

1. Kapsule is a healthcare data company, with the mission to **unlock the power of healthcare data**. Kapsule realise this mission by aggregating data to create actionable insights, and help healthcare multinational corporations (MNCs) to expand into Africa, thereby enhancing Africans' livelihoods and healthcare efficiency. Today, Kapsule uses their platform to aggregate data from over 8000 African healthcare providers and generate actionable insights for MNCs. Kapsule's platform is designed to efficiently connect and collect data from Electronic Medical Records (EMR) and Electronic Health Records (EHR), and standardize data into their proprietary 'Kapsule format'. These data models enable accurate insights for critical decision-making. Kapsule's consulting services help Global MNCs expand into Africa to bring affordable, high-quality healthcare into Africa. Kapsule's current monetisation strategy involves charging clients for actionable insights and consulting services. Kapsule's impact is felt across Africa, alleviating healthcare crises such as Hepatitis C in Rwanda, Sickle cell disease, Malaria and Cancer. Through their efforts, Kapsule marches forward in achieving its mission of increasing advanced healthcare's affordability and accessibility.

2 (a). Using PEST analysis, we categorised research based on the question requirements.

Indonesia is the fourth most populous country in the world, with a population of more than 270 million, with a steady increase in government healthcare expenditure (reportlinker), indicating a commitment to improve healthcare services: Indonesia shows a compelling case for Kapsule's healthcare innovation.(ReportLinker) We strongly believe Kapsule can reduce its disease burden — including non-communicable diseases (NCDs) accounting for over 70% (NCDs) of deaths annually (Utomo et al.) and a high maternal mortality rate (177 per 100,000 live births) (Wenang et al.)— and systemic inequities in healthcare access. 63.38% of Indonesia's hospitals are private (APRIL International): this is beneficial for Kapsule, which aims to secure private data partnerships. As for the regulatory environment, the government of Indonesia has implemented the “Blueprint of Digital Health Transformation Strategy”, (Ministry of Health of the Republic of Indonesia) and allocated 3.71% of their GDP to healthcare (World Bank Open Data). This suggests there are efforts to advance healthcare digitisation, presenting Kapsule an opportunity to form partnerships and aggregate healthcare data. There has been growth in Indonesian digital infrastructure (especially data collection, summarization and fiber networks), though challenges remain with cloud adoption. Its digital health market size stands at US\$ 2.296 billion, and is projected to grow to US\$ 3.647 billion in 2029 at a compound annual growth rate (CAGR) of 9.70% (Statista). Despite these opportunities, its low doctor density at 0.47 per 1,000 people (Ali) (falling below WHO recommendations) poses a challenge to form partnerships with limited healthcare professionals available.

India's primarily healthcare issues, including NCDs and high child mortality rates of 40.7, are exacerbated by a healthcare data system lacking security, experiencing 6,900 cyberattacks weekly (Shah). Low data security hinders the establishment of standardised EHR systems (Mukherjee), incentivising hospitals to establish data partnerships with Kapsule to organise healthcare data. India's massive population of 1.429 billion (“India - Place Explorer - Data Commons”) with around 2,000 ethnic groups (Bilinski) makes the aggregated data comprehensive and expansive, and hence attractive to MNCs or research organizations.

The government has established healthcare data digitisation initiatives — including Integrated Disease Surveillance Program (IDSP) and Ayushman Bharat Digital Mission (ABDM) — and allocated 2.1% of its GDP to healthcare in 2023 (PIB Delhi). Kapsule could offer to alleviate the government's data aggregation burden, possibly making the regulatory environment favorable and create governmental partnerships. Moreover, 67% of Indian hospitals are privately owned, making it easier to establish data partnerships. (Mayank Madhur). Meanwhile, India's digital health market is projected to grow 13.14% CAGR, reaching US\$9.90bn by 2029 (Statista), with private equity and venture capital investments in India's health sectors reaching \$5.5 billion in 2023 (Kay), a 25% increase from 2022; India's healthcare sector is a growing market and promises future returns for Kapsule.

Brazil, the largest country in Latin America, with a population of 215 million, offers an opportunity for Kapsule to create a positive impact in the country that suffers from unequal access to healthcare services, and low-quality healthcare. (“Brazil - Place Explorer - Data Commons”) Its regulatory environment involves ANVISA (National Health Surveillance Agency) which simplifies clinical trial processes, and LGPD (Lei Geral de Proteção de Dados) which enforces strict data privacy laws. (“Brazil’s ANVISA”) Sistema Único de Saúde (SUS) is Brazil's publicly funded health care system that provides services ranging from vaccines to complex procedures. Brazil’s government allocates 9.47% of its GDP to healthcare, totaling US \$161 billion, while prioritizing healthcare digitization, committing US \$200 million for health IT upgrades in 2023. (International Trade Administration) Meanwhile, the digital health sector is currently at US\$3.171 billion, and is projected to reach US \$4.936 billion by 2029, at a CAGR of 9.25% (Statista); the growing market and government spending presents Kapsule an opportunity for strategic expansion. However, Brazil possesses a private hospital ownership percentage of 62%, making private partnerships viable. (International Trade Administration)

2 (b). Indonesia's healthcare technology market features global players such as IQVIA, Siemens Healthineers, and Philips Healthcare, which dominate advanced analytics, diagnostics, and connected care. However, these entities primarily serve urban centers, leaving rural areas underserved. Kapsule can capitalize on this gap by focusing on data aggregation solutions tailored for fragmented healthcare systems in rural regions. Additionally, startups and local entities like PT Enseval Medika Prima (PT. Enseval Medika Prima) and hospital networks (e.g., RS Siloam, RS Hermina) are trying to transition to electronic medical record (EMR) systems which simplify data aggregation processes (Huang et al.). Partnering with these stakeholders provides a strategic entry point for Kapsule to establish its presence.

India’s healthcare technology market features IQVIA, Practo, and Niramai, which provide services from clinical products (“IQVIA India”) to telemedicine services (Practo). However, since none of these firms focus on data aggregation, it makes strategic sense for Kapsule to enter the market. Dreifcase (a start-up allowing consumers to store personal health records in accordance with ABDM) primarily provides tools for doctors to boost productivity. Meanwhile, Citiustech is a data management and consulting company. Since Dreifcase focuses on data organisation and Citiustech targets Indian hospitals as customers, Kapsule can enter the market, aggregating healthcare data and delivering value to MNCs using it.

In Brazil, the competitive landscape includes companies like Dr. Consulta, IQVIA and Philips Healthcare who focus on telemedicine, diagnostics, data analytics and hospital management. (“Iqvia Solutions Do Brasil Ltda. Company Profile - Brazil | Contacts & Key Executives | EMIS”). The Brazilian Ministry of Health has provided the Citizen's EHR, and an estimated 82% of all healthcare facilities and 78% of primary health care units had EHR systems in 2019 (*Outlook, 2024*). Kapsule can differentiate itself with AI-driven analytics and predictive solutions to enable data-based decision-making and improve patient outcomes, which is still an underdeveloped market in Brazil as the other markets are covered by either the government or other existing companies.

2 (c). Indonesia’s Digital Transformation Strategy prioritizes the integration of EMRs and healthcare digitization. Public partnerships with government bodies, including the Ministry of Health, could enable Kapsule to apply its services with national objectives, such as improving policy development. Working together with local hospitals to develop EMR systems and private health-tech startups could facilitate data-sharing agreements, extending Kapsule's reach across urban and rural regions to help more patients with digital medical systems. Furthermore, partnerships with academic and research institutions, such as the Ministry’s Research and Development Agency, could bolster Kapsule's reputation as a trusted data provider and open new funding opportunities.

In India, there is the opportunity for public partnerships, considering the government already has digitisation efforts (ABDM, IDSP), which Kapsule can offer to bear the burden of. Meanwhile, research institutions including Indian Council of Medical Research (ICMR) may purchase subscriptions for regular

data aggregation and insights from Kapsule. Since many hospitals, including Apollo Hospitals and Fortis Healthcare, have begun establishing EHR systems, Kapsule could manage hospital data for aggregation and establish effective private partnerships.

Partnerships are crucial for Kapsule's entry and success in Brazil. Collaborating with healthcare providers like SUS and private hospitals can enhance and streamline operations to make them more efficient. Partnering with pharmaceutical companies can provide work in clinical trial management, patient recruitment, and data analysis. Additionally, Kapsule can work with universities and research institutions to obtain data for further research, such as Universidade de São Paulo (USP), which excels in healthcare and life sciences research ("Research"). They can also form alliances with government and regulatory bodies, such as ANVISA and the Ministry of Health to provide insights and/or aggregate data.

2 (d). Among all three countries, **India** presents the **most strategic opportunity** for Kapsule to prioritize in its next phase of expansion due to its rapidly growing digital market, increasing investments in healthcare technology, and favourable regulatory environment. Partnerships with India's booming health-tech industry, with healthcare innovation doubling in value in the next 4 years ("Healthcare Innovation in India"), could secure a prominent place for Kapsule in this rapidly developing economy.

India has the highest population of 1.429 billion, providing Kapsule with a comprehensive dataset, and attracting more clients. Its rapidly growing digital healthcare market (growing at the highest CAGR of 13.14%) and rising private equity and venture capital investments (\$5.5 billion in 2023) indicates high demand for health-tech services. Indonesia's and Brazil's digital health market grows at a lower CAGR, and possess lower levels of investment, with Brazil's government only investing US \$200 million for health IT upgrades (2023). India's fastest-rising digital market with substantial investments provides the best opportunity for Kapsule's expansion and future returns.

Following, India's regulatory environment supports Kapsule's initial entry into its markets; government initiatives such as ABDM and IDSP actively promote digitization for healthcare data providing great support as Kapsule settles into the market. The private healthcare sector also significantly contributes to the digitization of healthcare. They adapt tools like EHR for support in their daily operation and have the resources and willingness to invest in new technologies. India's state of digitisation surpasses that of Indonesia and Brazil, which just began a digitisation plan and have fewer digitisation initiatives respectively, allowing for Kapsule's easier entry into the Indian market. While the hurdle of high governmental corruption prevails in India (though it possesses the lowest corruption levels by the Corruption Perception Index), the prevalence of digital systems and the growing role of private healthcare mitigate these risks. Kapsule can sidestep bureaucratic hurdles associated with public sector projects by targeting the private hospitals first, making up 67% of hospitals on the market (the highest private ownership of hospitals among all three countries).

There exist merits to expanding into Indonesia and Brazil: their high population sizes and primarily privately-owned hospitals provide opportunity for Kapsule to expand and aggregate. Brazil in particular has the highest allocation of GDP to healthcare, at 9.47%, compared to India's 2.1% and Indonesia's, which could indicate the government's efforts to improve Brazil's healthcare ecosystem, which Kapsule can offer to help with and gain partnerships. Regardless, India having the highest population, digital health market CAGR, investment, high level of digitisation efforts, and a strong private healthcare sector makes it the ideal market for Kapsule to prioritize expansion into. Kapsule can establish a competitive edge and drive long-term success in India by aligning its offerings with the country's healthcare goals.

3. We believe Kapsule could become the "Bloomberg" of health-tech data. This requires a suitable growth strategy: to enter and establish itself in a new market, Kapsule could organise events inviting important health administrators, and explain the benefits of working with Kapsule. For India, this could include Dilip Jones, CEO and Managing director of Manipal Hospitals ("Manipal Hospitals CEO and Key Executive Team"), which is India's second-largest private hospital chain ("About Manipal Hospitals,

Bangalore India”). Kapsule could explain the implications and incentives of data partnerships with it — organising hospitals’ medical data, and hospitals earning a cut of Kapsule’s profits from sales — in face-to-face interactions. The hospitals’ cut of the overall profit could be proportional to their data contribution: hospitals receive more profits through providing unlimited API access than data dumps. This encourages hospitals to provide more and better quality data for Kapsule’s aggregation. Kapsule could also invite pharmaceutical and insurance firms to potentially partner with them and increase the comprehensiveness of its data set with information about types and quantities of medications sold, and healthcare trends. Through explaining the partnership benefits to health administrators running multi-state networks, Kapsule can establish strong connections and strengthen its data set. These events could also include important governmental figures — i.e for India, Dr Balram Bhargava, the Indian Council of Medical Research’s Director General (“Balram Bhargava: Catalysing Innovation”) — to gain access to data aggregated by the government (i.e Ayushman Bharat Digital Mission), or even governmental bodies as clients.

To serve as a trusted data aggregator amongst partners, it must present its data security qualifications (such as ISO27001 Certification Process and Cybersecurity Agency Validation) and its system of maintaining patient anonymity to safeguard hospital data security and patient privacy. This allows Kapsule to secure long-term data partnerships. Meanwhile, for Kapsule to serve as a trusted data provider for clients, it could prove the data’s accuracy by mentioning the reputable private organisations that Kapsule holds data partnerships with.

To further establish itself as a trusted provider, Kapsule could verify its data and insights; on its website, it could show similarity between its analysis of an illness’s prevalence and other reputable sources’ analysis (to prove data accuracy), while advertising their service as one that provides deeper statistics into this illness’s regional and cultural variations. Meanwhile, to support their data insights’ accuracy, they could prove their insights and predictions have become reality before — they could show how past insights accurately predicted healthcare trends — making Kapsule’s service invaluable in preventing disease outbreaks and taking preventative measures.



Above: Kapsule’s 5-year timeline to implement the growth strategy (2025), after which it engages in forms of client retention (2025-26), and forms of revenue diversification (2027-28) after securing and client retention (2025-26) that will be subsequently explained.

4. Kapsule’s existing data services, instead of being project-based, can pivot to a subscription based model (per user per month) primarily for large MNCs. Kapsule could also write reports on existing data trends and publish them; firms have the option to either purchase individual reports, or subscribe annually to obtain all reports on specific research areas (Diabetes, Cancer) or markets (India, Africa).

For new revenue diversification, we suggest introducing a new service: data provision for training and testing image analysis AI in the healthcare industry. This year, over 11 billion USD has been invested into healthcare AI (Weforum, 2024). A bulk of these investments go into AI image analysis development (Signify, n.d.), used in Radiology, Pathology and Neurology to detect tumors, cancer cells and abnormalities in brain scans. The models’ development requires extensive quantities of data, when there remains a lack thereof. Specifically, these models suffer from demographic biases, they lack data of people in third world countries. This presents Kapsule a strategic opportunity to enter this market through

providing unique high quality data that comes from the under-represented demographic of Africa (and other countries it expands into).

Using its partnerships with over 8000 African healthcare providers, Kapsule could request MRI, MRA, CAT and CT scans, anonymise the data, and create a sandbox environment as a testing dataset for AI models. Data underrepresented populations in global healthcare datasets (India, Africa), allows models to detect abnormalities in under-represented demographics, making them safer for hospital use globally.

Kapsule can create value by offering AI training data, by developing its own dataset; charging a monthly subscription for companies to use its dataset secures recurring revenue. Constantly adding new data to the dataset increases client retention. Thus, Kapsule secures core revenue streams and acts directly in the interest of its partnered healthcare providers. By representing their data at the forefront of medical technology, Kapsule ensures that models trained on this data are viable in global markets. In conclusion, AI image analysis in a field where Kapsule can diversify its revenue while staying true to its vision and healthcare partners. With reference to the timeline (Qn. 3), after it establishes data partnerships in a new country, it could begin aggregating images for the AI training and sandbox products it launches the following year.

5. Kapsule plays in a niche industry and must focus on creating awareness of its services amongst other firms, and ensuring they return to Kapsule's services. Our client engagement strategies hence focus on client acquisition and retention to obtain new long-term clients.

Strategies for client acquisition

For Kapsule to acquire clients, it must advertise its data capabilities to possible clients. In the B2B marketing space, the 2 most effective methods to do this are attending healthcare data conferences and writing whitepapers (ClearView Healthcare Partners). It is essential for Kapsule to attend major healthcare conferences such as ViVE in Los Angeles or DMEA 2025 Connecting Digital Health, with thousands of possible clients attending, where Kapsule emphasizes the range of its data services' applications to attract the most number of possible clients. Furthermore, Kapsule could write White Papers, describing case studies where its data solutions helped companies achieve exemplary outcomes; these case-studies can be shown at conferences, and posted to Kapsule's social media (LinkedIn) and website. This will show interested clients Kapsule's data capabilities and the impressive results that they can achieve, increasing the probability of acquiring them.

Strategies for client retention

Kapsule must cater to each client's needs to ensure they subscribe to its services: if providing only one inflexible service that is only partially demanded, Kapsule loses stickiness. Instead, they should offer subscription-based **customisable data packages**, where clients can choose the combinations of services they prefer, ensuring more clients subscribe for longer periods of time; clients could select the type of service provided (purely data solutions, purely data insights, and a combination of both), the region of data ("The Indian Dataset", "The African Dataset" etc.), and healthcare categorisation (based on specific diseases or trends) to cater to each client's specific needs. A research institution may require only aggregated data in India, while a pharmaceutical firm may need both insights and data on a disease in an African country, and using customisable packages, Kapsule can ensure each customer receives what they demand, ensuring client retention and stickiness.

Kapsule could also create 2 different kinds of newsletters sent to their clients' emails. "Kapsule-Collate" is a monthly newsletter that explains how Kapsule has taken efforts to make datasets broader and of higher quality and accuracy. "Kapsule-Connect" is a biannual newsletter, personalised for each client, explaining the impact that the client has had through using Kapsule's services (e.g bringing up discoveries or solutions the client made with the help of Kapsule's data solutions). This presents Kapsule as both constantly improving and critical for clients' operations, increasing stickiness and convincing them of Kapsule's quality long-term.

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