

Post-Covid Impact on “Essential” and “Non-Essential Industries” Group 10-13

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1 Introduction

1.1 Theme

The theme for the project was “The post-pandemic world 5 years from now”. We interpreted the theme as such: 5 years from now, what would human society look like after Covid-19 has passed? What would have changed and why? How could we reflect on our experiences to better prepare for future pandemics, and to improve the future?

We identified several industries and communities that were severely impacted by the pandemic.

- Industries
 - Entertainment and Tourism
 - Healthcare
 - Supply chain
 - Human transportation
- Communities
 - Covid poses a greater risk on young and old people
 - Front-line workers (including healthcare workers, cleaners, food deliverymen, public transport workers and hawkers)
 - Foreign workers
 - Start-up businesses and entrepreneurs
 - Artists

1.2 Rationale

We observed that the list included several communities or industries deemed “essential” as well as some considered “non-essential”. (Janice Tai, 2020) While we could have used secondary research to narrow down our choices of industries to investigate, we found it important not to evaluate the severity of impacts on different sectors based on instinct. Instead, first hand observation would yield a more accurate representation of the truth. Hence we decided to interview as many organisations as we could, to understand which sector was worse affected. By interviewing people from multiple industries, we could compare the difficulties faced by “essential” and “non-essential” sectors, and in the process hopefully generating fresh insights on the problems arising from Covid and some potential solutions. Government policies and support measures affect industries differently, and the waves of Covid support measures left gaps in between roll-outs. We need more sustainable and long-term solutions, to reduce the financial burden on past government reserves, and a cohesive cross-sector policy to tackle the common challenges faced by different industries.

2 Primary research

2.1 Interview respondents

We interviewed the following organisations:

1. Infectious Diseases Labs at A*STAR (ID Labs)¹

ID Labs was established in September 2020 after the start of Covid-19 to mitigate the effects of Covid through the research of disease patterns in the community.

2. Crystal Moments Pte Ltd²

Established in 2006, Crystal Moments is a retailer and service provider of personalized and custom crystal products in Singapore. They started making personalized 2D and 3D crystal portraits for tourists in Sentosa in June 2007, and have since expanded their services to provide one-stop customization services for both individual customers and corporate clients, with products such as crystal portraits, plaques, awards, trophies, figurines, decorations and jewelry.

¹“A*STAR infectious diseases labs (ID Labs)”, n.d.

²“Photo crystal and trophy supplier”, n.d.

3. **LTS Group Pte Ltd**³

LTS Group is a wholesaler of corporate gifts and branding collaterals for clients' marketing efforts, customer giveaways or staff incentives. They supply products such as bottles, bags, notebooks, tech accessories and bigger ticket items such as electric home appliances. They also provide services including logo printing, warehouse storage and sample mock-ups of products.

4. **The Orchestra of the Music Makers (OMM)**⁴

OMM is a Singapore-based symphony orchestra established in 2008. It comprises over 140 volunteer musicians and performs a wide repertoire of musical styles, including classical works and film music.

5. **Cheese Creative Art Studio 启思艺想创意坊**⁵

Cheese Creative Art Studio is an art enrichment centre based in Malaysia which provides creative art and drawing classes for children.

6. **Singapore Tourism Board cruise team (STB Cruise)**⁶

STB is a statutory board under the Ministry of Trade and Industry of Singapore which champions the development of Singapore's tourism sector. We worked with the cruise department which serves as the cruise lead coordinator in the Association of Southeast Asian Nations (ASEAN).

7. **The Human Expression (T.H.E) Dance Company**⁷

Founded in 2008, THE Dance Company is a contemporary dance performance company based in Singapore.

The interviews with ID Labs, Crystal Moments, LTS Group, OMM and Cheese Creative Art Studio were conducted using Zoom Cloud Meetings. The interviews with STB Cruise and T.H.E Dance Company were carried out in the form of an email Q&A, because of the interviewees' busy schedules.

2.2 Interview questions

The interview questions for the healthcare sector were placed in a separate section from the rest because of major differences in content.

2.2.1 Healthcare sector

1. How might the inception of the A*STAR Infectious Diseases Labs alleviate the effects of future pandemics?
2. What do you think are some of the major impacts of Covid-19 on the healthcare and research community?
3. What challenges has your branch faced when collaborating with other departments under A*STAR and also with multiple hospitals in Singapore, during this pandemic?
4. What was your initial response to how your work might be affected when you first learnt about the COVID-19 situation?
5. What were some of your first few actions to adapt to the situation?
6. How prepared do you think Singapore was when the pandemic first started? How has this changed over the course of the pandemic?
7. In hindsight, is there anything you would have done differently?
8. As the Singapore government is planning to invest \$25 billion in research, innovation and enterprise for the next 5 years, how do you think this will benefit the R&D industry?
9. What do you envision as "the future of pandemic preparedness"?

³"LTS group", n.d.

⁴"Orchestra of the Music Makers Singapore", n.d.

⁵"Cheese Creative Art 启思艺想·创意坊", n.d.

⁶"Cruise", n.d.

⁷"#thegoesonline 数码舞者登陆", n.d.

10. What are some directions for the development of healthcare and research communities under the influence of COVID-19?
11. What aspect(s) of the current research and healthcare system would you like to improve on and what you would like to keep 5 years from now?
12. Is remote research away from the research laboratories a feasible prospect? How likely do you think it is going to happen?
13. What kinds of technologies have been developed and implemented to tackle COVID-19? Do you think they are applicable to tackle future diseases?

2.2.2 Other sectors

1. (a) *STB Cruise*: How has the STB Cruise Team been supporting the cruise line companies during these tough times?
2. How has your organisation or community been affected by Covid? What are some negative impacts?
3. What ideas have you come up with to cope with the negative impacts of Covid-19?
4. How prepared do you think you were when the pandemic first started? How has this changed over the course of the pandemic?
5. (a) *Crystal Moments, LTS Group*: How has the Fortitude, Resilience, Solidarity and Unity Budget by the Singapore government helped your business (or not)?
 (b) *OMM*: Has the Arts and Culture Resilience Package and other government support measures helped your organisation (or not)? If so, in what way?
6. How do you wish the situation will develop in the future? What do you hope will not happen?
7. How will your business try to recover and adapt to revert back to normal operations? How long do you think it will take?
8. (a) *Crystal Moments and LTS Group*: We learnt from your website that your company provides online ordering and shipping services. Was the mode of ordering the same before Covid? How has digitalisation impacted your business?
 (b) *OMM*: We learnt from your website that as part of the OMM RESTARTS! programme during the Covid period, you have tried to resume live concerts. Additionally, you have launched digital releases while following safe management measures. How has digitalisation impacted your organisation as well as the audience?
 (c) *THE Dance Company*: It was mentioned on your website that you hope to create digital programmes that retain the distinct characteristics of live performances, and maintain audience participation. It was also stated that you had tried real-time live-streaming as well as creating Virtual Reality (VR) 360° experiences. How has digitalisation impacted your organisation as well as the audience? How did you manage the logistics and technical aspects of creating these digital experiences?
9. What is your goal for the next 5 years of your organisation? How do you plan to reach this goal?
10. What if the constraint of Covid-19 and Safe Management Measures (SMM) were removed? How would that change things?
11. In hindsight, is there anything you would have done differently? What have you learnt from your experience in managing your organisation through this pandemic?
12. Which of your organisation's adaptations for Covid will you modify for long term use after the pandemic?
 (a) *OMM*: Do you think that digital performances can complement physical concerts for audiences, or would OMM prefer to revert back to predominantly physical performances?
 (b) *STB Cruise*: It was mentioned on the STB website that you take a three-pronged strategy to develop Singapore's cruise industry, through infrastructure, business development and industry capability. Has there been any compromise or shift in focus in these strategies due to the decrease in passengers?

3 Challenges identified

SME Small and medium-sized enterprise

MNC Multinational corporation

3.1 Difficulties in learning digital technology for digitalisation

Observation: Crystal Moments and LTS Group found that **learning digital technology for digitalisation was difficult**. They experienced a high workload because they had to develop digital platforms for their businesses. Crystal Moments' owner expressed that good learning resources were hard to find, and there was a steep learning curve in developing websites and using platforms like Lazada. LTS Group commissioned another company to develop their online ordering website because they did not know how to do it themselves. OMM expressed that taking high quality recordings of performances was expensive because they had to hire specialists.

Why this could pose a problem in the future: Companies may find digitalisation difficult because of their lack of expertise. It is harder during the current Covid period to hire IT specialists in order to shift their business online. Hence businesses face a great increase in workload when learning the necessary skills for digitalisation by themselves. Additionally, good learning resources are important for workers to learn efficiently. However, these resources are scarce on the internet and full time courses may conflict with workers' work hours. This problem may particularly impact old-age workers as they may be less adaptable to the shift online and their employability may be affected. Since digitalisation is a trend that is here to stay, this issue will only become more pressing in the future.

Research: According to a SME Digital Transformation Study involving a poll of 400 SME owners and key IT decision-makers here from March to June, 83% of SMEs in Singapore have digital transformation strategies in place, but despite higher adoption rates, only two in five SMEs perceived their efforts to be successful. In addition, more than half the firms (54%) blamed the Covid-19 outbreak for slowing their digital transformation plans, and about an equal proportion (56%) said it was too expensive to digitalise. As such, digitalising has proven to be troublesome for multiple SMEs. (Hariz Baharudin, 2020)

According to McKinsey and Company, 70% of complex, large-scale change programmes don't reach their stated goals. Common pitfalls include a lack of employee engagement, inadequate management support, poor or nonexistent cross-functional collaboration, and a lack of accountability. Furthermore, sustaining a transformation's impact typically requires a major reset in mind-sets and behaviors—something that few leaders know how to achieve. (Michael Bucy et al., 2016)

In 2011, General Electric started a major effort to assert itself in the digital software space by building a huge internet of things (IoT) platform, adding sensors to products and transforming its business models for industrial products. GE tried to do too much without a real strategic focus in any area. The company was simply too large to transform all at once, especially without a true vision of what it was trying to achieve. As a result, the company's stock price continued to drop and other products suffered. (Blake Morgan, 2019)

3.2 Difficulties in attracting customers to digital alternatives and making digital experiences appealing

(customer) experience all consumer responses during the consumption process, involving senses, emotions, perceptions, involvement and pleasure. For example, shopping, performances and services all provide customer experiences.

Observation: LTS Group, Cheese Creative Art Studio and OMM **faced difficulties in attracting demand online**. Patrons preferred an in-store experience over adopting online alternatives. Cheese Creative Art Studio's owner asked the parents' chat group whether they were willing to let their children go for online lessons, but 90% rejected the idea in the chat. Initially, around 70 of the 150 original students were willing to take online lessons. Similarly, LTS Group had invested in online advertisements for their products but the effect on their sales was insignificant. Previously they had depended on walk-in clients, but demand dropped due to Covid.

Another point raised was that **digital experiences were not as attractive as physical experiences**. Crystal Moments' owner uploaded photos of their products onto their website but he felt that the experience of viewing photos was incomparable to handling it in-store. He also claimed that communication face to face in the shop was faster than through texting, and created a better customer-seller relationship. THE Dance Company tried to innovate via live-streaming and

VR recordings of performances to take advantage of the digital medium and retain the feeling of live performances: encompassing audience participation and the “in-the-moment” quality of physical shows. OMM has launched digital releases on YouTube, which were recorded before Covid or while following safe management measures during Covid, as an alternative to live performances.

Why this could pose a problem in the future: We can infer that customers prefer physical and live experiences. Although digitalising is the only choice for some businesses during the pandemic, there are also downsides. For example, communication via social media often creates a loss of nuance and tone. Video-conferencing and live-streaming feel more distant and provide users the option to turn off video and audio, eroding audience engagement. In particular, businesses which sell physical products are unable to offer customers the chance to interact with the products online. Due to the lack of appeal, consumers may opt out of digital experiences and reduce their expenditure, which lowers revenue for local businesses.

Research: During a Bangtan Boys (BTS) Online Concert Weekend held in April, at least 50 million fans tuned in. Most viewers expressed that it did not feel the same as live concerts, rather, they claimed it was like watching a YouTube video. In the past, being present at physical concerts allowed them to share the moment with the BTS band. The band leader, BTS RM otherwise known as Kim Namjoon, admitted that he felt it was tough not being able to see their fans face to face in concerts. Although digital performances are often a substitute to real shows during the pandemic, audiences may still prefer live performances.

According to Romero et al., 2019, “despite the fact that digital technologies play a fundamental role in enabling innovation in service delivery processes, customer interactions still remain a critical point.”

3.3 Difficulties in adapting and innovating to improve competitiveness

Observation: The owner of Crystal Moments mentioned that their company was quite successful during the 2000s due to their innovative and novel products, but demand decreased after other businesses started selling the same products. LTS Group was slow to ride the digital wave and had largely depended on walk-in customers. Unfortunately, they lost business during these 2 years, even after digitalising and setting up their website, possibly because of a lack of customer base online.

Why this could pose a problem in the future: Accelerated digitalisation, as a result of the pandemic, has broadened businesses’ access to global markets, creating **fiercer competition for the global market share**. It is **crucial to innovate and to future-proof a business**. If companies fail to innovate, their sales would drop since other companies in the same industry would be able to provide consumers with more appealing products. Ultimately, **businesses can be eliminated if they do not anticipate change and rapidly adapt**. Crystal Moments is an example of securing demand through innovation in technologies and products. In contrast, LTS Group’s lack of quick adaptability during the pandemic has and may continue to create problems.

Research: Nokia is another example of a company which lost out to competition. Although initially successful, Nokia failed to adapt to rapid changes in the smartphone industry, and was acquired by Microsoft in 2013. Its failure was attributed to inferior technology compared to Apple, internal politics and lack of vision by the leaders of the company. While the launch of the iPhone sparked consumer interest in smartphones, Nokia was hesitant to pursue this new technology. In the end, it was outstripped by competitors as a result of lack of adaptability and innovation. (WAIO, 2018)

Home movie and video game rental services giant, Blockbuster Video, was founded in 1985 and arguably one of the most iconic brands in the video rental space. At its peak in 2004, Blockbuster employed 84,300 people worldwide and had 9,094 stores. Unable to transition towards a digital model, Blockbuster filed for bankruptcy in 2010. The more attractive model of digital streaming companies such as Netflix resulted in their slow decline and eventual failure when they were unable to adapt and digitalise in time. (1985 -2010) (Frances Goh, n.d.)

Toys“R”Us originally signed a 10-year contract to be the exclusive vendor of toys on Amazon in 2000. As a result, Toys“R”Us missed the opportunity to develop its own e-commerce presence early on. Far too late, Toys“R”Us announced in May 2017 its plan to revamp its website as part of a \$100 million, three-year investment to jump-start its e-commerce business. They ended up filing for bankruptcy in September 2017 under pressure from its debt of US\$1billion. (1948 -2017) (Frances Goh, n.d.)

At one time the world’s biggest film company, Kodak could not keep up with the digital revolution, for fear of cannibalizing its strongest product lines. Kodak held back from developing digital cameras for the mass market for fear of eradicating its all-important film business. Competitors,

such as the Japanese firm Canon, grasped this opportunity and has consequently outlived the giant. Another example is Kodak's acquisition of a photo sharing site called Ofoto in 2001. However, instead of pioneering what might have been a predecessor of Instagram, Kodak used Ofoto to try to get more people to print digital images. Kodak filed for bankruptcy in 2012 and after exiting most of its product streams, re-emerged in 2013 as a much smaller, consolidated company focused on serving commercial customers. (1889-2012) (Frances Goh, [n.d.](#))

3.4 High workload and lack of manpower

Observation: ID Labs stated that the hospital clinicians, whom they worked with, had too much work to do, especially during the peak of the pandemic. They had to handle the gathering of empirical data for academic research while taking care of Covid patients. The two other teachers at Cheese Creative Art Studio resigned due to financial concerns during the pandemic, and the owner of the centre became the only teacher managing all of her students.

Why this could pose a problem in the future: With the virus often evolving and forming new strains of more effective variants, the Covid-19 pandemic may continue, and the **workload of the healthcare sector may become increasingly heavy**. They will face more challenges with manpower allocations as more healthcare professionals will be needed to take care of the patients while collecting data on the effectiveness of treatments. For businesses, **as employees are laid off due to lack of revenue, workload on the remaining employees increases**.

Research: According to the World Health Organisation, there will be a shortage of 12.9 million healthcare workers by 2035, up from the gap of some 7.2 million today. (Christopher Black, [2013](#)) Singapore Trade and Industry Minister Chan Chun Sing mentioned that demand for manpower in the "recession-proof" healthcare sector will continue to grow in the coming years in an interview with the straits times. (Calvin Yang, [2020](#))

According to the 2021 Work Trend Index, commissioned by the American technology giant, Microsoft, about one in two workers, or 49 per cent, feels exhausted, while 58 per cent feel overworked, and 49% are considering leaving their employers this year according to an online poll in January of more than 1,000 workers here in Singapore. (Kenny Chee, [2021](#))

3.5 Limited funding and financial concerns

Observation: Many interviewees expressed **financial concerns**. Cheese Creative Art Studio saw a sharp drop in demand for lessons since the start of the Covid lockdown in Malaysia in 2020. This caused financial strain and **loss of revenue** which impacted the teachers' income stability, eventually causing 2 of the teachers to switch to other jobs. ID Labs mentioned that funding for healthcare research **only comes in waves** when there is a pandemic, such as during Covid-19 or SARS, and it usually dries up between pandemics. Thus, research efficiency is compromised during periods of low funding. LTS Group saw a sharp **decline in demand** for their products as less events with customer giveaways were being organised, in light of SMM. SMM restrictions also reduced the audience for OMM performances drastically, which caused a decrease in revenue. Online recordings of performances were also free, so they did not contribute to income.

Why this could pose a problem in the future: Before Covid, many businesses depended heavily on physical business. In the likely scenario that Covid remains in the near future, businesses would be unable to cover their operating costs if digitalisation does not bring in sufficient revenue. Government subsidies can only provide them with limited and temporary help. If companies are unable to obtain sufficient and consistent funding, they may be forced to close down.

Research: The Singapore Chinese Chamber of Commerce and Industry (SCCCI) did a survey on 1,020 companies —95% of which are SMEs. 50% of the companies that took part in the poll said that the Covid-19 pandemic has caused a major impact on their business models and almost 60% said that it will take them one to two years to recover to pre-pandemic levels. In addition, the top challenges raised by businesses include: financing and cash flow; rising business costs; uncertain economic and political conditions overseas. 80.3% of businesses also claimed that revenues were compromised, while 75.7% saw profit margins decline. (Justin Ong, [2020](#))

According to a survey conducted on more than 5,800 small businesses, many small businesses were financially fragile. The median business with monthly expenses over \$10,000 only had enough cash on hand to last 2 weeks. Three-quarters of respondents only had enough cash on hand to last 2 months or less. Firms with more cash on hand were more optimistic that they would remain open at the end of the year. (Bartik et al., [2020](#))

4 Underlying problem

By combining problems 2, 3 and 5, we identified this underlying problem. Inevitably, due to the broad span of challenges faced by the various organisations interviewed, some of the problems were not covered in the Underlying Problem. We focused on the challenges confronting small businesses.

Given that many businesses (including LTS Group, OMM and Cheese Creative Art Studio) are facing financial difficulties due to the drop in demand during Covid, which has disproportionately impacted physical stores and experiences, how can we support local businesses in maintaining a stable demand for their products and services, so that they can tide over the Covid period and regain their footing thereafter?

5 Solutions

5.1 Set up R&D department, innovate

Businesses can restructure their business model to **emphasize innovation**, by **setting up a research and development (R&D) department**. The R&D department would serve to develop new technology, prototype new products, services and experiences, then pilot test them with customers and **adapt the business model correspondingly**. If discoveries are made, R&D can lead to patents, copyrights, and trademarks. By integrating innovation into the core business model, businesses can improve their adaptability and increase the appeal of novelty. However, setting up an entire R&D department takes substantial investment and the return on investment is unpredictable. Thus the government could provide **subsidies for businesses to cut the cost** for setting up R&D departments, and streamline the process to encourage more businesses to do so. Therefore, businesses would be able to create new and appealing products to attract more customers, thereby increasing and stabilising demand. (Will Kenton, [n.d.-b](#))

Research:

For example, the Inland Revenue Authority of Singapore (IRAS) provides R&D tax benefits for companies. Tax deductions are granted to encourage pervasive R&D in Singapore and to build innovative capabilities of our people and businesses. However, the process can be streamlined to increase uptake. Similarly, the UK government introduced the Research and Development Expenditure Credit (RDEC) in 2013. It is a tax incentive which encourages companies, both large and small, to invest in R&D. Companies can claim a proportion of the costs on R&D projects where they have tried to achieve an advance in science and technology and overcome uncertainty. This reduces the financial burden on the companies and encourages them to develop new technologies and products.

(“Claim research and development (R&D) expenditure credit”, [2007](#); Jenny Tragner, [2017](#); “Research and development (R&D) -how to claim R&D tax benefits”, [n.d.](#))

5.2 Market research and adaptation of offerings

The government can subsidise businesses to **provide incentives (such as vouchers) for consumers who complete surveys** or interviews so that consumers would be more willing to participate in these studies. Businesses can thus **understand customer desires** to meet any hidden or unmet needs. Businesses themselves can also conduct first-hand observations and **market research** to understand consumer needs, for example via focus groups, one-to-one interviews and ethnographic research. (“Market research”, [2018](#)) Subsequently they can **change the design of customer experiences**, either physically or on digital platforms by taking advantage of new technologies, to create more engaging offerings tailored to their customers’ needs. All of this would increase customer satisfaction and increase demand for a business’ products.

Research:

For example, Cheese Creative Art Studio observed that relationships between family members were strained after Covid lockdowns forced them to stay in the house together for long periods. They then adapted their online art lessons to be more interactive and engaging, not only for their young students but also for the entire family. This helped to ease tensions in the families and boosted their demand for classes.

T.H.E dance company understood that their audience preferred the unique feeling of real-time, “in-the-moment” performances and engaging audience participation during live performances. Hence they started a programme titled #THEGOESONLINE, in which they explored Virtual Reality and real-time live streaming as a way to increase audience demand during Covid.

5.3 Improve customer service to increase customer satisfaction

MOE and MTI can collaborate to develop a platform which links businesses to **customer service workshops**, or they could integrate it into SkillsFuture. They can also create part-time customer service courses which would provide businesses a flexible learning schedule. Businesses can then send their staff to take courses on important service values such as patience and a “people first” attitude to interact better with customers. With the help of such courses, businesses can improve their customer service to make a good impression and retain customers. By applying skills learnt from customer service courses, businesses can **facilitate communication with clients** through a robust Q&A service and closer buyer-seller interaction via phone calls and online meetings. Not only does this **improve a customer’s attachment to a company**, the increased **interaction** can also make customers feel more comfortable whilst purchasing products in their stores. Businesses can also start a customer loyalty and membership programme which would benefit both parties. Repeat customers are rewarded while businesses gain from increased customer loyalty and hence repeat purchases. Overall, by improving customer service, more customers will be satisfied with their purchasing experience, and may be more inclined to patronise the same businesses in the future.

Research:

An example of a platform which provides customer learning courses is “Skillsfuture”, [n.d.](#), which was set up by MOE. It is a national movement that provides opportunities for all Singaporeans to continue learning at different stages of their lives. They provide education and career guidance including career coaching, employability skills workshops and skills-based modular courses, enabling Singaporeans to acquire skills relevant to industry needs. For example there is a course titled “Provide Go-the-Extra-Mile Service”⁸ available on the SkillsFuture website which costs \$350, to educate individuals on the importance of exceeding customer expectations and creating a positive customer experience.

5.4 Create more and better advertisements

The government could implement subsidies to **reduce the cost for the production and dissemination of advertisements**. In addition, businesses could hire advertising art directors to come up with **innovative ideas for publicity campaigns** in media such as print, TV, radio and online. If businesses focus on creativity, entertainment value and quality in their advertising, they would likely increase the reputation of the brand and attract customers. If they are unable to hire professional marketing teams due to financial constraints, they can **learn design, videography and video-editing skills** by themselves using online courses and websites like Coursera and Skillshare. To reduce the cost of airing advertisements on the TV or online, businesses can create **free social media accounts** to disseminate ads and information. Advertisements raise public awareness of a brand and persuade consumers to purchase goods and services, hence increasing demand.

Research:

A similar scheme by the government is the “Marketing Partnership Programme”, [n.d.](#) (MPP) which is part of STB’s COVID 19 Recovery Plan. It aims to support the marketing initiatives of local hotels, attractions, inbound travel agents and the MICE sector, portray Singapore as a choice destination for business events and drive tourist demand when the market recovers. This can be expanded to SMEs’ marketing efforts, which would encourage more individuals to patronise their offerings.

5.5 Government provide platform for SME and MNC collaboration

The government can develop a **platform** (whether online using a website or offline via organising conventions or fairs) **where SMEs can link up to MNCs or other SMEs**. This way, MNCs and SMEs can easily look out for potential collaborators and **secure partnerships** with other companies. Smaller businesses could collaborate with larger companies by providing materials for MNCs, which would create a stable demand for their products. They can also collaborate with other SMEs from different industries and **share their expertise** to develop new and attractive products to increase sales. Collaborations between small companies can also **combine the customer bases of both businesses** to stabilise demand and revenue earned by the SMEs.

Research:

⁸“Course Detail | Provide Go-the-Extra-Mile Service”, [n.d.](#)

For example, the A*STAR Collaborative Commerce Marketplace (ACCM) helps SMEs connect with MNCs, A*STAR research agencies and institutes of higher learning, to advance common interests in the engineering sector. The ACCM portal allows MNCs to easily find potential suppliers in Singapore while SMEs can gain insights to the needs of MNCs. Collaboration allows these companies to grow and remain competitive. (“SMEs now have ‘LinkedIn’ portal to connect them to MNCs and research institutes”, 2016)

Similarly, Singapore’s “PACT programme”, n.d. encourages mutually beneficial collaborations between companies. One enterprise assumes the role of a leader in driving projects to benefit the other companies, transferring knowledge to them and helping them upgrade their technology. Sharing expertise allows all parties to learn and adapt their offerings to attract more customers.

6 Evaluation of solutions

6.1 Criteria

1. Which solution will create the **greatest increase and stability in customer demand** for businesses, so that they can overcome their financial difficulties?
2. Which solution will generate the most **sustainable sales** for businesses and relevant organisations, so that it would benefit them in the long run and not just for a few months?
3. Which solution will be the most **feasible** for businesses and relevant organisations, so that it can be implemented as easily as possible?
4. Which solution will be the **cheapest** for businesses and relevant organisations, so that they can minimise costs and save money for other investments?
5. Which solution will be the **fastest** to see results, so that businesses will be able to see their return on investment before they might be forced to close down?

6.2 Ranking solutions

No.	Solution Ideas	Criteria					Total
		1*	2	3	4	5	
1	Set up R&D department, innovate	4	5	1	1	1	16
2	Market research and adaptation of offerings	5	2	2	4	4	22
3	Improve customer service to increase customer satisfaction	1	4	5	5	2	18
4	Create more and better advertisements	3	1	3	2	5	17
5	Government provide platform for SME and MNC collaboration	2	3	4	3	3	17

Numbers refer to the scores given to each solution when ranked based on a particular criteria, 1 is the lowest score while 5 is the highest. Solution number 2 was chosen as the basis of the action plan.

*Because criteria 1 is directly linked to the Key Verb Phrase in the Underlying Problem, it carries double weightage, therefore the score is multiplied by 2.

7 Action plan

7.1 Definitions

Market research “is the process of determining the viability of a new service or product through research conducted directly with potential customers. Market research allows a company to discover the target market and get opinions and other feedback from consumers about their interest in the product or service” (Alexandra Twin, n.d.)

Target market refers to a group of people who share similar attributes such as demographics, income, living area, challenges, goals and purchasing power. Consumers in a group are often attracted to the same products and services. Target markets allow businesses to better understand their current and potential consumer base, so that they can modify a product’s price, marketing strategy and distribution to better appeal to consumers. (Will Kenton, n.d.-a)

Buyer personas are fictional, generalized representations of customers based on demographic and psychographic data. (Farese, 2021; Grenier, n.d.)

Focus groups are groups of several participants from the same target market taking part in market research

7.2 Steps of action plan

1. *Market research; why is it important?*

According to Alexandra Twin, n.d., “The purpose of market research is to look at the market associated with a particular good or service to ascertain how the audience will receive it.” By gathering information about their target markets, a company can understand the needs and opinions of different types of customers, develop attractive products and tailor advertising efforts to suit each target market. Businesses can conduct pilot tests with some members of the target market to test the waters and get feedback, before launching a new product. If done well, market research can provide a company a competitive advantage over other companies in the same industry. “Part of the success of selling a good or service is knowing to whom it will appeal and who will ultimately buy it. That’s why businesses spend a lot of time and money to define and monitor its target market.” (Will Kenton, n.d.-a)

2. *Identify target market via research (≈1 week)*

How?

Conduct research (using past sales records) and compile buyer personas.

Include the following information about each target market or buyer persona:

- Who are they?
 - Age
 - Gender
 - Location
 - Job titles
 - Family size
 - Income
- What is their main goal?
- What is their main barrier to achieving this goal?
(Farese, 2021; Grenier, n.d.)

3. *Define research objectives (≈1 week)*

Possible objectives:

- Verify if a product will be welcomed by the market
- Understand the needs and desires of the target market
- Learn about customer behaviours and points of friction in the customer’s journey that may demotivate them from buying
- Adjust prices according to competitors’ prices and how much customers expect to pay
- Understand which part of the marketing resonated with the target market

4. *Decide on the method to collect information, prepare questions and conduct research (≈4-5 months)*

(a) Primary research

Who?

Contact people who had recently made a purchase, purposefully decided not to make one, or are interested in the type of service you offer but do not want to make a purchase. Try to contact at least 10 participants from each buyer persona to reduce distortion of data. To attract participants, you can provide small cash incentives, exclusive products or something else. Send a thank you note to participants afterwards to show your appreciation.

How?

- (Offline or online) surveys

- Online survey distribution platforms include SurveyMonkey, KeySurvey, and Web-Surveyor. For face-to-face surveys, staff must be sent on the field to collect information from participants.
 - Face-to-face interviews (prepare a discussion guide beforehand)
 - Test a product, watch a demo or collect feedback from focus groups
 - (Overtly and covertly) observe target audiences interact with a product or conduct interviews focused on specific products to understand why audiences use a product
 - Ask for feedback after customer purchases face-to-face or using feedback tablets or emails
- (b) Secondary research
- Search for keywords in google search
 - Use Google Trends to find out what customers are interested in
 - Public sources such as government data
 - Commercial sources, research agencies or trade association reports like Pew, Gartner, Forrester and Statista
 - Internal sales data
 - Leverage a third-party marketing analytics firm
 - Competitors' public relations campaigns, prices and business models
5. *Analyse and interpret data (≈1 month)*
Empathise and seek to understand the human element. Seek patterns and group observations under broad categories. Write a research report to document the findings and propose ways to use them.
6. *Apply the findings to improve customer experience*
Possible actions:
- Smooth out points of friction in online systems or physical shops (≈1 month or less if the changes are relatively minor)
 - Proceed with a product launch (immediate)
 - Develop and test product prototypes with focus groups (duration depends on the type of product, ≈3-4 months if done quickly, it may take multiple iterations of building on audience feedback)
 - Change prices based on the participants' perception of product price and competitors' prices (immediate, but it will take time to update the prices)
 - Alter marketing strategies (depends on whether it is a short term or long term change, ≈2 months)
 - Create targeted advertisements towards the buyer personas
 - Modify marketing based on campaign research by focusing efforts on successful styles of marketing in the past

(Adam Barone, [n.d.](#); Beatriz Estay, [2020](#); “Conducting online market research”, [n.d.](#); “What is online market research?”, [n.d.](#))

7.3 Additional information

Who can help?

- Customers willing to participate in research
- External market research agencies
- Research agencies' and government's data can be used for analysis
- Government support via grant or subsidies
 - The Singapore government can reallocate funding from existing budgets or plan for future budgets, to push out a new grant to support businesses in incentivising people to participate in market research. For example, they can cover part of the cost of vouchers given to a business' market research respondents.

- However, some companies may not use the subsidies in the intended ways. Alternatively, governments could let businesses spend their own money for market research, then claim a portion of the costs from the government. By performing a simple check on the use of funding, the government can ensure that businesses are using the grant to conduct market research.

Potential obstacles

1. Lack of willing respondents
2. No valuable findings, unable to draw patterns in data
3. Confusion in the data collection process
4. Lack of manpower

How to overcome the obstacles?

1. Use incentives to motivate more people to participate.
2. Increase sample size to get a more accurate trend or reveal new patterns. Ask open ended and probing questions during interviews to understand customers' thoughts, feelings, needs and decision making process.
3. Plan before conducting research
4. Conduct research part-time, whenever possible, or extend the timeline.

(Evan Tarver, n.d.; Konrad Bleyer-Simon & Iva Nenadić, n.d.; “Subsidy”, n.d.)

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