



MAGIC
Malaysian Global Innovation & Creativity Centre

X

Human Inc

Digital Health & Wellness: Then, Now and Tomorrow

Industry Insights from the Digital Health and Wellness Roundtable

5 August 2021

Prepared by Human Inc

Foreword by MaGIC



Amiruddin Abdul Shukor

Acting Chief Executive Officer (ACEO), MaGIC

COVID-19 has accelerated the rise of digital health and wellness technologies which are critical in the fight against the ongoing pandemic. Before the pandemic, we already saw signs that technology companies hop on the health and wellbeing bandwagon. We also started noticing technology complementing wellness where devices are used as monitoring tools for personal wellbeing. From a medical standpoint, both patients and physicians will turn to technology as their first point of reference. Healthcare will be increasingly delivered via technology, and diagnosis will be increasingly performed by artificial intelligence.

Because of movement limitations and physical interaction restrictions, digital health will certainly remain a permanent fixture as people are more aware of remote monitoring and self-care. The digital health market covers a broad scope of technologies, including mobile health apps, connected wearable devices, and telemedicine.

Although we see rising voluntary public adoption of wellness startups, the industry pain points and barriers to further innovation such as fragmented legacy systems, difficulties in showing values and at times, a disconnection with patient needs.¹ There are also risks of leaving those without digital access behind including the elderly, socially disadvantaged or underserved communities.

In the past few months, advancements through the Internet of Things (IoT), nanotechnology, genome sequencing, artificial intelligence and blockchain have emerged - each offering potential transformation of the healthcare and wellness industry which is too big to pass up. Based on Statista's findings, the revenue for digital health and wellness globally is marked at 73 billion USD as of May 2021 and expected to grow to 128 billion USD by 2025. It is worth noting that the findings also mentioned that 1.98 billion people are using one form or more of digital health services in 2021.²

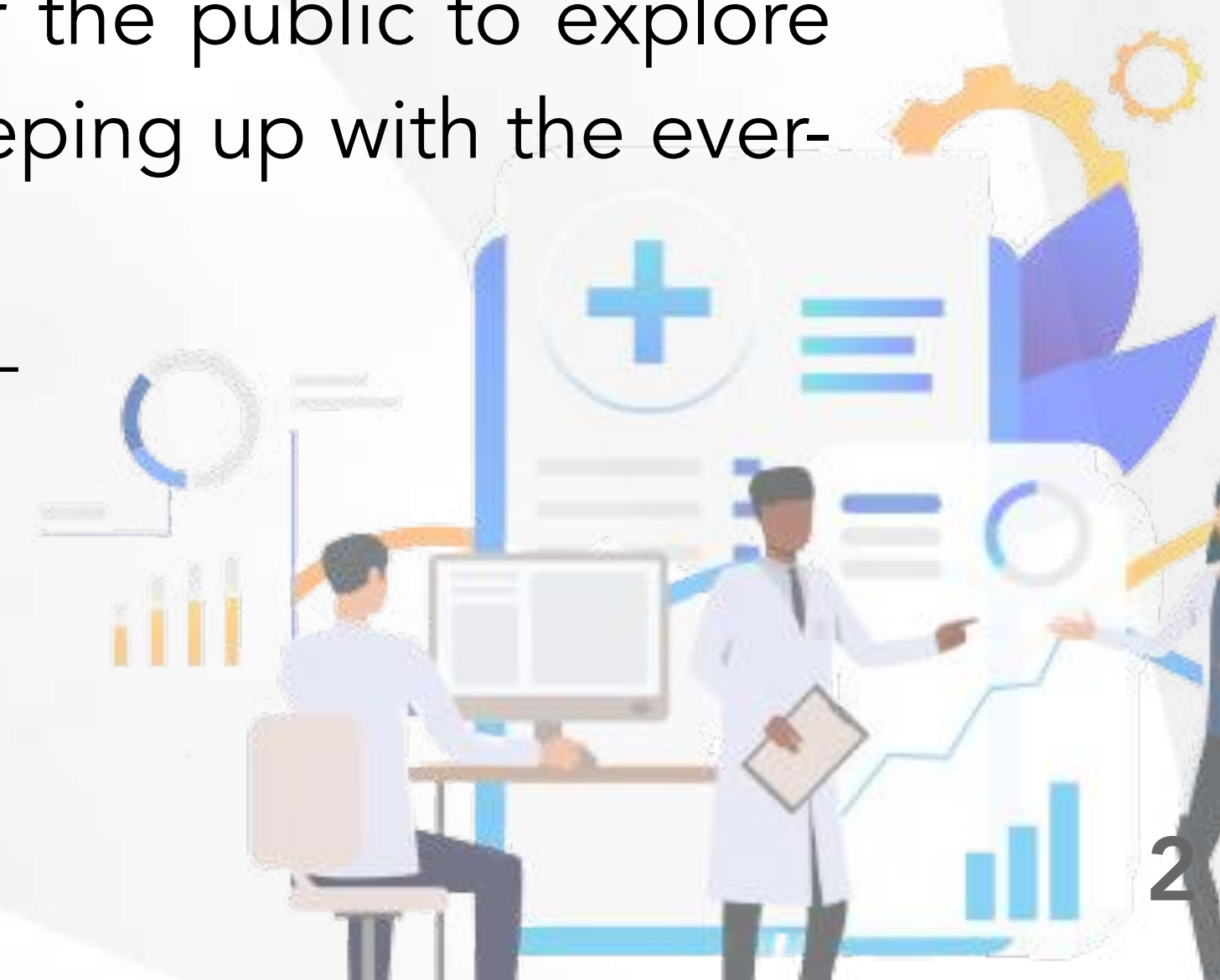
Medical startups are on the rise locally such as Nexuses, GetDoc, QueueMed and Beli Ubat, to name a few. From the government alone, a medical-driven app called MySejahtera was launched to curb pandemic and contact trace. Later on, it evolved into a multi-function app that covers medical appointments, mobile live queue, and virtual health among others.

Even at MaGIC, we believe in access to digital health and wellbeing, especially mental health. We partnered with Naluri for Naluri's integrated digital care solution that combines support for physical and mental health. We also included tools and services necessary for the recovery and sustainability of startups and its founders. The Ministry of Science, Technology and Innovation (MOSTI) introduced the National Technology and Innovation Sandbox (NTIS) in June 2020. It is an initiative aimed at accelerating the local development and commercialisation of technologies to transform specific industries or socio-economic sectors including the medical and healthcare sector. In fact, 26% of the approved applicants in NTIS are testing and offering innovative solutions in the medical and healthcare sector with the aim of improving the physical and emotional well-being of the rakyat.

As an enabler, facilitator and aggregator to the start-up and tech ecosystem over the years, MaGIC is confident that the answers to some of our pressing healthcare issues can emerge from our shores as Malaysian-bred world-renowned companies like Biogenes Technologies, Naluri Hidup and Health Digital Technologies continue to design and deploy solutions for this sector. This said, I believe much more can and must be done. Through this collaboration with Human Inc on the Digital Health & Wellness Industry Report we hope will lead to more empathetic innovations for the public to explore and trust, build a wider perspective in solving these pain points, eliminating existing barriers, while keeping up with the ever-changing innovation landscape.

¹. <https://thejournalofmhealth.com/have-the-barriers-to-digital-health-adoption-changed-with-covid-19-a-year-on/>

². <https://www.statista.com/topics/2409/digital-health/>



Foreword by Human Inc



Christoffer Erichsen

Founding Partner & CEO, Human Inc

In the years leading up to the COVID-19 pandemic, we have witnessed dramatic shifts in how consumers perceive and value health and wellness in their lives. Consumers are increasingly aware of their own personal health and wellness and savvy at searching for information and comparing treatment options. With today's abundance of information, they have come to realise that a more holistic and sustainable approach to health is crucial, with mental and spiritual wellbeing at the forefront of the health and wellness scene. Stating the obvious here, COVID has accelerated and amplified these trends.

Another emerging paradigm is that health is not solely limited to the preservation of life and the management of pain or suffering, but also encompassing wellbeing and performance optimisation — realised as “the experience of living”. This is evident with the recent health product trends that are available in the market, such as sleep trackers, wearable devices to monitor health, as well as nutrition tracking apps and tools. These new products are gradually becoming an indispensable part of our daily lives, helping us to make decisions that ultimately improve our quality of life. As the saying goes, prevention (which includes knowing and consistently monitoring the state of health we are in) is definitely better than cure.

Consumers are also becoming increasingly sensitised towards high quality everyday products and experiences. Customer experience is now an integral change driver in this industry. This presents a challenge AND opportunity for the healthcare and wellbeing industry players to innovate and think out of the box to deliver a delightful relevant experience that is more patient-centric. Ideally, the healthcare ecosystem should understand the patient and make it easy for patients to get healthcare they deserve - but this is still far from the reality today. With increased consumer awareness and service expectations, adopting future skills and experimenting with contemporary approaches in product and service design and technology is critical to deliver a holistic patient experience that takes into account immediate patients needs, desires and emotions - giving winners in this race a competitive advantage ahead of the pack.

Malaysia has in many ways done a great job in improving access to healthcare for its citizens. The healthcare industry itself is projected to experience tremendous growth, in Malaysia alone it is projected to be worth approximately RM154bil by 2027! There's a massive opportunity for the government, employers, healthcare providers, startups, big tech, insurers and citizens to collaborate closer and in new ways to create the future of healthcare and wellbeing. Looking at the future of the digital health and wellness industry and the ecosystem as a whole, it's key that we are aware that where we are today is a consequence of decades of innovation — owing to a multitude of technological advancements, business model innovation and service design improvements. In this regard, the big question we should ask ourselves is this — how do players in the ecosystem (i.e. insurers, public and private health and wellness providers and startups) make health and wellness accessible to all whilst improving healthcare outcomes at a reduced cost to patients? What are some key challenges — that if addressed — will unlock the most value not only for patients, but all the other stakeholders in the ecosystem?

Collaborative opportunities such as the Malaysian Global Innovation and Creativity Centre (MaGIC) Digital Health and Wellness Roundtable is a great step in connecting industry players towards improving the industry for the betterment of all consumers from different walks of life. I would like to extend a big thank you to MaGIC as well as the industry players that were a part of this exciting roundtable. We are thrilled to have been part of this journey and we invite the readers to leverage on the insights gained from this report to further drive collaborative synergies and spark value-adding innovation for growth to accelerate the future of health wellbeing for all.



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Sources and Limitations:

This report is informed by the insights obtained from the Digital Health and Wellness roundtable that was held on the 5th of August 2021 by MaGIC & Human Inc, articles from local, regional and global news sources, as well as respective company websites. While the information in this report is accurate as of the date of publication, some limitations remain due to the nature of information sources.





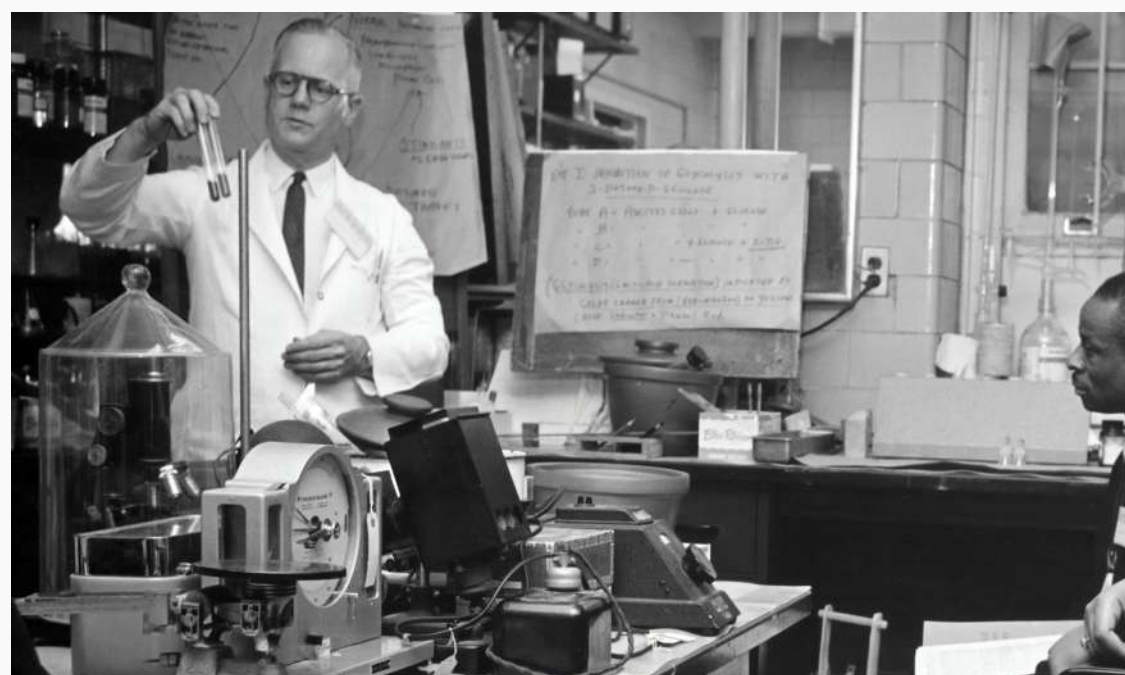
1

Introduction to the Digital Health and Wellness Industry

1.1 The Evolution of Health and Wellness

Amid unprecedented external forces— the Covid-19 pandemic, disproportionate access to medical services and multiplying chronic ailments being prime examples of such— the global digital health and wellness market has witnessed rapid and radical transformation in recent years to cater to shifts in consumer expectations. Our contemporary understanding of what it means to be at the forefront of health and wellness has certainly changed in accordance to the technological advancements of the era, with previous generations having a different set of expectations in lieu of the technology and resources available at the time. See below for a brief summary of how the modern digital health and wellness industry has pivoted and adapted to better serve consumers:¹

Health 1.0: Production



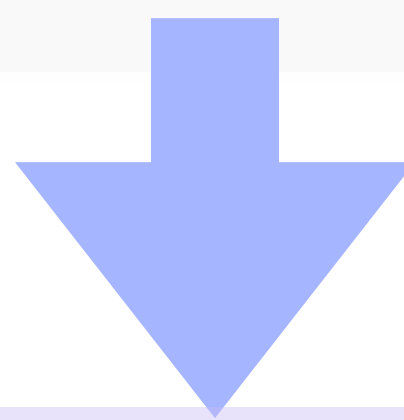
Spurred by the intellectual movements and scientific advancements of the 19th century, the early stages of the health and wellness industry saw a predominant focus in evidence-based treatment. Burgeoning medical research, coupled with improvements in public health and nutrition, vastly contributed to a **decrease in mortality rates** towards the end of the century.



Health 2.0: Industrialisation



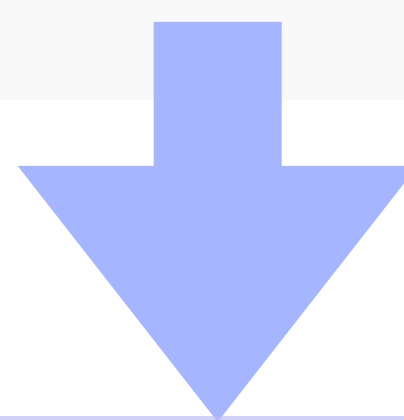
Equipped with the knowledge that modern forms of rapid economic growth would reliably deliver enhanced population health, the industry placed an emphasis on industrialisation and value chain integration. An integral component of this was the proliferation of residential hospitals and clinics, which allowed competing healthcare providers to provide **end-to-end care services**.



Health 3.0: Automation



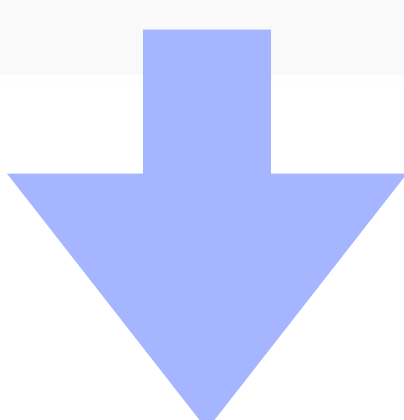
The mandate to **increase accessibility to healthcare** inevitably led to the introduction of automation in the healthcare sector. Enterprise resource planning software, triaging patients, automated patient check-ins etc. were integrated into the operating model which in turn resulted in productivity gains, as well as reduced cost and waste.



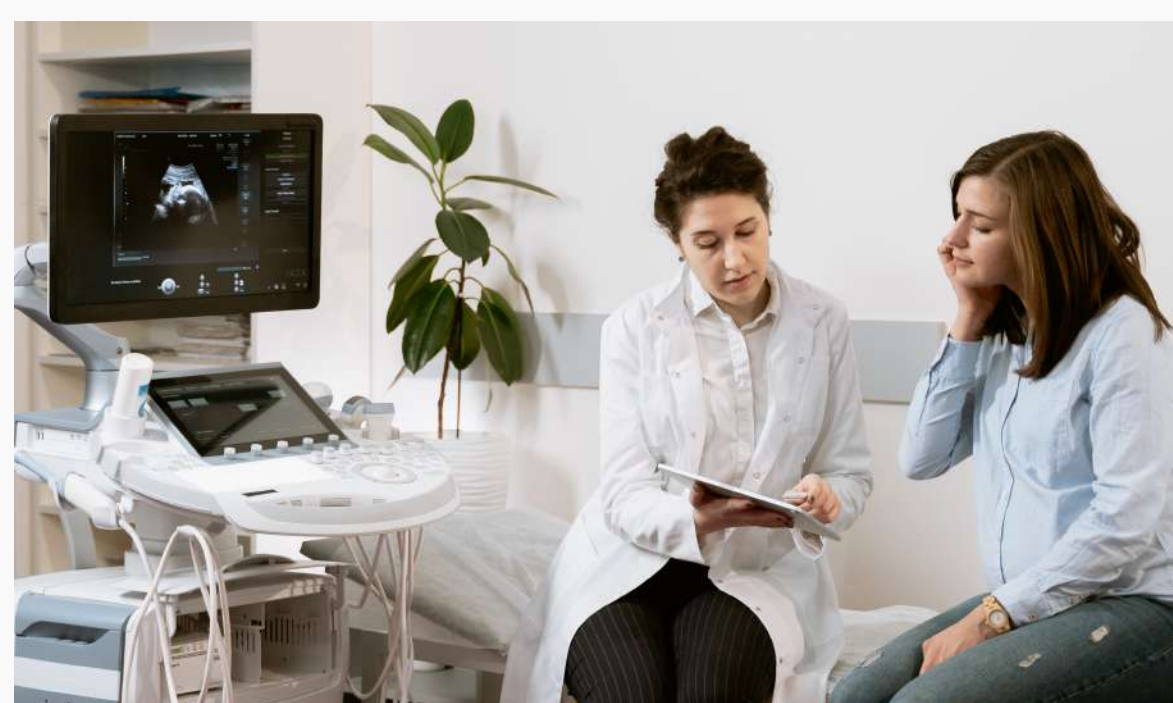
Health 4.0: Digitalisation



This stage has witnessed an upsurge in digitally-driven health innovations such as telemedicine, virtual reality tools, wearable medical devices, and 5G mobile technology. New entrants in the healthcare sector have benefitted from the emergence of new funding models (crowdfunding), with the ability to **provide unique value to customers** serving as a strategic differentiator amongst healthcare providers.



Health 5.0: Personalisation



Presently, the health and wellness industry has evolved beyond a traditional capital-intensive, hospital-centric model to that of one that places the wellbeing and quality of life of its customers at the forefront of it all. Healthcare providers are not only expected to provide automated and digitised offerings, but also to **deliver personalised care services** and cultivate a lifelong partnership with their customers.

1.2 Industry Stakeholder Ecosystem

The health and wellness industry is comprised of various players that operate within a complex and highly regulated ecosystem (refer to diagram 1.2.1).

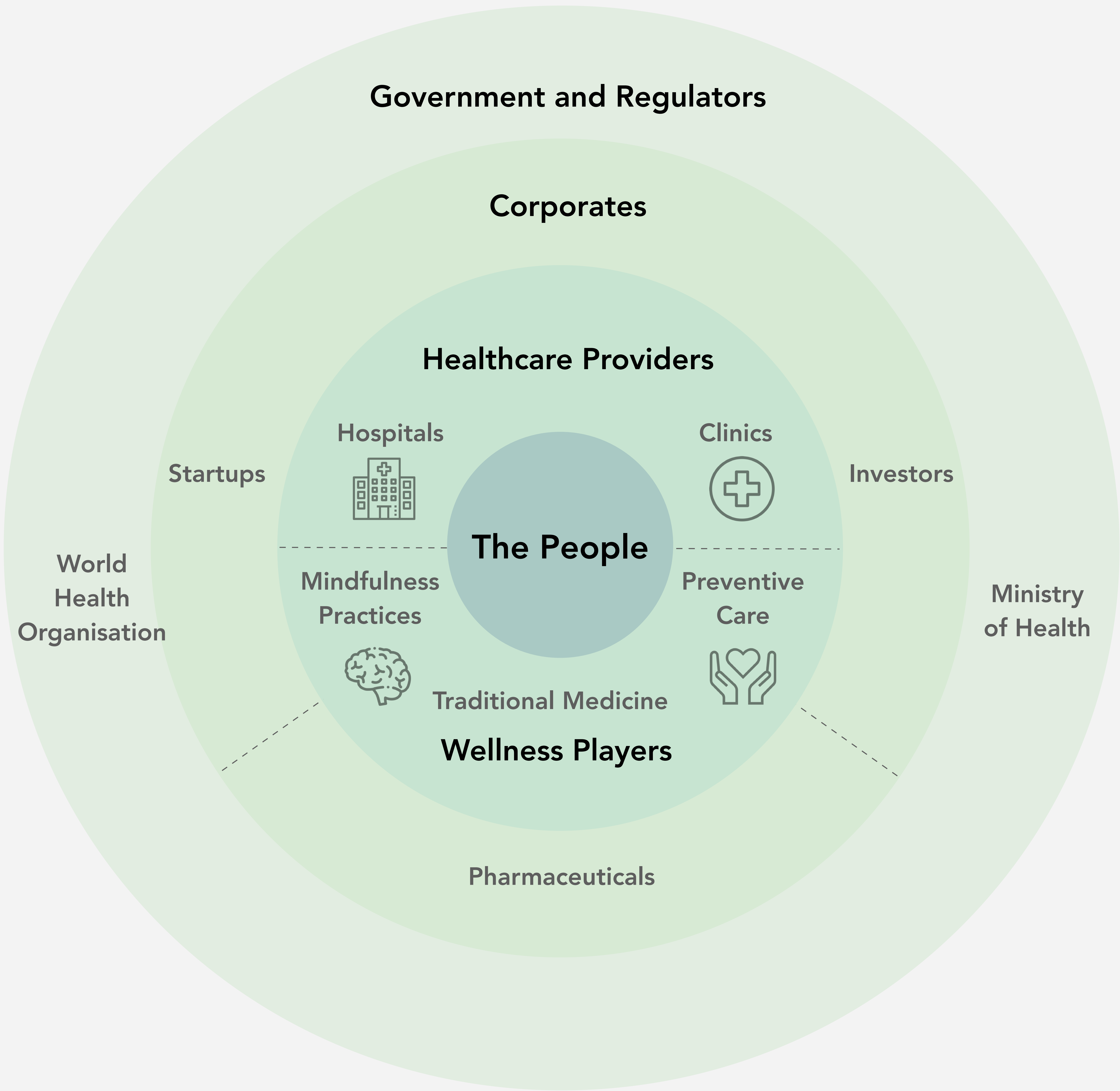


Diagram 1.2.1

Note: Diagram is not exhaustive/indicative of all of the industry players



1.3 The Health and Wellness Industry at a Glance

The Global Health and Wellness Industry

The Global Health and Wellness market revenue projection

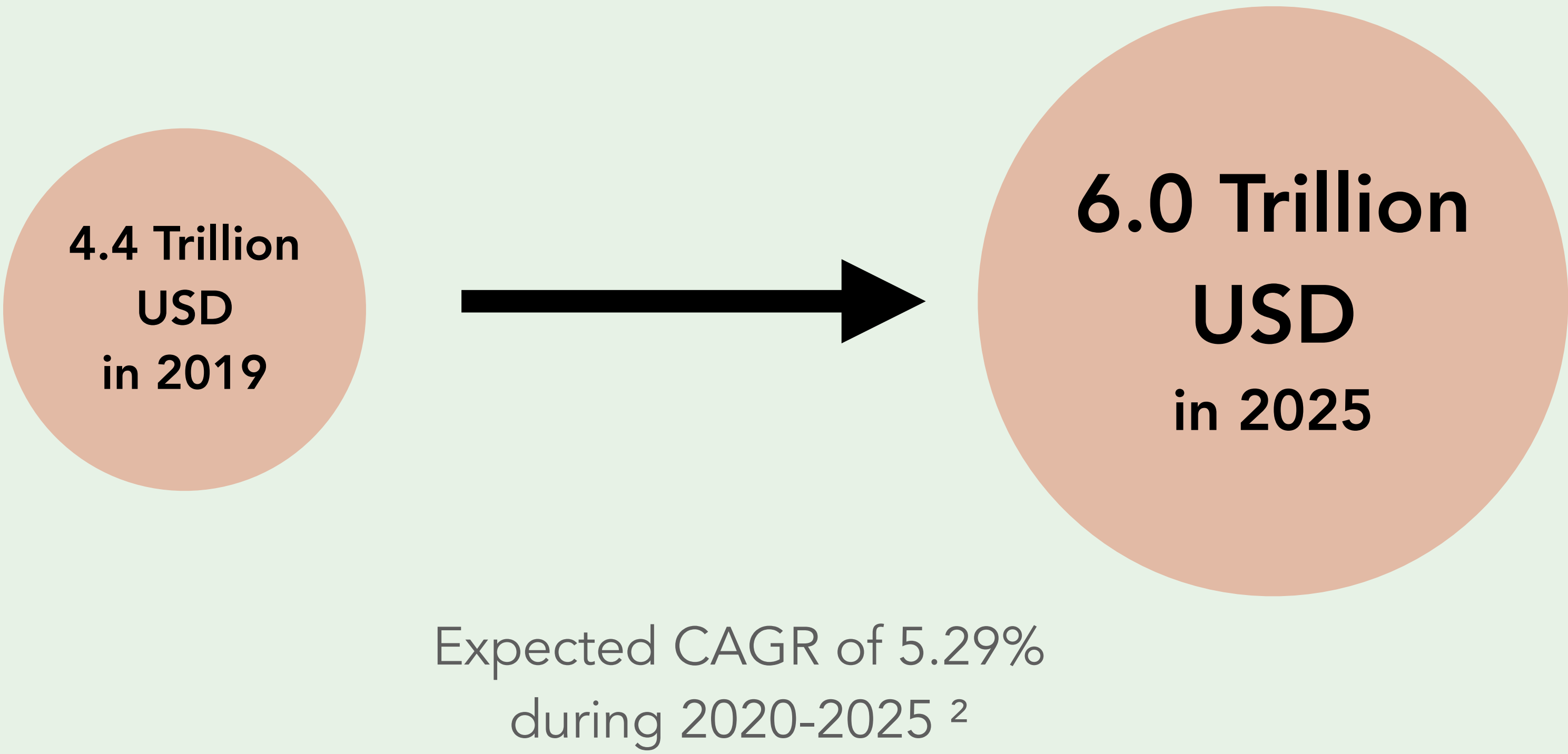


Diagram 1.3.1

Source: Global Health And Wellness Market Insights, 2020

Health Startups Investment & Initial Public Offerings (IPO) have doubled

- **Funding for digital health startups nearly doubled** from USD 7.5 billion in 2019 to USD14.1 billion in 2020.³
- **Health innovation funding increased by 55%** from 2019 to 2020.
- Demand for Health & Wellness offerings continued to surge from the fourth quarter of 2020, which saw **87 companies go public** at a total valuation of USD13.75 billion.
- The total valuation of the offerings was USD13.80 billion, **more than double** the USD 5.37 billion of offerings in the first quarter of 2020.
- Global healthcare IPOs for Q1 of 2021 more than doubled year over year.

Source: Healthcare Information and Management Systems Society, 2021

Malaysia's Health and Wellness Industry

Malaysia's Healthcare Industry

The Malaysian healthcare industry market size projection is expected to show **more than 2X growth**⁴

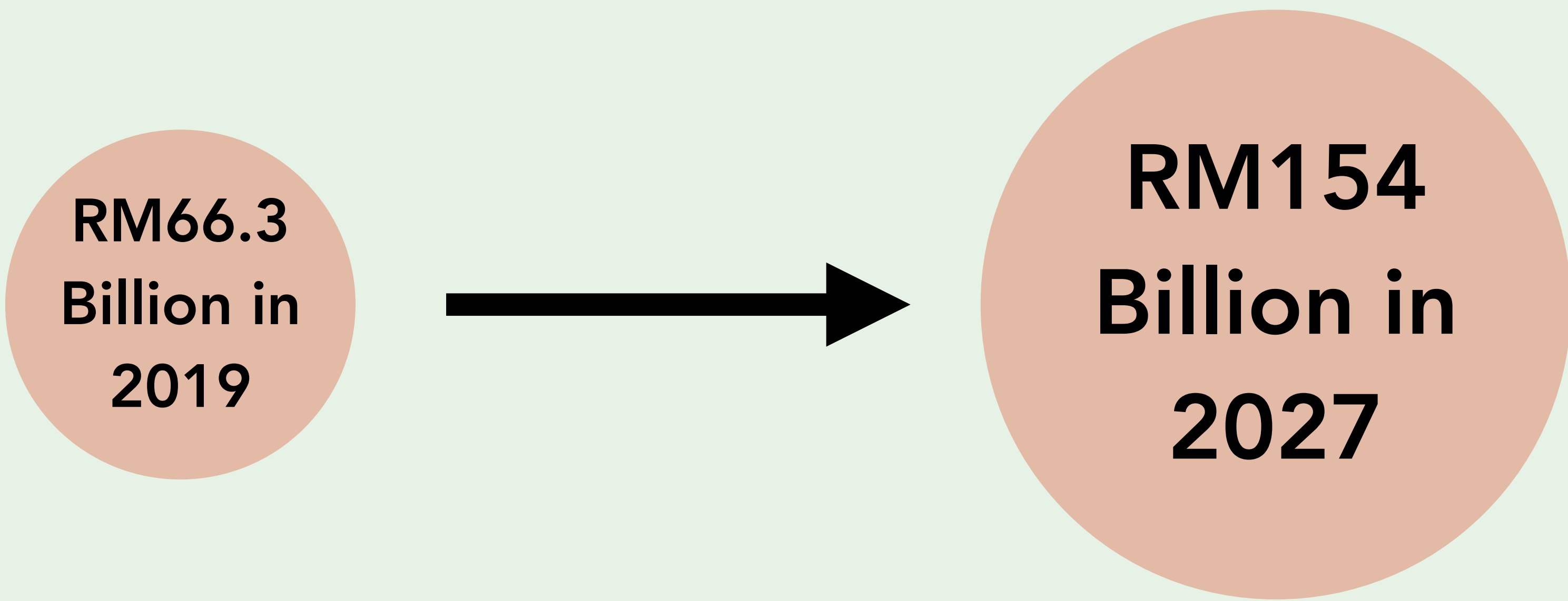


Diagram 1.3.2

Source: Fitch Solutions Macro Research, 2017

Total Private Equity (PE) and Venture Capital (VC) investments in Malaysia

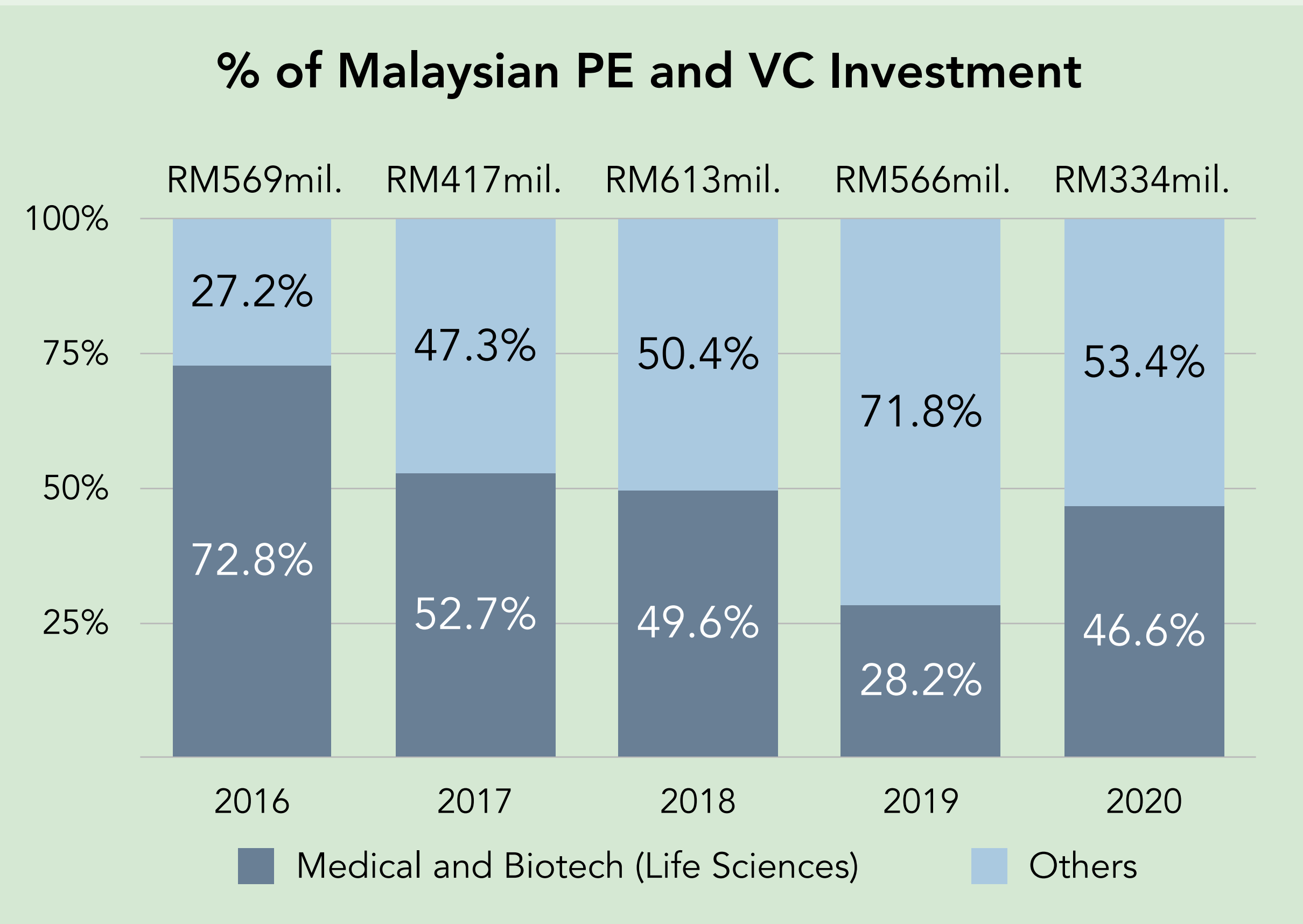


Diagram 1.3.3

Source: Securities Commission Annual Report from year 2016 - 2020

- Investment market share in health and wellness has been declining from 2016 to 2019.⁵ In spite of the overall decline, **investments into health and wellness has increased 18.4% from 2019 to 2020.**
- This increase can be attributed to the amplified focus on physical and mental health prompted by the recent pandemic. Moving forward, **investments will likely remain the same or may increase** as a result of a **shift in consumer focus to prioritise health** and **signs of a pandemic recovery.**

A nighttime photograph of the Petronas Twin Towers in Kuala Lumpur, Malaysia. The towers are illuminated with warm lights, and their reflection is visible in the water at the base. The surrounding city skyline is also lit up, with various buildings and streets visible. The overall scene is a vibrant urban landscape.

2

Key Industry Trends Impacting the Malaysian Market

2.1 Stakeholder Insights on Current Trends

This section details **key trends in the digital health and wellness industry** and **their respective implications on the local landscape**. It explores how these trends impact innovation and partnership opportunities in the health and wellness sector. Below lists the key trends prioritised across stakeholders within the industry, with each tick being indicative of whether the respective stakeholder considers the trend to be a priority.



#	Trends	Government & Regulators	Corporates	Startups & Investors	Hospitals & Clinics
1	Changing customer demands and experiences	✓	✓	✓	✓
2	Digital technology advancement	✓	✓	✓	✓
3	Collaborative ecosystem between stakeholders	✓	✓	✓	✓
4	Localising and leveraging data for decision making and data governance		✓	✓	✓
5	Mental health, wellbeing and self-care		✓	✓	

Source: Stakeholder Input based from MaGIC x Human Inc Digital Health and Wellness Roundtable, 2021

2.2 Key Trends Impacting the Industry



1

Changing Customer Demands and Experiences; Telehealth, On-Demand Services and More

The digital revolution, Covid-19 and its restrictions have significantly shifted customer demands and expectations for digital health and wellness. The four main customer trends observed are:



Prevalence of the digital lifestyle:

- Customers today live on digital mediums, with the average Malaysian spending around 5 hours a day on their phones.⁶ The shift to interacting with customers online has created a new operating field for healthcare and wellness providers. For instance, basic tasks— booking appointments, browsing treatment options, tracking of overall health— are expected to be accessible digitally, **prompting the arrival of telehealth services to allow access to healthcare anytime, anywhere.**

Rise of knowledgeable and informed customers:

- With infinite access to information, customers are constantly **seeking data about their health, latest health trends and the range of products and services available in the market.** We have recently observed, for example, the rise of wearable tech where customers can use personal data (e.g. quality of sleep) to make decisions on which treatments they need moving forward. This has elicited the need for more personalised services from key industry players.



Access to a buffet of health and wellness options:

- Whilst the market was previously concentrated with public institutions to provide healthcare, the market today is diluted with **an array of stakeholders (i.e. startups, investors) who have increased the range and affordability of health and wellness services.** In particular, the rising population of middle income earners can now 'shop' for more treatments and no longer need to rely on public health services alone.



Increased focus on wellness:

- The market has also seen a surge in wellness options in response to **customers' increasing focus on one's mental and spiritual health, on top of physical health.** As such, we have observed a significant increase in consumption of services such as therapy, yoga, fitness classes, life coaching and more. It was reported that 79% of survey respondents across 6 countries believe that wellness is important and 42% considers it a top priority.⁷



2.2 Key Trends Impacting the Industry



2 Digital Technology Advancement

The emergence of digital technology in healthcare was sparked by the **need to move away from a capital-intensive, hospital-centric model for health**. This model has increasingly come under pressure for its lack of efficiency in a world where 59% of the global population has gone digital, with more predicted to jump on this bandwagon.⁸

At the cusp of digital advancement are services such as telemedicine, Virtual Reality (VR) technology, blockchain for Electronic Medical Records (EMRs) and more. As a consequence, most touch points i.e. interactions with health personnel and our tracking of health have started to and will radically transform in the next few years. Moving forward, the general population will see a surge in the use of tech to inform more accurate and advanced treatments and health plans.

However, there is a consensus that **digital technology has yet to be fully leveraged in Malaysia**. The required improvements in operational efficiency and increased customer desirability have yet to be realised. Industry players would need to adopt radical innovative efforts to overcome various standards and regulations which are currently dampening the adoption of tech advancements.



3 Collaborative Ecosystem Between Stakeholders

The digital health and wellness **ecosystem has expanded beyond traditional players** (government, healthcare providers, healthcare insurers, etc.) **to include new players** such as consumer tech giants, health and wellness tech startups, banks and more. The greater involvement of these stakeholders has prompted a growth of 18.4% in total investment of health and wellness in Malaysia.⁹ New players are seeing more opportunities to leverage the expertise of traditional health professionals to create holistic solutions for customers.

As the desire to create life-changing digital health and wellness solutions spreads across more industry players, it will become increasingly critical for these players to leverage the wider ecosystem in building out comprehensive solutions for customers today.

Moving forward, we will see a rise in new models of partnerships between all stakeholders to create and scale best-in-class initiatives. The **management of these collaborations will require a clear framework or a centralised governance** (i.e. Ministry of Health) to ensure that efforts from different entities to create a unified health solution is not done at a piecemeal basis; rather being a collaborative process guided by experts, academics and healthcare professionals.

2.2 Key Trends Impacting the Industry



4

Localising and Leveraging Data for Decision Making and Data Governance

As customers spend a significant amount of time on digital mediums, the volume of data being gathered has amplified, rendering the process of data analytics and governance increasingly crucial to assess health risks, customer satisfaction and operational efficiencies. There has been a **rise of instances of cross-data sharing between private and government entities**, as well as amongst private entities themselves.

The use of **big/ open data is key to providing predictive analysis**. For instance, a data-enabled delivery system provides benefits such as better resource allocation (e.g. by forecasting hospital admissions or future illnesses and diseases to prevent). The effective leveraging of data will alter all touch points for a consumer from prevention to diagnosis and treatment.

As it stands, data governance (especially in areas of data sharing and privacy) is crucial to unlocking the use of open data across multiple institutions and governments. We hope to see efforts toward a global convergence for data governance to ensure that the use of data is accessible to all; a critical move in a world where impacts to health are interconnected (as seen with the Covid-19 pandemic).



5

Mental Health, Wellbeing and Self-Care

The definition of health has expanded beyond physical health to include mental health and overall wellness. **Mental health issues and a focus on overall wellbeing have steadily emerged after decades of laying dormant**. Industry leaders, athletes and top societal influencers have increasingly championed the need to care for your mind in order to live a healthier life.

This rise in awareness has given industry players an opportunity to connect with and consult customers in this space in order to learn more about a person's holistic needs. Failure to overcome the social stigma of mental health and wellness and recognise the domino effect of a debilitating mental health population will be counter-productive to the society and economy.

As it stands, **only 2% of the total health budget is being allocated to the treatment of mental disorders in low to middle-income countries**.¹⁰ To plug this gap, we are seeing a rise in efforts in both public and private sectors to provide better education, more wellness services and better social protection for affected groups. **Mental health and wellness have been deemed indivisible from public health**¹¹ and will hopefully see even more growth and inclusion in conversations amongst public and private entities.

3 Key Industry Challenges

3.1 Key Challenges Faced by Stakeholders

The **various challenges experienced by stakeholders** within the digital health and wellness industry fall under the categories of business model & partnerships, products & services, internal processes & digital adoption, policy, funding, as well as customer experiences. While there exist several congruencies in terms of the challenges faced, each stakeholder group has encountered its own unique set of difficulties, as outlined below:



Government and Regulators

01 *Policies & regulations unable to keep up with evolving industry needs*

- Policy and regulatory frameworks are not up to date, inhibiting collaboration and innovation within the ecosystem. Revisions made to policies and regulations caters to existing trends; playing catch up instead of laying out the foundations for greater innovation and collaboration. An example can be seen with regards to medical data protection: the initial lack of clarity and uncertainty in regards to data governance hinders industry players from exploring the possibilities of innovation that happens when medical records and data are shared openly across the whole health and wellness ecosystem.

02 *Government initiatives lack cohesiveness and human-centricity*

- The many government agencies involved directly (e.g. Ministry of Health (MOH), National Pharmaceutical Regulatory Agency (NPRA)) and indirectly (e.g. Multimedia Development Corporation (MDEC), MAGIC via startups development) with the health and wellness ecosystem dilutes the effectiveness of government-led programmes and initiatives. There also needs to be more push to involve end users and industry players during the development and delivery of regulations and initiatives. The lack of human-centricity further stems from a low level of awareness on what's out in the market and changing customer demands, resulting in solutions that do not cater to closing that gap.

Corporates

01 *Shifts to digitalisation requires significant risk-taking and innovation*

- Corporates in Malaysia are generally risk-averse and have significant concerns regarding data security and privacy. The risk aversion extends to collaboration with startups and other entities, which impedes innovation and customisation of products for existing customers. It was pointed out that a key reason for this is a lack of drive for innovation, exacerbating fear to venture into new territories.

02 *Local start-ups not up-to-par with regional start-up solutions*

- Corporates are looking for start-up solutions that can be scaled to regional customer bases. As discussed, start-ups in Malaysia are too focused on low-hanging fruits and do not seize bigger opportunities. As local healthcare entities still mainly import and adopt technology from regional markets, local start-ups will need to increase their competitive advantage against regional competitors to stay relevant.

3.1 Key Challenges Faced by Stakeholders

Start-Ups and Investors

01 *Traditional and slow adoption of digital transformation by other stakeholders*

- There is a deep-seated fear in traditional industry players that overall revenue will be affected by digital adoption and any efforts of transformation. Digital adoption is still deemed as a hindrance rather than an enabler for the industry. This mindset of fear serves as a laggard for needed transformation and will be a significant obstruction to Malaysia's innovation progress.
- An added factor that prevents the progression of this mindset is a lack of education, awareness and successful case studies on the impact of technology, further slowing down the response rates of key industry players to adopt digital changes.

02 *Bureaucracy and policy restrictions*

- Red tapes and outdated policies are affecting start-ups' speed-to-market and hampering their access to necessities, facilities and resources they can leverage on to further scale. There is a need for better talent in the public sector who can drive and implement policies relevant to the demands of the market and assist start-ups to scale in face of rising competition (who are heavily user-centric) beyond Malaysia.

03 *Government funding initiatives are lengthy and not time-sensitive*

- The lack of prioritisation in pertinent healthcare and wellness issues e.g. mental health, livelihoods of senior citizens and AI tech, means certain start-ups are prioritised over others which has in turn caused a backlog in funding initiatives and prolonged the process for health and wellness start-ups to obtain necessary funding. The review criteria for government funding needs to be further streamlined to hasten the approval process.

Healthcare and Wellness Providers

01 *IT/ healthtech companies lack understanding of healthcare process complexities*

- Each hospital/ clinic operates with a specific process and flow which requires deep customisation of services. However, there exists notable gaps between the understanding of health tech companies versus the needs of hospitals / clinics. This challenge is further exacerbated by the lack of incentives within the IT/ tech sector to develop skills and technologies that serve customisable needs for customers in hospitals/clinics.

02 *Regulation setbacks from government related entities*

- Lengthy approvals on regulations and processes for innovative methods have effectively discouraged innovation amongst health professionals and prevented top talent from maximising their potential in the field. Some methods and services that would otherwise produce added benefits to a patient's healthcare service are not permitted if they are not recognised by official government bodies. Hence, the lack of agility in policy and regulation changes in line with latest market needs will continue to hamper the progression of services in hospitals/ clinics, affecting opportunities to improve a consumer's overall health as a result.

A woman with long dark hair in a ponytail, wearing a light blue turtleneck and jeans, sits on a grey armchair. A man in light blue medical scrubs sits on a grey sofa next to her, holding a tablet. They are in a modern, brightly lit room with large windows in the background. The text '4 Stakeholder Ambitions and Potential Opportunities' is overlaid in white.

4 Stakeholder Ambitions and Potential Opportunities

4.1 Ambition Matrix

Based on the results collected from a census survey, we were able to obtain further insights into the different aspirations across various stakeholders in the digital health and wellness industry and in turn, the type of innovation ambition they want to focus on in the near future.

Ambition Matrix With All Stakeholders

Diagram 4.1.1 shows an overview of stakeholders’ chosen ambitions, based on data collected at the roundtable.

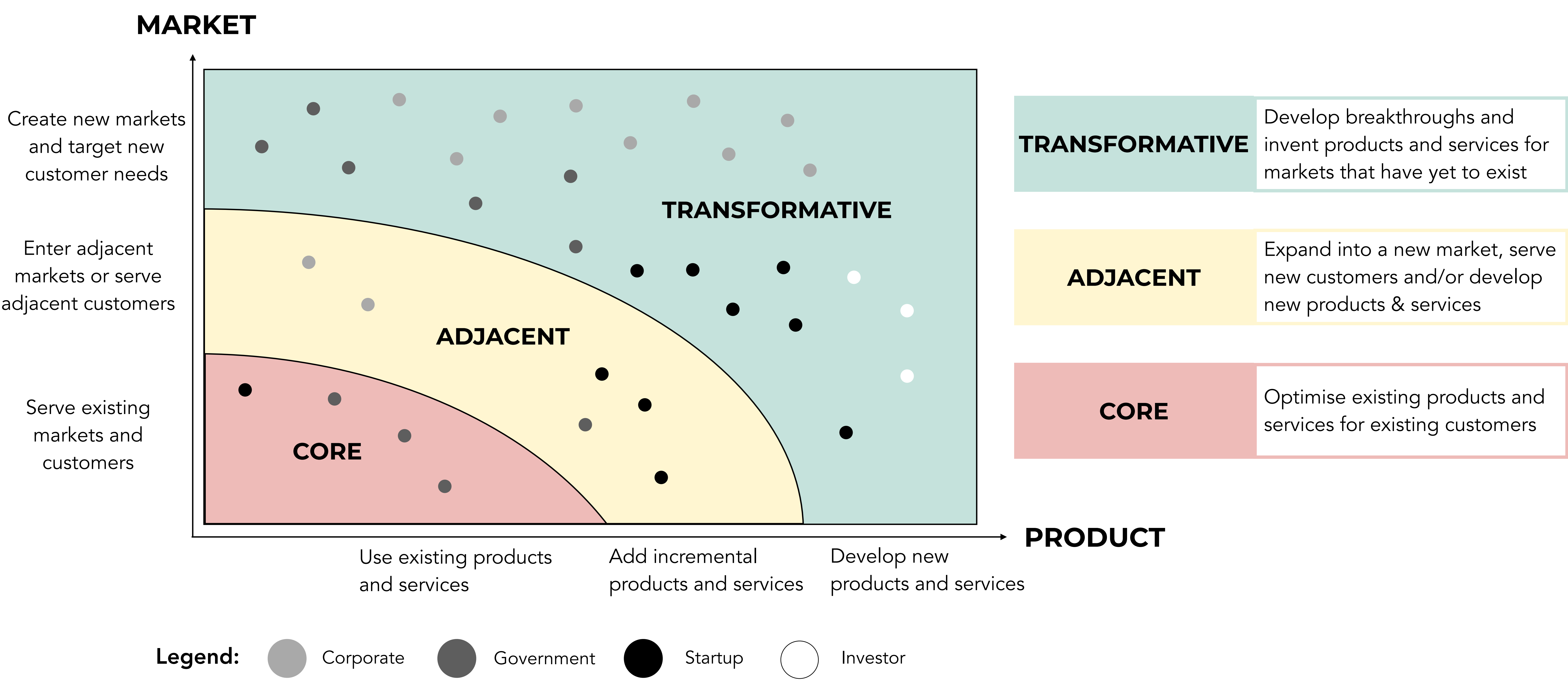


Diagram 4.1.1

Source: Tensions in Corporate Creativity, 2016, Carsten Deckert

67%

ASPIRE TO BE TRANSFORMATIVE

The global pandemic, together with technological and digital advancements, have provided the impetus to stakeholders to create breakthrough products and services, strengthening their impulse to seize new market opportunities and capture untapped customer areas.

22%

ASPIRES TO BE ADJACENT: INCREMENTAL GROWTH

Some stakeholders have opted to focus on creating incremental value by serving customers in markets that are close in proximity to their current market.

11%

FOCUS ON CORE

A smaller volume of stakeholders opted to focus on optimising current products and services through improving the efficiency and effectiveness of each and scaling these offerings to familiar markets.

4.1 Ambition Matrix

Ambition Matrix By Stakeholder Groups

Diagrams 4.1.2 - 4.1.5 entail a breakdown of each stakeholders' (corporates, startups, government and investors) **innovation focus to cultivate** in the near future.

Choice of Innovation Focus By Stakeholder
Group based on Ambition Matrix

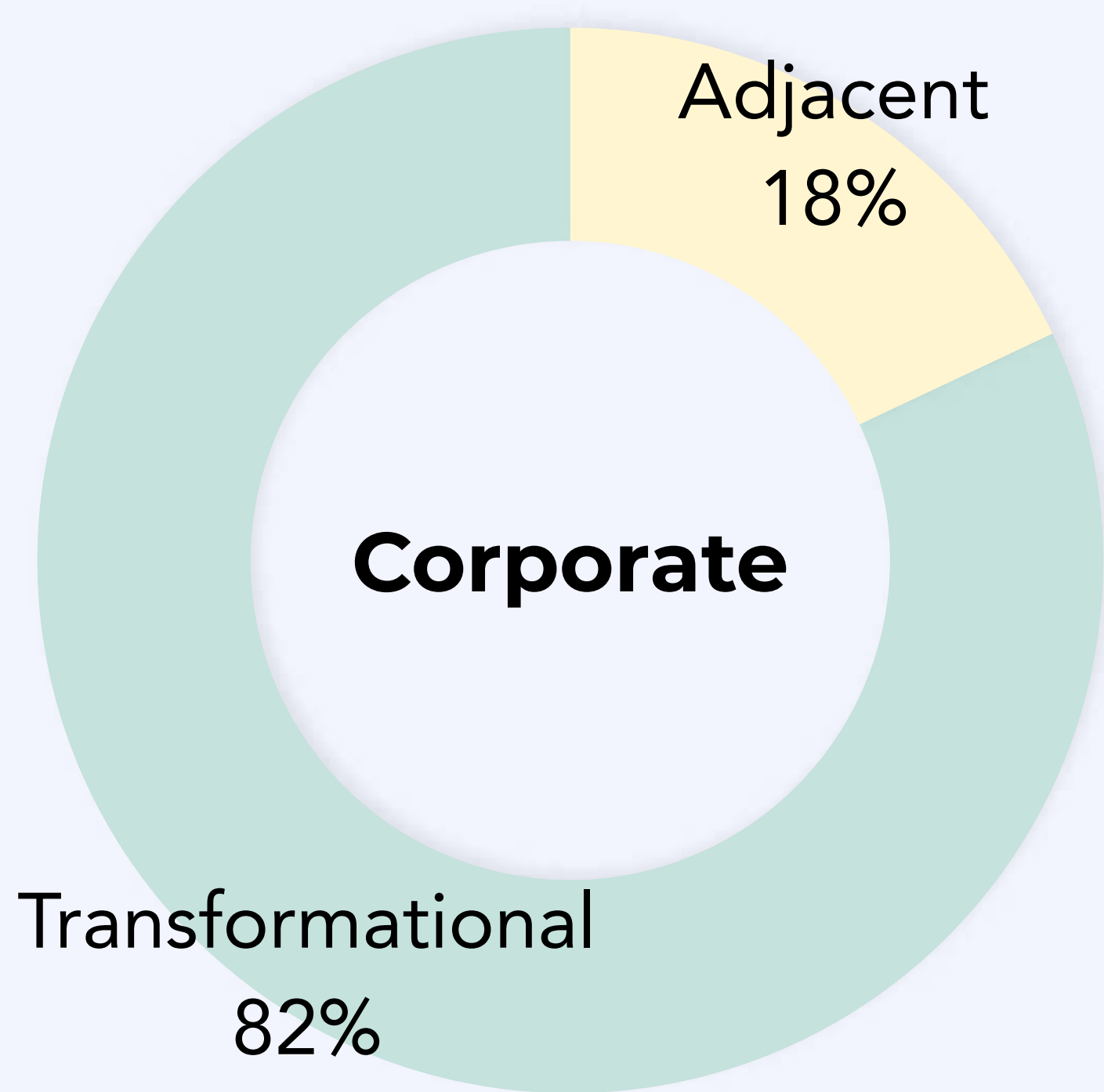


Diagram 4.1.2

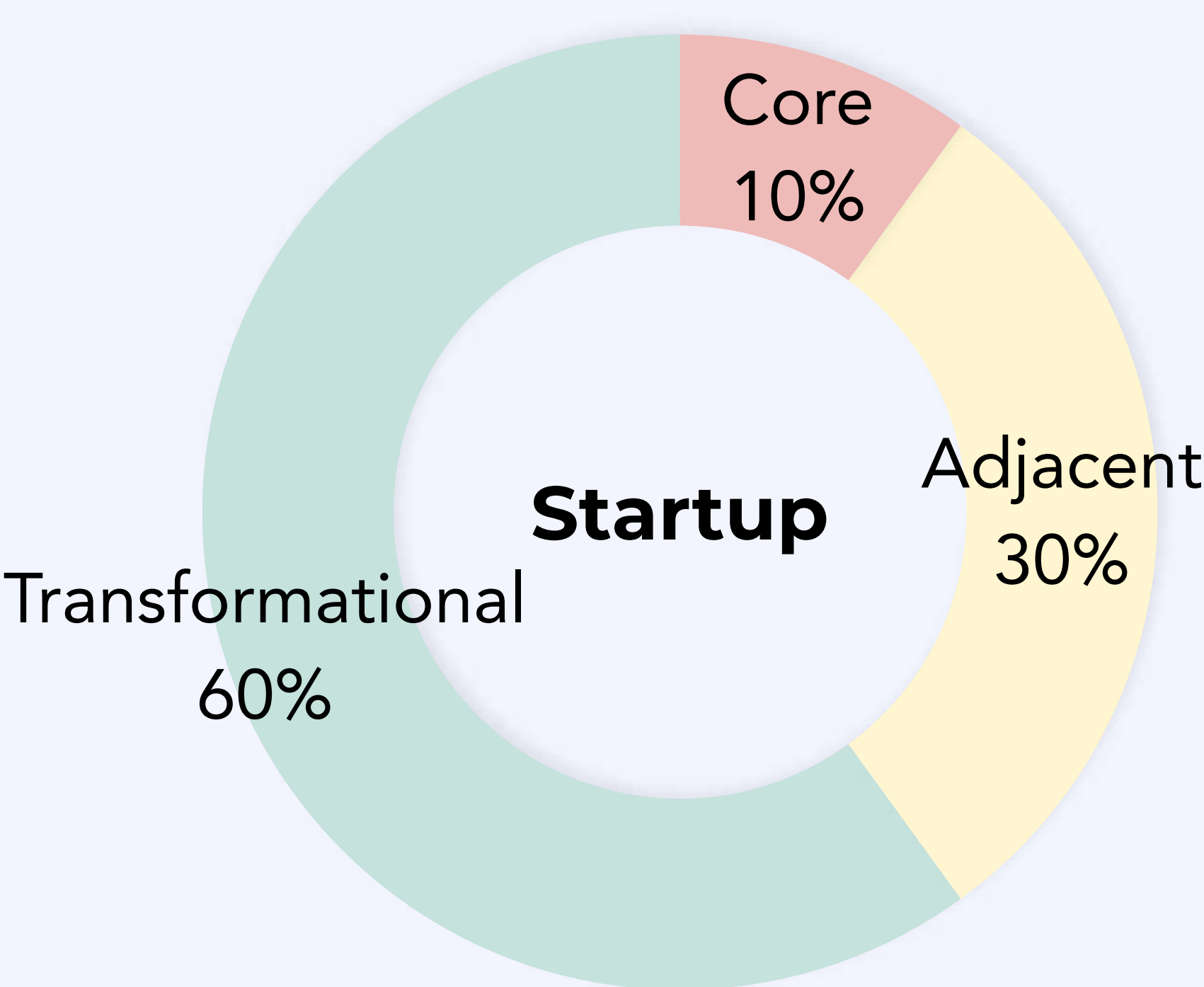


Diagram 4.1.3

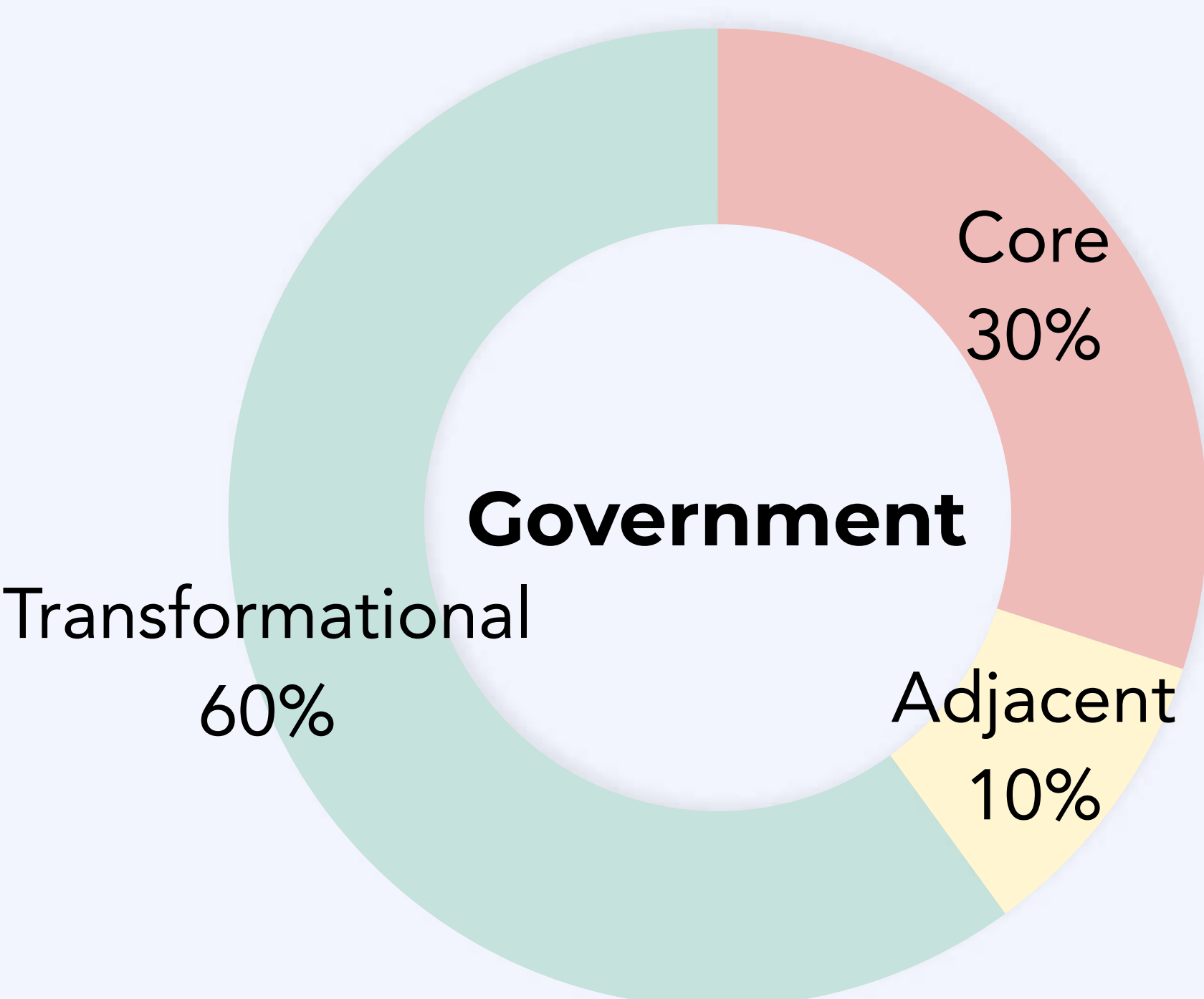


Diagram 4.1.4



Diagram 4.1.5

What this means

- All 4 stakeholder groups expressed strong desires (>60%) to focus on transformational innovation, with investors (100%) and corporates (82%) seeming more eager.
- 30% of startups are focused on adjacent markets, most likely due to being relatively new to market and would focus on building existing products and services before venturing into something more transformational.
- 30% of government agencies want to focus on core innovation as a priority, given that there are many areas in current ways of working which can be improved before they are able to venture into adjacent and transformational innovation.

Ranking of Key Areas to Innovate

Below shows **the ranks in priority in terms of areas to innovate** within the digital health and wellness industry, as plotted by stakeholders in a survey conducted at the roundtable:



- While overall survey results indicate that stakeholders ranked 'process streamlining and optimisation' to be the main priority, this result is not indicative of each stakeholder category's individual priorities.
- Some observations broken down by stakeholder groups are:
 - ▶ Corporates - ranked 'process streamlining and optimisation' as their top priority amongst others.
 - ▶ Startups and investors - ranked towards their products and services.
 - ▶ Customer centricity is consistently ranked as top-3 by all stakeholders.

4.2 Potential Opportunities

In the same survey, respondents mapped potential opportunities in response to challenges discovered and prioritised areas of innovation. Here are some key opportunities for each area of innovation:



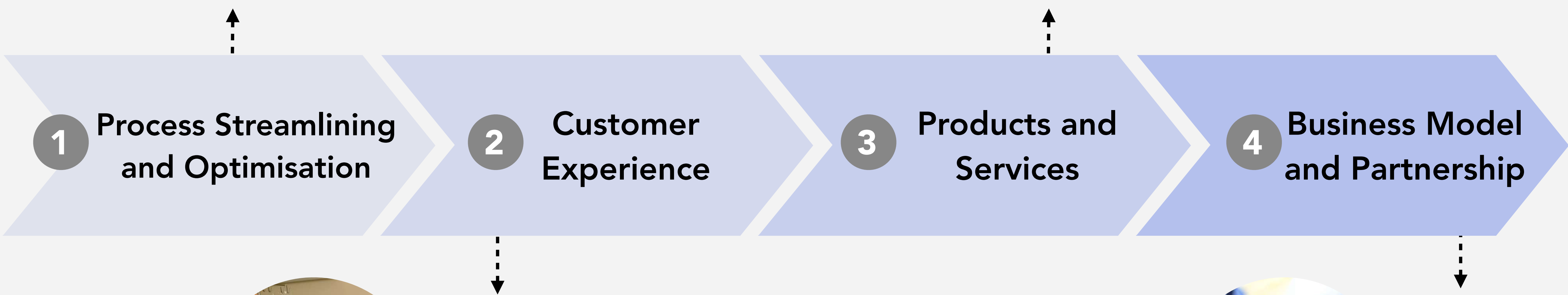
Remove Silos for Efficient and Effective Problem-Solving Capabilities

- **Empower a single body** with executive powers to implement policies, thus removing silos
- **Create a market or community** for tech companies to participate and work together in solving healthcare issues (e.g. Kaggle)
- Develop a **common shared framework on hospital best practices** and allocate training for IT/ tech companies to understand the industry better (supported by private and public sectors via think tanks)
- **Increase understanding of user journeys** when crafting regulations, policies or solutions with other entities



Incentivise and Reward Innovation

- **Encourage usage of sandbox** to incentivise innovation and collaboration between corporates and startups, as well as allow local industry players to collaborate with regional players early
- **Allocate more grants and funding** for R&D and increase government support for local startups
- **Consistent policies across all government bodies** in incentivising creative innovation, cultivating transparency and simple processes
- **Increase collaboration between private sectors and government agencies to reduce red tapes and bureaucracy** and speed up policy approval processes via an open digital platform



Boost Customer-Centricity

- **Adopt an interactive and innovative feedback mechanism across different touch points** to gather feedback fast and iterate solutions accordingly
- **Streamline education and awareness of agile and innovative mindsets** and methodologies (i.e. Design Thinking) to build user-centricity
- **Encourage customer empathy** in any service delivered to patients/ customers ensuring relevant problems were addressed and the needed level of patient care is provided
- **Prioritise simplicity when creating products** and services as customers value convenience









Enable Stronger Collaboration between Government, Health & Wellness Providers Learning Institutions and Startups

- **Cultivate closer collaboration** between government, health and wellness providers, learning institutions and tech startups by:
 - **Leveraging on data** from other industries/ creating a **central repository of health and wellness data** with the use of APIs or blockchain for data privacy & security
 - **Open innovation** - get tech startups to provide solutions for specific problems in order to be more agile in customising services for consumers
 - **Speeding up decision-making processes** in government, especially in regulatory and financing approvals, to allow quicker transformation








5 Startups in the Malaysian Ecosystem Today

5.1 Selected Digital Health and Wellness Startups

Startup	Business Model	What problems are they solving?	Their solution and impact
	A data driven technology platform providing holistic wellbeing solution through its unique ecosystem. We are bridging the gap between wellbeing solution providers and consumers through our gamified mobile Application.	Helping users manage non-Communicable diseases and Mental health effectively through data analytics driven behavior remodeling solution to create sustainable lifestyle changes and connecting them to qualified service providers.	Committed to the UN SDGs of "Good Health and well-being" "We are creating sustainable lifestyle changes by bringing Well-being solutions to every palm through our engaging ecosystem accessible through an innovative mobile application.
	Leading multifaceted AI software house with key strengths in Advanced Visual Recognition, Human Imaging Medical Technology and Bioinformatics.	Blinkware addresses high mortality rates issues & rising economics costs through early mass detection of chronic diseases and identification of potential antibodies to mitigate the risk of future health-related pandemics.	Through advanced patented deep learning algorithms, Blinkware empowers early stage diagnosis of diseases found in medical imaging and identification of potential debilitating illnesses, reducing long term suffering and heavy medical costs.
	Malaysia's first and leading online digital health platform that combines telehealth consultation, online pharmacy, medication delivery, health content, doctors and specialist booking services.	DoctorOnCall works to improve the waiting time and availability of healthcare, without compromising quality and affordability in overall services.	DoctorOnCall provides fast, easy and cost-effective access to Malaysia's top insurers, pharmacies and healthcare providers. This has increased the accessibility of healthcare to everyday citizens.
	An employee healthcare platform for companies to manage healthcare benefits holistically and seamlessly with process automation, live dashboards, data analytics, a self-service employee mobile app and crafted wellness programs.	HealthMetrics simplifies employee benefits administration and healthcare management which increases convenience for employees and aids cost-reduction for the organisation.	Simple & convenient real-time info of panel, entitlement & utilisation to employees, enabling companies to track all of their spending with just one provider and increase organisational efficiency.
	A tele-rehab robotic technology company that develops and delivers smart rehabilitation and fitness aids. They help people by providing more comprehensive solutions to train various human movements using Artificial Intelligence and smart human technology.	As the current tools used to train human movements remain basic, manual labour intensive and costly, Techcare leverages on the help of advanced technology to create portable and smart rehabilitation aids to enhance human performance and movement efficiency by giving users the option to train anywhere and anytime.	TechCare has managed to introduce a series of robotics systems called the Compact Rehabilitation Robot (CR2) to train balance, hand, wrist and forearm movements for a variety of patients including stroke patients and others needing these rehabilitation training.
	An insurance technology company that democratises insurance and makes buying insurance simple, easy, and affordable with un-bias choices and transparency. PolicyStreet uses a B2B2C model to leverage a cross-industry ecosystem insurance play.	PolicyStreet aims to help people secure financial wellness across life stages and eliminate difficulty in finding the right insurance product by improving transparency and access to clear choices.	By creating a one-stop platform to provide unbiased choices and transparency, PolicyStreet customers can get better or cheaper options by using a 3-step approach, and allowing agents and other channels to access their platform.

5.1 Selected Digital Health and Wellness Startups

Startup	Business Model	What problems are they solving?	Their solution and impact
	A one-stop corporate wellness and employee engagement solutions provider.	FitXcapes helps your business create a harmonious and healthy company culture, improving healthy outcomes for your employees and increase positive returns for the employers.	FitXcapes has built a wellness community, boost healthy company cultures and improved business productivity within their client's organisation. This has enabled an increase in retainment and attraction of top talent within the organisation and reduce work-related illnesses.
	As a leading digital care provider, Naluri's integrated health care programme is trusted to prevent and manage chronic disease and mental health conditions with multidisciplinary coaching, augmented by AI.	Naluri works with leading corporate employers, insurers and re-insurers, and pharmaceutical companies to reduce preventable healthcare costs, increase employee productivity and engagement, and works with healthcare providers to deliver continuity of care beyond the clinic setting to improve treatment compliance.	Naluri's health care programme combines support for physical and mental health holistically, and addresses multiple chronic health conditions, including diabetes, obesity, heart diseases, cancer, anxiety, depression and stress, to deliver quantifiable health outcomes while containing organisational healthcare costs.
	A trusted wellness lifestyle brand and guide for leading a sustainable healthy lifestyle, from responsible health education to reviving traditional Asian remedies & products for modern lifestyles.	PurelyB empowers sustainable healthy living for the modern generation, providing education as a trusted guide and 100% natural health products powered by nature, to make maintaining good health easy, affordable and accessible to everyone.	PurelyB transforms client's quality of life with their trusted wellness content, products & services. From positive lifestyle-change content to natural health food products, PurelyB has supported clients through every step of their health and wellness transformation journey.
	heyAisha is a digital health insurance platform that simplifies the purchase journey, targeted at millennials in Malaysia.	heyAisha platform creates a purchase journey relevant to millennials' behaviours, specifically in the pre-sales stage and in the enrolment pool, solving for problems such as lack of trust and transparency in insurance, non-intuitive purchase journeys, adverse selections, minimal profiling and more.	As a fully digital insurance platform, heyAisha has streamlined onboarding, sales and customer management, and maximised efficiency around purchase cycle, cross-sell, administration, and servicing. heyAisha is designed to work with new age data to quickly launch stackable insurance products.
	A healthtech startup with focus to ensure health and well-being for all, at every stage of life. Data8 Sdn Bhd is committed to provide solutions that accelerate better health outcomes by using technology.	DATA8 develops cHEART, a personalised healthcare app built on blockchain technology. cHEART is set to ensure data security, privacy and interoperability that allows users/patients to track, monitor, share and transfer medical data securely with trusted health partners.	cHEART is built on blockchain technology. It provides a centralised record platform that connects patients with health providers securely in order to provide more accurate diagnosis, quality care, reduce cost and faster treatment. With a secure online platform, patients are empowered to manage their health better and get medical consultation from

5.2 Spurring the Innovation Ecosystem

Various government agencies have catapulted the innovation ecosystem by driving initiatives to support local startups in various stages of their journey. This report outlines the role of Malaysian Global Innovation and Creativity Centre (MaGIC) and the National Technology and Innovation Sandbox (NTIS).

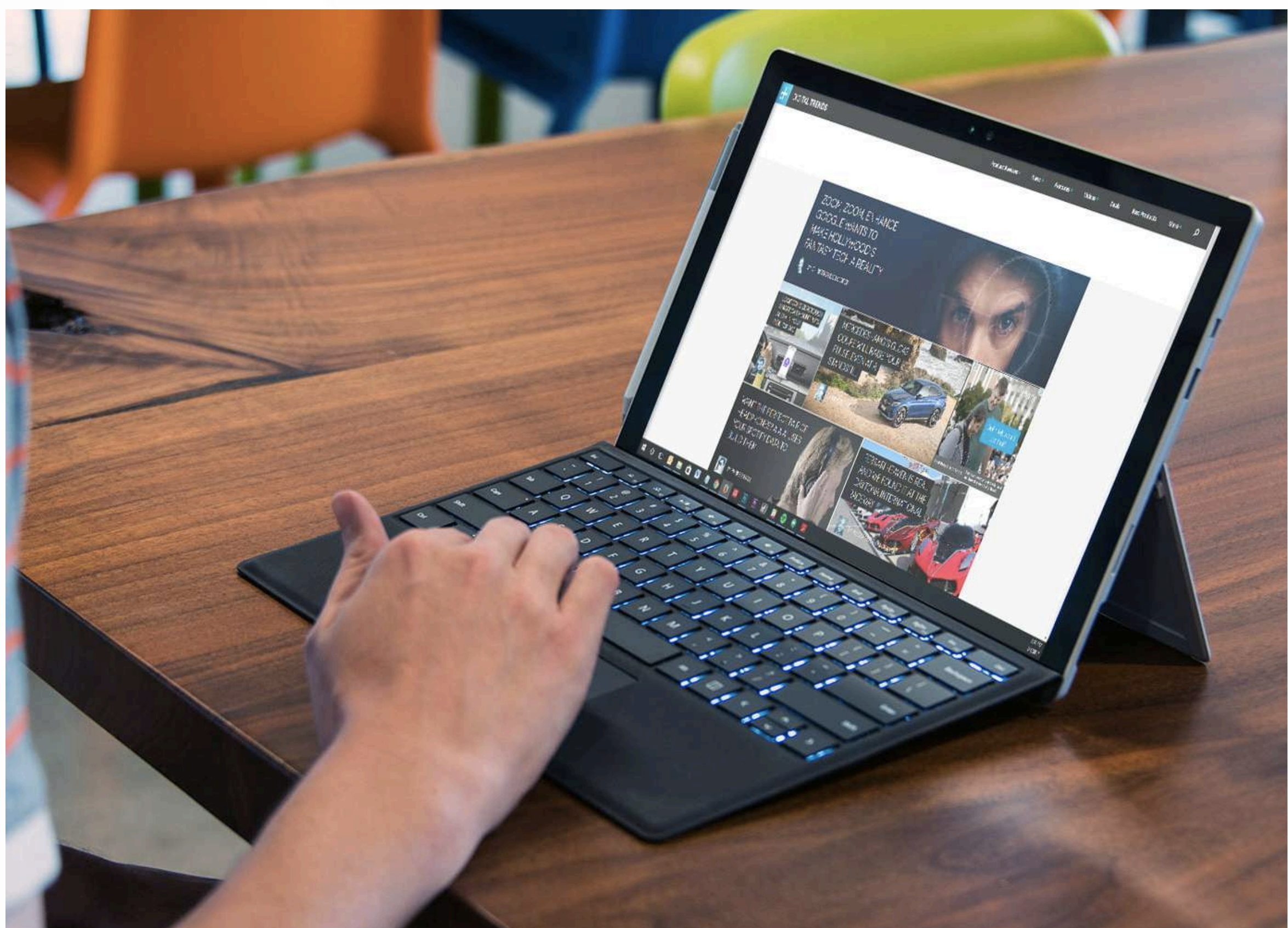
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Malaysian Global Innovation and Creativity Centre (MaGIC)

Malaysian Global Innovation and Creativity Centre (MaGIC) discovers and empowers technology startups and social innovators through creativity, innovation and technology adoption, and develops a vibrant and sustainable entrepreneurship ecosystem in Malaysia. Since its inception in 2014, MaGIC has provided its community of start-ups, investors and ecosystem players with capacity building programmes, market & funding opportunities and regulatory assistance that impacted more than 100,000 aspiring and seasoned entrepreneurs with overall value creation of RM1.9 billion.

Since the outbreak of COVID-19, technology has been crucial in dealing with increased demand and disruption in logistics and access to care. Digital health options have grown tremendously as a result of the ongoing pandemic and this is where MaGIC played its vital role in supporting its robust ecosystem to accelerate market-driven healthcare innovations from talented entrepreneurs by leveraging corporate testbeds and international networks. In 2020, MaGIC co-organised a three-day hackathon with ROCHE Malaysia’s pharmaceutical division where staff came together to brainstorm realistic, innovative healthcare solutions for Malaysian cancer patients. While this year, Malaysia and Sweden have come together to introduce the Digital Health Innovation Challenge. The Innovation Challenge invites startups registered in Malaysia to identify solutions in solving healthcare challenges, especially related to non-communicable diseases (NCD). The initiative is a collaboration between Team Sweden, comprising of the Embassy of Sweden, Business Sweden and AstraZeneca. The Innovation Challenge is aimed towards identifying solutions that can empower NCD patients and high-risk communities to proactively reduce the risk factors of these diseases by encouraging healthy living and increase accessibility, on top of introducing digital tools enabling self-care and monitoring.



2



National Technology and Innovation Sandbox (NTIS)

The Ministry of Science, Technology and Innovation (MOSTI) introduced the National Technology and Innovation Sandbox (NTIS) in June 2020. It is an initiative aimed at accelerating the local development and commercialisation of technologies to transform specific industries or socio-economic sectors including the medical and healthcare sector. NTIS offers a live test environment for products and services aside from providing funding, regulatory and technical support to researchers, innovators and entrepreneurs.

One of the companies working in multiple test sites; Naluri Hidup Sdn Bhd, is testing a human-driven, AI-augmented digital disease management programme using mobile application and bluetooth devices. With the provision of funding via NTIS, the company has managed to improve its AI Food Journal image recognition, integrated bluetooth connected health devices on their platform for patient monitoring and integrated Bahasa Malaysia into their processing algorithm for depression detection. Another company making milestones is Health Digital Technologies Sdn Bhd, the developer of digital health platform; DoctorOnCall. Their project aims to expand access to patients, particularly those with chronic illnesses, in rural areas through mobile clinics placed in those communities. Through funding and regulatory facilitation with the Ministry of Health, we are able to accelerate the testing and commercialisation of the solution.

The programme is opened to all tech-based startups, individuals with tech-based innovative solutions, established companies and academia. Applications are open all year long and can be done online at sandbox.gov.my with applications processed on a monthly cohort basis.



6

Conclusion

6:29 PM Sun Sep 6

83%

At this point chyme should be broken down to
monosaccharides }
amino acids } absorbed by small intestine
glycerol } into blood stream
fatty acids } absorbed by small intestine
into the lymphatics with help of bile

small intestine

micro villi
goblet cells

Intestine

water
of waste

Transverse
ascending
cecum
sigmoid
rectum
anus

Undigested foods in
cecum undergo fermentation
by bacteria to give
short chain fatty acids

6.1 Conclusion

The Covid-19 pandemic has simultaneously served as a major disruptor and catalyst for innovation across different industries. As evidenced by the findings detailed in this report, stakeholders in the local health and wellness sector are keen to explore the positive repercussions of the world’s ongoing health and wellness crisis. This discussion was a critical enabler for stakeholders to meet immediate and long-term consumers' digital health and wellness goals, as well as battle the challenges that have arose in this industry.

This report was written in conjunction with the Digital Health and Wellness Roundtable that was held on the 5th of August 2021, which provided various stakeholders across the industry with opportunities to exchange valuable insights with one another. The session was conducted to broaden horizons and deepen participants' understanding of what other players are facing within the ecosystem. **Here are the key takeaways:**

- **Whilst a range of challenges are experienced by different stakeholders, recurring challenges mentioned were: policy and regulation setbacks, slow adoption of digitalisation and a lack of human-centricity for end users.** There was general consensus that the pace of innovation largely depends upon the ability of policies and regulations to encourage groundbreaking technology and fresh new methods. Without foundational leeway to innovate, local startups are faced with a slowdown of innovation processes as regulation blocks and risk-averse policies continue to serve as a significant obstacle between new solutions and the consumers’ healthcare or wellness need.
- **Based on an understanding of existing trends and challenges, 67% of participating stakeholders chose transformative innovation as their innovation focus whilst 22% chose adjacent and 11% chose core.** Rapid technological advancements coupled with the impact of the recent pandemic on consumers’ health, has given rise to multiple market gaps and provided an impetus for stakeholders to adopt a radical change through the transformation of current products and services or the pursuit of new market opportunities.
- **In response to the ecosystem’s challenges and increased conviction to drive innovation, stakeholders discussed opportunities** such as the removal of silos to problem solve as an ecosystem, enabling innovation through rewards and boosting customer experiences through better understanding of user needs as key courses of action that will move the industry forward.

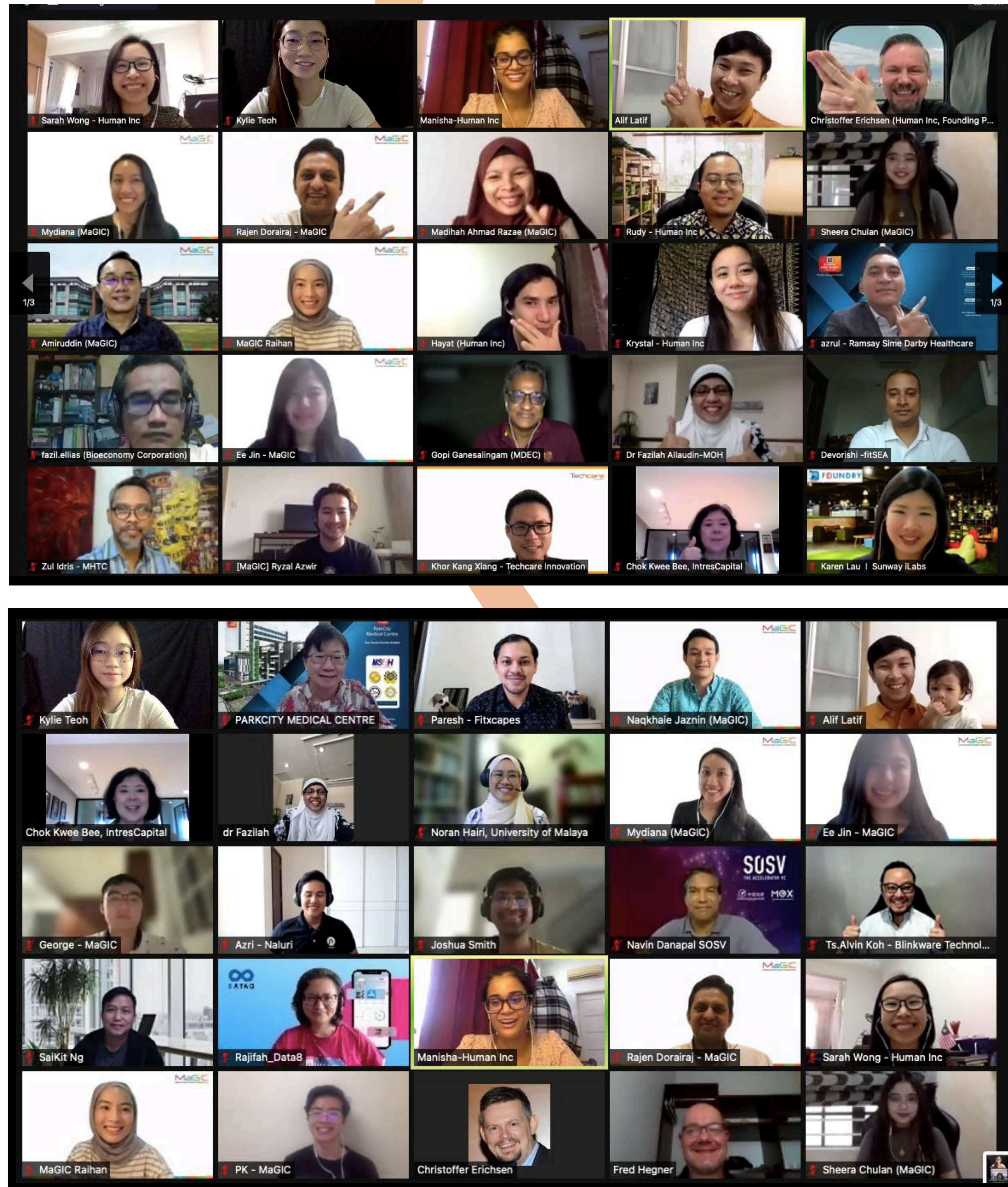
We would like to take this opportunity to thank the roundtable stakeholders for their full participation. We hope that that the roundtable has served as a driver for further collaboration amongst the various participating stakeholders, as well as inspired them to explore deeper opportunities in response to the key challenges that have emerged from the discussion.

Participating stakeholders:



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