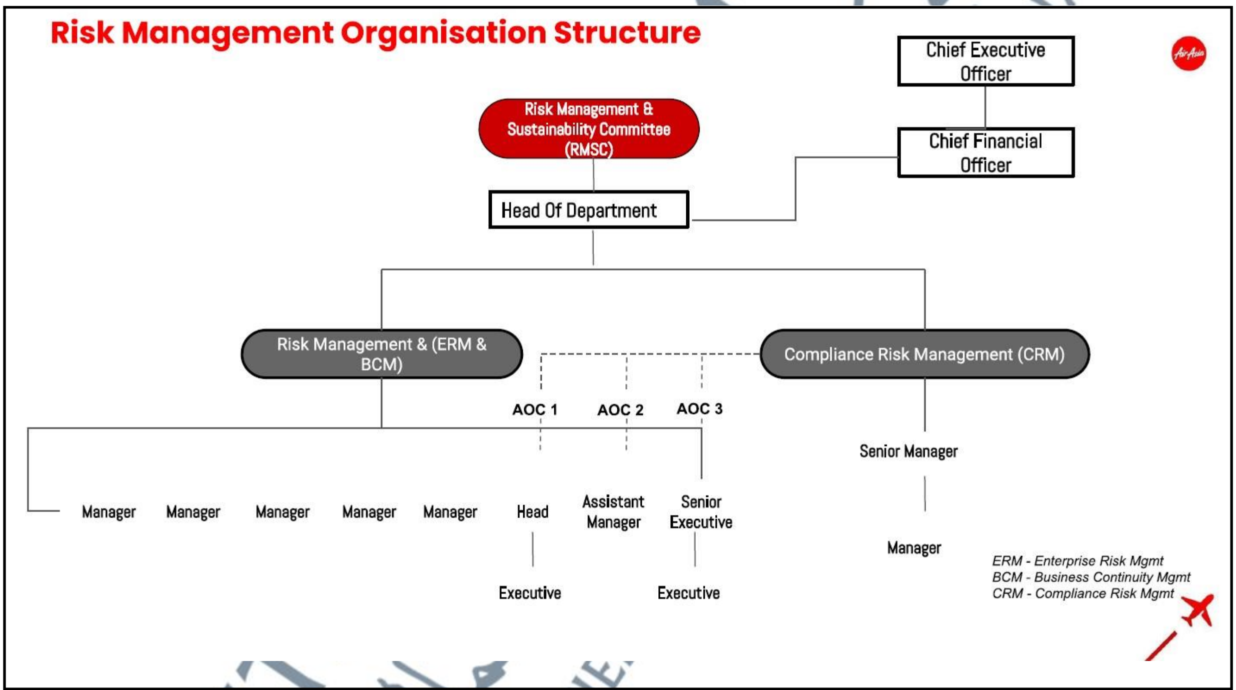
The management is aware that it cannot depend on flying with the passengers alone, especially during the outbreak of COVID-19. Therefore, a first-of-its-kind digital platform in Asean offering end-to-end medical services, airasia.com launches AirAsia Health on 2nd November 2020 (AirAsia Group Berhad, 2020a). In order to face the global attack of COVID-19, several steps have been taken by AirAsia's management. Because of that, the Corporate restructuring plan has been approved by AirAsia X shareholders on 1st Jun 2021. Meanwhile, on 9th June 2021, it converted A320 planes and 737-800 freighters and Teleport strengthens key routes. To control the outbreak of the pandemic situation, AirAsia sets up a vaccination centre at RedQ on 30th July 2021. As an alternative job to their staff, the management launched the *AK ride launch*, whereby the AK Super App wheels into e-hailing. Refer to the figure below:

Source: AirAsia Group Berhad (2020d)

Figure 2.30: AK e-hailing

In order to sustain its operations and safety measures, AirAsia management has made an instruction on 6th October 2021, whereby only fully-vaccinated guests will be accepted on its flights.

The Risk Management & Sustainability Committee (RMSC) is the entity that has responsibilities for risk matters in the AK organization. Under this committee, consists of two departments namely Risk Management (ERM and BCM) and Compliance Risk Management (ERM – Enterprise Risk Management). Their objectives are to back the RMSC in accomplishing its obligation for ensuring the implementation of appropriate systems to manage the overall risk and identifying significant risks and lastly sustainability disclosure of the Group (AirAsia Berhad, 2022). They are also required to supervise and proposed the risk management policies, frameworks and strategies of the Group. Respondent 1 is a manager for ERM and BCM. Their organization chart is as below:



Source: Respondent 1

Figure 2.31: Risk Management Organization Structure

In conclusion, no one would have thought that AirAsia's strongman was an artist. Starting with the brave actions of these 5 guys by investing money to get 2 planes, is a sign that AirAsia continues to be proud to get various international awards. They are Aziz Bakar, Tony Fernandes, Conor McCarthy, Datuk Kamarudin Meranun and Datuk Pahamin Rajab, that set out the dream to come true (AirAsia Group Berhad, 2020a).

Historic occasion. (L-R) Aziz Bakar, Director, Tune Air; Dato' Tik Mustaffa, Director of Hicom Holdings; Dato' Pahamin A. Rajab, Director, Tune Air; Datuk Kamarudin Meranun, Director, Tune Air; Tony Fernandes, Director, Tune Air; Raja Azmi, CFO, AirAsia Sdn Bhd (2001)

Source: AirAsia Group Berhad (2020a)

Figure 2.32: Key men during set up on AirAsia

Allowing everyone to fly was Tony Fernandes's dream. It started with RM1, 40 million in debts and 2 aircraft. Today, a brand that has changed Asia forever and is one the biggest low-cost airlines in the world, is a reputation that comes from AirAsia. Now everyone can fly.

2.10 The Background of Malaysia Airports Berhad Organization

Since its establishment in 1992, Malaysia Airports has come a long way since it was corporatized as Malaysia Airports Berhad (MAB). It used to be run by the government as an airport operator. Was incorporated as a public limited company in 1999 and then Malaysia Airports Holdings Berhad (MAHB) was listed on the

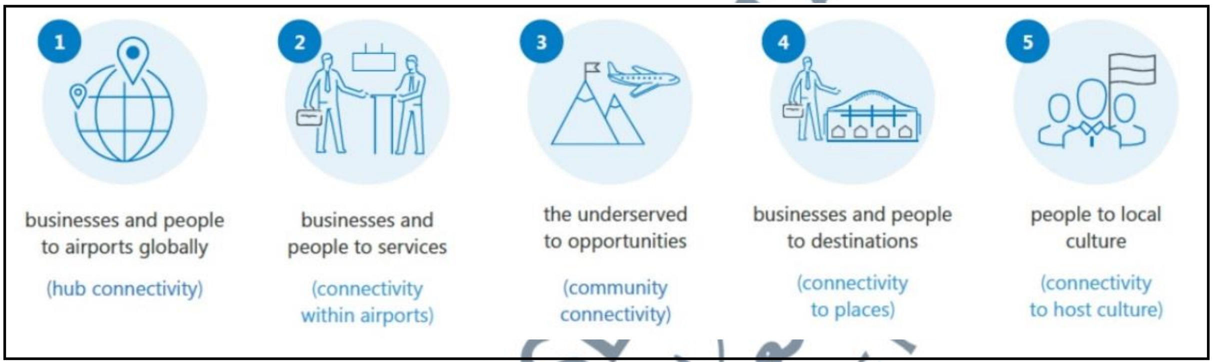
Malaysian Stock Exchange (Bursa Malaysia). The only 6th in the world and becoming the first Asian airport operator to go public to do so. Now, one of the largest airport operator groups in the world is Malaysia Airports. From the point of the number of passengers organized, whereby it managed 39 airports in Malaysia and overseas (17 domestic and STOLports and 5 international airports), counting Turkey as an international airport [STOL – Short Take Off and Landing] (MAHB, 2021b).

MALAYSIA AIRPORTS

Source: Malaysia Airports Holdings Berhad (2021b)

Figure 2.33: Logo of Malaysia Airports Berhad

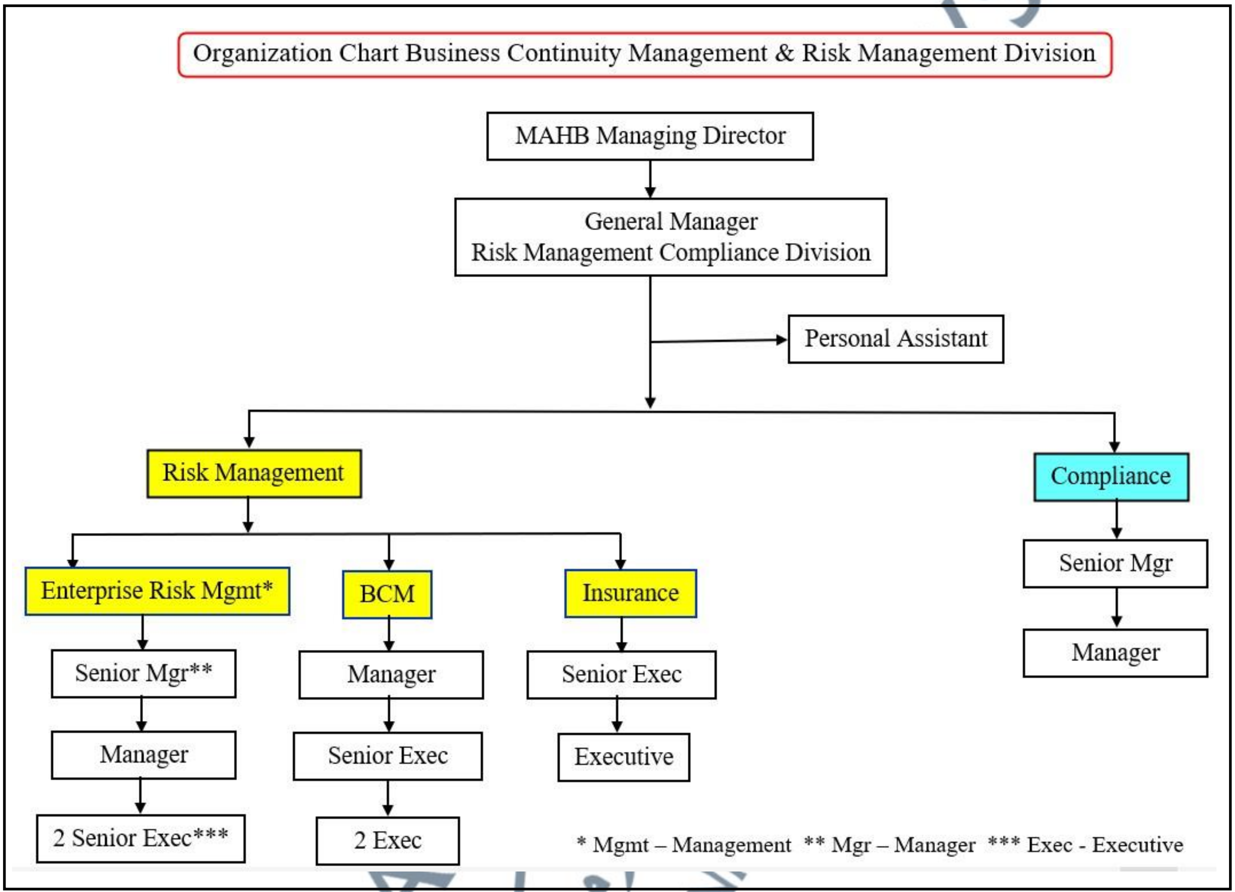
MAHB essence business is the operation, maintenance, development of airports and management. The revenue of Malaysia Airports draws from passenger service charges, other airline charges, aeronautical operations (aircraft landing and parking fees), hotel operations, commercial leasing, other retail outlets and commercial activities from the airport such as duty-free shops (MAHB, 2021b). MAHB has developed a business model over the past several decades, that focal point is not exclusive to the airport business but likewise on enhancing the commercial and prosperity opportunities brought by the aviation and travel industry. MAHB's vision is to be a global airport group as their move forward, that champions sustainability and connectivity by businesses and delights people while delivering sustainable value to all our stakeholders with world-standard services. Not only allowed them to keep aviation charges at a competitive level but the diversification of Malaysia Airports' business activities also to maintain robust returns to our shareholders. Furthermore, for our smaller landing strips and airports where rural communities depend on air transport to connect with the closest townships or cities, especially in Sabah and Sarawak, this model has allowed us to cross-subsidize the vital, but less lucrative operations. As a worthy corporate citizen, Malaysia Airports sees the continuing operation of these remote airbases as a crucial part of its responsibility (MAHB, 2021b).



Source: Malaysia Airports Holdings Berhad (2021a)

Figure 2.34: Achieve a vision by connecting to these entities

The division responsible for this study is Business Continuity Management and Risk Management Division (BCMRMD). Under this division, consists of two departments namely Risk Management and Compliance. BCM is parked under Risk Management and led by a manager name, Respondent 2. The main objective in their contingency plans is to minimise the brunt on all distressed passengers and appropriate them cautiously to their destinations. At the same time, their responsibilities are also to produce a platform for reporting and deliberation of risk management subjects. To empower knowledge, increasing cooperation and coordination between agencies involved in facing the challenges of air disaster management in Malaysia, on 19 October 2022, MAHB organized National Air Disaster Management Webinar with cooperation from National Disaster Management Agency (NADMA) (Malaysia Airports Holdings Berhad, 2021d). This webinar will help participants understand the content and essence of documents related to the National Search And Rescue (SAR) Manual and the National Disaster Management Policy and Mechanism. The BCMRMD organization chart is as below:



Source: BCM and Risk Management Division

Figure 2.35: Organization Chart for BCMRMD

Meanwhile, the business entities for MAHB can be categorised as below:

DUTY FREE AND NON-DUTIABLE GOODS

- KL International Airport (KUL)
- Kota Kinabalu International Airport (BKI)
- Kuching International Airport (KCH)
- Langkawi International Airport (LGK)
- Penang International Airport (PEN)

AGRICULTURE AND HORTICULTURE

- KL International Airport (KUL)
- Bintulu Airport (BTU)
- Miri Airport (MYY)
- Sibu Airport (SBW)

HOTEL

Four locations in and around KUL and SAW:

- KLIA1 landside
- KLIA1 airside
- klia2 airside
- SAW landside

PROJECT AND REPAIR MAINTENANCE

AIRPORTS

- KL International Airport (KUL)
- Kota Kinabalu International Airport (BKI)
- Kuching International Airport (KCH)
- Langkawi International Airport (LGK)
- Penang International Airport (PEN)
- Sultan Abdul Aziz Shah Airport, Subang (SZB)
- Hamad International Airport (DOH)

PORT

- Port of Tg Pelepas

COMMERCIAL BUILDINGS

- Airbus Helicopters Malaysia
- Cainiao Aeropolis eWTP Hub
- Exxon Mobil
- Masjid As-Syakirin KLCC
- Maxis Tower
- Novugen Pharma (Malaysia)
- Persada PLUS
- Petronas Tower 3
- Sepang International Circuit
- SPIRIT Aerosystems Malaysia

Source: The Sustainability Department (2021)

Figure 2.36: Business entities for MAHB

Undoubtedly, MAHB has also won several proud awards. Among them are:

Source: Malaysia Airports Holdings Berhad (2021a)

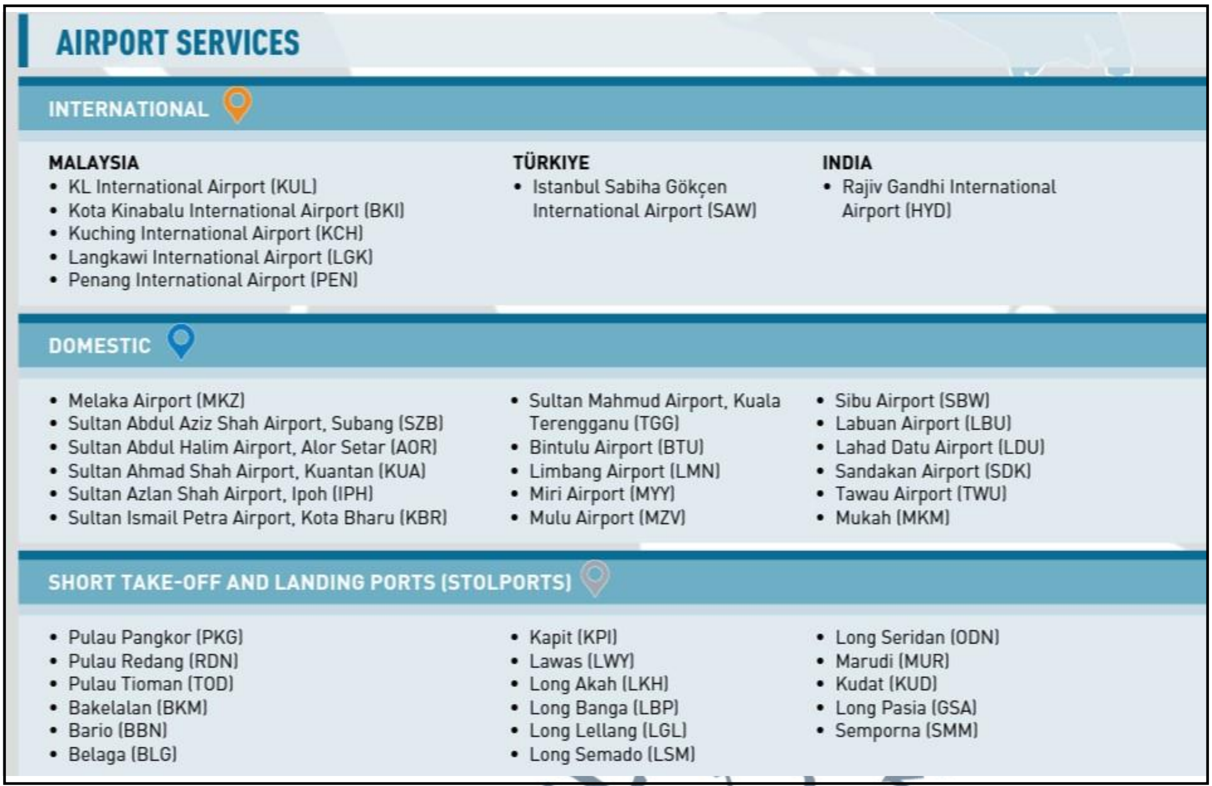
Figure 2.37: The Voice of Customer Awards 2021 for KLIA and Langkawi airport

Source: Malaysia Airports Holdings Berhad (2021a)

Figure 2.38: Airport Service Quality Awards 2021 for KLIA and Langkawi airport

Their business location is around Malaysia and internationals as depicted in the figure below:


MALAYSIA AIRPORTS HOLDINGS BERHAD
WHERE WE OPERATE
Langkawi (LGK)
4.0 mppa
Alor Setar (AOR)
0.8 mppa
Kota Bharu (KBR)
1.5 mppa
Pulau Redang (RDN)
Penang (PEN)
6.5 mppa
Kuala Terengganu (TGG)
1.5 mppa
Ipoh (IPH)
0.5 mppa
Istanbul Sabiha Gökçen
International Airport (SAW)
Türkiye
41.0 mppa
100% shareholding
Pulau Pangkor (PKG)
Kuantan (KUA)
1.3 mppa
Rajiv Gandhi
International Airport (HYD)
INDIA
25.0 mppa
11% shareholding
Subang (SZB)
1.5 mppa
KL International Airport (KUL)
KLIA1
30.0 mppa
klia2
45.0 mppa
Melaka (MKZ)
1.5 mppa
Pulau Tioman (TOD)
Kota Kinabalu (BKI)
9.0 mppa
Sandakan (SDK)
1.5 mppa
Labuan (LBU)
2.2 mppa
Lahad Datu (LDU)
0.1mppa
Limbang (LMN)
0.3 mppa
Lawas (LWY)
Miri (MYY)
2.0 mppa
Mulu (MZV)
0.05 mppa
Long Pasia (GSA)
Semporna (SMM)
Long Semado (LSM)
Marudi (MUR)
Bakelalan (BKM)
Tawau (TWU)
1.5 mppa
Long Seridan (ODN)
Bario (BBN)
Long Lellang (LGL)
Long Akah (LKH)
Long Banga
Bintulu (BTU)
1.0 mppa
Mukah (MKM)
0.3 mppa
Belaga (BLG)
Sibu (SBW)
1.8 mppa
Kapit (KPI)
Kuching (KCH)
5.3 mppa

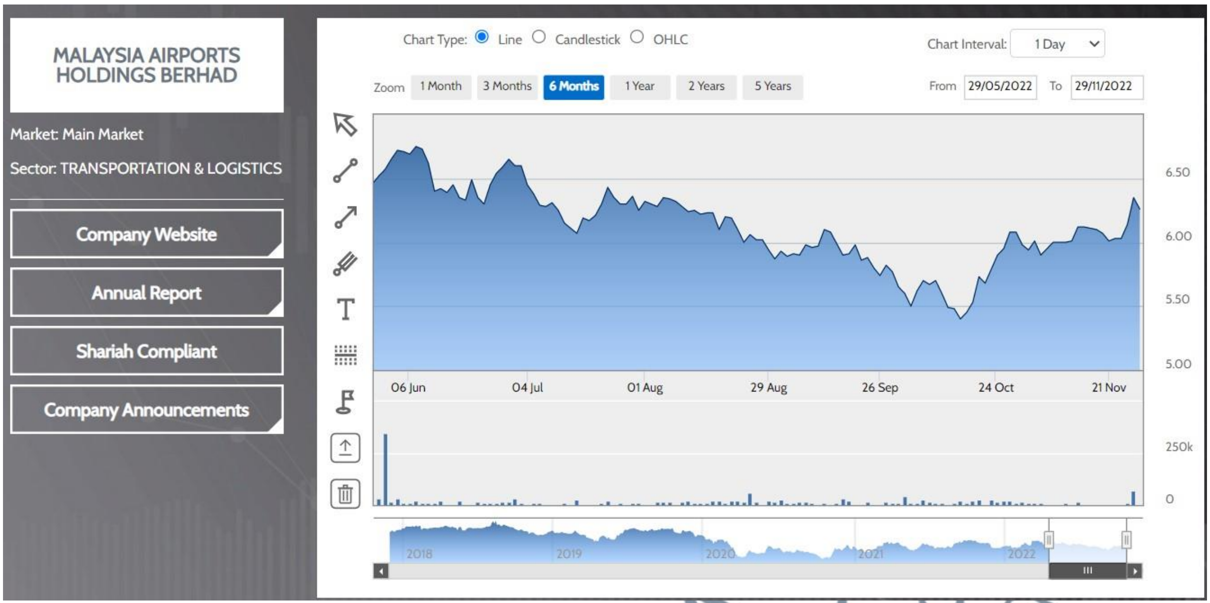


Source: The Sustainability Department (2021)

Figure 2.39: MAHB operates in these locations

MAHB gained international trust when it was appointed to manage an international airport, namely, Istanbul's Sabiha Gökçen Airport, in Turkey (with 100% shareholding). This is the second largest airport after Ataturk International Airport (Airport Technology, 2014). Meanwhile, MAHB also managed Rajiv Gandhi International Airport, in Hyderabad, India with a shareholding of 11%. Almost all states in Malaysia have airports managed by MAHB except the state of Johor (39 airports).

In terms of financial and share market performance, there are running on the right track and can be praised and proud. This can be proven through the Bursa Malaysia and GlobalData.com website about their stock position. Figure 2.40 shows the performance of MAHB shares from the Bursa Malaysia website. It turns out that the management of MAHB has been conducting affairs with dedication and efficiency. Headquartered MAHB is in Sepang, Selangor.



Source: Bursa Malaysia Berhad (2022)

Figure 2.40: The shares performance from 6 June until 21 November 2022

From MAHB website itself also shows their stock fundamentals performance as correct on 25 November 2022, as below:

Quotes Updated End Of Day

Updated: 25 Nov 2022

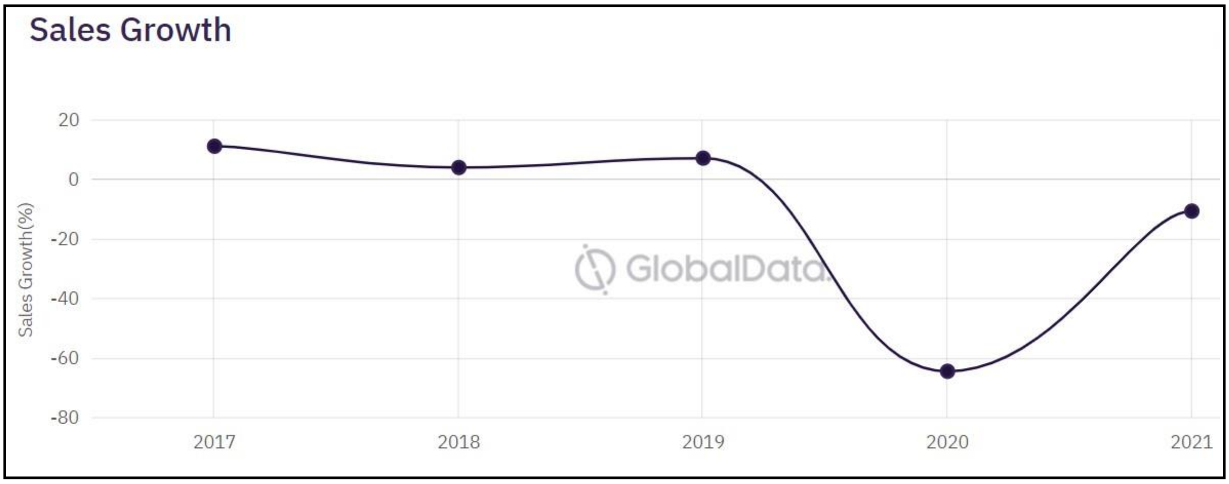
Bursa Symbol:	5014	Currency:	MYR
Last Done:	6.350	Volume ('00):	71,101
Change:	+0.210	% Change:	+3.420
Day's Range:	6.180 - 6.500	52 Weeks' Range:	5.400 - 7.080

EPS (MYR) [a] **-0.49659**	PE [a] -
NAV (MYR) [b] **3.6570**	Price / NAV [b] **1.7118**
Dividend (MYR) [d] -	Dividend Yield (%) [d] -
Market Cap (M) **10,386.542**	Issued & Paid-up Shares [c] **1,659,192,000**

Source: Malaysia Airports Holdings Berhad (2022)

Figure 2.41: MAHB Stock Fundamentals performance as of 25 November 2022

By referring to Figure 2.41, the last point under “Last Done” is 6.350. There is a positive remark when the “Change” indicator is +0.210 and the “% Change” is +3.420 at the volume 71,101. Meanwhile, information from GlobalData.com shows the sales growth of MAHB. They have done quite well in 2017, 2018 and 2019 year. But during COVID-19 in 2020 year, the sales dropped. The business in that year was affected globally, not only by MAHB. But MAHB rose again the following year, 2021. The graph as below:



Source: GlobalData Plc (2022)

Figure 2.42: MAHB Sales Growth 2017 – 2021

2.11 Conclusion

The greatest disease attack at this moment is COVID-19. It attacks from all angles. From the newsagent to the Liverpool stadium gate opener. Such massive interruptions as the pandemic raise the risk related to business and unpredictability. Thus, from the literature review, the BCM has been seen as the best solution to deal with the pandemic issue that does not know when the end will be. In addition to the BCM program during a pandemic, it is focused to reduce on the financial burden, sustainability of an organization and effectiveness of operations. Findings also stated that the meeting of literature BCP while the pandemic was successful without any time limitations after trial and error. The next chapter will explore the Research Methodology, such as the purpose of the study, conceptual framework, the unit of analysis, case study selection, data collection techniques and validity of data findings.